

YOUNAN XIA, Ph.D.

Brock Family Chair and GRA Eminent Scholar in Nanomedicine
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<http://nanocages.com>
 Year of Birth: 1965

Joint appointments: School of Chemistry & Biochemistry, School of Chemical & Biomolecular Engineering, and
 Parker H. Petit Institute for Bioengineering & Bioscience, Georgia Institute of Technology

EDUCATION BACKGROUND

<u>Institution</u>	<u>Degree</u>	<u>Dates</u>
Harvard University	Ph.D. ^a	1993 – 1996
University of Pennsylvania	M.S. ^b	1991 – 1993
University of Science and Technology of China	B.S. ^c	1982 – 1987

a) Ph.D. Dissertation Title: Soft Lithography: Micro- and Nanofabrication Based on Microcontact Printing and Replica Molding. Advisor: Professor George M. Whitesides

b) M.S. Dissertation Title: I. Synthesis, Characterization and Protonic Acid Doping of Poly(2,5-dimethoxy-phenylenevinylene); II. Polyaniline Conformations Studied Using a UV-vis-NIR Spectroscopic Method. Advisor: Professor Alan G. MacDiarmid

c) B.S. Dissertation Title: Experimental and Simulation Studies of Minimum Smoke Rocket Propellants. Advisor: Professor Shufen Li

EMPLOYMENT RECORD

<u>Institution</u>	<u>Position</u>	<u>Dates</u>
Georgia Institute of Technology	Brock Family Chair and Georgia Research Alliance (GRA) Eminent Scholar in Nanomedicine (Appointments: Biomedical Engineering; Chemistry & Biochemistry; Chemical & Biomolecular Engineering)	01/2012 –
Washington University in St. Louis	James M. McKelvey Professor for Advanced Materials (Appointments: Biomedical Engineering, Radiology, Biochemistry & Molecular Biophysics, Chemistry, Chemical, Energy & Environmental Engineering, Mechanical Engineering & Materials Science)	09/2007 – 12/2011
University of Washington	Professor of Chemistry	05/2004 – 09/2007
University of Washington	Associate Professor of Chemistry (Adjunct: Materials Science & Engineering, Chemical Engineering)	05/2002 – 05/2004
University of Washington	Assistant Professor of Chemistry (Adjunct: Materials Science & Engineering)	07/1997 – 05/2002
Harvard University	Postdoctoral Fellow	08/1996 – 07/1997

Fujian Institute of Research
on the Structure of Matter

Research Assistant

09/1987 – 05/1991

HONORS AND AWARDS

Sigma Xi Sustained Research Award, Georgia Institute of Technology, 2019
Highly Cited Researchers in Chemistry, Physics, and Materials Science, Clarivate Analytics, 2018
Special Creativity Award, National Science Foundation, 2018
MRS Medal, Materials Research Society, 2017
Inaugural Class of Hall of Fame, *Advanced Materials*, 2017
Highly Cited Researchers in Chemistry, Physics, and Materials Science, Clarivate Analytics, 2017
Outstanding Faculty Research Author Award, Georgia Institute of Technology, 2017
Highly Cited Researchers in Chemistry and Materials Science, Thomson Reuters, 2016
Sigma Xi Best Faculty Paper Award, Georgia Institute of Technology, 2016
Highly Cited Researchers in Chemistry, Physics, and Materials Science, Thomson Reuters, 2015
Fellow, American Chemical Society (ACS), 2014
Highly Cited Researchers in Chemistry and Materials Science, Thomson Reuters, 2014
Nano Today Award, Elsevier, 2013
National Award in the Chemistry of Materials, American Chemical Society (ACS), 2013
Fred Kavli Distinguished Lectureship in Nanoscience, Materials Research Society (MRS), 2013
Top 100 materials scientists (No. 4) and top 100 chemists (No. 35) in the world from 2000-2010 based on the number of citations per paper, see <http://sciencewatch.com/dr/sci/misc/Top100Chemists2000-10/>
Top 10 chemists (No. 5) in the world from 1999-2009 based on the number of citations per paper, for details, see <http://www.timeshighereducation.co.uk/story.asp?storyCode=409418§ioncode=26>
The 2nd most cited scientist in the field of nanomedicine, see <http://www.nano-biology.net/labs.php>
Fellow, American Institute for Medical and Biological Engineering (AIMBE), 2011
Fellow, Materials Research Society (MRS), 2009
NIH Director's Pioneer Award, National Institutes of Health (NIH), 2006
Leo Hendrik Baekeland Award, the North Jersey Section of American Chemical Society (ACS), 2005
Camille Dreyfus Teacher Scholar, Camille and Henry Dreyfus Foundation, 2002
Fellow in Science and Engineering, David and Lucile Packard Foundation, 2000
Research Fellow, Alfred P. Sloan Foundation, 2000
Faculty Early Career Development Award, National Science Foundation, 1999
Victor K. LaMer Award, American Chemical Society (ACS), 1999
Oversea Young Investigator Award, Chinese Natural Science Foundation, 1999
New Faculty Award, Camille and Henry Dreyfus Foundation, 1997
ICI Student Award Finalist, American Chemical Society (ACS), 1997
Stone Corporation Award for the Best Graduate Student, Graduate School of the University of Science and Technology of China, Chinese Academy of Sciences, 1988
Guo-Mo-Rou Award for the Best Student (the highest honor), University of Science and Technology of China, Chinese Academy of Sciences, 1986

HONORARY/GUEST PROFESSORSHIP

Honorary Professor, School of Chemistry & Chemical Engineering, Southeast University, Nanjing, China, 2017 –
Honorary Professor, School of Materials Science & Engineering, Wuhan University of Technology, Wuhan, China, 2013 – 2016
Honorary Professor, Department of Materials Science & Engineering, Zhejiang University, Hangzhou, China, 2010 –
World Class University (WCU) Professor, Department of Materials Science & Engineering, Yonsei University, Seoul, Republic of Korea, 2009 – 2013
Honorary Professor, Department of Chemistry, Fudan University, Shanghai, China, 2004 –

LECTURESHIPS

University Lecture, Southern University of Science and Technology, Shenzhen, Guangdong, China, 2018
Margaret C. Etter Memorial Lecture in Materials Chemistry, University of Minnesota, Twin City, MN, 2018
Rauscher Memorial Lectureship on polymer and materials chemistry, Department of Chemistry and Chemical Biology, Rensselaer Polytechnic Institute, Troy, NY, 2018
Distinguished Lecture, HKUST Jockey Club Institute for Advanced Study, Hong Kong University of Science and Technology, Hong Kong, 2017
Closs Lecture, Department of Chemistry, University of Chicago, Chicago, IL, 2013
Fred Kavli Distinguished Lectureship in Nanoscience, Materials Research Society (MRS) Spring Meeting, 2013
Chair Lectureship, Department of Chemistry, University of Nebraska, Lincoln, NE, 2013
The Ronald R. Fisher Lectureship in the Biochemical Sciences, Department of Chemistry & Biochemistry, University of South Carolina, Columbia, SC, 2013
Discovery Lecture, Center for Nanophase Materials Sciences at Oak Ridge National Laboratory, Oak Ridge, TN, 2013
Eastman Chemical Company Lectureship, Department of Polymer Science, University of Akron, Akron, OH, 2012
Materials Day Distinguished Lecture, Materials Research Institute, Penn State University, State College, PA, 2012
Honorary Bent Lecture, Department of Chemical Engineering, University of Missouri-Columbia, 2011
New Power Lectureship, Department of Chemical Engineering, National Tsing Hua University, Taiwan, 2009

PROFESSIONAL OFFICES AND SERVICES

Editorial Responsibilities

Associate Editor, *Nano Letters*, 2002 –

Chairman (inaugural) of International Advisory Board, *Advanced Healthcare Materials*, 2011 –

Member of Advisory Board, *Chemical Reviews*, 2019 –

Member of Advisory Board, *BME Frontiers*, 2019 –

Member of Advisory Board, *Research*, 2018 –

Member of Advisory Board, *ACS Applied Nano Materials*, 2018 –

Member of International Advisory Board, *Small Methods*, 2017 –

Member of International Advisory Board, *ChemNanoMat*, 2015 –

Member of Editorial Advisory Board, *Chemical Physics Letters*, 2014 –

Member of International Advisory Board, *Chemistry: A European Journal*, 2014 –

Member of International Advisory Board, *Chinese Journal of Chemistry*, 2014 –

Member of Editorial Advisory Board, *Cancer Nanotechnology*, 2014 –

Member of International Advisory Board, *Particle & Particle Systems Characterization*, 2013 –

Member of International Advisory Board, *Angewandte Chemie International Edition*, 2011 –

Member of International Advisory Board, *Chemistry: An Asian Journal*, 2010 –

Member of Editorial Advisory Board, *Accounts of Chemical Research*, 2010 – 2016

Member of Editorial Advisory Board, *Journal of Biomedical Optics*, 2010 – 2014

Member of Editorial Advisory Board, *Science of Advanced Materials*, 2009 –

Member of Editorial Advisory Board, *Nano Research*, 2008 –

Member of Editorial Advisory Board, *Nano Today*, 2006 –

Member of Editorial Advisory Board, *Langmuir*, 2005 – 2010, 2013 – 2015

Member of Editorial Advisory Board, *Chemistry of Materials*, 2005 – 2007

Member of International Advisory Board, *International Journal of Nanotechnology*, 2003 –

Member of Editorial Advisory Board, *Nano Letters*, 2002 – 2003

Member of International Advisory Board, *Advanced Functional Materials*, 2001 –

Member of Advisory Board of the *World Scientific Series in Nanoscience and Nanotechnology*, World Scientific Publishers, 2009 –

Member of Editorial Advisory Board, the *Dekker Encyclopedia of Nanoscience and Nanotechnology*, Marcel Dekker Inc., 2001

Co-Guest Editor of a Special Issue on Nanoparticles for Catalysis, *Accounts of Chemical Research*, 2013

Co-Guest Editor of a Special Issue on Nanomaterials Research by Chinese Scientists, *Advanced Functional*

Materials, 2010

Co-Guest Editor of a Special Issue on Materials Research at USTC, *Advanced Materials*, 2010
 Co-Guest Editor of a Special Issue on Bionanotechnology, *Advanced Materials*, 2007
 Co-Guest Editor of a Special Issue on Shaped-Controlled Nanostructures of Metals and Surface Plasmonics, *Materials Research Society (MRS) Bulletin*, 2005
 Guest Editor of a Special Issue on Soft Lithography and Surface Patterning in Honoring Professor George M. Whitesides, *Advanced Materials*, 2004
 Co-Guest Editor of a Special Issue on Nanowires, *Advanced Materials*, 2003
 Guest Editor of a Special Issue on Photonic Crystals, *Advanced Materials*, 2001
 Co-Guest Editor of a Special Issue on Materials Research in China, *Advanced Materials*, 1999
 Book Co-Editor, *Nontraditional Approaches to Patterning and Their Applications*, Materials Research Society (MRS), 2004
 Book Co-Editor, *Unconventional Approaches to Nanofabrication, with Applications in Photonics, Electronics and Sensing*, Materials Research Society (MRS), 2003
 Book Co-Editor, *Nonlithographic and Lithographic Methods of Nanofabrication – From Ultralarge-Scale Integration to Photonics to Molecular Electronics*, Materials Research Society (MRS), 2000

Organization of Conferences

Member of International Advisory Committee, CIMTEC 2020, Montecatini Terme, Italy, June 2020
 Member of International Scientific Committee, the 17th International Conference on BioMedical Engineering (ICBE), Singapore, December, 2019
 Member of International Advisory Committee, China Nano 2019, Beijing, China, August 2019
 Organizing Committee, the 5th Global Congress and Expo on Materials Science & Engineering (GCEMSE-2019), Osaka, Japan, June, 2019
 Member of International Steering Committee, the 3rd International Conference on Polyol Synthesis, Madrid, Spain, September 2018
 Member of International Advisory Committee, CIMTEC 2018, Salsomaggiore Terme, Italy, June 2018
 Member of International Advisory Committee, the 4th International Conference on Electrospinning, Stellenbosch, South America, January 2018
 Member of the International Scientific Committee, the 2017 International Conference on Clean Energy, Xi'an, China, December 2017.
 Member of International Advisory Committee, China Nano 2017, Beijing, China, September 2017
 Member of International Technical Board, 4th China-United States Symposium on Energy, Shanghai, June 2017
 Member of International Consulting Committee, the 4th Annual Conference of Chinese Society of Micro- & Nanoscience and Technology and the 2016 International Conference of Nanobiology and Nanomedicine, Fuzhou, Fujian, China, December 2016
 Member of International Scientific Committee, the 3rd International Conference on Bio-inspired and Bio-based Chemistry & Materials, Nice, France, October 2016
 Member of International Steering Committee, the 2nd International Conference on Polyol Synthesis, Hikone, Japan, July 2016
 Member of International Advisory Committee, the 3rd International Conference on Electrospinning, Otranto, Italy, June 2016
 Member of International Advisory Board of the 4th *Nano Today* Conference, Dubai, December 2015.
 Member of International Advisory Committee, China Nano 2015, Beijing, China, September 2015
 Member of International Scientific Committee, the 2nd International Conference on Bio-inspired and Bio-based Chemistry & Materials, Nice, France, October 2014
 Co-chair of the 3rd International Conference on Electrospinning, San Francisco, CA, August 2014
 Member of International Scientific Committee, the 1st International Conference on Polyol Synthesis, Paris, France, June 2014
 Member of International Advisory Committee, China Nano 2013, Beijing, China, September 2013
 Member of International Steering Committee, Frontiers in Nanomedicine, *Small Sciences Symposium*, Nanyang Technological University and Wiley Materials Science, Singapore, December 2012

Member of International Advisory Committee, the 1st International Symposium on Polymer Ecomaterials (PEM 2012), Changchun, China, August 2012

Member of International Advisory Committee, Session Chair, the 2nd International Conference on Electrospinning, Jeju Island, Korea, May 2012

Member of International Advisory Committee, China Nano 2011, Beijing, China, September 2011

Co-organizer for a Symposium on Patterning and Assembly of Nanomaterials and Biomolecules for the International Conference on Materials for Advanced Technologies (ICMAT), Singapore, June 2011

Session Chair of a Symposium on Nanomaterials for Energy Conversion and Storage for the American Chemical Society (ACS) Spring Meeting, Anaheim, CA, March 2010

Member of Advisory Committee, the 1st International NanoArt Exhibition, Shanghai, China, November 2010

Member of International Advisory Committee, the 18th International Vacuum Congress, the 2010 International Conference on Nanoscience and Technology, and the 14th International Conference on Solid Surfaces, Beijing, August 2010

Session Chair of a Symposium on Multifunctional Nanoparticle Systems for the Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2010

Session Chair, Asia Communications and Photonics Conference and Exhibit, Shanghai, China, November 2009

Session Chair, the 2nd Asian Conference on Coordination Chemistry, Nanjing, China, November 2009

Member of International Advisory Committee, China Nano 2009, Beijing, China, September 2009

Co-organizer of China-USA Workshop on Nanomaterials, Hefei, June 2009

Member of International Advisory Committee, China Nano 2007, Beijing, China, June 2007

Organizer of a Symposium on the Synthesis and Assembly of Nanostructures for Materials Today Asia Meeting, Beijing, China, September 2007

Organizer of a Symposium in Honor of the Priestley Medalist Prof. George M. Whitesides for the American Chemical Society (ACS) Spring Meeting, Chicago, IL, March 2007

Co-organizer of a Symposium on Self-Assembly and Nanofabrication for the American Chemical Society (ACS) Fall Meeting, San Francisco, CA, September 2006

Member of Program Committee of a Symposium on Nanophotonic Materials (NP202), SPIE Optics and Photonics, San Diego, CA, July 2006

Co-organizer of a Symposium on Nanostructured Materials for the American Chemical Society (ACS) Northwest Regional Meeting (NORM), Reno, NV, June 2006

Co-organizer of a Symposium on Nanostructured Materials for the 80th Colloid and Surface Science Symposium of the American Chemical Society (ACS), Boulder, CO, June 2006

Co-organizer of a Symposium on Semiconductor Nanowires for the Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2006

Session Chair of a Symposium on Nanomanufacturing for the Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2006

Session Chair of a Symposium on Plasmonics for the Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2005

Session Chair of a Symposium on Self-Assembly for the Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2005

Member of Program Committee of a Symposium on Photonic Crystals and Photonic Crystal Fibers for Sensing Applications (SA115), SPIE Optics East, Boston, MA, October 2005

Co-organizer of a Symposium on Unconventional Fabrication Techniques for the Materials Research Society (MRS) Fall Meeting, Boston, MA, December 2003

Co-organizer of a Symposium on Nanostructured Materials and Nanophotonics for the SPIE, San Diego, CA, August 2003

Co-organizer of a Symposium on Self-Assembly and Nanostructured Materials for the Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2003

Subcommittee Member of the 2002 Conference on Lasers and Electro-Optics (CLEO'2002), Optical Materials: Fabrication and Characterization, Long Beach, CA, May 2002

Session Chair of a Symposium on Self-Assembly for the Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2002

Session Chair of a Symposium on Photonic Crystals for the American Chemical Society (ACS) 2001 National Spring

Meeting, San Diego, CA, April 2001
 Co-organizer of a Symposium on Nanofabrication for the Materials Research Society (MRS) Fall Meeting, Boston, MA, December 2000
 Session Chair of a Symposium on Microfabrication for the Materials Research Society (MRS) Fall Meeting, Boston, MA, December 1999

INVITED LECTURES AND PRESENTATIONS

2019

- 491 "Oriented Attachment: An Alternative Mechanism for the Growth of Nanostructures", Materials Research Society (MRS) Fall Meeting, Boston, MA, November, 2019.
- 490 "Nanowires through Oriented Attachment or Nanoscale Self-assembly", AIChE Annual Meeting, Orlando, FL, October, 2019.
- 489 "Endocytosis and Exocytosis of Nanoparticles by Cells", American Chemical Society (ACS) Fall Meeting, San Diego, CA, August, 2019.
- 488 "Phase-controlled Synthesis of Colloidal Metal Nanocrystals", American Chemical Society (ACS) Fall Meeting, San Diego, CA, August, 2019.
- 487 "1D Nanomaterials for Flexible and Stretchable Bioelectronics", Mi-Bio Summit on Flexible and Stretchable Bioelectronics, Purdue University, West Lafayette, IN, July, 2019.
- 486 "Towards Predictable Synthesis of Colloidal Metal Nanocrystals", 13th International Nanoscience Student Conference, Beijing, China, July, 2019.
- 485 "Towards Predictable Synthesis of Colloidal Metal Nanocrystals", Beijing Institute of Technology, Beijing, China, July, 2019.
- 484 "Towards Predictable Synthesis of Colloidal Metal Nanocrystals", Gordon Research Conference on "Crystal Growth and Assembly", Manchester, NH, June, 2019.
- 483 "Maximize Neurite extension on Electrospun Nanofibers for Peripheral Nerve Repair", The 6th International Conference on Electrospinning, Shanghai, China, June, 2019.
- 482 "Towards Predictable Synthesis of Colloidal Metal Nanocrystals", Nankai University, Tianjin, China, June, 2019.
- 481 "Putting Nanomaterials to Work for Biomedical and Energy Research", Faculty of Engineering, Monash University, Melbourne, Australia, June, 2019.
- 480 "Putting Gold Nanocages to Work for Biomedical Applications", Workshop on eHealth Materials & Devices, University of Technology Sydney, Sydney, Australia, June, 2019.
- 479 "Towards Predictable Synthesis of Colloidal Metal Nanocrystals", Department of Chemistry, University of New South Wales, Sydney, Australia, June, 2019.
- 478 "Towards Predictable Synthesis of Colloidal Metal Nanocrystals", Platinum Seminar, Department of Chemical Engineering, University of Melbourne, Australia, June, 2019.
- 477 "Functionalization of Colloidal Particles through Symmetry Breaking", Functional NanoColloids Symposium, Monash University, Melbourne, Australia, June, 2019.
- 476 "Putting Electrospun Nanofibers to Work for Biomedical Research", EuroPolymer Conferences, Como, Lago di Como, Italy, May, 2019.
- 475 "Towards Predictable Synthesis of Colloidal Metal Nanocrystals", Materials Science Program, University of California at Riverside, CA, May, 2019.
- 474 "Autocatalytic Surface Reduction for Shape-Controlled Synthesis of Metal Nanocrystals", Materials Research Society (MRS) Spring Meeting, Phoenix, AZ, April, 2019.
- 473 "Putting Nanomaterials to Work for Biomedical Research", Global Health Lecture, Department of Biomedical Engineering, Rensselaer Polytechnic Institute, Troy, NY, April, 2019.
- 472 "Putting Electrospun Nanofibers to Work for Biomedical Research", Surgery Research Forum, University of Nebraska Medical Center, Omaha, NE, April, 2019.
- 471 "Towards Predictable Synthesis of Colloidal Metal Nanocrystals", Department of Chemistry, University of Illinois, Urbana-Champaign, IL, April, 2019.
- 470 "Shape-Controlled Metal Nanocrystals: The Next-Generation Heterogeneous Catalysts?", American Chemical Society (ACS) Spring Meeting, Orlando, FL, April, 2019.

- 469 "Shape-Controlled Bimetallic Nanocrystals for Fuel Cell Applications", American Chemical Society (ACS) Spring Meeting, Orlando, FL, April, 2019.
- 468 "Autocatalytic Surface Reduction and Its Role in the Synthesis of Metal Nanocrystals", American Chemical Society (ACS) Spring Meeting, Orlando, FL, April, 2019.
- 467 "Graded Surfaces and Materials for Biological and Biomedical Applications", American Chemical Society (ACS) Spring Meeting, Orlando, FL, April, 2019.
- 466 "Phase-Change Materials for Controlled Release and Related Biomedical Applications", TMS Annual Meeting, San Antonio, TX, March, 2019.
- 465 "Colloidal Metal Nanocrystals Enclosed by a Single Facet: A New Platform for Investigating Catalytic Reactions", Gordon Research Conference on "Chemical Reactions at Surfaces", Ventura, CA, February, 2019.

2018

- 464 "Putting Nanomaterials to Work for Biomedical Research", University Lecture, Southern University of Science and Technology, Shenzhen, Guangdong, China, December, 2018.
- 463 "All Roads Lead to Rome: But Don't Forget About Curiosity, Intuition, Persistency and Good Luck", "Revolutionaries" Lecture Series, Student Governance Association, Georgia Institute of Technology, Atlanta, GA, December, 2018.
- 462 "Recent Developments in the Design and Synthesis of Platinum-based Catalysts for Fuel Cell Application", Materials Research Society (MRS) Fall Meeting, Boston, MA, November, 2018.
- 461 "Facet-controlled Palladium Nanocrystals for Selective Catalysis", Materials Research Society (MRS) Fall Meeting, Boston, MA, November, 2018.
- 460 "Phase-Change Materials for Controlled Release and Related Applications", Vanderbilt Institute for Nanoscale Science and Engineering, Vanderbilt University, Nashville, TN, November 2018.
- 459 "Shape-controlled Copper Nanocrystals for Plasmonic and Related Applications", SCIX 2018, Atlanta, GA, October, 2018.
- 458 "Predictable and Deterministic Synthesis of Colloidal Metal Nanocrystals", Margaret C. Etter Memorial Lecture in Materials Chemistry, University of Minnesota, Twin Cities, MN, October, 2018.
- 457 "Anisotropic Colloidal Particles through Symmetry Breaking", The First Symposium on Anisotropic Particles – Tailoring Shape, Interactions and Structures, University of Konstanz, Konstanz, Germany, September, 2018. (plenary talk)
- 456 "Putting Nanomaterials to Work for Biomedical Research", Biomedical Engineering Workshop, University of Science and Technology of China, Hefei, Anhui, China, September, 2018.
- 455 "Predictable and Deterministic Synthesis of Colloidal Metal Nanocrystals", Institute of Solid State Physics, Chinese Academy of Sciences, Hefei, Anhui, September, 2018.
- 454 "Phase-Change Materials for Controlled Release and Related Biomedical Applications", the 4th International Conference on Energy and Biological Materials, University of Science and Technology of China, Hefei, Anhui, China, September, 2018. (plenary talk)
- 453 "Towards Predictable and Deterministic Synthesis of Colloidal Nanocrystals", American Chemical Society (ACS) Fall Meeting, Boston, MA, August, 2018.
- 452 "Advanced Nanomaterials for Aerospace and Related Applications", American Chemical Society (ACS) Fall Meeting, Boston, MA, August, 2018.
- 451 "New Catalytic Materials through Atomic Layer-by-Layer Deposition", American Chemical Society (ACS) Fall Meeting, Boston, MA, August, 2018.
- 450 "Synthesis and Catalytic Applications of Ru Nanocrystals with Well-Controlled Facets and an fcc Structure", American Chemical Society (ACS) Fall Meeting, Boston, MA, August, 2018.
- 449 "Quantifying the Cellular Uptake and Sub-Cellular Distributions of Nanoparticles", American Chemical Society (ACS) Fall Meeting, Boston, MA, August, 2018.
- 448 "Mitigating the Off-Target Toxicity of Nanomedicines through Controlled Release", American Chemical Society (ACS) Fall Meeting, Boston, MA, August, 2018.
- 447 "Gold Nanocages: A Multifunctional Platform for Nanomedicine and Beyond", the 19th International Symposium on Small Particles and Inorganic Clusters (ISSPIC-19), Hangzhou, Zhejiang, China, August, 2018.
- 446 "Putting Nanomaterials to Work for Biomedical and Energy Applications", 2018 International Seminar on Advanced Materials Research (2018 ISAMR), Shanghai, China, August, 2018. (plenary talk)

- 445 "Putting Nanomaterials to Work for Biomedical and Energy Research", Center for Cooperative Research in Biomaterials, CIC BiomaGUNE, San Sebastian, July, 2018.
- 444 "Colloidal Metal Nanocrystals: From Polyol-Mediated Synthesis to Seeded Growth", the 3rd International Conference on Polyol-Mediated Synthesis, Madrid, Spain, June, 2018. (plenary talk)
- 443 "Nanomedicine: The Concept, Success, Opportunities, and Challenges", Minnesota Nano Center, University of Minnesota, Minneapolis, MN, June, 2018.
- 442 "Surface Capping and the Shape Evolution of Colloidal Metal Nanocrystals", the 233rd Electrochemical Society (ECS) meeting, Seattle, WA, May, 2018. (keynote talk)
- 441 "Symmetry Breaking during the Synthesis of Nanoparticles", Soft Matter Forefront Symposium, Georgia Institute of Technology, Atlanta, GA, April, 2018.
- 440 "Predictable and Deterministic Synthesis of Colloidal Metal Nanocrystals", Rauscher Memorial Lectureship on Polymer and Materials Chemistry, Department of Chemistry and Chemical Biology, Rensselaer Polytechnic Institute, Troy, NY, April, 2018.
- 439 "Controlling the Growth Mode of Nanocrystal Seeds with Hollow Interior and Porous Walls", Materials Research Society (MRS) Spring Meeting, Phoenix, AZ, April 2018.
- 438 "Bimetallic Janus Nanocrystals", American Chemical Society (ACS) Spring Meeting, New Orleans, LA, March, 2018.
- 437 "Rational Design and Synthesis of Pt-Based Catalysts for Fuel Cell Applications", German Physical Society (DPG) and the European Physical Society (EPS) Annual Meeting, Berlin, March, 2018.

2017

- 436 "Towards Cost-Effective and Sustainable Use of Precious Metals in Catalysis and Medicine", Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2017 (plenary, MRS Medal award).
- 435 "Towards Predictable and Deterministic Synthesis of Colloidal Metal Nanocrystals", Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2017 (plenary, symposium X).
- 434 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Department of Chemical Engineering, University of Illinois, Chicago, IL, November 2017.
- 433 "Platinum-Based Nanocages as a New Class of Catalysts toward the Oxygen Reduction Reaction", American Chemical Society (ACS) Fall Meeting, Washington DC, August 2017.
- 432 "Engineering the Pt/CeO₂ Interface for the Development of Advanced Catalysts", American Chemical Society (ACS) Fall Meeting, Washington DC, August 2017.
- 431 "Probing the Cell-Nanomaterial Interaction with Gold Nanostructures", American Chemical Society (ACS) Fall Meeting, Washington DC, August 2017.
- 430 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Xi'an Jiaotong University, Xi'an, China, July 2017.
- 429 "Putting Nanomaterials to Work for Biomedical and Energy Research", Nanjing University, Nanjing, China, July 2017.
- 428 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", HKUST Jockey Club Institute for Advanced Study Distinguished Lecture, Hong Kong University of Science and Technology, Hong Kong, June 2017.
- 427 "Putting Electrospun Nanofibers to Work for Tissue Regeneration", Institute of Textiles and Clothing, The Hong Kong Polytechnic University, Hong Kong, June 2017.
- 426 "Towards Deterministic Synthesis of Colloidal Metal Nanocrystals", Department of Chemistry, The University of Hong Kong, Hong Kong, June 2017.
- 425 "Rational Design and Synthesis of Pt-Based Catalysts toward Oxygen Reduction for Fuel Cell Application", the 4th China-United States Symposium on Energy, Shanghai, China, June 2017. (plenary talk)
- 424 "Towards Deterministic Synthesis of Colloidal Metal Nanocrystals", the 12th US-Sino Nano Workshop, Beijing, China, May 2017.
- 423 "Colloidal Metal Nanocrystals: From Academic Studies to Industrial Applications", School of Materials Science and Engineering, University of Science and Technology Beijing, Beijing, China, May 2017.
- 422 "Putting Nanomaterials to Work for Biomedical and Energy Research", National Center for Nano Science and Technology, Beijing, China, May 2017.
- 421 "Towards a Quantitative Knob for Controlling the Synthesis of Metal Nanocrystals", Institute of Functional

- Nano- & Soft Materials, Soochow University, Suzhou, China, May 2017.
- 420 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Southeast University, Nanjing, Jiangsu, May 2017.
- 419 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Advanced Materials Symposium for the Celebration of 120th Anniversary of Zhejiang University, Hangzhou, Zhejiang, May 2017. (keynote talk)
- 418 "Rational Design and Synthesis of Pt-Based Catalysts for Fuel Cell Applications", APS Physics Next Workshop: Materials Design and Discovery, Riverhead, NY, May 2017.
- 417 "Towards a Quantitative Knob for Controlling the Synthesis of Metal Nanocrystals", Department of Chemistry, University of California, Berkeley, CA, April 2017.
- 416 "Nanofiber-Based Conduits with a Honeycomb Structure for Peripheral Nerve Repair", Materials Research Society (MRS) Spring Meeting, Phoenix, AZ, April 2017.
- 415 "Shape-Controlled Synthesis of Copper Nanocrystals", Materials Research Society (MRS) Spring Meeting, Phoenix, AZ, April 2017.
- 414 "Gold Nanocages as Photothermal Transducers for Controlled Release and Sensing Applications", Materials Research Society (MRS) Spring Meeting, Phoenix, AZ, April 2017.
- 413 "How is the Metal Precursor Reduced during a Synthesis of Colloidal Nanocrystals?", American Chemical Society (ACS) Spring Meeting, San Francisco, CA, April 2017.
- 412 "Colloidal Metal Nanocrystals: From Academic Studies to Industrial Applications", Department of Chemistry, University of Virginia, Charlottesville, VA, March 2017.
- 411 "Putting Nanomaterials to Work for Biomedical and Energy Research", Department of Biomedical Engineering, Johns Hopkins University, Baltimore, MD, March 2017. (BME distinguished seminar)
- 410 "Novel Plasmonic Nanostructures for Sensing and Imaging", PITTCON 2017, Chicago, IL, March 2017.

2016

- 409 "Inverse Opal Scaffolds for Tissue Engineering and Regenerative Medicine", Materials Research Society (MRS) Fall Meeting, Boston, MA, December 2016.
- 408 "Integration of Plasmonic Heating and Phase Transition for Novel Applications", Materials Research Society (MRS) Fall Meeting, Boston, MA, December 2016.
- 407 "Colloidal Metal Nanocrystals: From Academic Studies to Industrial Applications", Department of Materials Science and Engineering, Johns Hopkins University, Baltimore, MD, November 2016.
- 406 "Kinetic Control of the Nucleation and Growth of Colloidal Metal Nanocrystals", American Chemical Society (ACS) Fall Meeting, Philadelphia, PA, August 2016.
- 405 "Controlling the Synthesis and Assembly of Silver Nanocrystals for SERS Application", American Chemical Society (ACS) Fall Meeting, Philadelphia, PA, August 2016.
- 404 "Gold Nanomaterials at the Bio-Nano Interface", American Chemical Society (ACS) Fall Meeting, Philadelphia, PA, August 2016.
- 403 "Redesigning the Platinum ORR Catalyst for Fuel Cell Application", American Chemical Society (ACS) Fall Meeting, Philadelphia, PA, August 2016. (keynote talk)
- 402 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", KAIST International Workshop on Advanced Materials, Daejeon, Korea, August 2016. (Keynote)
- 401 "Putting Gold Nanomaterials to Work for Cancer Theranostics", Changchun Institute of Applied Chemistry, Changchun, Jilin, China, July 2016.
- 400 "Anisotropy: The Good, the 'Bad' and", Faraday Discussion on Nanoparticles with Morphological and Functional Anisotropy, Royal Society of Chemistry, Glasgow, Scotland, July 2016. (closing remarks)
- 399 "Electrospun Nanofibers for Catalytic and Biomedical Applications", the 4th International Conference on Electrospinning, Otranto, Italy, June 2016. (Plenary)
- 398 "Symmetry Breaking during Seed-Mediated Growth of Nanocrystals", American Chemical Society (ACS) Spring Meeting, San Diego, CA, March 2016.
- 397 "Putting Gold Nanomaterials to Work for Cancer Theranostics", Department of Biomedical Engineering, University of Houston, Houston, TX, March 2016.
- 396 "Putting Gold Nanomaterials to Work for Cancer Theranostics", Integrated Cancer Research Center, Georgia

Institute of Technology, Atlanta, GA, January 2016.

- 395 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Department of Chemistry, University of California, Davis, CA, January 2016.

2015

- 394 "Engineering the Size and Shape of Silver Nanocrystals for Plasmonic Applications", Materials Research Society (MRS) Fall Meeting, Boston, MA, December 2015.
- 393 "Maximizing the Mass Activity of Pt-Based Catalysts toward Oxygen Reduction", AIChE Annual Meeting, Salt Lake City, UT, November 2015.
- 392 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Texas Materials Institute, University of Texas, Austin, TX, November 2015.
- 391 "Toward a Sustainable Use of Precious Metals in Energy Conversion and Industrial Catalysis", the 1st International Symposium on Energy Chemistry and Materials, Shanghai, China, October 2015.
- 390 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Department of Chemistry, Oregon State University, Corvallis, OR, October 2015.
- 389 "Shape-controlled Synthesis of Metal Nanocrystals for Plasmonic Applications", Workshop for the Celebration of the International Year of Light at Georgia Tech, Atlanta, GA, September 2015.
- 388 "Shape-controlled Noble-Metal Nanocrystals for Catalytic Applications", ACS National Fall Meeting, Boston, MA, August 2015.
- 387 "New Strategies for the Development of Pt-Based Catalysts toward Oxygen Reduction", ACS National Fall Meeting, Boston, MA, August 2015.
- 386 "Putting Gold Nanomaterials to Work for Biomedical Research", ShanghaiTech Advances in Research (STAR) Symposium, Shanghai, China, June 2015.
- 385 "Toward a Sustainable Use of Precious Metals in Catalysis", TechConnect World 2015, Washington, DC, June 2015.
- 384 "Maximizing the Mass Activity of Pt-Based Catalysts toward Oxygen Reduction", ARO-MURI Workshop, Brown University, Providence, RI, June, 2015.
- 383 "Understanding the Nucleation and Growth of Nanocrystals with Controlled Shapes", Workshop on Chemistry and Catalysis, Advanced Photon Source, Argonne National Laboratory, Argonne, IL, May, 2015.
- 382 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Materials Institute (4D LABS), Simon Fraser University, Burnaby, British Columbia, Canada, May 2015.
- 381 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Department of Physics, Clemson University, Clemson, SC, April 2015.
- 380 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Yale University, New Haven, CT, April 2015.
- 379 "Recent Developments in the Controlled Synthesis of Silver Nanostructures", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2015.
- 378 "Recent Developments in the Synthesis and Utilization of Gold Nanocages", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2015.
- 377 "Quantitative Analysis of the Molecular/Ionic Species Adsorbed on the Surface of a Nanomaterial", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2015.
- 376 "Electrospun Nanofibers for Translational Applications", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2015.
- 375 "Putting Gold Nanomaterials to Work for Biomedical Research", the University of Florida's Biomaterials Day Symposium, Gainesville, FL, March 2015. (plenary talk)
- 374 "Putting Nanomaterials to Work for Biomedical Research", Department of Medical Biophysics, University of Toronto, Toronto, Ontario, Canada, March 2015.
- 373 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Georgia State University, Atlanta, GA, January 2015.
- 372 "The Environmental Public Health Implications of Nanotechnology", NCEH/ATSDR, Atlanta, GA, January 2015.

2014

- 371 "Recent Developments in the Use of Gold Nanostructures for Biomedical Applications", Materials Research Society (MRS) Fall Meeting, Boston, MA, December 2014.
- 370 "Micro- and Nanostructures Based on Phase-change Materials for Biochemical Delivery Applications", Materials Research Society (MRS) Fall Meeting, Boston, MA, December 2014.
- 369 "Novel Pt-Based Catalysts for the Oxygen Reduction Reaction", AIChE Annual Meeting, Atlanta, GA, November 2014.
- 368 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Department of Chemical and Biomolecular Engineering, Cornell University, Ithaca, NY, November 2014.
- 367 "Nanomaterials at Work in Biomedicine and Environmental Protection", GRA Academy of Eminent Scholars meeting, Atlanta, GA, October 2014.
- 366 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Department of Chemistry, Colorado School of Mines, Golden, CO, October 2014.
- 365 "Inverse Opal Scaffolds and Their Application in Regenerative Medicine", American Chemical Society (ACS) Fall Meeting, San Francisco, August 2014.
- 364 "What Controls the Twin Structure of a Seed during the Nucleation Process?", American Chemical Society (ACS) Fall Meeting, San Francisco, August 2014.
- 363 "Electrospun Nanofibers at Work in Biomedical Research", the 3rd International Conference on Electrospinning, San Francisco, CA, August 2014.
- 362 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", the 9th US-Sino Nano Workshop, Tianjin, China, July 2014.
- 361 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", Institute of Advanced Materials, Fudan University, Shanghai, China, July 2014.
- 360 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", BASF Corporation, Iselin, NJ, May 2014.
- 359 "Understanding the Role of Aligned Nanofibers in Guiding the Outgrowth of Neurites", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2014.
- 358 "Directing the Assembly of Atoms on the Surface of Noble-Metal Nanocrystals", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2014.
- 357 "Putting Nanomaterials to Work for Biomedical Research", Center for Drug Delivery and Nanomedicine, University of Nebraska Medical Center, Omaha, NE, April 2014.
- 356 "Putting Gold Nanocages to Work for Biomedical Research", the 5th Nanotechnology for Health Care Conference, the Winthrop Rockefeller Institute, Morrilton, AR, April 2014.
- 355 "Putting Nanomaterials to Work for Biomedical Research", National Research Council Canada, Ottawa, ON, Canada, March 2014.
- 354 "Recent Progress in Controlling the Synthesis of Colloidal Noble-metal Nanocrystals", American Chemical Society (ACS) Spring Meeting, Dallas, TX, April 2014.
- 353 "Novel Pd-Pt Bimetallic Nanocrystals as the Next-generation Catalysts", American Chemical Society (ACS) Spring Meeting, Dallas, TX, April 2014.
- 352 "Colloidal Metal Nanocrystals: Moving from Academic Studies to Industrial Applications", School of Chemistry & Biochemistry, Georgia Institute of Technology, Atlanta, GA, February 2014.
- 351 "Nanocrystals with Controlled Shapes and Their Applications", monthly meeting of the Georgia Section of the American Chemical Society, Atlanta, GA, February 2014.
- 350 "Colloidal Metal Nanocrystals: Shape Control and Symmetry Breaking", Department of Chemistry, University of Georgia, Athens, GA, February 2014.

2013

- 349 "Electrospun Nanofibers for Biomedical Research and Catalysis", School of Materials Science and Engineering, Nanyang Technological University, Singapore, December 2013.
- 348 "Colloidal Metal Nanocrystals: The Past, Present, and Future", the 3rd Nano Today Symposium, Singapore, December 2013. (plenary talk)
- 347 "Electrospun Nanofibers as a New Platform to Interface with the Biological Systems", Materials Research Society (MRS) Fall Meeting, Boston, MA, December 2013.
- 346 "New Developments in the Synthesis of Colloidal Noble-metal Nanocrystals", the 2013 Southeastern Regional

- Meeting (SERMACS 2013), Atlanta, GA, November 2013.
- 345 "Putting Nanomaterials to Work for Biomedical Research", Department of Biomedical Engineering, Tufts University, Medford, MA, November 2013.
- 344 "Colloidal Metal Nanocrystals: Shape Control and Symmetry Breaking", Closs Lecture, Department of Chemistry, University of Chicago, Chicago, IL, October 2013.
- 343 "Colloidal Metal Nanocrystals: The Past, Present, and Future", Sharp Labs of America, Camas, WA, October 2013.
- 342 "Putting Electrospun Nanofibers to Work for Biomedical Research", Department of Chemistry, Zhejiang University, Hangzhou, Zhejiang, China, July 2013.
- 341 "Colloidal Metal Nanocrystals", Department of Chemistry, Zhejiang University, Hangzhou, Zhejiang, China, July 2013.
- 340 "Follow Your Curiosity and Intuition into Different Research Areas", School of Materials Science and Engineering, Wuhan University of Technology, Wuhan, Hubei, China, July 2013.
- 339 "Colloidal Metal Nanocrystals: The Past, Present, and Future", State Key Laboratory of Advanced Technology for Materials Synthesis and Processing, Wuhan University of Technology, Wuhan, Hubei, China, July 2013.
- 338 "Colloidal Metal Nanocrystals: The Past, Present, and Future", the 8th US-Sino Nano Workshop, Hangzhou, Zhejiang, China, June 2013. (tutorial talk)
- 337 "Recent Developments in the Synthesis of Colloidal Metal Nanocrystals", University of Science and Technology, Hefei, Anhui, China, June 2013.
- 336 "Shape-controlled Synthesis of Metal Nanocrystals", Department of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), Gwangju, Korea, June 2013.
- 335 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Materials Science and Engineering, Pohang University of Science and Technology (POSTECH), Pohang, Korea, June 2013.
- 334 "Recent Developments in Colloidal Metal Nanocrystals", WCU-LGD Nanomaterials and Device Symposium, Jeju, Korea, June 2013. (keynote talk)
- 333 "Facet-controlled Noble-metal Nanocrystals as the Next-generation Heterogeneous Catalysts", iMAT Workshop on Materials and Interfaces for Catalysis, Environment, and Separations, Georgia Institute of technology, Atlanta, GA, May 2013.
- 332 "Putting Nanomaterials to Work for Biomedical Research", Department of Biochemistry & Molecular Pharmacology, UMass Medical School, Worcester, MA, May 2013.
- 331 "Shape-controlled Synthesis of Metal Nanocrystals", Fujian Institute of Research on the Structure of Matter, the Chinese Academy of Science, Fuzhou, Fujian, China, May 2013.
- 330 "Putting Nanomaterials to Work for Biomedical Research", Conference on Nanomedicine, the Third Military Medical University, Chongqing, China, May 2013. (keynote lecture)
- 329 "Phase-change Materials for Controlled Release and Drug Delivery Applications", 2013 International Advanced Drug Delivery Symposium, Taiwan, May 2013. (keynote lecture)
- 328 "Shape-controlled Synthesis of Colloidal Metal Nanocrystals", Department of Chemical Engineering, National Tsing Hua University, Taiwan, May 2013.
- 327 "Putting Electrospun Nanofibers to Work for Biomedical Research", Society of Plastics Engineers Annual Technical Conference, Cincinnati, OH, April, 2013.
- 326 "Shape-controlled Synthesis of Metal Nanocrystals", Department of Chemistry & Biochemistry, University of Arkansas, Fayetteville, AK, April 2013.
- 325 "Putting Nanomaterials to Work for Biomedical Research", the 10th Annual Conference on the Foundations of Nanoscience (FNANO13), Snowbird, UT, April 2013 (keynote talk).
- 324 "Shape Control and Symmetry Breaking in the Synthesis of Colloidal Nanocrystals", ACS Awards Lectures Symposium, Division of Colloid and Surface Chemistry, American Chemical Society (ACS) Spring Meeting, New Orleans, LA, April 2013.
- 323 "Towards Sustainable Use of Platinum as an Industrial Catalyst", Division of Energy and Fuels, American Chemical Society (ACS) Spring Meeting, New Orleans, LA, April 2013.
- 322 "Colloidal Metal Nanocrystals: Shape Control, Symmetry Breaking, and Niche Applications", Fred Kavli Distinguished Lectureship on Nanoscience, Materials Research Society (MRS) Spring Meeting, April 2013.
- 321 "Seeded Growth for the Manufacturing of Metal Nanocrystals", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2013.

- 320 "Ultrathin Nanowires of Au and Pd: Syntheses and Mechanistic Studies", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2013.
- 319 "Putting Chemistry to Work for Nano and Biomedical Research", Chair Lectureship, Department of Chemistry, University of Nebraska, Lincoln, NE, March 2013.
- 318 "Shape-Controlled Synthesis of Metal Nanocrystals", Nanoscience Seminar Series, Department of Physics, Arizona State University, Tempe, AZ, February 2013.
- 317 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemical and Biomedical Engineering, University of South Florida, Tampa, FL, February 2013.
- 316 "Putting Chemistry to Work for Nano and Biomedical Research", The Ronald R. Fisher Lectureship in the Biochemical Sciences, Department of Chemistry & Biochemistry, University of South Carolina, Columbia, SC, February 2013.
- 315 "Putting Electrospun Nanofibers to Work for Biomedical Research", Department of Mechanical Engineering, University of Illinois, Chicago, IL, January 2013.
- 314 "Shape-Controlled Synthesis of Colloidal Nanocrystals" 2013 Discovery Lecture, Center for Nanophase Materials Sciences, Oak Ridge National Laboratory, Oak Ridge, TN, January 2013.
- 313 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, University of Tennessee, Knoxville, TN, January 2013.

2012

- 312 "Simple Chemistry for Complex Nanomaterials", Lecture Series of New England Section of the Electrochemical Society, Hartford, CT, November 2012.
- 311 "Controlling the Shape of Silver Nanocrystals for Field Enhancement Application", Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2012.
- 310 "Simple Chemistry for Complex Nanomaterials", Nano@Tech seminar, Institute for Electronics and Nanotechnology, Georgia Institute of Technology, Atlanta, GA, November 2012.
- 309 "Putting Electrospun Nanofibers to Work for Biomedical Research", the Eastman Chemical Company Lecture, Department of Polymer Science, University of Akron, Akron, OH, October 2012.
- 308 "Complex Nanomaterials via Simple Chemistry", Triangle MRSEC on Programmable Soft Matter, North Carolina State University, Raleigh, NC, September 2012.
- 307 "Putting Chemistry to Work for Nano and Biomedical Research", School of Chemical and Biomolecular Engineering, Georgia Institute of Technology, Atlanta, GA, August 2012.
- 306 "Quantitative Analysis of the Cell Uptake of Gold Nanostructures", Division of Colloids and Surface Sciences, American Chemical Society (ACS) Fall Meeting, Philadelphia, PA, August 2012.
- 305 "Gold Nanocages: A Multifunctional Platform for Theranostic Applications", Nanotechnology in Medicine Workshop, Washington University Medical School, St. Louis, MO, July 2012.
- 304 "Putting Nanomaterials to Work for Biomedical Research", SURE Program, Georgia Institute of Technology, Atlanta, GA, July 2012.
- 303 "Putting Chemistry to Work for Nano and Biomedical Research", Graduate School of Convergence Science and Technology, Seoul National University, Suwon, Korea, June 2012.
- 302 "Recent Developments in Seed-Mediated Synthesis of Nanocrystals", the 7th US-Sino Nano Workshop, Xiamen, Fujian, China, June 2012.
- 301 "Gold Nanocages: A Multifunctional Platform for Theranostic Applications", the 5th International Symposium on Bioanalysis, Biomedical Engineering and Nanotechnology (ISBBN 2012), Changsha, Hunan, China, June 2012.
- 300 "Simple Chemistry for Complex Nanomaterials", School of Chemistry, Chemical Engineering, and Materials Science, Soochow University, Suzhou, Jiangsu, China, June 2012.
- 299 "Electrospun Nanofibers for Regenerative Medicine", the 2nd International Conference on Electrospinning 2012, Jeju Island, Korea, May 2012. (keynote lecture)
- 298 "Colloidal Nanocrystals: Past, Present and Future", Department of Energy Science, SungKyunKwan University, Suwon, Korea, May 2012 (distinguished lecture series).
- 297 "Colloidal Nanocrystals: Past, Present and Future", Materials Research Institute, Penn State University, State College, PA, April 2012. (distinguished lecture series, materials day symposium)
- 296 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, University of

Texas, Dallas, TX, April 2012.

- 295 "Simple Chemistry for Complex Nanomaterials", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2012. (plenary lecture, symposium x)
- 294 "Electrospun Nanofibers for Regenerative Medicine", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2012.
- 293 "Smart Capsules for Controlled Release", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2012.
- 292 "Novel Pd-Pt Bimetallic Nanocrystals for Catalytic Applications", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2012.
- 291 "Dispersed Nanoparticles for Biomedical Applications", Biomaterials Panel, Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2012.
- 290 "Nanocages and Nanofibers for Biomedical Research", the 4th Annual Georgia Nanotechnology & Infectious Disease Symposium, Emory University, Atlanta, GA, April 2012.
- 289 "Putting Nanomaterials to Work for Biomedical Research", NanoScience Technology Center, University of Central Florida, Orlando, FL, March 2012.
- 288 "Putting Nanomaterials to Work for Biomedical Research", Vanderbilt Institute of Nanoscale Science and Engineering, Vanderbilt University, Nashville, TN, February 2012.
- 287 "How to Achieve Sustainable Use of a Scarce Metal Like Platinum", Department of Chemical Engineering, Penn State University, State College, PA, February 2012.

2011

- 286 "Controlling the Synthesis and Assembly of Silver Nanocrystals for Plasmonic Applications", Department of Chemistry, University of California, Berkeley, CA, December 2011.
- 285 "Inverse Opal Scaffolds for Tissue Engineering Applications", Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2011.
- 284 "Putting Nanomaterials to Work for Biomedical Research", Department of Polymer Science and Engineering, SungKyunKwan University, Suwon, Korea, November 2011.
- 283 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, Zhejiang University, Hangzhou, Zhejiang, China, October 2011.
- 282 "Colloidal Nanocrystals: Past, Present, and Future", Department of Materials Science and Engineering, Zhejiang University, Hangzhou, Zhejiang, China, October 2011.
- 281 "Metal Nanowires for Touch Screen Applications", Flat-Panel Display Standardization Forum, the 11th International Meeting on Information Display (IMID 2011), Ilsan, Korea, October 2011.
- 280 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, University of Colorado, Boulder, CO, September 2011.
- 279 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry and Biochemistry, Georgia Institute of Technology, Atlanta, GA, September 2011.
- 278 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, Ohio State University, Columbus, OH, September 2011.
- 277 "Putting Nanomaterials to Work for Biomedical Research", the 7th Annual NIH Director's Pioneer Award Symposium, Washington DC, September 2011.
- 276 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, Boston College, MA, September 2011.
- 275 "Colloidal Nanocrystals: Past, Present, and Future", Center for Nanotechnology, University of Washington, Seattle, WA, September 2011.
- 274 "Gold Nanocages for Theranostic Applications", Division of Colloid and Surface Chemistry, American Chemical Society (ACS) Fall Meeting, Denver, CO, August 2011.
- 273 "Novel Silver Nanostructures for Surface-Enhanced Raman Scattering", Division of Physical Chemistry, American Chemical Society (ACS) Fall Meeting, Denver, CO, August 2011.
- 272 "Seeded Growth of Metal Nanocrystals with Controllable Shapes", Gordon Research Conference on Thin Film and Growth Mechanisms, Biddeford, ME, July 2011.
- 271 "Putting Chemistry to Work for Nano- and Bio- Research", School of Materials Science and Engineering, Nanyang Technological University, Singapore, July 2011.

- 270 "Colloidal Nanocrystals of Noble Metals: Past, Present and Future", Nanotechnology and Printed Electronics Symposium 2011, Singapore, July 2011 (plenary lecture).
- 269 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, Renmin University, Beijing, China, June 2011.
- 268 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, Tsinghua University, Beijing, China, June 2011.
- 267 "Controlling the Alignment of Electrospun Nanofibers for Various Applications", WCU-LGD Nanomaterials and Device Symposium, Jeju, Korea, June 2011 (keynote talk).
- 266 "Gold Nanocages with Tunable Plasmonic Properties for Biomedical Applications", the 5th International Conference on Nanophotonics, Shanghai, China, May 2011. (plenary lecture)
- 265 "Shape-Controlled Silver Nanocrystals for Plasmonic Applications", the 5th International Conference on Surface Plasmon Photonics (SPP5), Busan, Korea, May 2011.
- 264 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, University of Pittsburgh, Pittsburgh, PA, April 2011.
- 263 "Putting Electrospun Nanofibers to Work for Biomedical Research", Department of Polymer Science and Engineering, University of Massachusetts, Amherst, MA, April 2011.
- 262 "Seeded Growth for Large-Scale Production of Noble-Metal Nanostructures with Controllable Sizes and Shapes", Division of Polymeric Materials: Science and Engineering, American Chemical Society (ACS) Spring Meeting, Anaheim, CA, March 2011.
- 261 "Novel Pd-Pt Bimetallic Nanocrystals for Fuel Cell Applications", Division of Colloid and Surface Chemistry, American Chemical Society (ACS) Spring Meeting, Anaheim, CA, March 2011.
- 260 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, University of Wisconsin, Madison, WI, March 2011.
- 259 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Materials Science and Engineering, Carnegie Mellon University, Pittsburgh, PA, March 2011.
- 258 "Putting Chemistry to Work for Nano and Biomedical Research", Honorary Bent Lecture, Department of Chemical Engineering, University of Missouri-Columbia, MO, March 2011.
- 257 "Shape-Controlled Synthesis of Noble-Metal Nanocrystals", Department of Chemistry and Department of Physics, Georgetown University, Washington D.C., March 2011.
- 256 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Biomedical Engineering and Department of Chemistry and Biochemistry, Georgia Institute of Technology, GA, February 2011.
- 255 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, Columbia University, New York, NY, February 2011.

2010

- 254 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, Brown University, Providence, RI, December 2010.
- 253 "Gold Nanocages: A Multifunctional Platform for Nanomedicine", Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2010.
- 252 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Materials Science and Engineering and Department of Bioengineering, Iowa State University, Ames, IA, November 2010.
- 251 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemical Engineering, University of Florida, Gainesville, FL, November 2010.
- 250 "Putting Chemistry to Work for Nanocrystal Synthesis", Department of Chemistry, Indiana University, Bloomington, IN, November 2010
- 249 "Putting Electrospun Nanofibers to Work for Biomedical Research", 2010 International Symposium on Nature-Inspired Technology, Seoul National University, Seoul, Korea, October 2010
- 248 "Putting Chemistry to Work for Nano and Biomedical Research", National Meeting of Korean Chemical Society, Daegu, Korea, October 2010
- 247 "Following Your Curiosity, Intuition, and Good Luck into Different Research Areas", Pioneer-NanoSeoul Forum, Seoul, Korea, October 2010
- 246 "Putting Chemistry to Work for Nanocrystal Synthesis", Department of Chemistry, Rice University, Houston, TX, October 2010

- 245 "Gold Nanocages: A New Platform for Biomedical Applications", Department of Chemical and Biomolecular Engineering, Rice University, Houston, TX, October 2010.
- 244 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, Texas Christian University, Ft. Worth, TX, October 2010.
- 243 "Putting Nanocrystal Synthesis under Control", Center for Nano and Molecular Science and Technology, University of Texas, Austin, TX, September 2010.
- 242 "Design and Synthesis of Bimetallic Nanocrystals for Catalytic Applications", Catalysis Research Center, Hokkaido University, Sapporo, Japan, September 2010.
- 241 "Nanocrystal Synthesis: Past, Present and Future", International Conference on Nanoscopic Colloid and Surface Science, Chiba, Japan, September 2010 (plenary lecture).
- 240 "Colloidal Nanocrystals: Past, Present and Future", Department of Chemistry, Fudan University, Shanghai, China, September 2010.
- 239 "Putting Chemistry to Work for Nano and Biomedical Research", Institute of Advanced Materials and Nanomedicine, Tongji University, Shanghai, China, September 2010.
- 238 "Novel Silver Nanostructures for SERS Applications", the 18th International Vacuum Congress, Beijing, China, September 2010.
- 237 "Gold Nanocages: A New Platform for Cancer Diagnosis and Treatment", Gordon Research Conference on Lasers in Medicine and Biology, Holderness, NH, July 2010.
- 236 "Gold Nanocages for Controlled Release with Near-Infrared Light", the 37th Annual Meeting & Exposition of the Controlled Release Society (CRS), Portland, OR, July 2010.
- 235 "Etching and Growth: An Intertwined Pathway to Nanocrystals with Different Shapes", Gordon Research Conference on Noble Metal Nanoparticles, South Hadley, MA, June 2010.
- 234 "Nanocrystal Synthesis: Past, Present and Future", International Symposium on Nucleation and Growth of Crystals: Structures, Functions and Applications, Shandong University, Jinan, China, June 2010.
- 233 "Nanocrystal Synthesis: Past, Present and Future", the 125th Anniversary Symposium, Yonsei University, Seoul, Korea, June 2010.
- 232 "Nanomaterials, Synthesis, Manufacturing, and Applications", Samsung Advanced Institute of Technology (SAIT), Seoul, Korea, June 2010.
- 231 "Seed-Mediated Synthesis for Nanocrystal Manufacturing", US-Sino Nano Workshop, Suzhou, China, June 2010.
- 230 "Shape-Controlled Synthesis of Metal Nanocrystals", Department of Energy Engineering, Hanyang University, Seoul, Korea, June 2010.
- 229 "Shape-Controlled Synthesis of Metal Nanocrystals", Department of Chemistry and Nano Science, Ehwa Womans University, Seoul, Korea, May 2010.
- 228 "Metal Nanocrystals: From Synthesis to Manufacturing and Applications", Center for Nanoscale Science and Technology (CNST) Annual Nanotechnology Workshop, University of Illinois at Urbana Champaign, May 2010.
- 227 "Putting Nanomaterials to Work for Biomedical Research", Department of Chemistry, University of Maryland at Baltimore County, MD, May 2010.
- 226 "Putting Nanomaterials to Work for Biomedical Research", Department of Biomedical Engineering, Purdue University, West Lafayette, IN, May 2010.
- 225 "Engineering the Plasmonic Properties of Nanostructures for Various Applications", Applied Physics Lecture, Washington University, St. Louis, MO, April 2010.
- 224 "Putting Nanomaterials to Work for Biomedical Research", Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor, MI, April 2010.
- 223 "Nanochemistry: Where Are We Now?", California NanoSystems Institute (CNSI), University of California, Los Angeles, CA, April 2010.
- 222 "Gold Nanocages: A Multifunctional Platform for Biomedical Applications", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2010.
- 221 "Controlling the Nucleation and Growth of Bimetallic Nanostructures", Division of Polymeric Materials: Science and Engineering, American Chemical Society (ACS) Spring Meeting, San Francisco, CA, March 2010.
- 220 "Putting Nanomaterials to Work for Biomedical Research", Department of Chemistry, Brandeis University, Waltham, MA, March 2010.
- 219 "Putting Nanomaterials to Work for Biomedical Research", the 2010 Annual Conference of Institute of

Biological Engineering (IBE), Cambridge, MA, March 2010.

- 218 "Engineering the Optical Properties of Gold Nanocages for Biomedical Applications", IEEE INEC 2010, Hong Kong, January 2010.

2009

- 217 "Gold Nanocages: A New Platform for Cancer Diagnosis and Treatment", Marilyn Fixman Clinical Cancer Conference, Siteman Cancer Center, Washington University Medical School, St. Louis, December 2009.
- 216 "Metallic Nanowires: Synthesis and Applications", the Third International Conference on One-Dimensional Nanomaterials, Atlanta, GA, December 2009.
- 215 "Nanowires for Electronic and Photonic Applications", Samsung Advanced Institute of Technology (SAIT), Seoul, Korea, December 2009.
- 214 "Shape-Controlled Synthesis of Metal Nanocrystals", LG Chem, Daejeon, Korea, December, 2009.
- 213 "Putting Electrospun Nanofibers to Work for Biomedical Research", Korea Research Institute of Chemical Technology (KRICT), Daejeon, Korea, December 2009.
- 212 "Shape-Controlled Synthesis of Metal Nanocrystals", Korea Basic Science Institute (KBSI), Daejeon, Korea, December 2009.
- 211 "Putting Nanomaterials to Work for Biomedical Research", Department of Chemistry, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, December 2009.
- 210 "Electrospun Nanofibers: A New Platform for Neural Tissue Engineering", International Workshop on Emerging Materials & Active Polymer Patterning, Gyeongju, Korea 2009.
- 209 "Putting Nanostructures to Work for Biomedical Research", Department of Chemistry, Yonsei University, Seoul, Korea, November 2009.
- 208 "Gold Nanocages: A New Platform for Biomedical Applications", Asia Communications and Photonics Conference and Exhibit, Shanghai, China, November 2009.
- 207 "Maneuvering the Plasmonic Properties of Silver Nanocrystals", Asia Communications and Photonics Conference and Exhibit, Shanghai, China, November 2009.
- 206 "Shape-Controlled Synthesis of Metal Nanostructures", School of Chemical and Biomolecular Engineering, Southeast University, Nanjing, China, November 2009.
- 205 "Controlling the Synthesis and Assembly of Nanocrystals", The 2nd Asian Conference on Coordination Chemistry, Nanjing, China, November 2009.
- 204 "Shape-Controlled Synthesis of Metal Nanostructures", Department of Materials Science and Engineering, Yonsei University, Seoul, Korea, October 2009.
- 203 "Putting Nanomaterials to Work for Biomedical Research", Biophysics Evening, Department of Biochemistry and Molecular Biophysics, Washington University School of Medicine, MO, October 2009.
- 202 "Gold Nanocages: A New Platform for Biomedical Applications", the '09 Federation of Analytical Chemistry and Spectroscopy Societies (FACSS) Conference, Louisville, KY, October 2009.
- 201 "Nanomaterials at Work in various Applications", the First symposium on Nanotechnology, National Nanotechnology Infrastructure Network (NNIN), Washington University in St. Louis, MO, September 2009.
- 200 "Putting Nanomaterials to Work for Biomedical Research", Department of Chemical and Biomolecular Engineering, University of Illinois at Urbana Champaign, IL, September 2009.
- 199 "Dimers of Silver Nanospheres or Nanocubes for SERS Applications", Division of Colloidal and Surface Science, American Chemical Society (ACS) Fall Meeting, Washington D.C., August 2009.
- 198 "Gold Nanocages: A New Platform for Biomedical Applications", Division of Physical Chemistry, American Chemical Society (ACS) Fall Meeting, Washington D.C., August 2009.
- 197 "Hierarchically Porous Scaffolds for Tissue Engineering Applications", Division of Polymeric Materials Science and Engineering, American Chemical Society (ACS) Fall Meeting, Washington D.C., August 2009.
- 196 "Nanochemistry: Where Are We Now?", National Center for Nano Science and Nanotechnology, Beijing, China, July 2009.
- 195 "Controlling the Assembly of Atoms into Nanocrystals with Different Shapes", Dalian Institute of Chemical Physics, Dalian, China, July 2009.
- 194 "Design and Synthesis of Novel Catalysts for Fuel Cell Applications", US-Sino Nano Workshop, Hefei, China, July 2009.
- 193 "Bridging the Gap between Atoms and Nanocrystals", College of Engineering, National Tsing Hua

- University, Taiwan, May 2009.
- 192 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemical Engineering, National Tsing Hua University, Taiwan, May 2009.
- 191 "Putting Electrospun Nanofibers to Work for Biomedical Research", 2009 International Advanced Drug Delivery Symposium, Taiwan, May 2009 (keynote lecture).
- 190 "Putting Nanomaterials to Work for Biomedical Research", The 2nd International Symposium on Advanced Particles (ISAP2009), Yokohama, Japan, April, 2009 (plenary lecture).
- 189 "Nanomaterials: A New Platform for Molecular Imaging and Therapy", Washington University Imaging Sciences Pathway Program, St. Louis, MO, April 2009.
- 188 "Synthesis and Self-Assembly of Silver Nanocrystals", Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2009.
- 187 "Some New Developments in the Synthesis of Gold Nanostructures", Division of Colloidal and Surface Science, American Chemical Society (ACS) Spring Meeting, Salt Lake City, UT, March 2009.
- 186 "Shape-Controlled Synthesis of Palladium Nanocrystals in Aqueous Solutions", Division of Industrial and Engineering Chemistry, American Chemical Society (ACS) Spring Meeting, Salt Lake City, UT, March 2009.
- 185 "Controlling the Synthesis and Assembly of Nanoscale Building Blocks", Division of Physical Chemistry, American Chemical Society (ACS) Spring Meeting, Salt Lake City, UT, March 2009.
- 184 "Electrospun Nanofibers for Neural and Tissue Engineering", American Physical Society (APS) Spring Meeting, Pittsburgh, PA, March 2009.
- 183 "Electrospun Nanofibers for Repairing the Body", Department of Orthopaedic Surgery, Washington University, St. Louis, MO, January 2009.

2008

- 182 "Putting Electrospun Nanofibers to Work for Biomedical Research", Department of Chemistry, Hong Kong University of Science and Technology, Hong Kong, December 2008.
- 181 "Nanomaterial Synthesis in the Context of Energy, Environment, and Sustainability", I-CARES, Washington University, St. Louis, MO, November 2008.
- 180 "Putting Nanomaterials to Work for Biomedical Research", Department of Biomedical Engineering, Johns Hopkins University, Baltimore, MD, November 2008.
- 179 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, Duke University, Durham, NC, October 2008.
- 178 "Controlling the Assembly of Atoms into Nanocrystals with Different Shapes", Department of Chemistry, University of North Carolina, Chapel Hill, NC, October 2008.
- 177 "Nanochemistry: Where Are We Now?", Symposium in Honoring Prof. Ozin on the Occasion of his 65th Birthday, Department of Chemistry, University of Toronto, Toronto, Canada, October 2008.
- 176 "Putting Electrospun Nanofibers to Work for Biomedical Research", Fiber Society's Fall Conference, Montreal, Canada, October 2008.
- 175 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Biomedical Engineering, Washington University in St. Louis, September 2008.
- 174 "Controlling the Evolution of Atoms to Nanocrystals with Different Shapes", Hefei National Laboratory for Physical Science at the Microscale, Hefei, Anhui, China, July 2008.
- 173 "Tailoring Surface Plasmonic Properties of Metal Nanostructures", The Key Laboratory of Quantum Information, Chinese Academy of Sciences, Hefei, Anhui, July 2008.
- 172 "Shape-Controlled Synthesis of Nanocrystals: The Case of Palladium", the 7th International Symposium for Chinese Inorganic Chemists, Shanghai, July 2008.
- 171 "Engineering the Optical Properties of Gold Nanostructures for Biomedical Applications", the American Chemical Society (ACS) 82nd Colloidal & Surface Science Symposium, Raleigh, NC, June 2008.
- 170 "Controlling the Shapes of Colloidal Nanocrystals", the American Chemical Society (ACS) 82nd Colloidal & Surface Science Symposium, Raleigh, NC, June 2008.
- 169 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, University of Toronto, Toronto, Canada, April 2008.
- 168 "Shape-Controlled Synthesis of Nanocrystals: The Case of Palladium", the American Chemical Society (ACS) National Meeting, New Orleans, LA, April 2008.

- 167 "Putting Chemistry to Work for Nanomaterial Synthesis", the Materials Research Society (MRS) Spring Meeting, San Francisco, CA, March 2008.
- 166 "Shape-Controlled Synthesis of Nanocrystals", the Materials Research Society (MRS) Spring Meeting, San Francisco, CA, March 2008.
- 165 "Putting Nanostructures to Work for Biomedical Research", Nanoscale Science and Engineering, University of California, Berkeley, CA, March 2008.
- 164 "Gold Nanocages: A New Class of Nanostructures for Photothermal and Photoacoustic Applications", Gordon Research Conference on "Photoacoustic and Photothermal Phenomena: Photoinduced Processes and Applications", Ventura, CA, February 2008.
- 163 "Putting Chemistry to Work for Nano and Biomedical Research", Department of Chemistry, University of California, Irvine, CA, February 2008.
- 162 "Shape-Controlled Synthesis of Nanocrystals", Center for Nanoscience, University of Missouri at St. Louis, MO, January 2008.

2007

- 161 "Putting Nanostructures to Work for Biomedical Research", Nanyang Technological University, Singapore, December 2007.
- 160 "Shape-Controlled Synthesis of Nanocrystals", Singapore International Chemical Conference 5 (SICC-5), Singapore, December 2007 (plenary talk).
- 159 "Putting Nanostructures to Work for Biomedical Research", International Institute for Nanotechnology, Northwestern University, Chicago, IL, December 2007.
- 158 "Putting Nanostructures to Work for Biomedical Research", International Institute for Nanotechnology, University of Rochester, Rochester, NY, December 2007.
- 157 "Self-Assembly Approaches to Three-Dimensionally Structured Nanomaterials", the Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2007.
- 156 "Shape-Controlled Synthesis of Nanocrystals", Department of Chemistry, Columbia University, New York, NY, November 2007.
- 155 "Shape-Controlled Synthesis of Nanocrystals", Center for Nanotechnology, University of Texas, Dallas, TX, September 2007.
- 154 "Putting Nanostructures to Work for Biomedical Research", the Annual NIH Director's Pioneer Award Symposium, Bethesda, MD, September 2007.
- 153 "Shape-Controlled Synthesis of Nanocrystals: Simple Chemistry Meets Complex Physics", Department of Chemistry, Tsinghua University, Beijing, China, September 2007.
- 152 "Shape-Controlled Synthesis of Nanocrystals", Department of Chemistry, Nankai University, Tianjin, China, September 2007.
- 151 "Nanostructured Materials Enabled by Electrospinning", School of Engineering, Tianjin University, Tianjin, China, September 2007.
- 150 "Tailoring the Optical Properties of Gold Nanocages for Biomedical Applications", the Materials Today Asia Meeting, Beijing, China, September 2007.
- 149 "Tailoring the Optical Properties of Gold Nanocages for Biomedical Applications", International Conference on Molecular Photonics, San Juan Islands, WA, August 2007.
- 148 "Some New Developments in the Fabrication of Macroporous Materials", the American Chemical Society (ACS) Fall National Meeting, Boston, MA, August 2007.
- 147 "Tailoring the Optical Properties of Gold Nanocages for Biomedical Applications", the American Chemical Society (ACS) Fall National Meeting, Boston, MA, August 2007.
- 146 "Nanostructured Materials Enabled by Electrospinning", School of Engineering, National University of Singapore, Singapore, July 2007.
- 145 Inorganic Chemistry Seminar, Department of Chemistry, Washington University, St. Louis, MO, April 2007.
- 144 Annual Distinguished Lecture Series, Division of Polymers, the National Institute of Standards and Technology, Gaithersburg, MD, April 2007.
- 143 Physical Chemistry Seminar, Department of Chemistry, University of California, Riverside, CA, April 2007.
- 142 "Putting Nanostructures to Work for Biomedical Research", Nanobiotechnology Seminar Series, Stanford University, Stanford, CA, April 2007.

- 141 "Tailoring the Optical Properties of Gold Nanocages for Biomedical Applications", the Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2007.
- 140 Seminar, Department of Materials Science and Engineering, University of Illinois, Urbana, IL, April 2007.
- 139 "Putting Nanostructures to Work for Biomedical Research", Center for Materials Innovation, Washington University, St. Louis, MO, March 2007.
- 138 "Phase Separation: An Effective Approach to Nanostructured Materials", the American Chemical Society (ACS) Spring National Meeting, Chicago, IL, March 2007.
- 137 "Colloidal Molecules?", the American Chemical Society (ACS) Spring National Meeting, Chicago, IL, March 2007.
- 136 Seminar, Department of Chemical and Biomolecular Engineering, University of Wisconsin, Madison, WI, March 2007.
- 135 Inorganic Chemistry Seminar, Department of Chemistry and Biochemistry, University of California, Los Angeles, CA, March 2007.
- 134 "Shape-Controlled Synthesis of Nanocrystals: Simple Chemistry Meets Complex Physics", Plenary Lecture, Undergraduate Nanotechnology Conference (UNC), Toronto, Canada, March 2007.
- 133 "Putting Nanostructures to Work for Biomedical Research", School of Life Sciences, University of Science and Technology of China (USTC), Hefei, China, January 2007.
- 132 "Nanostructured Materials Enabled by Electrospinning", Department of Macromolecular Science, Fudan University, Shanghai, China, January 2007.

2006

- 131 "Some New Developments in Colloidal Synthesis and Assembly", Institute of Micro- and Nanotechnology, Jiaotong University, Shanghai, December 2006.
- 130 "Nanostructured Materials Enabled by Electrospinning", the Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2006.
- 129 Physical Chemistry Seminar, Department of Chemistry, Princeton University, Princeton, NJ, November, 2006.
- 128 "Nanostructured Materials by Electrospinning", Conference on Chemical Nanotechnology, Frankfurt, Germany, October 2006.
- 127 Institute Nanotechnology Seminar Series, Stevens Institute of Technology, Hoboken, NJ, September, 2006.
- 126 Centennial Lecture, Department of Engineering Mechanics, University of Nebraska, Lincoln, NE, September 2006.
- 125 Chemistry Colloquium, Department of Chemistry, University of Nebraska, Lincoln, NE, September 2006.
- 124 "Shape-Controlled Synthesis of Metal Nanostructures", the American Chemical Society (ACS) Northwest Regional Meeting (NORM), Reno, NV, June 2006.
- 123 "Metal Nanostructures with Controllable Shapes", Cambrios Inc., Mountain View, CA, June 2006.
- 122 Chemistry Colloquium, Department of Chemistry, Nanyang Technological University, Singapore, June 2006.
- 121 "Gold Nanocages: Engineering the Optical Properties for Biomedical Applications", Institute of Bioengineering and Nanotechnology, Singapore, June 2006.
- 120 "Shape-Controlled Synthesis of Metal Nanostructures", School of Materials Science and Engineering, Shanghai Jiaotong University, Shanghai, China, June 2006.
- 119 "Nanostructured Materials by Electrospinning", PPG Research Center, Pittsburgh, May 2006.
- 118 "Chemical Approaches to Nanomanufacturing", the Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2006.
- 117 Physical Chemistry Seminar, Department of Chemistry, University of Texas A&M, College Station, TX, March 2006.
- 116 "Tailoring the Plasmonic Properties of Metal Nanostructures for Biomedical Applications", the American Physical Society (APS) Spring Meeting, Baltimore, MD, March 2006.
- 115 Spring Colloquium, Department of Chemistry, University of Syracuse, Syracuse, NY, March 2006.
- 114 Chemistry Colloquium, Department of Chemistry, Pennsylvania State University, University Park, PA, February 2006.
- 113 Inorganic Chemistry Seminar, Department of Chemistry, University of Pennsylvania, Philadelphia, PA, February 2006.
- 112 Materials Science Seminar, Department of Chemical Engineering and Materials Science, University of

Minnesota, Minneapolis, MN, February 2006.

- 111 "Ceramic Processing Science: Perspectives from a Chemist", the 9th International Ceramic Processing Science Symposium, Plenary Lecture, Coral Springs, FL, January 2006.
- 110 "Exploration of New Research Areas", Department of Chemistry, Fudan University, Shanghai, China, January 2006.

2005

- 109 "Shape-Controlled Synthesis of Metal Nanostructures", the 5th PacificChem Meeting, Honolulu, HI, December 2005.
- 108 "The Roles of Capping Agents in Shape-Controlled Synthesis of Metal Nanostructures", the Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2005.
- 107 "Some New Developments in Colloidal Self-Assembly", the Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2005.
- 106 "Nanostructures of Noble Metals: Tailoring their Surface Plasmonic Properties through Shape Control", the Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2005.
- 105 Materials Chemistry Seminar, Department of Chemistry, Rutgers University, New Brunswick, NJ, November 2005.
- 104 "Shape-Controlled Synthesis of Nanostructures: Simple Chemistry Meets Complex Physics", 2005 Leo Hendrik Baekeland Award Symposium, Murray Hill, NJ, November 2005.
- 103 "New Methods and Materials for Micro- and Nanofabrication", Boston Scientific, Bellevue, WA, October 2005.
- 102 Inorganic Chemistry Seminar", Department of Chemistry, Brown University, Providence, RI, September 2005.
- 101 "Controlling the Synthesis of Metal Nanostructures", the David and Lucile Packard Foundation Annual Meeting, Monterey, CA, September 2005.
- 100 "Shape-Controlled Synthesis of Metallic Nanostructures", Gordon Research Conference on Clusters, Nanocrystals and Nanostructures, New London, CT, August 2005.
- 99 "Shape-Controlled Synthesis of Metal Nanostructures", Sandia National Laboratories, Albuquerque, NM, July 2005.
- 98 "Soft and Imprint Lithography", the 3rd ASME Nano Training Bootcamp, Washington, DC, July 2005.
- 97 "Building Complex and Functional Structures from Spherical Colloids", Gordon Research Conference on Polymer Colloids, Tilton, NH, July 2005.
- 96 "Shape-Controlled Synthesis of Metal Nanostructures", Institute of Physics, the Chinese Academy of Sciences, Beijing, China, June 2005.
- 95 "Shape-Controlled Synthesis of Nanostructured Materials", ChinaNANO 2005, Beijing, China, June 2005.
- 94 "Controlling the Structure, Alignment, and Assembly of Electrospun Nanofibers", Philip Morris USA Workshop on Droplet Engineering, Williamsburg, VA, May 2005.
- 93 "Metal Nanostructures with Controllable Shapes and Their Applications", the Microscale Life Science Center (MLSC), University of Washington, May 2005.
- 92 Materials Chemistry Seminar, Department of Materials Science and Engineering, Stanford University, May 2005.
- 91 "Shape-Controlled Synthesis of Nanostructured Materials", the Woodward Lecture Series in the Chemical Sciences, Department of Chemistry and Chemical Biology, Harvard University, April 2005.
- 90 "Shape-Controlled Synthesis of Metal Nanostructures", Department of Chemistry, University of Toronto, Canada, April 2005.
- 89 "Some New Developments in the Synthesis and Assembly of Spherical Colloids", the Materials Research Society (MRS) Spring Meeting, San Francisco, CA, March 2005.
- 88 "Shape-Controlled Synthesis of Metal Nanostructures", the Materials Research Society (MRS) Spring Meeting, San Francisco, CA, March 2005.
- 87 "Shape-Controlled Synthesis of Nanostructured Materials", the GE Global Research Center, Niskayuna, NY, March 2005.
- 86 Materials Chemistry Seminar, Department of Chemistry, University of Victoria, Canada, March 2005.
- 85 "New Building Blocks for Nanocomposites", the American Chemical Society (ACS) Spring Meeting, San Diego, CA, March 2005.

- 84 "Tailoring the Surface Plasmonic Properties of Metals by Shape Control", the American Chemical Society (ACS) Spring Meeting, San Diego, CA, March 2005.

2004

- 83 "Shape-Controlled Synthesis of Nanostructured Materials", the 5th International Symposium for Chinese Inorganic Chemists, Hong Kong, December 2004.
- 82 "Shape-Controlled Synthesis of Metallic Nanostructures", the Materials Research Society (MRS) Fall Meeting, Boston, MA, December 2004.
- 81 Materials Chemistry Seminar, Department of Materials Science and Engineering, University of Pennsylvania, Philadelphia, PA, September 2004.
- 80 "Shape-Controlled Synthesis of Metallic Nanostructures", the Society of Photo-Optical Instrumentation Engineers (SPIE) Annual Meeting, Denver, CO, August 2004.
- 79 "Mechanistic Studies on the Replacement Reaction between Silver Nanostructures and Chloroauric Acid", the Society of Photo-Optical Instrumentation Engineers (SPIE) Annual Meeting, Denver, CO, August 2004.
- 78 "Shape-Controlled Synthesis of Nanostructured Materials", the 3rd German-American Frontiers of Chemistry Symposium (GAFOC III), Munich, Germany, July 2004.
- 77 "Shape-Controlled Synthesis and Self-Assembly of Nanostructured Materials", the ACS-PRF Summer School on Nanomaterials, East Michigan University, MI, June 2004.
- 76 "Synthesis and Self-Assembly of Nanostructured Materials", the Foundations of Nanoscience, Snowbird, UT, April 2004.
- 75 Materials Science Colloquium, Department of Materials Science and Engineering, University of Illinois, Urbana Champaign, IL, April 2004.
- 74 "Shape-Controlled Synthesis of Nanostructured Materials", the American Chemical Society (ACS) National Meeting, Anaheim, CA, April 2004.
- 73 Physical Chemistry Seminar, Department of Chemistry, Northwestern University, Evanston, IL, February 2004.
- 72 Inorganic Chemistry Seminar, Department of Chemistry, University of California, Davis, CA, February 2004.
- 71 Materials Science Seminar, Department of Chemistry, University of Simon Fraser, Burnaby, British Columbia, Canada, February 2004.
- 70 Materials Chemistry Colloquium, Department of Chemistry, University of Chicago, Chicago, IL, February 2004.
- 69 Materials Chemistry Seminar, Department of Chemistry, Fudan University, Shanghai, China, January 2004.
- 68 Materials Chemistry Seminar, Department of Chemistry, University of Science and Technology of Hong Kong, Hong Kong, January 2004.

2003

- 67 Materials Chemistry Seminar, Department of Chemistry, University of Science and Technology of Hong Kong, Hong Kong, December 2003.
- 66 Materials Science Seminar, Department of Chemistry, University of New Orleans, New Orleans, LA, December 2003.
- 65 "Nanowires by Solution-Phase Methods", the Materials Research Society Fall Meeting, Boston, MA, December 2003.
- 64 Materials Science Seminar, Department of Materials, ETH Zurich, November 2003
- 63 Materials Chemistry Seminar, Brockhouse Institute for Materials, University of McMaster, Hamilton, Ontario, Canada, November 2003.
- 62 Materials Chemistry Seminar, Department of Chemistry, University of Toronto, Toronto, Ontario, Canada, November 2003.
- 61 Materials Chemistry Seminar, Department of Chemical Engineering, University of Rochester, Rochester, NY, November 2003.
- 60 "Shape-Controlled Synthesis of Nanostructured Materials", the International Conference on Nanomaterials, Xiamen, Fujian, China, October 2003.
- 59 "Self-Assembled Photonic Crystals", the 8th IUMRS International Conference on Advanced Materials, Yokohama, Japan, October 2003.
- 58 "Nanowires by Soft Solution-Phase Methods", the 8th IUMRS International Conference on Advanced Materials, Yokohama, Japan, October 2003.

- 57 "Self-Assembled Photonic Devices", the 2003 Frontiers in Optics/Laser Science XIX, American Optical Society, Tucson, AZ, October 2003.
- 56 "Shape-Controlled Synthesis of Nanostructures", the Alvin L. Kviram Symposium on the Electrical, Optical, and Magnetic Properties of Organic and Hybrid Materials, University of Washington, Seattle, WA, June 2003.
- 55 "Tutorial Introduction to Nanostructured Materials", the ACS/PRF Summer School on Photonics, University of Washington, Seattle, WA, June 2003.
- 54 "Shape-controlled Synthesis of Nanostructures", the 77th ACS Colloid and Surface Science Symposium, Atlanta, GA, June 2003.
- 53 Physical Chemistry Seminar, Department of Chemistry, University of British Columbia, Vancouver, British Columbia, Canada, March 2003.
- 52 Materials Science Seminar, Department of Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, MN, March 2003.

2002

- 51 "Self-Assembly Approaches to Photonic Devices", the Knowledge Foundation's International Conference on Photonic Nanostructures, San Diego, CA, October 2002.
- 50 Inorganic Chemistry Seminar, Department of Chemistry, University of California, Santa Barbara, CA, October 2002.
- 49 Physical Chemistry Seminar, Department of Chemistry, Stanford University, Palo Alto, CA, October 2002.
- 48 "Self-Assembly Approaches to Photonic Structures and Devices", the Society of Photo-Optical Instrumentation Engineers (SPIE) Annual Meeting, Seattle, WA, July 2002.
- 47 "The Chemistry and Art of Synthesizing Nanowires", the Society of Photo-Optical Instrumentation Engineers (SPIE) Annual Meeting, Seattle, WA, July 2002.
- 46 "The Chemistry and Art of Generating 1D Nanostructures", the International Conference on Synthetic Metals (ICSM), Shanghai, China, June 2002.
- 45 Physical Chemistry Seminar, Department of Chemistry, Duke University, Durham, NC, April 2002.
- 44 Inorganic Chemistry Seminar, Department of Chemistry, University of South Carolina, Columbia, SC, April 2002.
- 43 Materials Science Seminar, Department of Chemical Engineering, North Carolina State University, Raleigh, NC, April 2002.
- 42 Inorganic Chemistry Seminar, Department of Chemistry, University of North Carolina, Chapel Hill, NC, April 2002.
- 41 Physical Chemistry Seminar, Department of Chemistry, University of Reno, March 2002
- 40 "Photonic Bandgap Crystals by Self-Assembly", the American Chemical Society (ACS) National Meeting, Orlando, FL, April 2002.
- 39 "Soft Solution Approaches to One-Dimensional Nanostructures", the Materials Research Society (MRS) Spring Meeting, San Francisco, CA, April 2002.

2001

- 38 Materials Chemistry Seminar, Department of Chemistry, University of Cambridge, London, UK, December 2001.
- 37 "Complex Structures Self-Assembled from Colloidal Systems", the Royal Society of Chemistry (RSC), London, UK, December 2001.
- 36 "Self-Assembly Approaches to the Fabrication of Photonic Devices", the Materials Research Society (MRS) Fall Meeting, Boston, MA, November 2001.
- 35 "Self-Assembly Approaches to Photonic Structures and Devices", the Knowledge Foundation's International Conference on Photonic Nanostructures, San Diego, CA, October 2001.
- 34 Inorganic Chemistry Seminar, Department of Chemistry, University of California, Berkeley, CA, October 2001.
- 33 Materials Chemistry Seminar, Department of Chemistry, University of Washington, Seattle, WA, October 2001.
- 32 "Self-Assembly Approaches to Nanostructures and Nanomaterials", the DuPont Chesapeake Conference on Nanotechnology, Chesapeake Farm, MD, August 2001.
- 31 "Synthesis and Characterization of One-Dimensional Nanostructures", the International Workshop on

Nanoscience and Nanotechnology, Beijing, China, July 2001.

- 30 Materials Chemistry Seminar, College of Chemistry, University of Science and Technology of China, Hefei, Anhui, China, July 2001.
- 29 "Chemical Approaches to One-Dimensional Nanostructures", the American Chemical Society Northwestern Regional Meeting (NORM), Seattle, WA, June 2001.
- 28 "Self-Assembly Approaches to Nanostructured Materials and Photonic Devices", Los Alamos National Laboratory, Los Alamos, NM, June 2001.
- 27 "Mesoscale Self-Assembly: A Tutorial Review", the American Chemical Society (ACS) National Meeting, San Diego, CA, April 2001.
- 26 Physical Chemistry Seminar, Department of Chemistry, University of Washington, Seattle, WA, January, 2001.
- 25 "Fabrication of Complex Structures with Monodispersed Colloids as the Building Blocks", Nanoparticles 2001, Orlando, FL, February 2001.

2000

- 24 "Self-Assembly Approaches to Photonic Structures and Devices", the Defense Scientific Research Council (DSRC) and Defense Advanced Research Projects Agency (DARPA) Workshop on Self-Assembly in Manufacturing, Washington D.C., December 2000.
- 23 Colloidal Materials Seminar, Department of Chemical Engineering, University of Washington, Seattle, WA, December 2000.
- 22 Materials Chemistry Seminar, College of Chemistry, University of Science and Technology of China, Hefei, Anhui, China, September 2000.
- 21 Inorganic Chemistry Seminar, Department of Chemistry, Tsinghua University, Beijing, China, September 2000.
- 20 "Photonic Properties of Thin Films Patterned with Three-Dimensionally Periodic Structures", the American Chemical Society (ACS) National Meeting, Washington D.C., August 2000.
- 19 Physical Chemistry Seminar, Department of Chemistry, Western Washington University, Bellingham, WA, January 2000.
- 18 Inorganic Chemistry Seminar, Department of Chemistry, Fudan University, Shanghai, China, January 2000.

1999

- 17 Inorganic Chemistry Seminar, Department of Chemistry, Nanjing University, Nanjing, Jiangsu, China, December 1999.
- 16 Materials Chemistry Seminar, Department of Bioengineering and Bioelectronics, Southeast University, Nanjing, Jiangsu, China, December 1999.
- 15 Materials Chemistry Seminar, Department of Chemistry, Nanjing Normal University, Nanjing, Jiangsu, China, December 1999.
- 14 Materials Chemistry Seminar, College of Chemistry, University of Science and Technology of China, Hefei, Anhui, China, December 1999.
- 13 Materials Chemistry Seminar, College of Chemistry, Beijing University, Beijing, China, December 1999.
- 12 Inorganic Chemistry Seminar, Department of Chemistry, Tsinghua University, Beijing, China, December 1999.
- 11 Materials Chemistry Seminar, Department of Bioengineering, Tsinghua University, Beijing, China, December 1999.
- 10 "Fabrication and Characterization of Three-Dimensional Photonic Crystals", the Air Force Office of Scientific Research (AFOSR) Workshop on Nanostructured Materials, Dayton, OH, October 1999.
- 9 Physical Chemistry Seminar, Department of Chemistry, University of California, Santa Cruz, CA, October 1999.
- 8 Physical Chemistry Seminar, Department of Chemistry, University of Minnesota, Minneapolis, MN, October 1999.
- 7 "Organic Molecular Wires Threaded by Insulating Tubules", the 7th National Science Foundation (NSF) Materials Chemistry Workshop, Minneapolis, MN, October 1999.
- 6 "Self-Assembly and Its Applications in Nanofabrication", the 73rd Colloid and Surface Science Symposium of the American Chemical Society (ACS), Boston, MA, June 1999 (plenary lecture).

1998

- 5 Materials Science Seminar, Department of Materials Science and Engineering, University of Washington,

Seattle, WA, October 1998.

- 4 Physical Chemistry Seminar, Department of Chemistry, University of Washington, Seattle, WA, March 1998.

1997

- 3 "Controlling the Orientation of Inorganic Functional Groups in the Solid State", the 5th National Science Foundation (NSF) Materials Chemistry Workshop, Pasadena, CA, October 1997.
- 2 "Soft Lithography", the American Chemical Society (ACS) National Fall Meeting, ICI Student Award Symposium in Applied Polymer Science, Las Vegas, NV, September 1997.
- 1 "Soft Lithography", the Summer Institute of the Center for Practical Analytical Chemistry (CPAC), University of Washington, Seattle, WA, July 1997.

BIBLIOGRAPHY

Publications in Peer-Reviewed Journals

Articles with citation data (723), sum of the times cited (140,233), and h-index (189). For details, please visit <https://publons.com/researcher/2785247/younan-xia/>

2019

- 765 Catalytic system based on sub-2-nm Pt particles and its extraordinary activity and durability for oxygen reduction
Cheng, H.; Cao, Z.; Chen, Z.; Zhao, M.; Xie, M.; Lyu, Z.; Zhu, Z.; Chi, M. and Xia, Y. Nano Letters 2019, 19, in press.
- 764 Pd@Rh core-shell nanocrystals with well-defined facets and their enhanced catalytic performance towards CO oxidation
Choi, S.-I.; Young, A.; Lee, S. J.; Ma, C.; Luo, M.; Chi, M.; Tsung, C. K. and Xia, Y. Nanoscale Horizons, 2019, in press.
- 763 Facile synthesis and characterization of Pd@Ir_nL (n=1-4) core-shell nanocubes for highly efficient oxygen evolution in acidic media
Zhu, J.; Lyu, Z.; Chen, Z.; Xie, M.; Chi, M.; Jin, W. and Xia, Y. Chemistry of Materials, 2019, in press.
- 762 Synthesis of CaO₂ nanocrystals and their spherical aggregates with uniform sizes for use as a biodegradable bacteriostatic agent
Shen, S.; Mamat, M.; Zhang, S.; Cao, J.; Hood, Z. H.; Figueroa-Cosme, L. and Xia, Y. Small 2019, in press.
- 761 Continuous production of water-soluble nanocrystals through anti-solvent precipitation in a fluidic device
Chen, Q.; Hood, Z. D.; Qiu, J.; Guan, B. and Xia, Y. ChemNanoMat 2019, 5, in press.
- 760 Encapsulation of a phase-change material in nanocapsules with a well-defined hole in the wall for the controlled release of drugs
Qiu, J.; Huo, D.; Xue, J.; Zhu, G.; Liu, H. and Xia, Y. Angewandte Chemie International Edition 2019, 58, 10606-10611. (VIP article)
- 759 Ruthenium nanoframes in the face-centered cubic phase: Facile synthesis and their enhanced catalytic performance
Zhao, M.; Hood, Z.; Vara, M.; Gilroy, K.; Chi, M.; Xia, Y. ACS Nano 2019, 13, 7241-7251.
- 758 Electrospun nanofiber-based patches for the delivery of cardiac progenitor cells
Streeter, B.; Xue, J.; Xia, Y. and Davis, M. E. ACS Applied Materials and Interfaces 2019, 11, 18242-18253.
- 757 Ru octahedral nanocrystals with a face-centered cubic structure, {111} facets, thermal stability up to 400 °C and enhanced catalytic activity
Zhao, M.; Chen, Z.; Lyu, Z.; Hood, Z.; Xie, M.; Madeline, V.; Chi, M. and Xia, Y. Journal of the American Chemical Society 2019, 141, 7028-7036.
- 756 Seed-mediated growth of Au nanospheres into hexagonal stars and the emergence of hexagonal close-packed phase
Huo, D.; Cao, Z.; Li, J.; Tao, J. and Xia, Y. Nano Letters 2019, 19, 3115-3121.
- 755 Facile synthesis of Pt icosahedral nanocrystals with controllable sizes for the evaluation of size-dependent activity toward oxygen reduction
Zhao, M.; Holder, J.; Chen, Z.; Xie, M.; Cao, Z.; Chi, M. and Xia, Y. ChemCatChem 2019, 11, 2458-2463.

- 754 One-dimensional metal nanostructures: From colloidal syntheses to applications
Huo, D.; Kim, M. J.; Lyu, Z.; Shi, Y.; Wiley, B. and Xia, Y. *Chemical Reviews* 2019, 119, in press. (invited review article)
- 753 Iridium-based cubic nanocages with 1.1-nm thick-walls: A highly efficient and durable electrocatalyst for water oxidation in an acidic medium
Zhu, J.; Chen, Z.; Xie, M.; Lyu, Z.; Chi, M.; Mavrikakis, M.; Jin, W. and Xia, Y. *Angewandte Chemie International Edition* 2019, 58, 7244-7248. (hot paper, highlighted on the back cover)
- 752 Three-dimensional objects consisting of hierarchically assembled nanofibers with controlled alignment for regenerative medicine
Chen, S.; Wang, H.; McCarthy, A.; Yan, Z.; Kim, H.; Carlson, M.; Xia, Y. and Xie, J. *Nano Letters* 2019, 19, 2059-2065.
- 751 Electrospinning and electrospun nanofibers: Methods, materials, and applications
Xue, J.; Wu, T.; Dai, Y. and Xia, Y. *Chemical Reviews* 2019, 119, 5298-5415. (invited review article)
- 750 One-pot synthesis of Pd@Pt_{nL} core-shell icosahedral nanocrystals in high throughput through a quantitative analysis of the reduction kinetics
Lee, C.-T.; Wang, H.; Zhao, M.; Yang, T.-H.; Vara, M. and Xia, Y. *Chemistry: A European Journal* 2019, 25, 5322-5329.
- 749 Promoting the outgrowth of neurites on electrospun microfibers by functionalization with electrosprayed microparticles of fatty acids
Xue, J.; Wu, T.; Li, J.; Zhu, C. and Xia, Y. *Angewandte Chemie International Edition* 2019, 58, 3948-3951.
- 748 Continuous and scalable synthesis of Pt multipods with enhanced electrocatalytic activity toward oxygen reduction reaction
Chen, R.; Cao, Z.; Lyu, Z.; Xie, M.; Shi, Y. and Xia, Y. *ChemNanoMat* 2019, 5, 599-605.
- 747 Facile, one-pot synthesis of Pd@Pt_{1L} octahedra with enhanced activity and durability toward oxygen reduction
Zhou, M.; Wang, H.; Elnabawy, A.; Hood, Z.; Chi, M.; Xiao, P.; Zhang, Y.; Mavrikakis, M. and Xia, Y. *Chemistry of Materials* 2019, 31, 1370-1380. (It was highlighted on the cover)
- 746 Au@Cu core-shell nanocubes with controllable sizes in the range of 20-30 nm for applications in catalysis and plasmonics
Lyu, Z.; Xie, M.; Edgar, A.; Zhao, M.; Qiu, J.; Zhou, S. and Xia, Y. *ACS Applied Nano Materials* 2019, 2, 1533-1540. (It was highlighted on the cover)
- 745 In my element: Silver
Xia, Y. *Chemistry: A European Journal* 2019, 25, 4244. (invited editorial essay)
- 744 Photothermal transformation of Au-Ag nanocages under pulsed laser irradiation
Hood, Z. D.; Kubelick, K. P.; Gilroy, K. D.; Vanderlaan, D.; Yang, X.; Yang, M.; Chi, M.; Emelianov, S. Y. and Xia, Y. *Nanoscale* 2019, 11, 3013-3020.
- 743 Decahedral nanocrystals of noble metals: Synthesis, characterization, and application
Zhou, S.; Zhao, M.; Yang, T.-H. and Xia, Y. *Materials Today*, 2019, 22, 108-131. (invited review article)
- 742 Incorporation of gold nanocages into electrospun nanofibers for efficient water evaporation through photothermal heating
Wu, T.; Li, H.; Xie, M.; Shen, S.; Wang, W.; Mo, X. and Xia, Y. *Materials Today Energy* 2019, 12, 129-135.
- 741 Near-infrared-triggered release of Ca²⁺ ions for potential application in combination cancer therapy
Chen, Q.; Huo, D.; Cheng, H.; Lyu, Z.; Zhu, C.; Guan, B. and Xia, Y. *Advanced Healthcare Materials* 2019, 8, 1801113.

2018

- 740 Toward affordable and sustainable use of precious metals in catalysis and nanomedicine
Xia, Y.; Zhao, M.; Wang, X. and Huo, D. *MRS Bulletin* 2018, 43, 860-869.
- 739 Perspective: Aligned arrays of electrospun nanofibers for directing cell migration
Xue, J.; Wu, T. and Xia, Y. *APL Materials* 2018, 6, 120902 (invited perspective article)
- 738 Continuous processing of phase-change materials into uniform nanoparticles for near-infrared-triggered drug release
Chen, Q.; Zhu, C.; Huo, D.; Xue, J.; Cheng, H.; Guan, B. and Xia, Y. *Nanoscale* 2018, 10, 22312-22318.

- 737 Direct in situ observation and analysis of the formation of noble-metal nanocrystals with high-index facets
Gao, W.; Hou, Y.; Hood, Z. D.; Wang, X.; Xia, Y.; Wu, R.; Pan, X. and Chi, M. *Nano Letters* 2018, 18, 7004-7013. (It was highlighted as Editor's Choice)
- 736 Facile synthesis of Pt-Ag octahedral and tetrahedral nanocrystals with enhanced activity and durability toward methanol oxidation
Zhao, M.; Yang, X.; Hood, Z. D.; Chi, M. and Xia, Y. *Journal of Materials Research* 2018, 33, 3891-3897. (invited feature paper, it was highlighted on the front cover)
- 735 Enabling complete ligand exchange on the surface of gold nanocrystals through the deposition and then etching of silver
Zhou, S.; Huo, D.; Goines, S.; Yang, T.-H.; Lyu, Z.; Zhao, M.; Gilroy, K. D.; Wu, Y.; Hood, Z. D.; Xie, M. and Xia, Y. *Journal of the American Chemical Society* 2018, 140, 11898-11901. (It was highlighted as Editor's Choice)
- 734 A rationally designed route to the one-pot synthesis of right bipyramidal nanocrystals of copper
Lyu, Z.; Gilroy, K. D.; Xie, M.; Hood, Z. D.; Zhao, M.; Zhou, S.; Liu, J. and Xia, Y. *Chemistry of Materials* 2018, 30, 6469-6477.
- 733 Synthesis of Pt nanocrystals with different shapes using the same protocol to optimize their catalytic activity toward oxygen reduction
Qian, J.; Shen, M.; Zhou, S.; Lee, C.-T.; Zhao, M.; Lyu, Z.; Hood, Z. D.; Vara, M.; Gilroy, K. D.; Wang, K. and Xia, Y. *Materials Today* 2018, 21, 834-844.
- 732 Enhancing the tactile and near-infrared sensing capabilities of electrospun PVDF nanofibers with the use of gold nanocages
Li, H.; Wu, T.; Shen, S.; Xie, M.; Shi, Y.; Zhao, M.; Yang, X.; Figueroa-Cosme, L.; Ke, Q. and Xia, Y. *Journal of Materials Chemistry C* 2018, 6, 10263-10269. (It was selected as a hot paper)
- 731 The effect of adipose-derived stem cell sheets and CTGF on early flexor tendon healing in a canine model
Shen, H.; Jayaram, R.; Yondeda, S.; Linderman, S. W.; Sakiyama-Elbert, S.; Xia, Y.; Gelberman, R. H.; Thomaspoulos, S. *Scientific Reports*, 2018, 8, 11078.
- 730 Quantitative analysis of the reduction kinetics of a Pt(II) precursor in the context of Pt nanocrystal synthesis
Zhou, S.; Yang, T.-H.; Zhao, M. and Xia, Y. *Chinese Journal of Chemical Physics*, 2018, 31, 370-374. (A special issue for the 60th anniversary of USTC)
- 729 Facile synthesis of silver icosahedral nanocrystals with uniform and controlled sizes
Wang, W.; Zhou, S.; Shen, M.; Hood, Z. D.; Xia, K. and Xia, Y. *ChemNanoMat* 2018, 4, 1071-1077.
- 728 Synthesis of colloidal metal nanocrystals: A comprehensive review on the reductants
Rodrigues, T. S.; Zhao, M.; Yang, T.-H.; Gilroy, K. D.; da Silva, A. G. M.; Camargo, P. H. C. and Xia, Y. *Chemistry: A European Journal*, 2018, 24, 16944-16963. (invited review article)
- 727 Nanofiber-based multi-tubular conduits with a honeycomb structure for potential application in peripheral nerve repair
Xue, J.; Li, H. and Xia, Y. *Macromolecular Bioscience* 2018, 18, 1800090.
- 726 Facile synthesis of gold trisoctahedral nanocrystals with controllable sizes and dihedral angles
Huo, D.; Ding, H.; Zhou, S.; Li, J.; Tao, J.; Ma, Y. and Xia, Y. *Nanoscale*, 2018, 10, 11034-11042.
- 725 Synthesis of Ru icosahedral nanocages with a face-centered-cubic structure and evaluation of their catalytic properties
Zhao, M.; Xu, L.; Vara, M.; Elnabawy, A. O.; Gilroy, K. D.; Hood, Z. D.; Zhou, S.; Figueroa-Cosme, L.; Chi, M.; Mavrikakis, M. and Xia, Y. *ACS Catalysis* 2018, 8, 6948-6960.
- 724 A droplet reactor system capable of automation for the continuous and scalable production of noble-metal nanocrystals
Niu, G.; Zhang, L.; Ruditskiy, A.; Wang, L. and Xia, Y. *Nano Letters* 2018, 18, 3879-3884. (It was highlighted in *Nature Chemistry Review*)
- 723 The physical chemistry and materials science behind sinter-resistant catalysts
Dai, Y.; Lu, P.; Cao, Z.; Campbell, C. T. and Xia, Y. *Chemical Society Reviews* 2018, 47, 4314-4331. (invited review article)
- 722 Hollow metal nanocrystals with ultrathin, porous walls and well-controlled surface structures
Zhao, M.; Wang, X.; Yang, X.; Gilroy, K. G.; Qin, D. and Xia, Y. *Advanced Materials*, 2018, 30, 1801956. (invited progress report)
- 721 Inverse opal scaffolds with gradations in mineral content for spatial control of osteogenesis

- Zhu, C.; Qiu, J.; Pongkitwitoon, S.; Thomopoulos, S. and Xia, Y. *Advanced Materials* 2018, 30, 1706706.
- 720 Quantifying the sub-cellular distributions of gold nanospheres uptaken by cells through stepwise, site-selective etching
Huo, D. and Xia, *Chemistry: A European Journal*, 2018, 24, 8513-8518.
- 719 Combination cancer treatment through photothermally controlled release of selenous acid from gold nanocages
Cheng, H.; Huo, D.; Zhu, C.; Shen, S.; Wang, W.; Li, H.; Zhu, Z. and Xia, Y. *Biomaterials* 2018, 178, 517-526.
- 718 Fabrication of sub-micrometer-thick solid electrolyte membranes of β -Li₃PS₄ *via* tiled assembly of nanoscale, plate-like building blocks
Hood, Z. D.; Wang, H.; Pandian, A. S.; Peng, R.; Gilroy, K. D.; Chi, M.; Liang, C. and Xia, Y. *Advanced Energy Materials* 2018, 8, 1870096. (It was highlighted on the front cover and *Advanced Science News and Materials Views China*)
- 717 Facile, robust, scalable synthesis of Pd nanoplates with hydroxylamine as a reducing agent and the mechanistic insights from kinetic analysis
Figuerola-Cosme, L.; Hood, Z. D.; Gilroy, K. D. and Xia, Y. *Journal of Materials Chemistry C* 2018, 6, 4677-4682. (It was selected as a hot paper)
- 716 Synthesis of Pd nanoscale octahedra through a one-pot, dual-reductant route and the kinetic analysis
Figuerola-Cosme, L.; Gilroy, K. D.; Yang, T.-H.; Vara, M.; Park, J.; Bao, S.; da Silva, A. G. M. and Xia, Y. *Chemistry: A European Journal*, 2018, 24, 6133-6139.
- 715 Design and fabrication of a hierarchically structured scaffold for tendon-to-bone repair
Zhu, C.; Pongkitwitoon, S.; Qiu, J.; Thomopoulos, S. and Xia, Y. *Advanced Materials* 2018, 30, 1707306. (It was highlighted on the back cover)
- 714 General method for generating circular gradients of active proteins on nanofiber scaffolds sought for wound closure and related applications
Wu, T.; Xue, J.; Li, H.; Zhu, C.; Mo, X. and Xia, Y. *ACS Applied Materials & Interfaces* 2018, 10, 8536-8545.
- 713 Shape-controlled synthesis of colloidal metal nanocrystals by replicating the surface atomic structure on the seeds
Gilroy, K. D.; Yang, X.; Xie, S.; Zhao, M.; Qin, D. and Xia, Y. *Advanced Materials* 2018, 30, 1706312. (invited review article)
- 712 Integration of phase-change materials with electrospun fibers for promoting neurite outgrowth under controlled release
Xue, J.; Zhu, C.; Li, J.; Li, H. and Xia, Y. *Advanced Functional Materials*, 2018, 28, 1705563.
- 711 Melanocortin 1 receptor targeted imaging of melanoma with gold nanocages and positron emission tomography
Zhao, Y.; Pang, B.; Detering, L.; Luehmann, H.; Yang, M.; Black, K.; Sultan, D.; Xia, Y. and Liu, Y. *Molecular Imaging* 2018, 17, 1536012118775827.
- 710 Facile synthesis of Pd concave nanocubes: From kinetic analysis to mechanistic understanding and rationally designed protocol
Vara, M. and Xia, Y. *Nano Research*, 2018, 11, 3122-3131.
- 709 Site-selective growth of Ag nanocubes for sharpening their corners and edges, followed by elongation into nanobars through symmetry reduction
Zhou, S.; Mesina, D. S.; Organt, M. A.; Yang, T.-H.; Yang, X.; Huo, D.; Zhao, M. and Xia, Y. *Journal of Materials Chemistry C*, 2018, 6, 1384-1392. (It was selected as a hot paper)
- 708 The effect of connective tissue growth factor delivered via porous coated sutures on the proliferative stage of intrasynovial tendon repair
Linderman, S. W.; She, H.; Tonedá, S.; Jayaram, R.; Tanes, M. L.; Sakiyama-Elbert, S. E.; Xia, Y.; Thomopoulos, S. and Gelberman, R. H.; *Journal of Orthopaedic Research*, 2018, 36, 2052-2063.
- 707 Understanding the stability of Pt-based nanocages under thermal stress using in situ electron microscopy
Vara, M.; Wang, X.; Howe, J.; Chi, M. and Xia, Y. *ChemNanoMat* 2018, 4, 112-117.
- 706 Rhodium decahedral nanocrystals: Facile synthesis, mechanistic insights, and experimental controls
Lee, S. R.; Vara, M.; Hood, Z.; Zhao, M.; Gilroy, K. D.; Chi, M. and Xia, Y. *ChemNanoMat* 2018, 4, 66-70.

2017

- 705 Autocatalytic surface reduction and its role in controlling seed-mediated growth of colloidal metal nanocrystals
Yang, T.-H.; Zhou, S.; Gilroy, K. D.; Figueroa-Cosme, L.; Lee, Y.-H.; Wu, J.-M. and Xia, Y. *Proceeding of the National Academy of Sciences USA* 2017, 114, 13619-13624.
- 704 Biomimetics: Reconstitution of low-density lipoprotein for targeted delivery and related theranostic applications
Zhu, C. and Xia, Y. *Chemical Society Reviews* 2017, 46, 7668-7682 (invited tutorial review).
- 703 Facile synthesis of Ru-based octahedral nanocages with ultrathin walls in a face-centered cubic structure
Zhao, M.; Elnabawy, A.; Vara, M.; Xu, L.; Yang, X.; Gilroy, K.; Figueroa-Cosme, L.; Mavrikakis, M. and Xia, Y. *Chemistry of Materials* 2017, 29, 9227-9237.
- 702 A eutectic mixture of natural fatty acids can serve as the gating material for near-infrared-triggered drug release
Zhu, C.; Huo, D.; Chen, Q.; Xue, J.; Shen, S. and Xia, Y. *Advanced Materials* 2017, 29, 1703702.
- 701 Reconstitution of low-density lipoproteins with fatty acids for the targeted delivery of drugs into cancer cells
Zhu, C.; Pradhan, P.; Huo, D.; Xue, J.; Shen, S.; Roy, K. and Xia, Y. *Angewandte Chemie International Edition* 2017, 56, 10399-10402.
- 700 Reduction rate as a quantitative knob for achieving deterministic synthesis of colloidal metal nanocrystals
Yang, T. H.; Gilroy, G. D. and Xia, Y. *Chemical Science* 2017, 8, 6730-6749 (invited perspective article).
- 699 One-pot synthesis of penta-twinned Pd nanowires and their enhanced electrocatalytic properties
Huang, H.; Ruditskiy, A.; Choi, S.-I.; Zhang, L.; Liu, J.; Ye, Z. and Xia, Y. *ACS Applied Materials & Interfaces* 2017, 9, 31203-31212.
- 698 Controlling the deposition of Pd on Au nanocages: Outer surface only versus both outer and inner surfaces
Yang, M.; Wang, W.; Gilroy, K. D. and Xia, Y. *Nano Letters* 2017, 17, 5682-5687.
- 697 Electrospun nanofibers: New concepts, materials, and applications
Xue, J.; Xie, J.; Liu, W. and Xia, Y. *Accounts of Chemical Research* 2017, 50, 1976-1987. (invited review article)
- 696 Icosahedral nanocrystals of noble metals: Synthesis and applications
Wang, H.; Zhou, S.; Gilroy, G. D.; Cai, Z. and Xia, Y. *Nano Today*, 2017, 15, 121-144. (invited review article)
- 695 A hybrid nanomaterial for the controlled generation of free radicals and oxidative destruction of hypoxic cancer cells
Shen, S.; Zhu, C.; Huo, D.; Yang, M.; Xue, J. and Xia, Y. *Angewandte Chemie International Edition* 2017, 56, 8801-8804 (selected as a hot paper and highlighted on the back cover).
- 694 On the thermodynamics and experimental control of twinning in metal nanocrystals
Gilroy, K. D.; Puibasset, J.; Vara, M. and Xia, Y. *Angewandte Chemie International Edition* 2017, 56, 8647-8651 (it was selected as a hot paper).
- 693 Water-based synthesis of sub-10 nm Pt octahedra and their performance towards the oxygen reduction reaction
Lee, C.-T.; Yang, X.; Vara, M.; Gilroy, K. D. and Xia, Y. *ChemNanoMat* 2017, 3, 879-884.
- 692 Oxidative etching of Pd decahedral nanocrystals with a penta-twinned structure and its impact on their growth behavior
Ruditskiy, A.; Vara, M.; Huang, H. and Xia, Y. *Chemistry of Materials* 2017, 29, 5394-5400.
- 691 Novel acid catalysts from waste-tire-derived carbon: Application in waste-to-biofuel conversion
Hood, Z. D.; Adhikari, S. P.; Li, Y.; Naskar, A. K.; Figueroa-Cosme, L.; Xia, Y.; Chi, M.; Wright, M. W.; Lachgar, A. and Paranthaman, P. *ChemistrySelect* 2017, 2, 4975-4982 (highlighted on the front cover).
- 690 A general strategy for generating gradients of bioactive proteins on electrospun nanofiber mats by masking with bovine serum albumin
Tanes, M. L.; Xue, J. and Xia, Y. *Journal of Materials Chemistry B*, 2017, 5, 5580-5587.
- 689 Understanding the thermal stability of palladium-platinum core-shell nanocrystals by in situ transmission electron microscopy and density functional theory
Vara, M.; Roling, L.; Wang, X.; Elnabawy, A.; Hood, Z.; Chi, M.; Mavrikakis, M. and Xia, Y. *ACS Nano* 2017, 11, 4571-4581.
- 688 Thermal stability of metal nanocrystals: An investigation of the surface and bulk reconstructions of Pd concave icosahedra
Gilroy, K. D.; Elnabawy, A.; Yang, T.-H.; Roling, L.; Howe, J.; Mavrikakis, M. and Xia, Y. *Nano Letters* 2017, 17,

- 3655-3661.
- 687 A photochemical, room-temperature, and aqueous route to the synthesis of Pd nanocubes enriched with atomic steps and terraces on the side faces
Vara, M.; Lu, P.; Yang, X. and Xia, Y. *Chemistry of Materials* 2017, 29, 4563-4571.
- 686 Toughening of fibrous scaffolds by mobile mineral deposits
Lipner, J.; Boyle, J. J.; Xia, Y.; Birman, V.; Genin, G. M. and Thomopoulos, S. *Acta Biomaterialia* 2017, 58, 492-501.
- 685 Inverse opal scaffolds and their biomedical applications
Zhang, Y. S.; Zhu, C. and Xia, Y. *Advanced Materials* 2017, 29, 1701115 (review article).
- 684 Symmetry breaking during nanocrystal growth
Gilroy, G. D.; Peng, H.-C.; Yang, X.; Ruditskiy, A. and Xia, Y. *Chemical Communications* 2017, 53, 4530-4541 (invited feature article, highlighted on the front cover).
- 683 Differentiation of bone marrow stem cells into Schwann cells for the promotion of neurite outgrowth on electrospun fibers
Xue, J.; Yang, J.; O'Connor, D.; Zhu, C.; Huo, D.; Boulis, N. and Xia, Y. *ACS Applied Materials & Interfaces* 2017, 9, 12299-12310.
- 682 Intermetallic nanocrystals: Syntheses and catalytic applications
Yan, Y.; Du, J.; Gilroy, K. D.; Yang, D.; Xia, Y. and Zhang, H. *Advanced Materials* 2017, 29, 1605997 (invited review article).
- 681 Gold icosahedral nanocages: Facile synthesis, optical properties, and fragmentation under ultrasonication
Yang, X.; Gilroy, G. D.; Vara, M.; Zhao, M.; Zhou, S. and Xia, Y. *Chemical Physics Letters* 2017, 683, 613-618 (invited contribution to the Ahmed Zewail Commemoration Issue).
- 680 Enhancing the mechanical properties of electrospun nanofiber mats through controllable welding at the cross points
Li, H.; Zhu, C.; Xue, J.; Ke, Q. and Xia, Y. *Macromolecular Rapid Communications* 2017, 38, 1600723.
- 679 Penta-twinned Cu nanowires with ultrathin diameters below 20 nm and their use as templates for the synthesis of Au-based nanotubes
Luo, M.; Zhou, M.; Rosa da Silva, R.; Tao, J.; Figueroa-Cosme, L.; Peng, H.-C.; He, Z. and Xia, Y. *ChemNanoMat*, 2017, 3, 190-195 (VIP paper).
- 678 Facile synthesis of Ag@Au core-sheath nanowires with greatly improved stability against oxidation
Yang, M.; Hood, Z. D.; Yang, X.; Chi, M. and Xia, Y. *Chemical Communications* 2017, 53, 1965-1968.
- 677 Facile synthesis of Pd@Pt_{3-4L} core-shell octahedra with a clean surface and thus enhanced activity toward oxygen reduction
Bao, S.; Vara, M.; Yang, X.; Zhou, S.; Figueroa-Cosme, L.; Park, J.; Luo, M.; Xie, Z. and Xia, Y. *ChemCatChem* 2017, 9, 414-419 (highlighted on the front cover).
- 676 Facile synthesis of ⁶⁴Cu-doped Au nanocages for positron emission tomography
Yang, M.; Huo, D.; Gilroy, K. D.; Sun, X.; Sultan, D.; Luehmann, H.; Detering, L.; Li, S.; Qin, D.; Liu, Y. and Xia, Y. *ChemNanoMat* 2017, 3, 44-50 (VIP paper, highlighted in Chemistry Views).
- 675 A general approach to the synthesis of M@Au/Ag (M=Au, Pd, and Pt) nanorattles with ultrathin shells of less than 2.5 nm thick
Yang, M.; Gilroy, K. D. and Xia, Y. *Particle & Particle Systems Characterization*, 2017, 34, 1600279.
- 674 The science and art of carving metal nanocrystals
Ruditskiy, A. and Xia, Y. *ACS Nano* 2017, 11, 23-27 (invited perspective article).
- 673 Toward a quantitative understanding of the reduction pathways of a salt precursor in the synthesis of metal nanocrystals
Yang, T.-H.; Peng, H.-C.; Zhou, S.; Lee, C.-T.; Bao, S.; Lee, Y.-H.; Wu, J.-M. and Xia, Y. *Nano Letters* 2017, 17, 334-340.
- 672 Toward cost-effective and sustainable use of precious metals in heterogeneous catalysis
Xia, Y. and Yang, X. *Accounts of Chemical Research* 2017, 50, 450-454 (invited commentary article for the special issue on Holy Grails in Chemistry, highlighted on the front cover).
- 671 Seed-mediated growth of colloidal metal nanocrystals
Xia, Y.; Gilroy, K. D.; Peng, H.-C. and Xia, X. *Angewandte Chemie International Edition* 2017, 56, 60-95 (invited review article).

2016

- 670 Rational design and synthesis of noble-metal nanoframes for catalytic and photonic applications
Wang, X.; Ruditskiy, A. and Xia, Y. *National Science Review* 2016, 3, 520-533 (invited review article).
- 669 Toward a quantitative understanding of the sulfate-mediated synthesis of Pd decahedral nanocrystals with high conversion and morphology yields
Ruditskiy, A.; Zhao, M.; Gilroy, K. D.; Vara, M. and Xia, Y. *Chemistry of Materials* 2016, 28, 8800-8806.
- 668 Micropatterned polymer nanorod forests and their use for dual drug loading and regulation of cell adhesion
Zhu, C.; Xue, J.; Gilroy, K. D.; Huo, D.; Shen, S. and Xia, Y. *ACS Applied Materials & Interfaces* 2016, 8, 34194-34197.
- 667 The effect of surface capping on the diffusion of adatoms in the synthesis of Pd@Au core-shell nanocrystals
Liu, M.; Gilroy, K. D.; Peng, H.-C.; Chi, M.; Guo, L. and Xia, Y. *Chemical Communications* 2016, 52, 13159-13162.
- 666 Synthesis and characterization of Pt-Ag alloy nanocages with enhanced activity and durability toward oxygen reduction
Yang, X.; Roling, L.; Vara, M.; Elnabaway, A.; Zhao, M.; Hood, Z.; Bao, S.; Mavrikakis, M. and Xia, Y. *Nano Letters* 2016, 16, 6644-6649.
- 665 Facile synthesis of silver nanocubes with sharp corners and edges in an aqueous solution
Zhou, S.; Li, J.; Gilroy, K. D.; Tao, J.; Zhu, C.; Yang, X.; Sun, X. and Xia, Y. *ACS Nano* 2016, 10, 9861-9870.
- 664 Shape-controlled synthesis of CO-free Pd nanocrystals with the use of formic acid as a reducing agent
Bao, S.; Yang, X.; Luo, M.; Zhou, S.; Wang, X.; Xie, Z. and Xia, Y. *Chemical Communications* 2016, 52, 12594-12597.
- 663 Dynamic visualization of photothermal heating by gold nanocages using thermo-responsive elastin-like polypeptides
Cheemalapati, S.; Ladanov, M.; Pang, B.; Yuan, Y.; Koria, P.; Xia, Y. and Pyayt, A. *Nanoscale* 2016, 8, 18912-18920.
- 662 Facile synthesis of Pt-Pd alloy nanocages and Pt nanorings by templating with Pd nanoplates
Wang, X.; Luo, M.; Huang, H.; Chi, M.; Howe, J.; Xie, Z. and Xia, Y. *ChemNanoMat* 2016, 2, 1086-1091 (VIP article).
- 661 Seed-mediated growth of colloidal metal nanocrystals: Scaling up the production through geometric and stoichiometric analyses
Figueroa-Cosme, L.; Park, J.; Bao, S. and Xia, Y. *ChemNanoMat* 2016, 2, 1033-1039.
- 660 Quantitative analysis of the reduction kinetics responsible for the one-pot synthesis of Pd-Pt bimetallic nanocrystals with different structures
Zhou, M.; Wang, H.; Vara, M.; Hood, Z.; Luo, M.; Yang, T.-H.; Bao, S.; Chi, M.; Xiao, P.; Zhang, Y. and Xia, Y. *Journal of the American Chemical Society* 2016, 138, 12263-12270.
- 659 Surface-functionalized electrospun TiO₂ nanofibers for the scavenging and recycling of precious metal ions
Dai, Y.; Formo, E.; Li, H.; Xue, J. and Xia, Y. *ChemSusChem* 2016, 9, 2912-2916.
- 658 Concluding remarks: Anisotropy: the good, the “bad” and
Xia, Y. *Faraday Discussions* 2016, 191, 597-604.
- 657 Platinum cubic nanoframes with enhanced catalytic activity and durability toward oxygen reduction
Park, J.; Wang, H.; Vara, M. and Xia, Y. *ChemSusChem* 2016, 9, 2855-2861.
- 656 Synthesis and characterization of Ru cubic nanocages with a face-centered-cubic (fcc) structure by templating with Pd nanocubes
Zhao, M.; Figueroa-Cosme, L.; Elnabawy, A.; Vara, M.; Yang, X.; Roling, L.; Chi, M.; Mavrikakis, M. and Xia, Y. *Nano Letters* 2016, 16, 5310-5317.
- 655 Facile synthesis of sub-20 nm silver nanowires through a bromide-mediated polyol method
Silva, R. R.; Yang, M.; Choi, S.-I.; Chi, M.; Luo, M.; Zhang, C.; Li, Z.-Y.; Camargo, P. H.-C.; Sidney, R. and Xia, Y. *ACS Nano*, 2016, 10, 7892-7900 (highlighted in Nanotechweb.org).
- 654 Dimerization of colloidal particles through controlled aggregation for enhanced properties and applications
Gilroy, K. D. and Xia, Y. *Chemistry: An Asian Journal*, 2016, 11, 2341-2351 (invited focus review article).
- 653 Palladium@platinum concave nanocubes with enhanced catalytic activity toward oxygen reduction
Lee, S. R.; Park, J.; Gilroy, K. D.; Yang, X.; Ding, Y. and Xia, Y. *ChemCatChem* 2016, 8, 3082-3088.

- 652 On the critical role of Rayleigh scattering in single-molecule surface-enhanced Raman scattering via plasmonic nanogap
Chen, B.-Q.; Zhang, C.; Li, J.; Li, Z.-Y. and Xia, Y. *Nanoscale* 2016, 8, 15730-15736.
- 651 Facile synthesis of BaTiO₃ nanocubes with the use of anatase TiO₂ nanorods as a precursor to titanium hydroxide
Vara, M.; Chi, M. and Xia, Y. *ChemNanoMat* 2016, 2, 873-878.
- 650 Pt-Ni octahedral nanocrystals as a class of highly active electrocatalysts toward hydrogen evolution reaction in an alkaline electrolyte
Kavian, R.; Choi, S. I.; Park, J.; Liu, T.; Peng, H.-C.; Lu, N.; Wang, J.; Kim, M. J.; Xia, Y. and Lee, S. W. *Journal of Materials Chemistry A* 2016, 4, 12392-12397.
- 649 Micropatterning of the ferroelectric phase in a poly(vinylidene difluoride) film via plasmonic heating with gold nanocages
Li, J.; Yang, M.; Sun, X.; Yang, X.; Xue, J.; Zhu, C.; Liu, H. and Xia, Y. X. *Angewandte Chemie International Edition* 2016, 55, 13828-13832 (VIP paper, highlighted on the back cover).
- 648 A systematic study of the catalytic durability of Pd@Pt_{2-3L} nano-sized octahedra toward oxygen reduction
Park, J.; Vara, M. and Xia, Y. *Catalysis Today*, 2016, 280, 266-273.
- 647 Coating Pt-Ni octahedra with ultrathin Pt shells to enhance the durability without compromising the activity toward oxygen reduction
Park, J.; Liu, J.; Peng, H.-C.; Maio, S.; Choi, S.-I.; Bao, S.; Yang, X. and Xia, Y. *ChemSusChem* 2016, 9, 2209-2215.
- 646 Formation of second-generation nanoclusters on metal nanoparticles driven by reactant gases
Tao, F.; Nguyen, L.; Zhang, S.; Li, Y.; Winterstein, J. P.; Tang, Y.; Zhang, L.; Frenkel, A. I.; Sharma, R.; Xia, Y. and Salmeron, M. *Nano Letters* 2016, 16, 5001-5009.
- 645 Bimetallic nanocrystals: Syntheses, properties, and applications
Gilroy, K. D.; Ruditskiy, A.; Peng, H.-C.; Qin, D. and Xia, Y. *Chemical Reviews* 2016, 116, 10414-10472 (invited review article).
- 644 Synthesis of Pt-Ni octahedra in continuous-flow droplet reactors for the scalable production of highly active catalysts toward oxygen reduction
Niu, G.; Zhou, M.; Yang, X.; Park, J.; Lu, N.; Wang, J.; Kim, M.; Wang, L. and Xia, Y. *Nano Letters* 2016, 16, 3850-3857.
- 643 Controlling the growth of Au on icosahedral seeds of Pd by manipulating the reduction kinetics
Lv, T.; Yang, X.; Zheng, Y.; Huang, H.; Zhang, L.; Tao, J.; Pan, L. and Xia, Y. *Journal of Physical Chemistry C*, 2016, 120, 20768-20774.
- 642 Seed-mediated synthesis of Pd nanocrystals: The effect of surface capping on the heterogeneous nucleation and growth
Peng, H.-C.; Li, Z.; Aldahonda, G.; Huang, H. and Xia, Y. *Journal of Physical Chemistry C* 2016, 120, 11754-11761.
- 641 Putting gold nanocages to work for optical imaging, controlled release, and cancer theranostics
Pang, B.; Yang, X. and Xia, Y. *Nanomedicine* 2016, 11, 1715-1728 (invited review article).
- 640 Fabrication of ultrathin solid electrolyte membranes of β -Li₃PS₄ nanoflakes by evaporation-induced self-assembly for all-solid state batteries
Wang, H.; Hood, Z. D.; Xia, Y. and Liang, C. *Journal of Materials Chemistry A* 2016, 4, 8091-8096.
- 639 Cell alignment induced by anisotropic electrospun fibrous scaffolds alone has limited effect on cardiomyocyte maturation
Han, J.; Wu, Q.; Xia, Y.; Wagner, M. B. and Xu, C. *Stem Cell Research* 2016, 16, 740-750.
- 638 Targeted delivery of anti-miR-712 by VCAM1-binding Au nanospheres for atherosclerosis therapy
Sun, T.; Simons, R.; Huo, D.; Pang, B.; Zhao, X.; Kim, C.; Jo, H. and Xia, Y. *ChemNanoMat* 2016, 2, 400-406 (highlighted in Materials Views).
- 637 Surgical sutures with porous sheaths for the sustained release of growth factors
Li, J.; Linderman, S.; Zhu, C.; Liu, H.; Thomopoulos, S. and Xia, Y. *Advanced Materials* 2016, 28, 4620-4624 (highlighted in Materials Views and Materials Views China).
- 636 Toward the synthesis of sub-15-nm Ag nanocubes with sharp corners and edges: The roles of heterogeneous nucleation and surface capping
Ruditskiy, A and Xia, Y. *Journal of the American Chemical Society* 2016, 138, 3161-3167 (highlighted in

- Chemistry Views).
- 635 ⁶⁴Cu-doped PdCu@Au Tripods: A multifunctional nanomaterial for positron emission tomography and image-guided photothermal cancer treatment
Pang, B.; Zhao, Y.; Luehmann, H.; Yang, X.; Detering, L.; You, M.; Zhang, C.; Zhang, L.; Li, Z.-Y.; Ren, Q.; Liu, Y. and Xia, Y. ACS Nano 2016, 10, 3121-3131.
- 634 Scalable synthesis of Pd icosahedra in plug reactors for the production of oxygen reduction reaction catalysts
Wang, H.; Niu, G.; Zhou, M.; Wang, X.; Park, J.; Bao, X.; Chi, M.; Cai, Z. and Xia, Y. ChemCatChem 2016, 8, 1658-1664 (highlighted in Chemistry Views and on the front cover).
- 633 Pt-based icosahedral nanocages: Using a combination of {111} facets, twin defects, and ultrathin walls to greatly enhance their activity toward oxygen reduction
Wang, X.; Figueroa-Cosme, L.; Yang, X.; Luo, M.; Liu, J.; Xie, Z.-X. and Xia, Y. Nano Letters 2016, 16, 1467-1471.
- 632 Gold nanoparticles doped with ¹⁹⁹Au atoms and their use for targeted cancer imaging by SPECT
Zhao, Y.; Pang, B.; Detering, L.; Yang, X.; Sultan, D.; Harprits, S.; Sharma, V.; Culter, C. S.; Xia, Y. and Liu, Y. Advanced Healthcare Materials 2016, 5, 928-935.
- 631 Seeing through the surface: Non-invasive characterization of biomaterial-tissue interactions using photoacoustic microscopy
Zhang, Y.; Wang, L.-V. and Xia, Y. Annals of Biomedical Engineering 2016, 44, 639-666 (invited review article).
- 630 The effect of adipose-derived stromal cells and BMP12 on intrasynovial tendon repair: A biomechanical, biochemical, and proteomics study
Gelberman, R. H.; Shen, H.; Kormpakis, I.; Rothrauff, B.; Tuan, R.; Xia, Y.; Sakiyama-Elbert, S.; Silva, M.; Thomopoulos, S. Journal of Orthopaedic Research 2016, 34, 630-640.
- 629 Facile synthesis of rhodium icosahedra with controlled sizes up to 12 nm
Choi, S.-I.; Lee, S. R.; Ma, C.; Oliy, B.; Luo, M.; Chi, M. and Xia, Y. ChemNanoMat 2016, 2, 61-66.
- 628 Penta-twinned copper nanorods: Facile synthesis via seed-mediated growth and their tunable plasmonic properties
Luo, M.; Ruditskiy, A.; Peng, H.-C.; Tao, J.; Figueroa-Cosme, L.; He, Z. and Xia, Y. Advanced Functional Materials 2016, 26, 1209-1216.
- 627 Shape-controlled metal nanocrystals for heterogeneous catalysis
Ruditskiy, A.; Peng, H.-C. and Xia, Y. Annual Review of Chemical and Biomolecular Engineering 2016, 7, 327-348 (invited review article).

2015

- 626 Pd@Pt core-shell concave decahedra: A class of catalysts for the oxygen reduction reaction with enhanced activity and durability
Wang, X.; Vara, M.; Luo, M.; Huang, H.; Ruditskiy, A.; Park, J.; Bao, S.; Liu, J.; Howe, J.; Chi, M.; Xie, Z.-X. and Xia, Y. Journal of the American Chemical Society 2015, 137, 15036-15042.
- 625 Facile synthesis of Ag nanorods with no plasmon resonance peak in the visible region by using Pd decahedra of 16 nm in size as the seeds
Luo, M.; Huang, H.; Choi, S.-I.; Zhang, C.; Robson, S.; Peng, H.-C.; Li, Z.-Y.; Liu, J.; He, Z. and Xia, Y. ACS Nano 2015, 9, 10523-10532.
- 624 Metal-enhanced near-infrared fluorescence by micropatterned gold nanocages
Camposeo, A.; Persano, L.; Manco, R.; Wang, Y.; Del Carro, P.; Zhang, C.; Li, Z.-Y.; Pisignano, D. and Xia, Y. ACS Nano 2015, 9, 10047-10054.
- 623 Accelerating the translation of nanomaterials in biomedicine
Mitragotri, S.; Anderson, D. G.; Chen, X.; Chow, E. K.; Ho, D.; Kabanov, A. V.; Karp, J. M.; Kataoka, K.; Mirkin, C. A.; Petrosko, S. H.; Shi, J.; Stevens, M. M.; Sun, S.; Teoh, S.; Venkatraman, S. S.; Xia, Y.; Wang, S.; Gu, Z. and Xu, J. ACS Nano 2015, 9, 6644-654 (Nano Focus).
- 622 Tunability of collagen matrix mechanical properties via multiple modes of mineralization
Smith, L.; Deymier, A.; Boyle, J.; Li, Z.; Linderman, S.; Pasteris, J.; Xia, Y.; Genin, G. and Thomopoulos, S. Interface Focus 2015, 6, 20150070.
- 621 In vivo evaluation of adipose derived stromal cells delivered with a nanofiber scaffold for tendon-to-bone repair

- Lipner, J.; Shen, H.; Cavinatto, L.; Liu, W.; Havlioglu, N.; Xia, Y.; Galatz, L. and Thomopoulos, S. *Tissue Engineering A* 2015, 21, 2766-2774.
- 620 Gold nanomaterials at work in biomedicine
Yang, X.; Yang, M.; Pang, B.; Vara, M. and Xia, Y. *Chemical Reviews* 2015, 115, 10410-10488 (invited review article).
- 619 Platinum-based nanocages with subnanometer-thick walls and well-defined, controllable facets
Zhang, L.; Roling, L. T.; Wang, X.; Vara, M.; Chi, M.; Liu, J.; Choi, S.-I.; Park, J.; Herron, J. A.; Xie, Z.; Mavrikakis, M. and Xia, Y. *Science* 2015, 349, 412-416 (it was highlighted in *C&EN News*, 2015, July 27, p. 12; *Science News*, 2017, March 7, pp. 21-23).
- 618 Surface plasmon resonance in bimetallic core-shell nanoparticles
Zhang, C.; Chen, B.-Q.; Li, Z.-Y. and Xia, Y. *Journal of Physical Chemistry C* 2015, 119, 16836-16845.
- 617 Palladium-platinum core-shell icosahedra with substantially enhanced activity and durability towards oxygen reduction
Wang, X.; Choi, S.-I.; Roling, L. T.; Luo, M.; Ma, C.; Zhang, L.; Chi, M.; Liu, J.; Xie, Z.; Herron, J. A.; Mavrikakis, M. and Xia, Y. *Nature Communications* 2015, 6, 7594.
- 616 Shape-controlled synthesis of colloidal metal nanocrystals: Thermodynamic versus kinetic products
Xia, Y.; Xia, X. and Peng, H.-C. *Journal of the American Chemical Society* 2015, 137, 7947-7966 (invited perspective article).
- 615 Toward a quantitative understanding of symmetry reduction involved in the seed-mediated growth of Pd nanocrystals
Peng, H.-C.; Park, J.; Zhang, L. and Xia, Y. *Journal of the American Chemical Society* 2015, 137, 6643-6652.
- 614 Photochemical deposition of highly dispersed Pt nanoparticles on porous CeO₂ nanofibers for the water-gas shift reaction
Lu, P.; Qiao, B.; Lu, N.; Hyun, D. C.; Wang, J.; Kim, M. J.; Liu, J. and Xia, Y. *Advanced Functional Materials* 2015, 25, 4153-4162.
- 613 Five-fold twinned Pd nanorods and their use as templates for the synthesis of bimetallic or hollow nanostructures
Huang, H.; Zhang, L.; Lv, T.; Ruditskiy, A.; Liu, J.; Ye, Z. and Xia, Y. *ChemNanoMat* 2015, 1, 246-252 (VIP article, highlighted on the front cover).
- 612 A comprehensive study of formic acid oxidation on palladium nanocrystals with different types of facets and twin defects
Choi, S.-I.; Herron, J. A.; Scaranto, J.; Huang, H.; Wang, Y.; Xia, X.; Lv, T.; Park, J.; Peng, H.-C.; Mavrikakis, M. and Xia, Y. *ChemCatChem* 2015, 7, 2077-2084.
- 611 Toward continuous and scalable production of colloidal nanocrystals by switching from batch to droplet reactors
Niu, G.; Ruditskiy, A.; Vara, M. and Xia, Y. *Chemical Society Reviews* 2015, 44, 5806-5820 (invited review article).
- 610 Generation of electrospun nanofibers with controllable degrees of crimping through a simple, plasticizer-based treatment
Liu, W.; Lipner, J.; Moran, C. H.; Feng, L.; Li, X.; Thomopoulos, S. and Xia, Y. *Advanced Materials* 2015, 27, 2583-2588 (highlighted on the front cover).
- 609 Atomic layer-by-layer deposition of platinum on palladium octahedra for enhanced catalysts toward the oxygen reduction reaction
Park, J.; Zhang, L.; Choi, S.-I.; Roling, L.; Lu, N.; Herron, J.; Xie, S.; Wang, J.; Kim, M.; Mavrikakis, M. and Xia, Y. *ACS Nano* 2015, 9, 2635-2647.
- 608 Use of reduction rate as a quantitative knob for controlling the twin structure and shape of palladium nanocrystals
Wang, Y.; Peng, H.-C.; Liu, J.; Huang, C. Z. and Xia, Y. *Nano Letters* 2015, 15, 1445-1450.
- 607 Multiple facets for ECM mimicking in regenerative medicine
Zhang, Y. and Xia, Y. *Nanomedicine*, 2015, 10, 689-692 (invited editorial essay).
- 606 Interstitial diffuse radiance spectroscopy of gold nanocages and nanorods in bulk muscle tissues
Grabchak, S.; Montgomery, L. G.; Pang, B.; Wang, Y.; Zhang, C.; Li, Z.-Y.; Xia, Y. and Whelan, W. M. *International Journal of Nanomedicine*, 2015, 10, 1307-1320.

- 605 Shape-controlled syntheses of rhodium nanocrystals for the enhancement of their catalytic properties
Xie, S.; Liu, X. and Xia, Y. *Nano Research* 2015, 8, 82-96 (invited review article).

2014

- 604 Continuous and scalable production of well-controlled noble-metal nanocrystals in milliliter-sized droplet reactors
Zhang, L.; Niu, G.; Lu, N.; Wang, J.; Tong, L.; Wang, L.; Kim, M. and Xia, Y. *Nano Letters* 2014, 14, 6626-6631.
- 603 Synthesis and characterization of Pd@Pt-Ni core-shell octahedra with high activity toward oxygen reduction
Choi, S.-I.; Shao, M.; Lu, N.; Ruditskiy, A.; Peng, H.-C.; Park, J.; Guerrero, S.; Wang, J.; Kim, M. and Xia, Y. *ACS Nano* 2014, 8, 10363-10371.
- 602 Aberration corrected electron microscopy study of bimetallic Pd-Pt nanocrystal: Core-shell cubic and core-frame concave structures
Lu, N.; Wang, J.; Xie, S.; Brink, J.; McIlwrath, K.; Xia, Y. and Kim, M. *Journal of Physical Chemistry C*, 2014, 118, 28876-28882.
- 601 Seed-mediated growth of gold nanocrystals: Change to the crystallinity or morphology as induced by the treatment of seeds with a sulfur species
Zheng, Y.; Luo, M.; Tao, J.; Peng, H.-C.; Wan, D.; Zhu, Y. and Xia, Y. *Journal of Physical Chemistry B*, 2014, 118, 14132-14139 (for a special issue in honor of Prof. Mostafa El-Sayed on the occasion of his 80th birthday).
- 600 Engineered nanoparticles for drug delivery in cancer therapy
Sun, T.; Zhang, Y.; Pang, B.; Hyun, D. C.; Yang, M. and Xia, Y. *Angewandte Chemie International Edition* 2014, 53, 12320-12364 (invited review article).
- 599 Are we entering the nano era?
Xia, Y. *Angewandte Chemie International Edition* 2014, 53, 12268-12271 (invited editorial essay, highlighted on the front cover).
- 598 Pd-Cu bimetallic tripods: A mechanistic understanding of the synthesis and their enhanced electrocatalytic activity for formic acid oxidation
Zhang, L.; Choi, S.-I.; Tao, J.; Peng, H.-C.; Xie, S.; Zhu, Y.; Xie, Z. and Xia, Y. *Advanced Functional Materials* 2014, 24, 7520-7529.
- 597 Facile synthesis of iridium nanocrystals with well-controlled facets using seed-mediated growth
Xia, X.; Figueroa-Cosme, L.; Tao, J.; Peng, H.-C.; Niu, G.; Zhu, Y.; Xia, Y. *Journal of the American Chemical Society* 2014, 136, 10878-10881.
- 596 Polyol syntheses of palladium decahedra and icosahedra as pure samples by maneuvering the reaction kinetics with additives
Huang, H.; Wang, Y.; Ruditskiy, A.; Peng, H.-C.; Zhao, X.; Zhang, L.; Liu, J.; Ye, Z. and Xia, Y. *ACS Nano* 2014, 8, 7041-7059.
- 595 Synthesis of colloidal metal nanocrystals in droplet reactors: The pros and cons of interfacial adsorption
Zhang, L.; Wang, Y.; Tong, L. and Xia, Y. *Nano Letters* 2014, 14, 4189-4194.
- 594 Atomic layer-by-layer deposition of Pt on Pd nanocubes for catalysts with enhanced activity and durability toward oxygen reduction
Xie, S.; Choi, S.-I.; Lu, N.; Roling, L.; Herron, J.; Zhang, L.; Park, J.; Wang, J.; Kim, M.; Xie, Z.; Mavrikakis, M. and Xia, Y. *Nano Letters* 2014, 14, 3970-3976.
- 593 Dye-assisted gain of strongly confined plasmon polaritons in silver nanowires
Paul, A.; Zhen, Y.-R.; Wang, Y.; Chang, W.-S.; Xia, Y.; Norlander, P. and Link, S. *Nano Letters* 2014, 14, 3628-3633.
- 592 Optical-resolution photoacoustic microscopy for volumetric and spectral analysis of histological and immunochemical samples
Zhang, Y.; Yao, J.; Zhang, C.; Li, L.; Wang, L. V. and Xia, Y. *Angewandte Chemie International Edition* 2014, 53, 8099-8103.
- 591 Radioactive ¹⁹⁸Au-doped nanostructures with different shapes for in vivo analyses of their biodistribution, tumor uptake, and intratumoral distribution
Black, K.; Wang, Y.; Luehmann, H.; Cai, X.; Xing, W.; Pang, B.; Zhao, Y.; Cutler, C.; Wang, L. V.; Liu, Y. and Xia, Y. *ACS Nano* 2014, 8, 4385-4394.

- 590 The mechanics of PLGA nanofiber scaffolds with biomimetic gradients in mineral for tendon-to-bone repair
Lipner, J.; Liu, W.; Liu, Y.; Boyle, J.; Genin, G. M.; Xia, Y. and Thomopoulos, S. *Journal of the Mechanical Behavior of Biomedical Materials*, 2014, 40, 59-68.
- 589 Simple and accurate methods for quantifying deformation, disruption, and development in biological tissues
Boyle, J. J.; Kume, M.; Wyczalkowski, M. A.; Taber, L. A.; Pless, R. B.; Xia, Y.; Genin, G. M. and Thomopoulos, S. *Journal of the Royal Society Interface*, 2014, 11(100), 20140685.
- 588 Seed-mediated synthesis of gold tetrahedra in high purity and with tunable, well-controlled sizes
Zheng, Y.; Liu, W.; Lv, T.; Luo, M.; Hu, H.; Lu, P.; Choi, S.-I.; Zhang, C.; Tao, J.; Li, Z.-Y. and Xia, Y. *Chemistry: An Asian Journal* 2014, 9, 2635-2640 (highlighted in Chemical View).
- 587 Nerve guidance conduits based on double-layered scaffolds of electrospun nanofibers for repairing the peripheral nervous system
Xie, J.; MacEwan, M.; Liu, W.; Jesuraj, N.; Li, X.; Hunter, D. and Xia, Y. *ACS Applied Materials & Interfaces* 2014, 6, 9472-9480.
- 586 Protein capsules with cross-linked, semi-permeable, and enzyme-degradable surface barriers for controlled release
Zhou, J.; Hyun, D. C.; Liu, H.; Wu, H. and Xia, Y. *Macromolecular Rapid Communications* 2014, 35, 1436-1442.
- 585 Shape-controlled metal nanocrystals for catalytic applications
Ruditskiy, A.; Choi, S.-I.; Peng, H.-C. and Xia, Y. *MRS Bulletin* 2014, 39, 727-737 (invited review article).
- 584 Size and shape-controlled Pd nanocrystals on ZnO and SiO₂: When the nature of the support determines the active phase
Crepó-Quesada, M.; Yoon, S.; Jin, M.; Xia, Y.; Weidenkaff, A. and Kiwi-Minsker, L. *ChemCatChem* 2014, 6, 767-771.
- 583 Quick, large-area assembly of a single-crystal monolayer of spherical particles by unidirectional rubbing
Park, C.; Lee, T.; Xia, Y.; Shin, T. J.; Myoung, J. and Jeong, U. *Advanced Materials* 2014, 26, 4633-4638 (highlighted on the front cover).
- 582 Stimuli-responsive materials for controlled release of theranostic agents
Wang, Y.; Shim, M.-S.; Levinson, N. S.; Sung, S.-W. and Xia, Y. *Advanced Functional Materials* 2014, 24, 4206-4220 (invited feature article).
- 581 Using SV119-gold nanocage conjugates to eradicate cancer stem cells through a combination of photothermal and chemo therapies
Sun, T.; Wang, Y.; Wang, Y.; Xu, J.; Zhao, X.; Vangveravong, S.; Mach, R. H. and Xia, Y. *Advanced Healthcare Materials* 2014, 3, 1283-1291.
- 580 Controlling the sizes and compositions of nanosized Pt-Ni octahedra to optimize their catalytic activities toward oxygen reduction reaction
Choi, S.-I.; Xie, S.; Shao, M.; Lu, N.; Guerrero, S.; Odell, J. H.; Park, J.; Wang, J.; Kim, M. J. and Xia, Y. *ChemSusChem* 2014, 5, 1476-1483.
- 579 Neurite outgrowth on electrospun nanofibers with uniaxial alignment: The effects of fiber density, surface coating, and supporting substrate
Xie, J.; Liu, W.; MacEwan, M.; Bridgman, P. and Xia, Y. *ACS Nano* 2014, 8, 1878-1885.
- 578 Nanoparticles with dual-responses to oxidative stress and reduced pH for drug release and anti-inflammatory applications
Pu, H.-L.; Chiang, W.-L.; Maiti, B.; Liao, Z.-X.; Ho, Y.-C.; Shim, M. S.; Chuang, E.-Y.; Xia, Y. and Sung, H.-W. *ACS Nano* 2014, 8, 1213-1221.
- 577 Nanofiber scaffolds with gradients in mineral content for spatial control of osteogenesis
Liu, W.; Lipner, J.; Xie, J.; Manning, C.; Thomopoulos, S. and Xia, Y. *ACS Applied Materials & Interfaces* 2014, 6, 2842-2849.
- 576 Scaling up the production of colloidal nanocrystals: Should we increase or decrease the reaction volume?
Zhang, L. and Xia, Y. *Advanced Materials* 2014, 26, 2600-2606 (research news article).
- 575 Polyol synthesis of ultrathin Pd nanowires via attachment-based growth and their enhanced activity towards formic acid oxidation
Wang, Y.; Choi, S.-I.; Zhao, X.; Xie, S.; Peng, H.-C.; Chi, M.; Huang, C. Z. and Xia, Y. *Advanced Functional Materials* 2014, 24, 131-139.
- 574 Oxidative etching and its role in manipulating the nucleation and growth of noble-metal nanocrystals

- Zheng, Y.; Zeng, J.; Ruditskiy, A.; Liu, M. and Xia, Y. *Chemistry of Materials* 2014, 26, 22-33 (invited review article for the Special Issue Celebrating 25 Years of Chemistry of Materials).
- 573 Fabrication of cell patches using biodegradable scaffolds with a hexagonal array of interconnected pores (SHAIPs)
Zhang, Y.; Yao, J.; Wang, L. V. and Xia, Y. *Polymer* 2014, 55, 445-452.
- 572 Gold nanocages as multifunctional materials for nanomedicine
Xia, X. and Xia, Y. *Frontiers of Physics* 2014, 9, 378–384 (invited review article).
- 571 Successive, seed-mediated growth for the synthesis of single-crystal gold nanospheres with uniform diameters controlled in the range of 5-150 nm
Zheng, Y.; Zhong, X.; Li, Z.-Y. and Xia, Y. *Particle & Particle Systems Characterization* 2014, 31, 266-273.
- 570 Using well-defined Ag nanocubes as substrates to quantify the spatial resolution and penetration depth of SERS imaging
Moran, C. H.; Rycenga, M.; Xia, X.; Cobley, C. M. and Xia, Y. *Nanotechnology* 2014, 25, 014007.
- 569 Site-selective sulfurization of bromide-capped palladium nanocubes by polysulfide and the underlying mechanism
Lu, P.; Lu, N.; Wang, J.; Moon, K. J. and Xia, Y. *Nanotechnology* 2014, 25, 014003.
- 568 Emerging applications of phase-change materials (PCMs): Teaching an old dog new tricks
Hyun, D. C.; Levinson, N. S.; Jeong, U. and Xia, Y. *Angewandte Chemie International Edition* 2014, 53, 3780-3795 (invited review article).
- 567 Non-invasive and in situ characterization of the degradation of biomaterial scaffolds by volumetric photoacoustic microscopy
Zhang, Y. S.; Cai, X.; Yao, J.; Xing, W.; Wang, L. V. and Xia, Y. *Angewandte Chemie International Edition* 2014, 53, 184-188.

2013

- 566 Synthesis of rhodium concave tetrahedrons by collectively manipulating the reduction kinetics, facet-selective capping, and surface diffusion
Xie, S.; Zhang, H.; Lu, N.; Jin, M.; Wang, J.; Kim, M.; Xie, Z. and Xia, Y. *Nano Letters* 2013, 13, 6262-6268.
- 565 Confining the nucleation and overgrowth of Rh to the {111} facets of Pd nanocrystal seeds: The roles of capping agent and surface diffusion
Xie, S.; Peng, H.-C.; Lu, N.; Wang, J.; Kim, M.; Xie, Z. and Xia, Y. *Journal of the American Chemical Society* 2013, 135, 16658-16667.
- 564 Facile synthesis of Pd right bipyramids and their use as seeds for overgrowth and as catalysts for formic acid oxidation
Xia, X.; Choi, S.I.; Herron, J.; Lu, N.; Scaranto, J.; Peng, H.-C.; Wang, J.; Mavrikakis, M.; Kim, M. and Xia, Y. *Journal of the American Chemical Society* 2013, 135, 15706-15709.
- 563 A sinter-resistant catalytic system fabricated by maneuvering the selectivity of SiO₂ deposition onto TiO₂ surface versus Pt nanoparticle surface
Lu, P.; Campbell, C. T. and Xia, Y. *Nano Letters* 2013, 13, 4957-4962 (it was highlighted at <http://nanotechweb.org/cws/article/tech/54740>).
- 562 Enhanced hemangioblast generation and improved vascular repair and regeneration from embryonic stem cells by defined transcription factors
Liu, F.; Bhang, S. H.; Arentson, E.; Sawada, A.; Kim, C. K.; Kang, I.; Yu, J.; Sakurai, N.; Kim, S. H.; Yoo, J. J.; Kim, P.; Pahng, S. H.; Xia, Y.; Solnica-Krezel, L. and Choi, K. *Stem Cell Reports* 2013, 25, 166-182.
- 561 Strong and tough mineralized PLGA nanofibers for tendon-to-bone scaffolds
Kolluru, P. V.; Lipner, J.; Liu, W.; Xia, Y.; Thomopoulos, S.; Genin, G. M. and Chasiotis, I. *Acta Biomaterialia* 2013, 9, 9442-9450.
- 560 Seed-mediated synthesis of silver nanocrystals with controlled sizes and shapes in droplet microreactors separated by air
Zhang, L.; Wang, Y.; Tong, L. and Xia, Y. *Langmuir* 2013, 29, 15719-15725.
- 559 Enhanced shape stability of Pd-Rh core-frame nanocubes at elevated temperature: in situ heating transmission electron microscopy

- Lu, N.; Wang, J.; Xie, S.; Xia, Y. and Kim, M. J. *Chemical Communications* 2013, 49, 11806-11808.
- 558 Inverse opal scaffolds for applications in regenerative medicine
Zhang, Y. S.; Choi, S.-W. and Xia, Y. *Soft Matter* 2013, 9, 9747-9754 (invited opinion article).
- 557 Transformation of Pd nanocubes into octahedra with controlled sizes by maneuvering the rates of etching and regrowth
Liu, M.; Zheng, Y.; Zhang, L.; Guo, L. and Xia, Y. *Journal of the American Chemical Society*, 2013, 135, 11752-11755.
- 556 Nanoparticles for catalysis
Xia, Y.; Yang, H. and Campbell, C. T. *Accounts of Chemical Research* 2013, 46, 1671-1672 (editorial for a special issue on *Nanoparticles for Catalysis*).
- 555 On the role of surface diffusion in determining the shape or morphology of noble-metal nanocrystals
Xia, X.; Xie, S.; Liu, M.; Peng, H.-C.; Lu, N.; Wang, J.; Kim, M. and Xia, Y. *Proceedings of National Academy of Sciences USA* 2013, 110, 6669-6673 (it was highlighted in C&EN News, 2013, April 15, p. 7 and many other news media).
- 554 Microscale polymer bottles corked with a phase-change material for temperature-controlled release
Hyun, D. C.; Lu, P.; Choi, S. I.; Jeong, U. and Xia, Y. *Angewandte Chemie International Edition* 2013, 52, 10468-10471 (it was highlighted by a number of news media).
- 553 Synthesis and characterization of 9-nm Pt-Ni octahedra with a record-high activity of 3.3 A/mgPt for the oxygen reduction reaction
Choi, S. I.; Xie, S.; Shao, M.; Odell, J. H.; Lu, N.; Peng, H.-C.; Protsailo, L.; Guerrero, S.; Park, J.; Xia, X.; Wang, J.; Kim, M. and Xia, Y. *Nano Letters* 2013, 13, 3420-3425 (it was highlighted at <http://nanotechweb.org/cws/article/tech/54111>).
- 552 Galvanic replacement: A simple and versatile route to metal nanostructures with tunable and well-controlled properties
Xia, X.; Wang, Y.; Ruditskiy, A. and Xia, Y. *Advanced Materials* 2013, 25, 6313-6333 (invited progress report for the 25th anniversary issue).
- 551 Shape-controlled synthesis of palladium nanocrystals: A mechanistic understanding of the evolution from octahedrons to tetrahedrons
Wang, Y.; Xie, S.; Liu, J.; Park, J.; Huang, C. Z. and Xia, Y. *Nano Letters* 2013, 13, 2276-2281.
- 550 A reactive oxygen species (ROS)-responsive polymer for safe, efficient, and targeted gene delivery in cancer cells
Shim, M. S. and Xia, Y. *Angewandte Chemie International Edition* 2013, 52, 6926-6929.
- 549 Characterization of multi-dye pressure-sensitive microbeads
Lacrois, D.; Viraye-Chevalier, T.; Seiter, G.; Howard, J.; Dabiri, D.; Khalil, G. E.; Xia, Y. and Zhu, C. *Review of Scientific Instruments* 2013, 84, 115107.
- 548 Controlled synthesis of nanosized palladium icosahedra and their enhanced catalytic activity towards formic-acid oxidation
Lv, T.; Wang, Y.; Choi, S. I.; Chi, M.; Tao, J.; Pan, L.; Huang, C. Z.; Zhu, Y. and Xia, Y. *ChemSusChem* 2013, 6, 1923-1930.
- 547 Manipulating the oxygen reduction activity of platinum shells with shape-controlled palladium nanocrystal cores
Shao, M.; He, G.; Peles, A.; Odell, J. H.; Zeng, J.; Su, D.; Tao, J.; Yu, T.; Zhu, Y. and Xia, Y. *Chemical Communications* 2013, 49, 9030-9032.
- 546 A plasmon-assisted optofluidic (PAOF) system for measuring the photothermal conversion efficiencies of gold nanostructures and controlling an electrical switch
Zeng, J.; Goldfeld, D. and Xia, Y. *Angewandte Chemie International Edition* 2013, 52, 4169-4172 (hot paper).
- 545 Synthesis of silver octahedra with controlled sizes and optical properties via seed-mediated growth
Wang, Y.; Wan, D.; Xie, S.; Xia, X.; Huang, C. Z. and Xia, Y. *ACS Nano* 2013, 7, 4586-4594.
- 544 Novel nanostructures of rutile fabricated by templating against yarns of polystyrene nanofibrils and their catalytic applications
Lu, P. and Xia, Y. *ACS Applied Materials and Interfaces* 2013, 5, 6391-6399.
- 543 Silver nanocube on gold microplate as a well-defined and highly active substrate for SERS detection
Xia, X.; Rycenga, M.; Qin, D. and Xia, Y. *Journal of Materials Chemistry C* 2013, 1, 6145-6150.

- 542 Facile synthesis of Pd-Ir bimetallic octapods and nanocages through galvanic replacement and co-reduction, and their use for hydrazine decomposition
Liu, M.; Zheng, Y.; Xie, S.; Li, N.; Lu, N.; Wang, J.; Kim, M. J.; Guo, L. and Xia, Y. *Physical Chemistry Chemical Physics* 2013, 15, 11822-11829.
- 541 Quantitative analysis of the coverage density of Br⁻ ions on Pd{100} facets and its role in controlling the shape of Pd nanocrystals
Peng, H.-C.; Xie, S.; Park, J.; Xia, X. and Xia, Y. *Journal of the American Chemical Society* 2013, 135, 3780-3783.
- 540 Droplet-based microreactors for continuous production of palladium nanocrystals with controlled sizes and shapes
Kim, Y. H.; Zhang, L.; Yu, T.; Jin, M.; Qin, D. and Xia, Y. *Small* 2013, 9, 3462-3467.
- 539 Maneuvering the internal porosity and surface morphology of electrospun polystyrene yarns by controlling the solvent and relative humidity
Lu, P. and Xia, Y. *Langmuir* 2013, 29, 7070-7078 (it was highlighted on the cover).
- 538 Electrochemical surface area measurements of platinum- and palladium-based nanoparticles
Shao, M.; Odell, J. H.; Choi, S.-I. and Xia, Y. *Electrochemistry Communications* 2013, 31, 46-48.
- 537 Solvent-dispersed benzothiadiazole-tetrathiafulvalene single-crystal nanowires and their application in field-effect transistors
Tucker, N. M.; Briseno, A. L.; Acton, O.; Yip, H. L.; Ma, H.; Jenekhe, S. A.; Xia, Y. and Jen, A. K. *ACS Applied Materials and Interfaces* 2013, 5, 2320-2324.
- 536 Synthesis and characterization of pressure and temperature dual-responsive polystyrene microbeads
Zhu, C.; Deng, R.; Zeng, J.; Khalil, G. E.; Dabiri, D.; Gu, Z. and Xia, Y. *Particle & Particle Systems Characterization*, 2013, 30, 542-548 (VIP article, it was also highlighted at Materials View China).
- 535 Photoacoustic microscopy in tissue engineering
Cai, X.; Zhang, Y.; Xia, Y. and Wang, L. V. *Materials Today* 2013, 16, 67-77 (invited review article).
- 534 Electrocatalysis on shape-controlled palladium nanocrystals: Oxygen reduction reaction and formic acid oxidation
Shao, M.; Odell, J.; Humbert, M.; Yu, T. and Xia, Y. *Journal of Physical Chemistry C* 2013, 117, 4172-4180.
- 533 Comparison study of gold nanohexapods, nanorods, and nanocages for photothermal cancer treatment
Wang, Y.; Black, K.; Luehmann, H.; Li, W.; Zhang, Y.; Cai, X.; Wan, D.; Liu, S.-Y.; Li, M.; Kim, P.; Li, Z.-Y.; Wang, L. V.; Liu, Y. and Xia, Y. *ACS Nano* 2013, 7, 2068-2077.
- 532 Robust synthesis of gold cubic nanoframes through a combination of galvanic replacement, gold deposition, and silver dealloying
Wan, D.; Xia, X.; Wang, Y. and Xia, Y. *Small* 2013, 9, 3111-3117.
- 531 Radioluminescent gold nanocages with controlled radioactivity for real-time in vivo imaging
Wang, Y.; Liu, Y.; Luehmann, H.; Xia, X.; Wan, D.; Cutler, C. and Xia, Y. *Nano Letters* 2013, 13, 581-585 (it was highlighted at <http://nanotechweb.org/cws/article/tech/52479> and <http://physicsworld.com/cws/article/news/2013/feb/25>).
- 530 Improving correlated SERS measurements with scanning electron microscopy: An assessment of the problem arising from the deposition of amorphous carbon
Moran, C. M.; Xia, X. and Xia, Y. *Physical Chemistry Chemical Physics* 2013, 15, 5400-5406.
- 529 Shape-controlled synthesis of metal nanocrystals
Xia, Y.; Xia, X.; Wang, Y. and Xie, S. *MRS Bulletin* 2013, 38, 335-344 (invited review).
- 528 Label-free photoacoustic microscopy of cytochromes
Zhang, C.; Zhang, Y.; Yao, D.-K.; Xia, Y. and Wang, L. V. *Journal of Biomedical Optics* 2013, 18, 020504-1-3.
- 527 Synthesis of Ag nanocubes 18-32 nm in edge length: The effects of polyol on reduction kinetics, size control, and reproducibility
Wang, Y.; Zheng, Y.; Huang, C. Z. and Xia, Y. *Journal of the American Chemical Society* 2013, 135, 1941-1951.
- 526 Aqueous-phase synthesis of single-crystal Pd seeds 3 nm in diameter and their use for the growth of Pd nanocrystals with different shapes
Zhu, C.; Zeng, J.; Lu, P.; Liu, J.; Gu, Z. and Xia, Y. *Chemistry: A European Journal* 2013, 19, 5127-5133.
- 525 Catalysis on faceted noble-metal nanocrystals: Both shape and size matter
Xie, S.; Choi, S.-I.; Xia, X. and Xia, Y. *Current Opinion in Chemical Engineering* 2013, 2, 142-150 (invited review).
- 524 Controlling the pore sizes and related properties of inverse opal scaffolds for tissue engineering

- Zhang, Y.; Ragan, K. P. and Xia, Y. *Macromolecular Rapid Communications* 2013, 34, 485-491.
- 523 Silica-coated dimers of silver nanospheres as surface-enhanced Raman scattering (SERS) tags for imaging cancer cells
Xia, X.; Li, W.; Zhang, Y. and Xia, Y. *Interface Focus* 2013, 3(3), 20120092.
- 522 A thermoresponsive bubble-generating liposomal system for triggering localized extracellular drug delivery
Chen, K.-J.; Liang, H.-F.; Chen, H. L.; Wang, Y.; Cheng, P.-Y.; Liu, H.-L.; Xia, Y. and Sung, H.-W. *ACS Nano* 2013, 7, 438-446.
- 521 Seed-mediated synthesis of single-crystal gold nanospheres with controlled diameters in the range of 5-30 nm and their self-assembly upon dilution
Zheng, Y.; Ma, Y.; Zhong, X.; Jin, M.; Li, Z.-Y. and Xia, Y. *Chemistry: An Asian Journal* 2013, 8, 792-799 (VIP article, it was highlighted on the cover).
- 520 Labeling human mesenchymal stem cells with Au nanocages for in vitro and in vivo tracking by two-photon microscopy and photoacoustic microscopy
Zhang, Y.; Wang, Y.; Wang, L.; Wang, Y.; Cai, X.; Zhang, C.; Wang, L. V. and Xia, Y. *Theranostics*, 2013, 3, 532-543.
- 519 Controlled delivery of mesenchymal stem cells and growth factors using a tendon-specific nanofiber scaffold
C. N. Manning, A. G. Schwartz, W. Liu, J. Xie, S. Sakiyama-Elbert, M. J. Silva, Y. Xia, R. H. Gelberman and S. Thomopoulos, *Acta Biomaterialia* 2013, 9, 6905-6914.
- 518 Investigation of neovascularization in three-dimensional porous scaffolds *in vivo* by a combination of multiscale photoacoustic microscopy and optical coherence tomography
Cai, X.; Zhang, Y.; Li, L.; Choi, S.-W.; MacEwan, M. R.; Yao, J.; Kim, C.; Xia, Y. and Wang, L. V. *Tissue Engineering C* 2013, 19, 196-204.
- 517 Neovascularization in biodegradable inverse opal scaffolds with uniform and precisely controlled pore sizes
Choi, S.-W.; Zhang, Y.; MacEwan, M. R. and Xia, Y. *Advanced Healthcare Materials* 2013, 2, 145-154.
- 516 Quantitative analysis of the fate of gold nanocages in vitro and in vivo after uptake by U87-MG tumor cells
Cho, E. C.; Zhang, Y.; Cai, X.; Moran, C. H.; Wang, L. V. and Xia, Y. *Angewandte Chemie International Edition* 2013, 52, 1152-1155.
- 515 Generation of controllable gradients in cell density
Liu, W.; Zhang, Y.; Thomopoulos, S. and Xia, Y. *Angewandte Chemie International Edition* 2013, 52, 429-432 (VIP article, jubilee issue for the celebration of the 125th anniversary of *Angewandte Chemie*).
- 514 Shape-controlled synthesis of Pd nanocrystals and their catalytic applications
Zhang, H.; Jin, M.; Xiong, Y.; Lim, B. and Xia, Y. *Accounts of Chemical Research* 2013, 46, 1783-1794 (invited review article).
- 2012**
- 513 Symmetry breaking during seeded growth of nanocrystals
Xia, X. and Xia, Y. *Nano Letters* 2012, 12, 6038-6042.
- 512 Facile synthesis of gold wavy nanowires and investigation of their growth mechanism
Zhu, C.; Peng, H.-C.; Zeng, J.; Liu, J.; Gu, Z. and Xia, Y. *Journal of the American Chemical Society* 2012, 134, 20234-20237.
- 511 Enhancing the catalytic and electrocatalytic properties of Pt-based catalysts by forming bimetallic nanocrystals with Pd
Zhang, H.; Jin, M. and Xia, Y. *Chemical Society Reviews* 2012, 41, 8035-8049 (invited tutorial review article).
- 510 A bioreducible polymer for efficient delivery of Fas-silencing siRNA into stem cell spheroids and enhanced therapeutic angiogenesis
Shim, M. S.; Bhang, S. H.; Yoon, K.; Choi, K. and Xia, Y. *Angewandte Chemie International Edition* 2012, 51, 11899-11903.
- 509 Synthesis and characterization of Pd@MxCu_{1-x} (M=Au, Pd, and Pt) nanocages with porous walls and a yolk-shell structure through galvanic replacement reactions
Xie, S.; Jin, M.; Tao, J.; Wang, Y.; Xie, Z.; Zhu, Y. and Xia, Y. *Chemistry: A European Journal* 2012, 18, 14974-14980 (highlighted on the cover).
- 508 Kinetically controlled overgrowth of Ag or Au on Pd nanocrystal seeds: From hybrid dimers to nonconcentric

- and concentric bimetallic nanocrystals
Zhu, C.; Zeng, J.; Tao, J.; Johnson, M.; Schmidt-Krey, I.; Blubaugh, L.; Zhu, Y.; Gu, Z. and Xia, Y. *Journal of the American Chemical Society* 2012, 134, 15823-15831.
- 507 Synthesis of Pd-Rh core-frame concave nanocubes and their conversion to Rh cubic nanoframes by selective etching of the Pd cores
Xie, S.; Lu, N.; Xie, Z.; Wang, J.; Kim, M. J. and Xia, Y. *Angewandte Chemie International Edition* 2012, 51, 10266-10270.
- 506 A liposomal system capable of generating CO₂ bubbles to induce transient cavitation, lysosomal rupturing, and cell necrosis
Chung, M.-F.; Chen, K.-J.; Liang, H.-F.; Liao, Z.-X.; Chia, W.-T.; Xia, Y.; and Sung, H.-W. *Angewandte Chemie International Edition* 2012, 51, 10089-10093 (hot paper, it was highlighted in ChemistryViews).
- 505 Multi-scale molecular photoacoustic tomography of gene expression
Cai, X.; Li, L.; Krumholz, A.; Guo, Z.; Erpelding, T. N.; Zhang, C.; Zhang, Y.; Xia, Y. and Wang, L. V. *PLoS One* 2012, 7(8), e43999.
- 504 Plasmonic near electric field enhancement effects in ultrafast photoelectron emission: Correlated spatial and laser polarization microscopy studies of individual Ag nanocubes
Grubisic, A.; Ringe, E.; Cobley, C.; Xia, Y.; Marks, L.; Van Duyne, R. and Nesbitt, D. *Nano Letters* 2012, 12, 4823-4829.
- 503 Recent developments in shape-controlled synthesis of silver nanocrystals
Xia, X.; Zeng, J.; Zhang, Q.; Moran, C. M. and Xia, Y. *Journal of Physical Chemistry C* 2012, 116, 21647-21656 (invited feature article, highlighted on the cover).
- 502 Protein-protected Au clusters as a new platform for fluorescence detection of proteases with high sensitivity
Wang, Y.; Wang, Y.; Zhou, F.; Kim, P. and Xia, Y. *Small* 2012, 8, 3769-3773.
- 501 Pulsatile drug release from PLGA hollow microspheres by controlling the permeability of their walls with a magnetic field
Chiang, W. L.; Ke, C.-J.; Chen, S.-Y.; Liao, Z.-X.; Chen, F.-R.; Tsai, C.-Y.; Xia, Y. and Sung, H.-W. *Small* 2012, 8, 3584-3589.
- 500 A highly reactive and sinter-resistant catalytic system based on platinum nanoparticles embedded in the inner surfaces of CeO₂ hollow fibers
Yoon, K.; Yang, Y.; Lu, P.; Wan, D.; Peng, H.-C.; Stamm Masias, K.; Fanson, P. T.; Campbell, C. T. and Xia, Y. *Angewandte Chemie International Edition* 2012, 51, 10089-10092 (VIP article).
- 499 Not just a pretty flower
Zeng, J. and Xia, Y. *Nature Nanotechnology* 2012, 7, 415-416 (invited news & views article).
- 498 Noble-metal nanocrystals with concave surfaces and their applications
Zhang, H.; Jin, M. and Xia, Y. *Angewandte Chemie International Edition* 2012, 51, 7656-7673 (invited review article, it was highlighted on the inside cover).
- 497 Evaluating the pharmacokinetics and in vivo cancer targeting capability of Au nanocages by positron emission tomography imaging
Wang, Y.; Liu, Y.; Luehmann, H.; Xia, X.; Brown, P. K.; Jarreau, C.; Welch, M. J. and Xia, Y. *ACS Nano* 2012, 6, 5880-5888.
- 496 Tumor glucose metabolism imaged in vivo in small animals with whole-body photoacoustic computed tomography
Chatnia, M. R.; Xia, J.; Sohn, R.; Maslova, K.; Guo, Z.; Zhang, Y.; Wang, K.; Xia, Y.; Anastasio, M.; Arbeit, J. and Wang, L. V. *Journal of Biomedical Optics* 2012, 17, 076012-1-7.
- 495 Controlling the size and morphology of Au@Pd core-shell nanocrystals by manipulating the kinetics of seeded growth
Li, J.; Zheng, Y.; Zeng, J. and Xia, Y. *Chemistry: A European Journal* 2012, 18, 8150-8156.
- 494 A mechanistic study on the nucleation and growth of Au on Pd seeds with a cubic or octahedral shape
He, G.; Zeng, J.; Jin, M.; Zhang, H.; Lu, N.; Wang, J.; M. J. Kim and Xia, Y. *ChemCatChem* 2012, 4, 1668-1675 (VIP article, highlighted on the cover).
- 493 Polymer nanofibers embedded with aligned gold nanorods: A new platform for plasmonic studies and optical sensing
Wang, P.; Zhang, L.; Xia, Y.; Xu, X. and Tong, L. *Nano Letters* 2012, 12, 3145-3150.

- 492 Synthesis of Ag nanobars in the presence of single-crystal seeds and a bromide compound, and their surface-enhanced Raman scattering (SERS) properties
Zhang, Q.; Moran, C. M.; Xia, X.; Rycenga, M.; Li, N. and Xia, Y. *Langmuir* 2012, 28, 9047-9054.
- 491 Controlling the evolution of cubic Ag seeds into nanocrystals with different morphologies
Zeng, J.; Xia, X.; Zhang, Q.; Wang, Y. and Xia, Y. *Scientia Sinica Chimica*, 2012, 42, 1505-1512.
- 490 Injectable PLGA porous beads cellularized by hAFSCs for cellular cardiomyoplasty
Huang, C.-C.; Wei, H.-J.; Yeh, Y.-C.; Wang, J.-J.; Lin, W.-W.; Lee, T.-Y.; Hwang, S.-M.; Choi, S.-W.; Xia, Y.; Chang, Y. and Sung, S.-W. *Biomaterials*, 2012, 33, 4069-4077.
- 489 Copper can still be epitaxially deposited on palladium nanocrystals to generate core-shell nanocubes despite their large lattice mismatch
Jin, M.; Zhang, H.; Wang, J.; Zhong, X.; Lu, N.; Li, Z.-Y.; Xie, Z.; Kim, M. J. and Xia, Y. *ACS Nano* 2012, 6, 2566-2573 (it was highlighted at <http://nanotechweb.org/cws/article/tech/48779>).
- 488 Kinetically controlled way to create highly uniform monodispersed ZnO sub-microrods for electronics
Jang, W. S.; Lee, T. I.; Oh, J. Y.; Hwang, S. H.; Shon, S. W.; Kim, D. H.; Xia, Y.; Myoung, J. M. and Baik, H. K. *Journal of Materials Chemistry* 2012, 22, 20719-20727.
- 487 Biodegradable porous beads and their potential applications in regenerative medicine
Choi, S.-W.; Zhang, Y.; Yeh, Y.-C.; Wooten, A. L. and Xia, Y. *Journal of Materials Chemistry* 2012, 22, 11442-11451 (invited feature article).
- 486 Tissue engineering strategies for the tendon/ligament-to-bone insertion
Smith, L.; Xia, Y.; Galatz, L. M.; Genin, G. M. and Thomopoulos, S. *Connective Tissue Research* 2012, 53, 95-105 (invited review article).
- 485 Quantitative analysis of the role played by poly(vinyl pyrrolidone) in seed-mediated growth of Ag nanocrystals
Xia, X.; Zeng, J.; Otejen, L. K.; Li, Q. and Xia, Y. *Journal of the American Chemical Society* 2012, 134, 1793-1801.
- 484 Modifying the pores of an inverse opal scaffold with chitosan microstructures for truly three-dimensional cell culture
Zhang, Y.; Choi, S.-W. and Xia, Y. *Macromolecular Rapid Communications* 2012, 33, 296-301 (highlighted on the cover).
- 483 Choosing orientation: Influence of cargo geometry and ActA polarization on actin comet tails
Lacayo, C. I.; Soneral, P. A. G.; Zhu, J.; Tsuchida, M. A.; Footer, M. J.; Soo, F. S.; Lu, Y.; Xia, Y.; Mogilner, A. and Theriot, J. A. *Molecular Biology of the Cell* 2012, 23, 614-629.
- 482 Palladium nanocrystals enclosed by {100} and {111} facets in controlled proportions and their catalytic activities for formic acid oxidation
Jin, M.; Zhang, H.; Xie, Z.; Xia, Y. *Energy & Environmental Science* 2012, 5, 6352-6357.
- 481 Quantifying the coverage density of poly(ethylene glycol) chains on the surface of gold nanostructures
Xia, X.; Yang, M.; Wang, Y.; Zheng, Y.; Li, Q.; Chen, J. and Xia, Y. *ACS Nano* 2012, 6, 512-522.
- 480 Electrospun nanofibers for regenerative medicine
Liu, W.; Thomopoulos, S. and Xia, Y. *Advanced Healthcare Materials* 2012, 1, 10-25 (invited progress report, it was highlighted on the inside cover of the inaugural issue).
- 479 SV119-gold nanocage conjugates: A new platform for targeting cancer cells via sigma-2 receptors
Wang, Y.; Xu, J.; Xia, X.; Yang, M.; Vangveravong, S.; Chen, J.; Mach, R. H. and Xia, Y. *Nanoscale* 2012, 4, 421-424.
- 478 A facile and general method for the encapsulation of different types of imaging contrast agents within micrometer-sized polymer beads
Bai, M.-Y.; Moran, C. H.; Zhang, L.; Liu, C.; Zhang, Y.; Wang, L.-V.; Xia, Y. *Advanced Functional Materials* 2012, 22, 764-771.
- 477 Formation of embryoid bodies with controlled sizes and maintained pluripotency in three-dimensional inverse opal scaffolds
Zhang, Y.; Choi, S.-W. and Xia, Y. *Advanced Functional Materials*, 2012, 22, 121-129.
- 476 Controlling nucleation and growth of silver on palladium nanocubes by manipulating the reaction kinetics
Zeng, J.; Zhu, C.; Tao, J.; Jin, M.; Zhang, H.; Li, Z.-Y.; Zhu, Y. and Xia, Y. *Angewandte Chemie International Edition* 2012, 51, 2354-2359 (VIP article, highlighted on the back cover and in an accompanying article, as well

as in C&EN News, 2011, December 19, p. 36).

2011

- 475 Silver nanocrystals with concave surfaces and their optical and surface-enhanced Raman scattering properties
Xia, X.; Zeng, J.; McDearmon, B.; Zheng, Y.; Li, Q. and Xia, Y. *Angewandte Chemie International Edition* 2011, 50, 12542-12546 (highlighted on the inside cover).
- 474 In vivo quantitative evaluation of the transport kinetics of gold nanocages in a lymphatic system by noninvasive photoacoustic tomography
Cai, X.; Li, W.; Kim, C.-H.; Yuan, Y.; Wang, L.-V.; Xia, Y. *ACS Nano* 2011, 5, 9658-9667 (It was highlighted at <http://nanotechweb.org/cws/article/tech/48017>).
- 473 Patterning materials through viscoelastic flow and phase separation
Park, M.; Xia, Y. and Jeong, U. *Angewandte Chemie International Edition* 2011, 50, 10977-10980.
- 472 Shape-controlled synthesis of copper nanocrystals in an aqueous solution with glucose as a reducing agent and hexadecylamine as a capping agent
Jin, M.; He, G.; Zhang, H.; Zeng, J.; Xie, Z. and Xia, Y. *Angewandte Chemie International Edition* 2011, 50, 10560-10564.
- 471 n-Channel polymer thin film transistors with long-term air-stability and durability and their use in complementary inverters
Briseno, A. L.; Kim, F. S.; Babel, A.; Xia, Y. and Jenekhe, S. A. *Journal of Materials Chemistry* 2011, 21, 16461-16466.
- 470 Replacement of poly(vinyl pyrrolidone) by thiols: A systematic study of Ag nanocube functionalization by surface-enhanced Raman scattering
Moran, C. H.; Rycenga, M.; Zhang, Q. and Xia, Y. *Journal of Physical Chemistry C*, 2011, 115, 21852-21857.
- 469 Facile synthesis of Pd-Pt alloy nanocages and their enhanced performance for preferential oxidation of CO in excess hydrogen
Zhang, H.; Jin, M.; Liu, H.; Wang, J.; Kim, M. J.; Yang, D.; Xie, Z.; Liu, J. and Xia, Y. *ACS Nano* 2011, 5, 8212-8222.
- 468 Binder-free and full electrical-addressing free-standing nanosheets with carbon nanotube fabrics for electrochemical applications
Lee, T. I.; Jeagal, J. P.; Choi, J. H.; Choi, W. J.; Lee, M. J.; Oh, J. Y.; Kim, G. B.; Baik, H. K.; Xia, Y. and Myoung, J. M. *Advanced Materials* 2011, 23, 4711-4715.
- 467 On-chip screening of experimental conditions for the synthesis of noble-metal nanostructures with different morphologies
Zhou, J.; Zeng, J.; Grant, J.; Wu, H. and Xia, Y. *Small*, 2011, 7, 3308-3316 (VIP article, it was highlighted on the cover and in Materials Views).
- 466 Smart multifunctional hollow microspheres for the quick release of drugs in intracellular lysosomal compartments
Ke, C.-J.; Su, T.-Y.; Chen, H.-L.; Liu, H.-L.; Chiang, W.-L.; Chu, P.-C.; Xia, Y. and Sung, H.-W. *Angewandte Chemie International Edition* 2011, 50, 5086-5089.
- 465 Palladium concave nanocubes with high-Index facets and their enhanced catalytic properties
Jin, M.; Zhang, H.; Xie, Z. and Xia, Y. *Angewandte Chemie International Edition* 2011, 50, 7850-7855.
- 464 The structure sensitivity of alkynol hydrogenation on shape- and size-controlled Pd nanocrystals: Which sites are most active and selective?
Crespo Quesada, M.; Yarulin, A.; Jin, M.; Xia, Y. and Kiwi-Minsker, L. *Journal of the American Chemical Society* 2011, 133, 12787-12794.
- 463 Nanocrystals comprised of alternating shells of Pd and Pt can be obtained by sequentially adding different precursors
Zhang, H.; Jin, M.; Wang, J.; Kim, M. J.; Yang, D. and Xia, Y. *Journal of the American Chemical Society* 2011, 133, 10422-10425.
- 462 Selective sulfuration at the corner sites of a silver nanocrystal and its use in stabilization of the shape
Zeng, J.; Tao, J.; Su, D.; Zhu, Y.; Qin, D. and Xia, Y. *Nano Letters* 2011, 11, 3010-3015.
- 461 Enhancing the stiffness of electrospun nanofiber scaffolds with controlled surface coating and mineralization
Liu, W.; Yeh, Y.-C.; Lipner, J.; Xie, J.; Sung, H.-W.; Thomopoulos, S. and Xia, Y. *Langmuir* 2011, 27, 9088-9093.

- 460 Nanomedicine: Swarming towards the target
Wang, Y.; Brown, P. and Xia, Y. *Nature Materials* 2011, 10, 482-483 (invited News & Views article).
- 459 Non-invasive photoacoustic microscopy of living cells in two and three dimensions through enhancement by a metabolite dye
Zhang, Y.; Cai, X.; Wang, Y.; Zhang, C.; Li, L.; Choi, S.-W.; Wang, L. V. and Xia, Y. *Angewandte Chemie International Edition* 2011, 50, 7359-7363.
- 458 Synthesis of gold nano-hexapods with controllable arm lengths and their tunable optical properties
Kim, D. Y.; Yu, T.; Cho, E. C.; Ma, Y.; Park, O. O. and Xia, Y. *Angewandte Chemie International Edition* 2011, 50, 6328-6331.
- 457 *In vivo* integrated photoacoustic and confocal microscopy of hemoglobin oxygen saturation and oxygen partial pressure
Wang, Y.; Hu, S.; Maslov, K.; Zhang, Y.; Xia, Y. and Wang, L. V. *Optics Letters* 2011, 36, 1029-1031.
- 456 UV-ozone cleaning of supported poly(vinyl pyrrolidone)-stabilized palladium nanocubes: The effect of stabilizer removal on morphology and catalytic behavior
Crespo-Quessada, M.; Andanson, J.-M.; Yarulin, A.; Lim, B.; Xia, Y. and Kiwi-Minsker, L. *Langmuir* 2011, 27, 7909-7916.
- 455 The effect of sedimentation and diffusion on cellular uptake of gold nanoparticles
Cho, E. C.; Zhang, Q. and Xia, Y. *Nature Nanotechnology* 2011, 6, 385-391 (it was highlighted in an editorial article entitled "The dose makes the poison").
- 454 Ordered zig-zag stripes of polymer gel/metal nanoparticle composites for highly stretchable, conductive electrodes
Hyun, D. C.; Park, M.; Park, C.; Kim, B.; Xia, Y.; Hur, J. H.; Park, J. J. and Jeong, U. *Advanced Materials* 2011, 23, 2946-2950.
- 453 Mixing an aqueous suspension of palladium or gold nanocrystals with a less polar solvent can cause changes to size, morphology, or both
Lim, B.; Yu, T.; Park, J.; Zheng, Y. and Xia, Y. *Angewandte Chemie International Edition* 2011, 50, 6068-6071.
- 452 Generation of hot spots with silver nanocubes for single-molecule detection by surface-enhanced Raman scattering
Rycenga, M.; Xia, X.; Moran, C.; Zhou, F.; Qin, D.; Li, Z.-Y. and Xia, Y. *Angewandte Chemie International Edition* 2011, 50, 5473-5477 (hot paper).
- 451 Synthesis of Pd-Pt bimetallic nanocrystals with a concave structure through a bromide-induced galvanic replacement reaction
Zhang, H.; Jin, M.; Wang, J.; Li, W.; Camargo, P. H. C.; Kim, M.; Yang, D.; Xie, Z. and Xia, Y. *Journal of the American Chemical Society* 2011, 133, 6078-6089.
- 450 Putting advanced materials to work for healthcare
Xia, Y. *Advanced Materials* 2011, 23, H8-H9 (editorial for the inaugural publication of *Advanced Healthcare Materials*, a special section in *Advanced Materials*).
- 449 Gold nanocages: From synthesis to theranostic applications
Xia, Y.; Li, W.; Cobley, C. M.; Chen, J.; Xia, X.; Zhang, Q.; Yang, M.; Cho, E. C. and Brown, P. K. *Accounts of Chemical Research* 2011, 44, 914-924 (invited review article, this work was highlighted in C&EN News, 2011, September 26, p. 30, "Personalizing Nanomedicine", <http://pubs.acs.org/cen/email/html/8939sci1.html>)
- 448 Structural dependence of oxygen reduction reaction on palladium nanocrystals
Shao, M.; Yu, T.; Odell, J. H.; Jin, M. and Xia, Y. *Chemical Communications* 2011, 47, 6566-6568.
- 447 Facile synthesis of gold nanorice enclosed by high-index facets and their application for CO oxidation
Zeng, Y.; Tao, J.; Liu, H.; Zeng, J.; Yu, T.; Ma, Y.; Moran, C.; Wu, L.; Zhu, Y.; Liu, J. and Xia, Y. *Small* 2011, 7, 2307-2312.
- 446 Label-free oxygen-metabolic photoacoustic microscopy *in vivo*
Yao, J.; Maslov, K. I.; Zhang, Y.; Xia, Y. and Wang, L. V. *Journal of Biomedical Optics* 2011, 16, 076003.
- 445 A new theranostic system based on gold nanocages and phase-change materials with unique features for photoacoustic imaging and controlled release
Moon, G. D.; Choi, S.-W.; Cai, X.; Li, W.; Cho, E. C.; Jeong, U.; Wang, L. V.; and Xia, Y. *Journal of the American Chemical Society* 2011, 133, 4762-4765.
- 444 Seed-mediated synthesis of gold octahedra in high purity and with well-controlled sizes and optical properties

- Kim, D. Y.; Li, W.; Ma, Y.; Yu, T.; Li, Z.-Y.; Park, O. O. and Xia, Y. *Chemistry: A European Journal* 2011, 17, 4759-4764 (VIP article).
- 443 Platinum concave nanocubes with high-index facets and their enhanced activity for oxygen reduction reaction
Yu, T.; Kim, D. Y.; Zhang, H. and Xia, Y. *Angewandte Chemie International Edition* 2011, 50, 2773-2777 (hot paper).
- 442 The role of surface nonuniformity in controlling the initiation of a galvanic replacement reaction
Cobley, C. M.; Zhang, Q.; Song, W. and Xia, Y. *Chemistry: An Asian Journal* 2011, 6, 1479-1484.
- 441 Gold nanocages as contrast agents for photoacoustic imaging
Li, W.; Brown, P. K.; Wang, L. V. and Xia, Y. *Contrast Media and Molecular Imaging* 2011, 6, 370-377 (invited review article).
- 440 Gold nanocages covered with thermally-responsive polymers for controlled release by high-intensity focused ultrasound
Li, W.; Cai, X.; Kim, C.; Sun, G.; Zhang, Y.; Deng, R.; Yang, M.; Chen, J.; Achilefu, S.; Wang, L. V. and Xia, Y. *Nanoscale* 2011, 3, 1724-1730.
- 439 Controlling the morphology of rhodium nanocrystals by manipulating the growth kinetics with a syringe pump
Zhang, H.; Li, W.; Jin, M.; Zeng, J.; Yu, T.; Yang, D. and Xia, Y. *Nano Letters* 2011, 11, 898-903.
- 438 An enzyme-sensitive probe for photoacoustic imaging and fluorescence detection of protease activity
Xia, X.; Yang, M.; Otejen, L. K.; Zhang, Y.; Li, Q.; Chen, J. and Xia, Y. *Nanoscale* 2011, 3, 950-953 (it was highlighted as a hot paper on the website of Nanoscale).
- 437 Controlling the synthesis and assembly of silver nanostructures for plasmonic applications
Rycenga, M.; Cobley, C. M.; Zeng, J.; Li, W.; Moran, C.; Zhang, Q.; Qin, D. and Xia, Y. *Chemical Reviews* 2011, 111, 3669-3712 (invited review article).
- 436 Chemical transformations of nanostructured materials
Moon, G. D.; Ko, S.; Min, Y.; Zeng, J.; Xia, Y. and Jeong, U. *Nano Today* 2011, 6, 186-203 (invited review article).
- 435 Discrete plasticity in sub-10-nanometer-sized gold crystals
Zheng, H.; Cao, A.; Weinberger, C. R.; Huang, J. Y.; Du, K.; Wang, J.; Ma, Y.; Xia, Y. and Mao, S. X. *Nature Communications* 2011, 1:144, DOI:10.1038/ncomms1149.
- 434 Strain-controlled release of molecules from arrayed microcapsules supported on an elastomer substrate
Hyun, D. C.; Moon, G. D.; Park, C. J.; Kim, B. S.; Xia, Y. and Jeong, U. *Angewandte Chemie International Edition* 2011, 50, 724-727 (it was featured on the inside cover).
- 433 Successive deposition of silver on silver nanoplates: Lateral vs. vertical growth
Zeng, J.; Xia, X.; Rycenga, M.; Henneghan, P.; Li, Q. and Xia, Y. *Angewandte Chemie International Edition* 2011, 50, 244-249 (VIP, it was highlighted on the frontispieces and in an accompanying article published in the same journal, 2011, 50, 992-993).
- 432 Metal nanocrystals with highly branched morphologies
Lim, B. and Xia, Y. *Angewandte Chemie International Edition* 2011, 50, 76-85 (invited mini review article).
- 431 Gold nanostructures: A class of multifunctional materials for biomedical applications
Cobley, C. M.; Chen, J.; Cho, E. C.; Wang, L. V. and Xia, Y. *Chemical Society Reviews* 2011, 40, 44-56 (invited tutorial review).
- 430 Synthesis of Pd nanocrystals enclosed by {100} facets and with sizes <10 nm for application in CO oxidation
Jin, M.; Liu, H.; Zhang, H.; Xie, Z.; Liu, J. and Xia, Y. *Nano Research* 2011, 4, 83-91.
- 429 A mechanistic study on the formation of silver nanoplates in the presence of silver seeds and citric acid or citrate ions
Zeng, J.; Tao, J.; Li, W.; Grant, J.; Wang, P.; Zhu, Y. and Xia, Y. *Chemistry: An Asian Journal*, 2011, 6, 376-379.
- 428 Ceramic nanofibers fabricated by electrospinning and their applications in catalysis, environmental science, and energy technology
Dai, Y.; Liu, W.; Formo, E.; Sun, Y. and Xia, Y. *Polymers for Advanced Technologies*, 2011, 22, 326-338 (invited review article).
- 427 Fiber-laser-based photoacoustic microscopy and melanoma cell detection
Wang, Y.; Zhang, Y.; Hu, S.; Maslov, K. I.; Yang, L.; Xia, Y.; Liu, J. and Wang, L. V. *Journal of Biomedical Optics* 2011, 16, 011014-1-4.
- 426 Nanofiber membranes with controllable microwells and structural cues and their use in forming cell

microarrays and neuronal networks

Xie, J.; Liu, W.; MacEwan, M. R.; Yeh, Y.-C.; Thomopoulos, S. and Xia, Y. *Small* 2011, 7, 293-297 (it was highlighted on the cover).

2010

- 425 Beyond the confines of templates
Xia, Y. and Lim, B. *Nature* 2010, 467, 923-924 (invited News & Views article).
- 424 Three-dimensional scaffolds for tissue engineering: The importance of uniformity in pore size and structure
Choi, S.-W.; Zhang, Y. and Xia, Y. *Langmuir* 2010, 26, 19001-19006.
- 423 Inorganic nanoparticle-based contrast agents for molecular imaging
Cho, E. C.; Glaus, C.; Chen, J.; Welch, M. J. and Xia, Y. *Trends in Molecular Medicine* 2010, 16, 561-573 (invited review article).
- 422 Au@Ag core-shell nanocubes with finely tuned and well-controlled sizes, shell thicknesses, and optical properties
Ma, Y.; Li, W.; Cho, E. C.; Li, Z.; Yu, T.; Zeng, J.; Xie, Z. and Xia, Y. *ACS Nano* 2010, 4, 6725-6734.
- 421 Shaping a bright future for platinum-based alloy nanocatalysts
Lim, B.; Yu, T. and Xia, Y. *Angewandte Chemie International Edition* 2010, 49, 9819-9820 (invited highlight article).
- 420 Nanocrystal-based time-temperature indicators
Zeng, J.; Roberts, S. and Xia, Y. *Chemistry: A European Journal* 2010, 16, 12559-12563 (it was highlighted on the cover).
- 419 Facile synthesis of Ag nanocubes of 30 to 70 nm in edge length with CF₃COOAg as a precursor
Zhang, Q.; Li, W.; Wen, L.-P.; Chen, J.; and Xia, Y. *Chemistry: A European Journal* 2010, 16, 10234-10239.
- 418 A sinter-resistant catalytic system based on Pt nanoparticles supported on TiO₂ nanofibers and covered by porous silica
Dai, Y.; Lim, B.; Yang, Y.; Cobley, C. M.; Cho, E. C.; Li, W.; Grayson, B.; Fanson, P. T.; Campbell, C. T. and Xia, Y. *Angewandte Chemie International Edition* 2010, 49, 8165-8168 (VIP, it was also featured in a press release article posted on the WUSTL website, with a title of "New technology promises better catalytic converter", and covered by many other media).
- 417 Aqueous-phase synthesis of Pt/CeO₂ hybrid nanostructures and their catalytic properties
Yu, T.; Zeng, J.; Lim, B. and Xia, Y. *Advanced Materials* 2010, 22, 5188-5192.
- 416 A temperature-sensitive drug release system based on phase-change materials
Choi, S. W.; Zhang, Y. and Xia, Y. *Angewandte Chemie International Edition* 2010, 49, 7904-7908.
- 415 Radially aligned, electrospun nanofibers as dural substitutes for wound closure and tissue regeneration applications
Xie, J.; MacEwan, M. R.; Ray, W. Z.; Liu, W.; Siewe, D. Y. and Xia, Y. *ACS Nano* 2010, 4, 5027-5036 (it was featured on the cover and highlighted in C&EN News, August 26, 2010; it was also featured on Nanowerk, posted on August 17, 2010).
- 414 Chronic label-free volumetric photoacoustic microscopy of melanoma cells in three-dimensional porous scaffolds
Zhang, Y.; Cai, X.; Choi, S.-W.; Kim, C.; Wang, L. V. and Xia, Y. *Biomaterials* 2010, 31, 8651-8658.
- 413 Analytical model for optical bistability in nonlinear metal nano-antennae involving Kerr materials
Zhou, F.; Li, Z.-Y. and Xia, Y. *Optics Express*, 2010, 18, 13337-13344.
- 412 Seed-mediated synthesis of Ag nanocubes with controllable edge lengths in the range of 30-200 nm and comparison of their optical properties
Zhang, Q.; Li, W.; Moran, C.; Chen, J.; Wen, L. and Xia, Y. *Journal of the American Chemical Society* 2010, 132, 11372-11378.
- 411 Facile synthesis of double-shelled polypyrrole hollow particles with a structure similar to that of a thermal bottle
Bai, M. Y. and Xia, Y. *Macromolecular Rapid Communications* 2010, 31, 1863-1868 (it was highlighted on the cover).
- 410 In vivo molecular photoacoustic tomography of melanomas targeted by bioconjugated gold nanocages
Kim, C.; Cho, E. C.; Chen, J.; Song, K. H.; Au, L.; Favazza, C.; Zhang, Q.; Cobley, C. M.; Cao, F.; Xia, Y. and Wang,

- L. V. ACS Nano, 2010, 4, 4559-4564 (it was featured in a press release article posted on the WUSTL website, with a title of "Seeing melanoma", and covered by other media).
- 409 Nanofabrication at high throughput and low cost
Wiley, B. J.; Qin, D. and Xia, Y. ACS Nano 2010, 4, 3554-3559 (invited perspective article).
- 408 Facile synthesis of bimetallic Ag-Ni core-sheath nanowires and their magnetic and electrical properties
McKiernan, M.; Zeng, J.; Ferdous, S.; Verhaverbeke, S.; Leschkies, K. S.; Gouk, R.; Lazik, C.; Jin, M.; Briseno, A. L. and Xia, Y. Small 2010, 6, 1927-1934.
- 407 Epitaxial overgrowth of platinum on palladium nanocrystals
Jiang, M.; Lim, B.; Tao, J.; Camargo, P. H. C.; Ma, C.; Zhu, Y. and Xia, Y. Nanoscale 2010, 2, 2406-2411.
- 406 Unraveling the effects of size, composition, and substrate on the localized surface plasmon resonance frequency of gold and silver nanocubes: A systematic single particle approach
Ringe, E.; McMahon, J.; Sohn, K. N.; Cobley, C.; Xia, Y.; Huang, J.; Schatz, G. C.; Marks, L. D. and Van Duyne, R. P. Journal of Physical Chemistry C 2010, 114, 12511-12516.
- 405 Facile synthesis of starfish-like Rh nanocrystals by eliminating oxidative etching with a chloride-free precursor
Zhang, H.; Xia, X.; Li, W.; Zeng, J.; Dai, Y.; Yang, D. and Xia, Y. Angewandte Chemie International Edition 2010, 49, 5296-5300 (it was highlighted in Nature Materials, 2010, 9, p. 605).
- 404 Controlling the shapes of silver nanocrystals with different capping agents
Zeng, J.; Zheng, Y.; Rycenga, M.; Tao, J.; Li, Z.-Y.; Zhang, Q.; Zhu, Y. and Xia, Y. Journal of the American Chemical Society 2010, 132, 8552-8553.
- 403 Uniform beads with controllable pore sizes for biomedical applications
Choi, S.-W.; Yeh, Y.-C.; Zhang, Y.; H.-W. Sung and Xia, Y. Small 2010, 6, 1492-1498.
- 402 Nanomaterials research with a Chinese flavor
Yu, S. and Xia, Y. Advanced Functional Materials 2010, 20, 3628-3629 (an essay for a special issue on Nanomaterials Research by Chinese Scientists).
- 401 Gold nanocages: A novel class of multifunctional materials for theranostic applications
Chen, J.; Yang, M.; Zhang, Q.; Cho, E. C.; Cobley, C. M.; Kim, C.; Claus, C.; Wang, L. V.; Welch, M. J. and Xia, Y. Advanced Functional Materials 2010, 20, 3684-3694 (invited feature article).
- 400 In vitro mineralization by preosteoblasts in poly(DL-lactide-co-glycolide) inverse opal scaffolds reinforced with hydroxyapatite nanoparticles
Choi, S.-W.; Zhang, Y.; Ye, J.; Thomopoulos, S. and Xia, Y. Langmuir, 2010, 26, 12126-12131.
- 399 USTC: A powerhouse of talent
Xia, Y. and Yu, S. Advanced Materials 2010, 22, 1897-1899 (an essay for a special issue on USTC Materials Science).
- 398 Seed-mediated synthesis of Pd-Rh bimetallic nanodendrites
Kobayashi, H.; Lim, B.; Wang, J.; Camargo, P.; Yu, T.; Kim, M. J. and Xia, Y. Chemical Physics Letters 2010, 494, 249-254.
- 397 Facile synthesis of gold octahedra by direct reduction of HAuCl_4 in an aqueous solution
Li, W. and Xia, Y. Chemistry: An Asian Journal 2010, 5, 1312-1316.
- 396 Thiol-induced assembly of Au nanoparticles into chain-like structures and their fixing by encapsulation in silica shells or gelatin microspheres
Cho, E. C.; Choi, S. W.; Camargo, P. C. H. and Xia, Y. Langmuir 2010, 26, 10005-10012.
- 395 Aqueous-phase synthesis of single-crystal ceria nanosheets
Yu, T.; Lim, B. and Xia, Y. Angewandte Chemie International Edition 2010, 49, 4484-4487 (it was selected as a hot paper).
- 394 Simultaneous velocity and pressure measurements using luminescent microspheres
Kimura, F.; McCann, J.; Khalil, G.; Dabiri, D.; Xia, Y. and Callis, J. Review of Scientific Instruments 2010, 81, 064101.
- 393 Noble-metal nanotubes prepared via a galvanic replacement reaction between Cu nanowires and aqueous HAuCl_4 , H_2PtCl_6 , or Na_2PdCl_4
Lu, X.; McKiernan, M.; Peng, Z.; Lee, E. P.; Yang, H. and Xia, Y. Science of Advanced Materials, 2010, 2, 413-420.
- 392 Hydrothermal synthesis of monoclinic VO_2 micro- and nanocrystals in one step and their use in fabricating inverse opals

- Son, J.-H.; Wei, J.; Cobden, D.; Cao, G. and Xia, Y. *Chemistry of Materials* 2010, 22, 3043-3050.
- 391 “Aligned-to-random” nanofiber scaffolds for mimicking the structure of tendon-to-bone insertion site
Xie, J.; Li, X.; Lipner, J.; Wolfe, C.; Schwartz, A.; Thomopoulos, S. and Xia, Y. *Nanoscale* 2010, 2, 923-926.
- 390 Synthesis of small silver nanocubes in a hydrophobic solvent by introducing oxidative etching with Fe(III) species
Ma, Y.; Li, W.; Zeng, J.; McKiernan, M.; Xie, Z. and Xia, Y. *Journal of Materials Chemistry* 2010, 20, 3586-3589.
- 389 Bright three-photon luminescence from Au-Ag alloyed nanostructures for bio-imaging with negligible photothermal toxicity
Tong, L.; Cobley, C. M.; Chen, J.; Xia, Y. and Cheng, J.-X. *Angewandte Chemie International Edition* 2010, 49, 3485-3488 (it was selected as a hot paper, highlighted on the inside cover, and featured in Science Daily, <http://www.sciencedaily.com/releases/2010/04/100412170337>; it was highlighted in Nature Methods, 2010, 7, p. 957).
- 388 Buckling-assisted patterning of multiple polymers
Hyun, D. C.; Moon, G. D.; Park, C. J.; Kim, B. S.; Xia, Y. and Jeong, U. *Advanced Materials* 2010, 22, 2642-2646 (it was highlighted on the cover).
- 387 Fabrication of density gradients of biodegradable polymer microparticles and their use in guiding neurite outgrowth
Li, X.; MacEwan, M. R.; Xie, J.; Siewe, D.; Yuan, X. and Xia, Y. *Advanced Functional Materials* 2010, 20, 1632-1637.
- 386 Dissolving Ag from Au-Ag alloy nanoboxes with H₂O₂: A method for both tailoring the optical properties and measuring the H₂O₂ concentration
Zhang, Q.; Cobley, C. M. Zeng, J.; Wen, L.-P.; Chen, J. and Xia, Y. *Journal of Physical Chemistry C* 2010, 114, 6396-6400.
- 385 Hierarchical nanostructures of K-birnessite nanoplates on anatase nanofibers and their application for decoloration of dye solution
Dai, Y.; Lu, X.; McKiernan, M.; Lee, E. P.; Sun, Y. and Xia, Y. *Journal of Materials Chemistry* 2010, 20, 3157-3162.
- 384 Engineering the properties of metal nanostructures via galvanic replacement reactions
Cobley, C. M. and Xia, Y. *Materials Science & Engineering Reports* 2010, 70, 45-63.
- 383 A simple spectroscopic method for differentiating cellular uptakes of gold nanospheres and nanorods from their mixtures
Cho, E. C.; Liu, Y. and Xia, Y. *Angewandte Chemie International Edition* 2010, 49, 1976-1980.
- 382 Chemical transformations in ultrathin chalcogenide nanowires
Moon, G. D.; Ko, S.; Xia, Y. and Jeong, U. *ACS Nano* 2010, 4, 2307-2317.
- 381 New insights into the growth mechanism and surface structure of palladium nanocrystals
Lim, B.; Liu, Kobayashi, H.; Camargo, P. H. C.; Allard, L. F.; Liu, Y. and Xia, Y. *Nano Research* 2010, 3, 180-188 (it was highlighted on the cover).
- 380 Gold nanocages as photothermal transducers for cancer treatment
Chen, J.; Claus, C.; Laforest, R.; Zhang, Q.; Yang, M.; Gidding, M.; Welch, M. and Xia, Y. *Small* 2010, 7, 811-817 (it was feature in a press release article posted on the WUSTL website, with a title of “Nanoparticles: A golden bullet for cancer”, and covered by many other media).
- 379 Synthesis of Pd-Au bimetallic nanocrystals via controlled overgrowth
Lim, B.; Kobayashi, H.; Yu, T.; Wang, J.; Kim, M. J.; Li, Z.-Y. Rycenga, M. and Xia, Y. *Journal of the American Chemical Society* 2010, 132, 2506-2507.
- 378 Magnetic field-assisted electrospinning of aligned straight and wavy polymeric nanofibers
Liu, Y.; Zhang, X.; Xia, Y. and Yang, H. *Advanced Materials* 2010, 22, 2454-2457.
- 377 Targeting gold nanocages to cancer cells for photothermal destruction and drug delivery
Cobley, C. M.; Au, L.; Chen, J. and Xia, Y. *Expert Opinion on Drug Delivery* 2010, 7, 577-587 (invited review article).
- 376 Au^I: An alternative and potentially better precursor than Au^{III} for the synthesis of Au nanostructures
Zeng, J.; Ma, Y.; Jeong, U. and Xia, Y. *Journal of Materials Chemistry* 2010, 20, 2290-2301 (invited feature article).
- 375 Gold-based hybrid nanocrystals through heterogeneous nucleation and growth

- Zeng, J.; Huang, J.; Liu, C.; Wu, C.; Lin, Y.; Wang, X.; Zhang, S.; Hou, J. and Xia, Y. *Advanced Materials* 2010, 22, 1936-1940.
- 374 Seed-mediated synthesis of truncated gold decahedrons with the AuCl/oleylamine complex as a precursor
Ma, Y.; Zeng, J.; Li, W.; McKiernan, M.; Xie, Z. and Xia, Y. *Advanced Materials* 2010, 22, 1930-1934.
- 373 Nucleation and growth mechanisms for Pd-Pt bimetallic nanodendrites and their electrocatalytic properties
Lim, B.; Jiang, M.; Yu, T.; Camargo, P. H. C. and Xia, Y. *Nano Research* 2010, 3, 69-80.
- 372 Measuring the SERS enhancement factors of dimers with different structures constructed from two silver nanocubes
Camargo, P. H. C.; Au, L.; Rycenga, M.; Li, W. and Xia, Y. *Chemical Physics Letters* 2010, 484, 304-308.
- 371 Metal nanoparticles with gain towards single-molecule detection by surface-enhanced Raman scattering
Li, Z.-Y. and Xia, Y. *Nano Letters* 2010, 10, 243-249.
- 370 A comparison study of the catalytic properties of Au-based nanocages, nanoboxes, and nanoparticles
Zeng, J.; Zhang, Q.; Chen, J. and Xia, Y. *Nano Letters* 2010, 10, 30-35.
- 369 Quantifying the cellular uptake of antibody-conjugated Au nanocages by two-photon microscopy and inductively coupled plasma mass spectrometry
Au, L.; Zhang, Q.; Cobley, C. M.; Gidding, M.; Schwartz, A. G.; Chen, J. and Xia, Y. *ACS Nano* 2010, 4, 35-42.
- 368 Etching and dimerization: A simple and versatile route to dimers of silver nanospheres with a range of sizes
Li, W.; Camargo, P. H. C.; Au, L.; Zhang, Q.; Rycenga, M. and Xia, Y. *Angewandte Chemie International Edition* 2010, 49, 164-168 (VIP, also featured in an accompanying highlight article).
- 367 Understanding the SERS effects of single silver nanoparticles and their dimers, one at a time
Rycenga, M.; Camargo, P. H. C.; Li, W.; Moran, C. and Xia, Y. *Journal of Physical Chemistry Letters* 2010, 1, 696-703 (invited perspective article, it was among the 20 most cited papers in 2010 and highlighted on the journal homepage).
- 366 Synthesis of gold microplates using bovine serum albumin as a reductant and a stabilizer
Au, L.; Lim, B.; Colletti, P.; Jun, Y.-S. and Xia, Y. *Chemistry: An Asian Journal* 2010, 5, 123-129.
- 365 Soft lithographic techniques for micro- and nanoscale patterning
Qin, D.; Xia, Y. and Whitesides, G. M. *Nature Protocols* 2010, 5, 491-502.
- 364 The effects of size, shape, and surface functional group of gold nanostructures on their adsorption and internalization by cells
Cho, E. C.; Au, L.; Zhang, Q. and Xia, Y. *Small* 2010, 6, 517-522.
- 363 Synthesis and characterization of noble-metal nanostructures containing gold nanorods in the center
Cho, E. C.; Camargo, P. H. C. and Xia, Y. *Advanced Materials* 2010, 22, 744-748 (highlighted in Material Views).
- 362 Electrospun nanofibers for neural tissue engineering
Xie, J.; MacEwan, M. R.; Schwartz, A. G. and Xia, Y. *Nanoscale* 2010, 2, 35-44 (invited feature article).

2009

- 361 Gold nanocages covered by smart polymers for controlled release with near-infrared light
Yavuz, M. S.; Cheng, Y.; Chen, J.; Cobley, C. M.; Zhang, Q.; Rycenga, M.; Xie, J.; Kim, C. H.; Song, K. H.; Schwartz, A. G.; Wang, L. V. and Xia, Y. *Nature Materials* 2009, 12, 935-939 (it was highlighted in the Science Observation Section of New York Times, 2009, November 3; Discover Magazine, Blog, 2009; Pharmaceutical Formulations & Quality, 2009, November 24; and BioPhotonics, 2010, January, p. 12).
- 360 Probing the photothermal effect of gold-based nanocages with surface-enhanced Raman scattering (SERS)
Rycenga, M.; Wang, Z.; Gordon, E.; Cobley, C. M.; Schwartz, A. G.; Lo, C. S. and Xia, Y. *Angewandte Chemie International Edition* 2009, 48, 9924-9927.
- 359 Controlled etching as a route to high quality silver nanospheres for optical studies
Cobley, C.; Rycenga, M.; Zhou, F.; Li, Z. and Xia, Y. *Journal of Physical Chemistry C* 2009, 113, 16975-16982.
- 358 Production of Ag nanocubes on a scale of 0.1 g per batch by protecting the NaHS-mediated polyol synthesis with argon
Zhang, Q.; Cobley, C. M.; Au, L.; McKiernan, M.; Schwartz, A.; Chen, J.; Wen, L. and Xia, Y. *ACS Applied Materials and Interfaces* 2009, 1, 2044-2048.
- 357 Coupling to light, and transport and dissipation of energy in silver nanowires
Staleva, H.; Skrabalak, S. E.; Carey, C. R.; Kosel, T.; Xia, Y. and Hartland, G. V. *Physical Chemistry Chemical Physics* 2009, 28, 5889-5896.

- 356 Facile synthesis of gold icosahedra in an aqueous solution by reacting HAuCl_4 with N-vinyl pyrrolidone
Yavuz, M. S.; Li, W. and Xia, Y. *Chemistry: A European Journal* 2009, 15, 13181-13187.
- 355 Metal-polymer hybrid colloidal particles with an eccentric structure
Ohnuma, A.; Cho, E. C.; Jiang, M.; Ohtani, B. and Xia, Y. *Langmuir* 2009, 25, 13880-13887.
- 354 Mid-IR plasmonics: Near-field imaging of coherent plasmon modes of silver nanowires
Jones, A. C.; Olman, R. L.; Skrabalak, S. E.; Wiley, B. J.; Xia, Y. and Raschke, M. B. *Nano Letters* 2009, 9, 2553-2558.
- 353 Functionalization of ZrO_2 nanofibers with Pt nanostructures: The effect of surface roughness on nucleation mechanism and morphology control
Formo, E.; Camargo, P. H. C.; Lim, B.; Jiang, M. and Xia, Y. *Chemical Physics Letters* 2009, 476, 56-61.
- 352 Measuring the SERS enhancement factors of hot spots formed between an individual Ag nanowire and a single Ag nanocube
Camargo, P. H. C.; Cobley, C. M.; Rycenga, M. and Xia, Y. *Nanotechnology* 2009, 20, 434020 (selected to be part of Nanotechnology's Highlights of 2009 collection).
- 351 Fabrication of microbeads with a controllable hollow interior and porous wall using a capillary fluidic device
Choi, S.-W.; Zhang, Y. and Xia, Y. *Advanced Functional Materials* 2009, 19, 2943-2949.
- 350 Twin-induced growth of palladium-platinum alloy nanocrystals
Lim, B.; Wang, J.; Camargo, P. H. C.; Cobley, C. M.; Kim, M. J. and Xia, Y. *Angewandte Chemie International Edition* 2009, 48, 6304-6308.
- 349 Nanofiber scaffolds with gradations in mineral content for mimicking the tendon-to-bone insertion site
Li, X.; Xie, J.; Lipner, J.; Yuan, X.; Thomopoulos, S. and Xia, Y. *Nano Letters* 2009, 9, 2763-2768 (it was highlighted in C&EN News, June 29, 2009, p. 27; Discover Magazine, November, 2009, P. 15; Nanotechweb.org, <http://nanotechweb.org/cws/article/tech/39726>).
- 348 Etching and growth: An intertwined pathway to silver nanocrystals with exotic shapes
Cobley, C. M.; Rycenga, M.; Zou, F.; Li, Z.-Y. and Xia, Y. *Angewandte Chemie International Edition* 2009, 48, 4824-4827 (it was highlighted in Nature, 2009, 459, p. 893).
- 347 Synthesis of anatase TiO_2 nanocrystals with exposed {001} facets
Dai, Y.; Cobley, C. M.; Zeng, J.; Sun, Y. and Xia, Y. *Nano Letters*, 2009, 9, 2455-2459.
- 346 Measuring the optical absorption cross sections of Au-Ag nanocages and Au nanorods by photoacoustic imaging
Cho, E. C.; Kim, C.; Zou, F.; Cobley, C. M.; Song, K. H.; Chen, J.; Li, Z.-Y.; Wang, L. V. and Xia, Y. *Journal of Physical Chemistry C*, 2009, 113, 9023-9028.
- 345 Neurite outgrowth on nanofiber scaffolds with different orders, structures, and surface properties
Xie, J.; MacEwan, M. R.; Li, X.; Sakiyama-Elbert, S. E. and Xia, Y. *ACS Nano* 2009, 3, 1151-1159 (highlighted on the cover).
- 344 Probing the surface-enhanced Raman scattering properties of Au-Ag nanocages at two different excitation wavelengths
Rycenga, M.; Hou, K. K.; Cobley, C. M.; Schwartz, A.; Camargo, P. H. C. and Xia, Y. *Physical Chemistry Chemical Physics* 2009, 11, 5903-5908.
- 343 Functionalization of electrospun ceramic nanofibre membranes with noble-metal nanostructures for catalytic applications
Formo, E.; Yavuz, M.; Lee, E. P.; Lane, L. and Xia, Y. *Journal of Materials Chemistry* 2009, 19, 3878-3882.
- 342 Shape-controlled synthesis of silver nanoparticles for plasmonic and sensing applications
Cobley, C. M.; Skrabalak, S. E. and Xia, Y. *Plasmonics* 2009, 4, 171-179 (invited review article).
- 341 Fine tuning the optical properties of Au-Ag nanocages by selectively etching of Ag with oxygen and a water-soluble thiol
Cho, E. C.; Cobley, C. M.; Rycenga, M. and Xia, Y. *Journal of Materials Chemistry* 2009, 19, 6317-6320.
- 340 Pd-Pt bimetallic nanodendrites with high activity for oxygen reduction
Lim, B.; Jiang, M.; Camargo, P. H. C.; Cho, E. C.; Tao, J.; Lu, X.; Zhu, Y. and Xia, Y. *Science* 2009, 324, 1302-1305 (it was highlighted in C&EN News, 2009, May 18, p. 8; Science News, 2009, May 14, web version; Nano Today, 2009, 4, p. 286; Earth, 2009, August, p. 15; ChemWeb.com; Chemical Engineering Progress, 2009, June 20, p. 10).

- 339 Hollow spheres of conducting polymers with smooth surface and uniform, controllable sizes
Bai, M.-Y.; Cheng, Y.-J.; Wickline, S. A. and Xia, Y. *Small* 2009, 5, 1747-1752.
- 338 Conductive core-sheath nanofibers and their potential application in neural tissue engineering
Xie, J.; MacEwan, M. R.; Willerth, S. M.; Li, X.; Moran, D. W.; Sakiyama-Elbert, S. E. and Xia, Y. *Advanced Functional Materials* 2009, 19, 2312-2318.
- 337 Understanding the role of surface charges in cellular adsorption versus internalization by selectively removing gold nanoparticles on the cell surface with a I_2/KI etchant
Cho, E. C.; Xie, J.; Wurm, P. A. and Xia, Y. *Nano Letters* 2009, 9, 1080-1084.
- 336 Chitosan-based inverse opals: Three-dimensional scaffolds with uniform pore structures for cell culture
Choi, S.-W.; Xie, J. and Xia, Y. *Advanced Materials* 2009, 21, 2997-3001.
- 335 Gold and Nanotechnology
Cobley, C. M. and Xia, Y. *Elements* 2009, 5, 309-313 (invited review article).
- 334 Isolating and probing the hot spot formed between two silver nanocubes
Camargo, P. H. C.; Rycenga, M.; Au, L. and Xia, Y. *Angewandte Chemie International Edition* 2009, 48, 2180-2184.
- 333 Synthesis of gold nanostructures with controlled morphologies from the $AuCl(oleylamine)$ complex
Ma, Y.; Zeng, J. and Xia, Y. *Acta Physico-Chimica Sinica*, 2009, 25, 1026-1032 (invited review article).
- 332 Noble-metal nanostructures with controlled morphologies
Jiang, M.; Cobley, C. M.; Lim, B. and Xia, Y. *Material Matters* 2009, 4(1), 8-13.
- 331 A facile synthesis of asymmetric hybrid colloidal particles
Ohnuma, A.; Cho, E. C.; Camargo, P. H. C.; Au, L.; Ohtani, B. and Xia, Y. *Journal of the American Chemical Society* 2009, 131, 1362-1363.
- 330 Pushing nanocrystal synthesis toward nanomanufacturing
Skrabalak, S. E. and Xia, Y. *ACS Nano* 2009, 3, 10-15 (invited perspective article).
- 329 Dimers of silver nanospheres: Facile synthesis and their use as hot spots for surface-enhanced Raman scattering
Li, W.; Camargo, P. H. C.; Lu, X. and Xia, Y. *Nano Letters* 2009, 9, 485-490.
- 328 Surface-enhanced Raman scattering: Comparison of three different molecules on single-crystal nanocubes and nanospheres of silver
Rycenga, M.; Kim, M. H.; Camargo, P. H. C.; Cobley, C. M.; Li, Z.-Y. and Xia, Y. *Journal of Physical Chemistry A* 2009, 113, 3932-3939.
- 327 Preparation of uniform microspheres using a simple fluidic device and their crystallization into close-packed lattices
Choi, S.-W.; Cheong, I. W.; Kim, J.-H. and Xia, Y. *Small* 2009, 4, 454-459 (highlighted on the cover).
- 326 Shape-controlled synthesis of metal nanocrystals: Simple chemistry meets complex physics?
Xia, Y.; Xiong, Y.; Lim, B. and Skrabalak, S. E. *Angewandte Chemie International Edition* 2009, 48, 60-103 (invited review article, highlighted on the cover; it was also featured as a Fast Moving Fronts Paper in the field of Materials Science in an interview with ScienceWatch.com, March 2010).
- 325 Template-assisted self-assembly: A versatile approach to complex micro- and nanostructures
Rycenga, M.; Camargo, P. H. C. and Xia, Y. *Soft Matter* 2009, 5, 1129-1136 (invited highlight article).
- 324 Synthesis and application of $RuSe_2$ nanotubes as methanol tolerant electrocatalysts for the oxygen reduction reaction
Camargo, P. H. C.; Peng, Z.; Lu, X.; Yang, H. and Xia, Y. *Journal of Materials Chemistry* 2009, 19, 1024-1030.
- 323 The differentiation of embryonic stem cells seeded on electrospun nanofibers into neural lineages
Xie, J.; Willerth, S. M.; Li, X.; MacEwan, M. R.; Rader, A.; Sakiyama-Elbert, S. E. and Xia, Y. *Biomaterials* 2009, 30, 354-362.
- 322 Chemical synthesis of novel plasmonic nanoparticles
Lu, X.; Rycenga, M.; Skrabalak, S. E.; Wiley, B. and Xia, Y. *Annual Review of Physical Chemistry* 2009, 60, 167-192 (invited review article).
- 321 Shape-controlled synthesis of platinum nanocrystals for catalytic and electrocatalytic applications
Chen, J.; Lim, B. K.; Lee, E. P. and Xia, Y. *Nanotoday: An International Rapid Reviews Journal* 2009, 4, 81-95 (invited review article).
- 320 Shape-controlled synthesis of Pd nanocrystals in aqueous solutions

Lim, B.; Jiang, M.; Tao, J.; Camargo, P. H. C.; Zhu, Y. and Xia, Y. *Advanced Functional Materials* 2009, 19, 189-200 (feature article).

- 319 Near-infrared gold nanocages as a new class of tracers for photoacoustic sentinel lymph node mapping on a rat model
Song, K. H.; Kim, C.; Cobley, C. M. Xia, Y. and Wang, L. V. *Nano Letters* 2009, 9, 183-188.

2008

- 318 Gold nanocages: Synthesis, properties, and applications
Skrabalak, S. E.; Chen, J.; Sun, Y.; Lu, X.; Au, L.; Cobley, C. M. and Xia, Y. *Accounts of Chemical Research* 2008, 41, 1587-1595.
- 317 Coating electrospun poly(ϵ -caprolactone) fibers with gelatin and calcium phosphate and their use as biomimetic scaffolds for bone tissue engineering
Li, X.; Xie, J.; Yuan, X. and Xia, Y. *Langmuir*, 2008, 24, 14145-14150.
- 316 Quantitative analysis of dipole and quadrupole excitation in surface plasmon resonance of metal nanoparticles
Zhou, F.; Li, Z.-Y.; Liu, Y. and Xia, Y. *Journal of Physical Chemistry C* 2008, 112, 20233-20240.
- 315 Size dependence of cubic to trigonal structural distortion in silver micro- and nanocrystals under high pressure
Guo, Q.; Zhao, Y.; Wang, Z.; Skrabalak, S.; Lin, Z. and Xia, Y. *Journal of Physical Chemistry C* 2008, 112, 20135-20137.
- 314 Synthesis and optical properties of cubic gold nanoframes
Au, L.; Chen, Y.; Zhou, F.; Camargo, P. H. C.; Lim, B.; Li, Z.-Y.; Ginger, D. S. and Xia, Y. *Nano Research* 2008, 1, 441-449.
- 313 Facile synthesis of highly faceted multioctahedral Pt nanocrystals through controlled overgrowth
Lim, B.; Lu, X.; Jiang, M.; Camargo, P. H. C.; Cho, E.-C.; Lee, E. P. and Xia, Y. *Nano Letters* 2008, 8, 4043-4047.
- 312 Facile synthesis of branched Au nanostructures by templating against a self-destructive lattice of magnetic Fe nanoparticles
Li, Z.; Li, W.; Camargo, P. H. C. and Xia, Y. *Angewandte Chemie International Edition* 2008, 47, 9653-9656.
- 311 Nanomaterials at work in biomedical research
Xia, Y. *Nature Materials* 2008, 7, 758-760 (invited commentary article).
- 310 Integration of photonic and silver nanowire plasmonic waveguides
Pyayt, A.; Wiley, B. J.; Xia, Y.; Chen, A. and Dalton, L. *Nature Nanotechnology* 2008, 3, 660-665.
- 309 Optical near-field mapping of plasmonic nanoprisms
Rang, M.; Jones, A. C.; Zhou, F.; Li, Z.-Y.; Wiley, B. J.; Xia, Y. and Raschke, M. B. *Nano Letters* 2008, 8, 3357-3363.
- 308 Coaxial electrospinning of microfibers with liquid crystal in the core
Lagerwall, J. P. F.; McCann, J. T.; Formo, E.; Scalia, G. and Xia, Y. *Chemical Communications* 2008, 5420-5422.
- 307 Electrocatalytic properties of Pt nanowires supported on Pt and W gauzes
Lee, E. P.; Peng, Z.; Chen, W.; Chen, S.; Yang, H. and Xia, Y. *ACS Nano* 2008, 2, 2167-2173.
- 306 A SERS study of the molecular structure of alkanethiol monolayers on Ag nanocubes in the presence of aqueous glucose
Rycenga, M.; McLellan, J. M. and Xia, Y. *Chemical Physics Letters* 2008, 463, 166-171.
- 305 A facile, water-based synthesis of highly branched nanostructures of silver
Wang, Y.; Camargo, P. H. C.; Skrabalak, S. E.; Gu, H. and Xia, Y. *Langmuir* 2008, 24, 12042-12046.
- 304 Facile synthesis of ultrathin Au nanorods by aging the AuCl(oleylamine) complex with amorphous Fe nanoparticles in chloroform
Li, Z.; Tao, J.; Lu, X.; Zhu, X. and Xia, Y. *Nano Letters* 2008, 8, 3052-3055.
- 303 Adding new functions to organic semiconductor nanowires by assembling metal nanoparticles onto their surfaces
Briseno, A. L.; Mannsfeld, S. C. B.; Formo, E.; Xiong, Y.; Lu, X.; Bao, Z.; Jenekhe, S. A. and Xia, Y. *Journal of Materials Chemistry* 2008, 18, 5395-5398.
- 302 Silane-based poly(ethylene glycol) as a primer for surface modification of nonhydrolytically synthesized nanoparticles using the Stöber method

- Shen, R.; Camargo, P. H. C.; Xia, Y. and Yang, H. *Langmuir* 2008, 24, 11189-11195.
- 301 Some recent developments in the controlled synthesis of gold nanocages and their applications in biomedical research
Li, W.; Chen, J. and Xia, Y. *Chinese Science Bulletin* 2008, 53, 1999-2000 (invited progress report).
- 300 Putting electrospun nanofibers to work for biomedical research
Xie, J.; Li, X. and Xia, Y. *Macromolecular Rapid Communications* 2008, 29, 1775-1792 (invited feature article; highlighted on the cover; also see the highlight in *Materials Views*, 2008, November, A4).
- 299 A quantitative study on the photothermal effect of immuno gold nanocages targeted to breast cancer cells
Au, L.; Zheng, D.; Zhou, F.; Li, Z.-Y.; Li, X. and Xia, Y. *ACS Nano* 2008, 2, 1645-1652.
- 298 Development and characterization of fast responding pressure sensitive microspheres
Kimura, F.; Rodriguez, M.; McCann, J.; Carlson, B.; Dabiri, D.; Khalil, G. E.; Callis, J. B.; Xia, Y. and Gouterman, M. *Review of Scientific Instruments* 2008, 79, 074102.
- 297 Mechanistic study on the synthesis of Au nanotadpoles, nanokites, and microplates by reducing aqueous HAuCl_4 with poly(vinyl pyrrolidone)
Lim, B.; Camargo, P. H. C. and Xia, Y. *Langmuir* 2008, 24, 10437-10442.
- 296 Facile synthesis of bimetallic nanoplates consisting of Pd cores and Pt shells through seeded epitaxial growth
Lim, B.; J.-G. Wang, Camargo, P. H. C.; Jiang, M.; Kim, M. and Xia, Y. *Nano Letters* 2008, 8, 2535-2540.
- 295 Growth and patterning of Pt nanowires on silicon substrates
Lee, E. P. and Xia, Y. *Nano Research* 2008, 1, 129-137.
- 294 Polyol synthesis of Cu_2O nanoparticles: Use of chloride to promote the formation of cubic morphology
Kim, M. H.; Lim, B.; Lee, E. and Xia, Y. *Journal of Materials Chemistry* 2008, 18, 4069-4073.
- 293 Direct oxidation of methanol on Pt nanostructures supported on electrospun nanofibers of anatase
Formo, E.; Peng, Z.; Lee, E.; Lu, X.; Yang, H. and Xia, Y. *Journal of Physical Chemistry C* 2008, 112, 9970-9975.
- 292 Ultrathin gold nanowires can be obtained by reducing polymeric strands of oleylamine-AuCl complexes formed via aurophilic interaction
Lu, X.; Yavuz, M.; Tuan, H.-Y.; Korgel, B. and Xia, Y. *Journal of the American Chemical Society* 2008, 130, 8900-8901.
- 291 On the polyol synthesis of silver nanostructures: Glycolaldehyde as a reducing agent
Skrabalak, S. E.; Wiley, B. J.; Kim, M. H.; Formo, E. and Xia, Y. *Nano Letters* 2008, 8, 2077-2081.
- 290 Improving biomedical imaging with gold nanocages
Xia, Y. and Skrabalak, S. E. *SPIE Newsroom*, 2008, DOI: 10.1117/2.1200805.1135.
- 289 Excitation enhancement of CdSe quantum dots by single metal nanoparticles
Chen, Y.; Munechika, K.; Plante, I. J.-L.; Munro, A. M.; Skrabalak, S. E.; Xia, Y. and Ginger, D. S. *Applied Physics Letters* 2008, 93, 053106.
- 288 Self-assembly, molecular packing, and electron transport in n-type polymer semiconductor nanobelts
Briseno, A.; Mannsfeld, S. C. B.; Shamberger, P.; Ohuchi, F.; Bao, Z.; Jenekhe, S. A. and Xia, Y. *Chemistry of Materials* 2008, 20, 4712-4719.
- 287 Shape-controlled synthesis of silver nanoparticles: Ab initio study of preferential surface coordination with citric acid
Kilin, D. S.; Prezhdo, O. V. and Xia, Y. *Chemical Physics Letters* 2008, 458, 113-116.
- 286 Introducing organic nanowire transistors
Briseno, A. L.; Mannsfeld, S. C. B.; Jenekhe, S. A.; Bao, Z. and Xia, Y. *Materials Today* 2008, 11, 38-47.
- 285 Controlling the assembly of silver nanocubes through selective functionalization of their faces
Rycenga, M.; McLellan, J. M. and Xia, Y. *Advanced Materials* 2008, 20, 2416-2420 (cover communication).
- 284 A comparative study of galvanic replacement reactions involving Ag nanocubes and AuCl_2^- or AuCl_4^-
Au, L.; Lu, X. and Xia, Y. *Advanced Materials* 2008, 20, 2517-2522.
- 283 Electrospinning: An enabling technique for nanostructured materials
Xie, J. and Xia, Y. *Material Matters* 2008, 3, 19-23 (short review article).
- 282 Synthesis and characterization of magnetic Co nanoparticles: A comparison study of three different capping surfactants
Lu, Y.; Lu, X.; Mayers, B. T.; Herricks, T. and Xia, Y. *Journal of Solid State Chemistry* 2008, 181, 1530-1538.
- 281 Cubic to tetragonal phase transformation in cold-compressed Pd nanocubes
Guo, Q.; Zhao, Y.; Mao, W. L.; Wang, Z.; Xiong, Y. and Xia, Y. *Nano Letters* 2008, 8, 972-975.

- 280 Functionalization of electrospun TiO₂ nanofibers with Pt nanoparticles and nanowires for catalytic applications
Formo, E.; Lee, E. P.; Campbell, D. and Xia, Y. *Nano Letters* 2008, 8, 668-672.
- 279 Morphological evolution of single-crystal Ag nanospheres during the galvanic replacement reaction with H₂AuCl₄
Kim, M. H.; Lu, X.; Wiley, B.; Lee, E. P. and Xia, Y. *Journal of Physical Chemistry C* 2008, 112, 7872-7876.
- 278 High mobility single-crystal field-effect transistors from bisindoloquinoline semiconductors
Ahmed, E.; Briseno, A. L.; Xia, Y. and Jenekhe, S. A. *Journal of the American Chemical Society* 2008, 130, 1118-1119.
- 277 Growth of t-Se nanowires on the surfaces of α -Se@Ag₂Se core-shell particles through controlled release of Se from the α -Se cores
Moon, G. D.; Jeong, U. and Xia, Y. *Chemistry of Materials* 2008, 20, 367-369.
- 276 Tailoring the optical and catalytic properties of gold-silver nanoboxes and nanocages by introducing palladium
Cobley, C. M.; Campbell, D. J. and Xia, Y. *Advanced Materials* 2008, 20, 748-752 (also see the highlight in *Materials Views*, 2008, March, A5).
- 275 Controlling the thickness of surface oxide layer on the Cu nanoparticles for the fabrication of conductive structures by ink-jet printing
Jeong, S.; Woo, K.; Kim, D.; Lim, S.; Kim, J. S.; Shin, H.; Xia, Y. and Moon, J. *Advanced Functional Materials* 2008, 18, 679-686 (cover article).
- 274 Dark-field microscopy studies of single metal nanoparticles: understanding the factors that influence the linewidth of the localized surface plasmon resonance
Hu, M.; Novo, C.; Funston, A.; Wang, H.; Petrova, H.; Zou, S.; Mulvaney, P.; Xia, Y. and Hartland, G. V. *Journal of Materials Chemistry* 2008, 18, 1949-1960 (feature article).
- 273 Facile synthesis of gold nanoparticles with narrow size distribution by using AuCl or AuBr as the precursor
Lu, X.; Tuan, T.-Y.; Korgel, B. A. and Xia, Y. *Chemistry: A European Journal* 2008, 14, 1584-1591.
- 272 Synthesis and evaluation of superparamagnetic silica particles for extraction of glycopeptides in the microtiter plate format
Zou, Z.; Ibisate, M.; Zhou, Y.; Aebbersold, R.; Xia, Y. and Zhang, H. *Analytical Chemistry* 2008, 80, 1228-1234.
- 271 Rapid synthesis of silver nanowires through a CuCl- or CuCl₂-mediated polyol process
Korte, K. E.; Skrabalak, S. E. and Xia, Y. *Journal of Materials Chemistry* 2008, 18, 437-441.
- 2007**
- 270 Facile synthesis of tadpole-like nanostructures consisting of Au heads and Pd tails
Camargo, P. H. C.; Xiong, Y.; Ji, L.; Zuo, J. M. and Xia, Y. *Journal of the American Chemical Society* 2007, 129, 15452-15453.
- 269 Photoacoustic tomography of a rat cerebral cortex in vivo with Au nanocages as an optical contrast agent
Yang, X.; Skrabalak, S. E.; Li, Z.-Y.; Xia, Y. and Wang, L. V. *Nano Letters* 2007, 7, 3798-3702 (also see the highlight in *Nature Photonics*, January 2008, p. 7).
- 268 A water-based synthesis of octahedral, decahedral, and icosahedral Pd nanocrystals
Lim, B.; Xiong, Y. and Xia, Y. *Angewandte Chemie International Edition*, 2007, 46, 9279-9282.
- 267 Selective crystallization of organic semiconductors on patterned templates of carbon nanotubes
Liu, S.; Briseno, A. L.; Mannsfeld, S. C. B.; You, W.; Locklin, J.; Lee, H. W.; Xia, Y. and Bao, Z. *Advanced Functional Materials* 2007, 17, 2891-2896.
- 266 Microscale fish bowls: A new class of latex particles with hollow interiors and engineered porous structures in their surfaces
Jeong, U.; Im, S.-H.; Camargo, P. H. C.; Kim, J.-H. and Xia, Y. *Langmuir* 2007, 23, 10968-10975 (also see the highlight in <http://www.nanowerk.com>, posted January 25, 2008).
- 265 Gold nanocages for biomedical applications
Skrabalak, S. E.; Chen, J.; Au, L.; Lu, X.; Li, X. and Xia, Y. *Advanced Materials* 2007, 19, 3177-3184 (research news article).
- 264 Bionanotechnology: Enabling biomedical research with nanomaterials
Yang, H. and Xia, Y. *Advanced Materials* 2007, 19, 3085-3087 (a special section on bionanotechnology).

- 263 Perylenediimide nanowires and their use in fabricating field-effect transistors and complementary inverters
Briseno, A. L.; Mannsfeld, S. C. B.; Reese, C.; Hancock, J. M.; Xiong, Y.; Jenekhe, S. A.; Bao, Z. and Xia, Y. *Nano Letters* 2007, 7, 2847-2853 (it was highlighted in *MRS Bulletin*, November 2007).
- 262 Capturing electrified nanodroplets under Rayleigh instability by coupling electrospray with a sol-gel reaction
Li, D.; Marquez, M. and Xia, Y. *Chemical Physics Letters* 2007, 445, 271-275.
- 261 Gold nanocages for cancer detection and treatment
Skrabalak, S. E.; Au, L.; Lu, X.; Li, X. and Xia, Y. *Nanomedicine* 2007, 2, 657-668 (review article).
- 260 Growing Pt nanowires as a densely packed array on metal gauze
Lee, E. P.; Peng, Z.; Cate, D. M.; Yang, H.; Campbell, C. T. and Xia, Y. *Journal of the American Chemical Society* 2007, 129, 10634-10635.
- 259 Facile synthesis of Ag nanocubes and Au nanocages
Skrabalak, S. E.; Au, L.; Li, X. and Xia, Y. *Nature Protocols* 2007, 2, 2182-2190.
- 258 Colloidal building blocks with potential for magnetically configurable photonic crystals
Camargo, P. H. C. and Xia, Y. *Soft Matter* 2007, 3, 1215-1222 (highlight article).
- 257 Shape-controlled synthesis of metal nanostructures: The case of palladium
Xiong, Y. and Xia, Y. *Advanced Materials* 2007, 19, 3385-3391 (research news article).
- 256 Correlated Rayleigh scattering spectroscopy and scanning electron microscopy studies of Au-Ag bimetallic nanoboxes and nanocages
Hu, M.; Chen, J.; Marquez, M.; Xia, Y. and Hartland, G. V. *Journal of Physical Chemistry C* 2007, 111, 12558-12565.
- 255 Carbon nanotubes by electrospinning with a polyelectrolyte and vapor deposition polymerization
McCann, J. T.; Lim, B.; Ostermann, R.; Rycenga, M.; Marquez, M. and Xia, Y. *Nano Letters* 2007, 7, 2470-2474.
- 254 Galvanic replacement reaction: A simple and powerful route to hollow and porous metal nanostructures
Lu, X.; Chen, J.; Skrabalak, S. E. and Xia, Y. *Proceeding of IMechE, Part N: Journal of Nanoengineering and Nanosystems*, 2007, 221(N1), 1-16 (review article).
- 253 Nanocrystals with unconventional shapes – A class of promising catalysts
Xiong, Y.; Wiley, B. J. and Xia, Y. *Angewandte Chemie International Edition* 2007, 46, 7157-7159 (highlight article).
- 252 Synthesis of silver nanostructures with controlled shapes and properties
Wiley, B. J.; Sun, Y. and Xia, Y. *Accounts of Chemical Research* 2007, 40, 1067-1076 (review article).
- 251 One-dimensional nanostructures of metals: Large-scale synthesis and some potential applications
Chen, J.; Wiley, B. J. and Xia, Y. *Langmuir* 2007, 23, 4120-4129 (cover feature article).
- 250 Superparamagnetic colloids: Controlled synthesis and niche applications
Jeong, U.; Teng, X.; Wang, Y.; Yang, H. and Xia, Y. *Advanced Materials* 2007, 19, 33-60 (review article).
- 249 Synthesis and characterization of fivefold twinned nanorods and right bipyramids of palladium
Xiong, Y.; Cai, H.; Yin, Y. and Xia, Y. *Chemical Physics Letters* 2007, 440, 273-278.
- 248 Synthesis of silver nanoplates at high yields by slowing down the polyol reduction of silver nitrate with polyacrylamide
Xiong, Y.; Siekkinen, A. R.; Wang, J.; Yin, Y.; Kim, M. J. and Xia, Y. *Journal of Materials Chemistry* 2007, 17, 2600-2602 (cover communication).
- 247 Fabrication of cubic nanocages and nanoframes by dealloying Au/Ag alloy nanoboxes with an aqueous etchant based on $\text{Fe}(\text{NO}_3)_3$ or NH_4OH
Lu, X.; Au, L.; McLellan, J. M.; Li, Z.-Y.; Marquez, M. and Xia, Y. *Nano Letters* 2007, 7, 1764-1769.
- 246 Synthesis and galvanic replacement reactions of silver nanocubes in organic medium
Young, K.; Xia, Y. and Lu, X. *Journal of Young Investigators* 2007, 16(4), web publication.
- 245 Trimeric clusters of silver in aqueous AgNO_3 solutions and their role as nuclei in forming triangular nanoplates of silver
Xiong, Y.; Washio, I.; Chen, J.; Sadilek, M. and Xia, Y. *Angewandte Chemie International Edition* 2007, 46, 4917-4921.
- 244 Immuno gold nanocages with tailored optical properties for targeted photothermal destruction of cancer cells
Chen, J.; Wang, D.; Xi, J.; Au, L.; Siekkinen, A. R.; Warsen, A.; Li, Z.-Y.; Zhang, H.; Xia, Y. and Li, X. *Nano Letters*

- 2007, 7, 1318-1322 (it was highlighted at Nanotechweb.org, 2007, May 6).
- 243 Vibrational response of Au-Ag nanoboxes and nanocages to ultrafast laser-induced heating
Petrova; H.; Lin, C.-H.; Hu, M.; Chen, J.; Siekkinen, A. R.; Xia, Y.; Sader, J. E. and Hartland, G. V. *Nano Letters* 2007, 7, 1059-1063.
- 242 Synthesis and optical properties of silver nanobars and nanorice
Wiley, B. J.; Chen, Y.; McLellan, J. M.; Xiong, Y.; Li, Z.-Y.; Ginger, D. and Xia, Y. *Nano Letters* 2007, 7, 1032-1036 (also see the highlight in *Photonics Spectra*, 2007, May, p. 84).
- 241 The SERS activity of a supported Ag nanocube strongly depends on its orientation relative to laser polarization
McLellan, J. M.; Li, Z.-Y.; Siekkinen, A. R. and Xia, Y. *Nano Letters* 2007, 7, 1013-1017 (also see the highlight as Editor's Choice in *Science*, 2007, Vol. 316, p. 20).
- 240 Synthesis and mechanistic study of palladium nanobars and nanorods
Xiong, Y.; Cai, H.; Wiley, B. J.; Wang, J.; Kim, M. J. and Xia, Y. *Journal of the American Chemical Society* 2007, 129, 3665-3675.
- 239 Mechanistic studies on the galvanic replacement reaction between multiply twinned particles of Ag and HAuCl_4 in an organic medium
Lu, X.; Tuan, H.-Y.; Chen, J.; Li, Z.-Y.; Korgel, B. A. and Xia, Y. *Journal of the American Chemical Society* 2007, 129, 1733-1742.
- 238 Fabrication of field-effect transistors from hexathiapentacene single-crystal nanowires
Briseno, A. L.; Mannsfeld, S. C. B.; Lu, X.; Xiong, Y.; Jenekhe, S. A.; Bao, Z. and Xia, Y. *Nano Letters* 2007, 7, 668-675 (also see the highlight in *Nano Today*, 2007, Vol. 2, P. 9).
- 237 Synthesis and characterization of monodisperse colloidal spheres of Pb containing superparamagnetic Fe_3O_4 nanoparticles
Wang, Y.; Herricks, T.; Ibisate, M.; Camargo, P. H. C. and Xia, Y. *Chemical Physics Letters* 2007, 436, 213-217.
- 236 Time-resolved spectroscopy of silver nanocubes: Observation and assignment of coherently excited vibrational modes
Petrova, H.; Lin, C.-H.; de Liejer, S.; Hu, M.; McLellan, J. M.; Siekkinen, A. R.; Wiley, B. J.; Marquez, M.; Xia, Y.; Sader, J. E. and Hartland, G. V. *Journal of Chemical Physics* 2007, 126, 094709.
- 235 Cation exchange: A simple and versatile route to inorganic colloidal spheres with the same size but different compositions and properties
Camargo, P. H. C.; Lee, Y. H.; Jeong, U.; Zou, Z. and Xia, Y. *Langmuir* 2007, 23, 2985-2992.
- 234 Resonance wavelength-dependent signal of absorptive particles in surface plasmon resonance-based detection
Fu, E.; Ramsey, S. A.; Chen, J.; Chinowsky, T. M.; Wiley, B. J.; Xia, Y. and Yager, P. *Sensors & Actuators B-Chemical* 2007, 123, 606-613.
- 233 Synthesis of palladium icosahedra with twinned structure by blocking oxidative etching with citric acid or citrate ions
Xiong, Y.; McLellan, J. M.; Yin, Y. and Xia, Y. *Angewandte Chemie International Edition* 2007, 46, 790-794 (inside cover VIP paper).
- 232 Fabrication and analysis of photonic crystals
Campbell, D. J.; Korte, K. E. and Xia, Y. *Journal of Chemical Education* 2007, 84, 1824-1826.
- 231 Plasmons: Why should we care?
Campbell, D. J. and Xia, Y. *Journal of Chemical Education* 2007, 84, 91-96.

2006

- 230 Electronic materials – buckling down for flexible electronics
Lu, X. and Xia, Y. *Nature Nanotechnology* 2006, 1, 163-164 (news & views article).
- 229 Gold nanostructures: engineering their plasmonic properties for biomedical applications
Hu, M.; Chen, J.; Li, Z.-Y.; Au, L.; Hartland, G. V.; Li, X.; Marquez, M. and Xia, Y. *Chemical Society Reviews* 2006, 35, 1084-1094 (tutorial review article).
- 228 Chemical transformation: A powerful route to metal chalcogenide nanowires
Jeong, U.; Camargo, P. H. C.; Lee, Y. H. and Xia, Y. *Journal of Materials Chemistry* 2006, 16, 3893-3897 (highlight article).

- 227 Maneuvering the surface plasmon resonance of silver nanostructures through shape-controlled synthesis
Wiley, B.; McLellan, J.; Siekkinen, A.; Li, Z.-Y. and Xia, Y. *Journal of Physical Chemistry B* 2006, 110, 15666-15675 (cover feature article).
- 226 Electrospinning: A new and versatile method for producing ceramic nanofibers and nanotubes
Li, D.; McCann, J. T.; Marquez, M. and Xia, Y. *Journal of the American Ceramic Society* 2006, 89, 1861-1869 (cover review article).
- 225 Facile synthesis of gold-silver nanocages with controllable pores on the surface
Chen, J.; McLellan, J. M.; Siekkinen, A.; Xiong, Y.; Li, Z.-Y. and Xia, Y. *Journal of the American Chemical Society* 2006, 128, 14776-14777.
- 224 Melt coaxial electrospinning: A versatile method for the encapsulation of solid materials and fabrication of phase change nanofibers
McCann, J. T.; Marquez, M. and Xia, Y. *Nano Letters* 2006, 6, 2868-2872.
- 223 Synthesis and electrical characterization of silver nanobeams
Wiley, B. J.; Wang, Z.; Wei, J.; Yin, Y.; Cobden, D. H. and Xia, Y. *Nano Letters* 2006, 6, 2273-2278.
- 222 Rapid synthesis of small silver nanocubes by mediating polyol reduction with a trace amount of sodium sulfide or sodium hydrosulfide
Siekkinen, A. R.; McLellan, J. M.; Chen, J. and Xia, Y. *Chemical Physics Letters* 2006, 432, 491-496.
- 221 Pd-catalyzed growth of Pt nanoparticles or nanowires as dense coatings on polymeric and ceramic particulate supports
Lee, E. P.; Chen, J.; Yin, Y.; Campbell, C. T. and Xia, Y. *Advanced Materials* 2006, 18, 3271-3274.
- 220 Observation of plasmon propagation, redirection, and fan-out in silver nanowires
Sanders, A. W.; Routenberg, D. A.; Wiley, B. J.; Xia, Y.; Dufresne, E. R. and Reed, M. A. *Nano Letters* 2006, 6, 1822-1826.
- 219 Poly(vinyl pyrrolidone): A dual functional reductant and stabilizer for the facile synthesis of noble metal nanoplates in aqueous solutions
Xiong, Y.; Washio, I.; Chen, J.; Cai, H.; Li, Z.-Y. and Xia, Y. *Langmuir* 2006, 22, 8563-8570.
- 218 Optical properties of Au-Ag nanoboxes studied by single nanoparticle spectroscopy
Hu, M.; Petrova, H.; Siekkinen, A. R.; Chen, J.; McLellan, J. M.; Li, Z.-Y.; Marquez, M.; Li, X.; Xia, Y. and Hartland, G. V. *Journal of Physical Chemistry B* 2006, 110, 19923-19928.
- 217 Comparison of the surface-enhanced Raman scattering on sharp and truncated silver nanocubes
McLellan, J. M.; Siekkinen, A.; Chen, J. and Xia, Y. *Chemical Physics Letters* 2006, 427, 122-126.
- 216 Arresting, fixing, and separating dimers composed of uniform silica colloidal spheres
Ibáñez, M.; Zou, Z. and Xia, Y. *Advanced Functional Materials* 2006, 16, 1627-1632 (cover article).
- 215 Reduction by the end groups of poly(vinylpyrrolidone): A new and versatile route to the kinetically controlled synthesis of Ag triangular nanoplates
Washio, I.; Xiong, Y.; Yin, Y. and Xia, Y. *Advanced Materials* 2006, 18, 1745-1749.
- 214 V₂O₅ nanorods on TiO₂ nanofibers: A new class of hierarchical nanostructures enabled by electrospinning and calcination
Ostermann, R.; Li, D.; Yin, Y.; McCann, J. T. and Xia, Y. *Nano Letters* 2006, 6, 1297-1302.
- 213 Electrospinning of polycrystalline barium titanate nanofibers with controllable morphology and alignment
McCann, J. T.; Chen, J.; Li, D.; Ye, Z.-G. and Xia, Y. *Chemical Physics Letters* 2006, 424, 162-166.
- 212 Right bipyramids of silver: A new shape derived from single twinned seeds
Wiley, B.; Xiong, Y.; Li, Z.-Y. and Xia, Y. *Nano Letters* 2006, 6, 765-768.
- 211 Highly porous fibers by electrospinning into a cryogenic liquid
McCann, J. T.; Marquez, M. and Xia, Y. *Journal of the American Chemical Society* 2006, 128, 1436-1437.
- 210 Ultrafast laser studies of the photothermal properties of gold nanocages
Hu, M.; Petrova, H.; Chen, J.; McLellan, J. M.; Siekkinen, A. R.; Marquez, M.; Li, X.; Xia, Y. and Hartland, G. V. *Journal of Physical Chemistry B* 2006, 110, 1520-1524.
- 209 Surfactant-directed assembly of Pt nanoparticles into colloidal spheres and their use as substrates in forming Pt nanorods and nanowires
Chen, J.; Xiong, Y.; Yin, Y. and Xia, Y. *Small* 2006, 11, 1340-1343.

- 208 Metallodielectric photonic crystals assembled from monodisperse spherical colloids of bismuth and lead Wang, Y.; Ibisate, M.; Li, Z.-Y. and Xia, Y. *Advanced Materials* 2006, 18, 471-476.
- 207 Synthesis, stability, surface plasmonic properties of rhodium multipods, and their use as substrates for surface-enhanced Raman scattering Zettsu, N.; McLellan, J. M.; Wiley, B.; Yin, Y.; Li, Z.-Y. and Xia, Y. *Angewandte Chemie International Edition* 2006, 45, 1288-1292.
- 206 Dual luminophor polystyrene microspheres for pressure sensitive luminescent imaging Kimura, F.; Khalil, G.; Zettsu, N.; Xia, Y.; Callis J.; Gouterman, M.; Dalton, L.; Dabiri, D. and Rodriguez, M. *Journal of Measurement Science and Technology* 2006, 17, 1254-1260.
- 205 Surface-enhanced Raman scattering of 4-mercaptopyridine on thin Films of nanoscale Pd cubes, boxes, and cages McLellan, J. M.; Xiong, Y.; Hu, M. and Xia, Y. *Chemical Physics Letters* 2006, 417, 230-234.
- 204 Powder diffraction simulated by a polycrystalline film of spherical colloids Campbell, D. J.; Xia, Y. and Lisensky, G. C. *Journal of Chemical Education* 2006, 83, 1638-1642.
- 203 Classroom-scale demonstrations using flash ignition of carbon nanotubes Campbell, D. J.; Korte, K. E.; McCann, J. T. and Xia, Y. *Journal of Chemical Education* 2006, 83, 1511-1515.

2005

- 202 Some recent developments in the chemical synthesis of inorganic nanotubes Xiong, Y.; Mayers, B. T. and Xia, Y. *Chemical Communications* 2005, 5013-5022 (review article).
- 201 Some new developments in the synthesis, functionalization, and utilization of monodisperse colloidal spheres Jeong, U.; Wang, Y.; Ibisate, M. and Xia, Y. *Advanced Functional Materials* 2005, 15, 1907-1921 (feature article).
- 200 Shape-controlled synthesis of silver and gold nanostructures Wiley, B.; Sun, Y.; Chen, J.; Cang, H.; Li, Z.-Y.; Li, X. and Xia, Y. *MRS Bulletin* 2005, 30, 356-361 (review article).
- 199 Shape-controlled synthesis and surface plasmonic properties of metallic nanostructures Xia, Y. and Halas, N. J. *MRS Bulletin* 2005, 30, 338-344 (cover review article).
- 198 Electrospinning of nanofibers with core-sheath, hollow, or porous structures McCann, J. T.; Li, D. and Xia, Y. *Journal of Materials Chemistry* 2005, 15, 735-738 (cover highlight article).
- 197 Shape-controlled synthesis of metal nanostructures: The case of silver Wiley, B.; Sun, Y.; Mayers, B. and Xia, Y. *Chemistry - A European Journal* 2005, 11, 454-463 (cover concepts article).
- 196 Kinetically controlled synthesis of triangular and hexagonal nanoplates of palladium and their SPR/SERS properties Xiong, Y.; McLellan, J. M.; Chen, J.; Yin, Y.; Li, Z.-Y. and Xia, Y. *Journal of the American Chemical Society* 2005, 127, 17118-17127.
- 195 Corrosion-based synthesis of single-crystal Pd nanoboxes and nanocages and their surface plasmon properties Xiong, Y.; Wiley, B.; Chen, J.; Li, Z.-Y.; Yin, Y. and Xia, Y. *Angewandte Chemie International Edition* 2005, 44, 7913-7917.
- 194 Large-scale synthesis of single-crystal CdSe nanowires through a cation-exchange route Jeong, U.; Xia, Y. and Yin, Y. *Chemical Physics Letters* 2005, 416, 246-250.
- 193 Optical properties of Pd-Ag and Pt-Ag nanoboxes synthesized via galvanic replacement reactions Chen, J.; Wiley, B.; McLellan, J.; Xiong, Y.; Li, Z.-Y. and Xia, Y. *Nano Letters* 2005, 5, 2058-2062.
- 192 Localized surface plasmon resonance spectroscopy of single silver nanocubes Sherry, L. J.; Chang, S. H.; Schatz, G. C.; Van Duyne, R. P.; Wiley, B. J. and Xia, Y. *Nano Letters* 2005, 5, 2034-2038.
- 191 Polymer hollow particles with controllable holes in their surfaces Im, S.-H.; Jeong, U. and Xia, Y. *Nature Materials* 2005, 4, 672-675 (cover article, it was highlighted as a breakthrough in macromolecular chemistry in 2005 by the German Chemical Society, *Nachrichten aus der Chemie*, p. 295; it was also featured as Nanotech News on the website of the National Cancer Institute, September, 2005).
- 190 Polyol synthesis of silver nanostructures: Control of product morphology with Fe(II) or Fe(III) Species

- Wiley, B. J.; Sun, Y. and Xia, Y. *Langmuir* 2005, 21, 8077-8080.
- 189 Gold nanocages as contrast agents for spectroscopic and conventional optical coherence tomography
Cang, H.; Sun, T.; Li, Z.-Y.; Chen, J.; Wiley, B. J.; Xia, Y. and Li, X. *Optics Letters* 2005, 30, 3048-3050.
- 188 Quick formation of single-crystal nanocubes of silver through dual functions of hydrogen gas in polyol synthesis
Lee, Y. T.; Im, S. H.; Wiley, B. and Xia, Y. *Chemical Physics Letters* 2005, 441, 479-483.
- 187 Direct fabrication of enzyme-carrying polymer nanofibers by electrospinning
Herricks, T.; Kim, S.-H.; Kim, J.; Li, D.; Kwak, J. H.; Grate, J. W.; Kim, S. H. and Xia, Y. *Journal of Materials Chemistry* 2005, 15, 3241-3245.
- 186 Size-dependence of surface plasmon resonance and oxidation for Pd nanocubes synthesized via a seed etching process
Xiong, Y.; Wiley, B. J.; Chen, J.; Xia, Y.; Yin, Y. and Li, Z.-Y. *Nano Letters* 2005, 5, 1237-1242.
- 185 Electrospun nanofibers of blends of conjugated polymers: Morphology, optical properties, and field-effect transistors
Babel, A.; Li, D.; Xia, Y. and Jenekhe, S. A. *Macromolecules*, 2005, 38, 4705-4711.
- 184 Gold nanocages: Engineering their structure for biomedical applications
Chen, J.; Wiley, B. J.; Li, Z.-Y.; Campbell, D. J.; Saeki, F.; Cang, H.; Au, L.; Lee, J.; Li, X. and Xia, Y. *Advanced Materials* 2005, 17, 2255-2261 (research news article, it was highlighted as Nanotech News on the website of the National Cancer Institute, September, 2005).
- 183 Understanding the role of oxidative etching in the polyol synthesis of Pd nanoparticles with uniform shape and size
Xiong, Y.; Chen, J.; Wiley, B.; Xia, Y.; Aloni, S. and Yin, Y. *Journal of the American Chemical Society* 2005, 127, 7332-7333.
- 182 Self-assembly of hexadecanethiol molecules on gold from the vapor phase as directed by a two-dimensional array of silica beads
McLellan, J. M.; Geissler, M. and Xia, Y. *Chemical Physics Letters* 2005, 408, 80-83.
- 181 Collecting electrospun nanofibers with patterned electrodes
Li, D.; Ouyang, M.; McCann, J. T. and Xia, Y. *Nano Letters* 2005, 5, 913-916.
- 180 Monodispersed spherical colloids of Se@CdSe: Synthesis and use as building blocks in fabricating photonic crystals
Jeong, U.; Kim, J.; Xia, Y. and Li, Z.-Y. *Nano Letters* 2005, 5, 937-942.
- 179 Side-by-side patterning of multiple alkanethiolate monolayers on gold using edge-spreading lithography
Geissler, M.; McLellan, J. M.; Chen, J. and Xia, Y. *Angewandte Chemie International Edition* 2005, 44, 3596-3599.
- 178 Photonic crystals with thermally switchable stop bands fabricated from Se@Ag₂Se spherical colloids
Jeong, U. and Xia, Y. *Angewandte Chemie International Edition* 2005, 44, 3099-3103 (hot paper).
- 177 Synthesis of polystyrene beads loaded with dual luminophors for self-referenced oxygen sensing
Im, S. H.; Kahlil, G. E.; Callis, J.; Ahn, B.; Gouterman, M. and Xia, Y. *Talanta* 2005, 67, 492-497.
- 176 Polyol synthesis of platinum nanostructures: Control of morphology through the manipulation of reduction kinetics
Chen, J.; Herricks, T. and Xia, Y. *Angewandte Chemie International Edition* 2005, 44, 2589-2592.
- 175 Nanostructured superhydrophobic surfaces
Shang, H. M.; Wang, Y.; Takahashi, K.; Cao, G.; Li, D.; Xia, Y. *Journal of Material Science* 2005, 40, 3587-3591.
- 174 Ag-Ag_{0.08}V₂O₅nH₂O composite films as host materials for Li⁺ intercalation
Wang, Y.; Lee, K.; Shang, H.; Wiley, B.; Xia, Y. and Cao, G. *Physica Status Solidi (a)* 2005, 8, R79-R81.
- 173 Amorphous Se: A new platform for synthesizing superparamagnetic colloids with controllable surfaces
Jeong, U.; Herricks, T.; Shahar, E. and Xia, Y. *Journal of the American Chemical Society* 2005, 127, 1098-1099.
- 172 Gold nanocages: Bioconjugation and their potential use as optical imaging contrast agents
Chen, J.; Saeki, F.; Wiley, B. J.; Cang, H.; Cobb, M. J.; Li, Z.-Y.; Au, L.; Zhang, H.; Kimmey, M. B.; Li, X. and Xia, Y. *Nano Letters* 2005, 5, 473-477 (it was highlighted as Nanotech News on the website of the National Cancer Institute, February 22, 2005, and in *Biophotonics International*, 2005, July, pp. 20-21).
- 171 Large-scale synthesis of silver nanocubes: The role of HCl in promoting cube perfection and monodispersity
Im, S. H.; Lee, Y. T.; Wiley, B. and Xia, Y. *Angewandte Chemie International Edition* 2005, 44, 2154-2157.

- 170 Synthesis and characterization of monodisperse silica colloids loaded with superparamagnetic iron oxide nanoparticles
Im, S. H.; Herricks, T.; Lee, Y. T. and Xia, Y. Chemical Physics Letters 2005, 401, 19-23.
- 169 Monodisperse spherical colloids of Pb and their use as chemical templates to produce hollow particles
Wang, Y.; Cai, L. and Xia, Y. Advanced Materials 2005, 17, 473-477.
- 168 Edge-spreading lithography: Use of patterned photoresist structures to direct the spreading of alkanethiols on gold
Geissler, M.; McLellan, J. M. and Xia, Y. Nano Letters 2005, 5, 31-36.
- 167 Use of electrospinning to directly fabricate hollow nanofibers with functionalized inner and outer surfaces
Li, D.; McCann, J. T. and Xia, Y. Small 2005, 1, 83-86.
- 166 Synthesis and crystallization of monodisperse spherical colloids of amorphous selenium
Jeong, U. and Xia, Y. Advanced Materials 2005, 17, 102-106.

2004

- 165 Electrospinning of nanofibers: Reinventing the wheel?
Li, D. and Xia, Y. Advanced Materials 2004, 16, 1151-1170 (invited review).
- 164 Nanomaterials – welding and patterning in a flash
Li, D. and Xia, Y. Nature Materials 2004, 3, 753-754 (news & views article).
- 163 Soft lithography and the art of patterning
Xia, Y. Advanced Materials 2004, 16, 1245-1246 (a special issue dedicated to Professor George M. Whitesides).
- 162 Patterning: Principles and some new developments
Geissler, M. and Xia, Y. Advanced Materials 2004, 16, 1249-1269 (cover review article).
- 161 Polyol synthesis of platinum nanoparticles: Control of morphology with sodium nitrate
Herricks, T.; Chen, J. and Xia, Y. Nano Letters 2004, 4, 2367-2371
- 160 Bottom-up and top-down approaches to the synthesis of monodispersed spherical colloids of low melting-point metals
Wang, Y. and Xia, Y. Nano Letters 2004, 4, 2047-2050.
- 159 Single-crystal nanowires of platinum can be synthesized by controlling the reaction rate of a polyol process
Chen, J.; Herricks, T.; Geissler, M. and Xia, Y. Journal of the American Chemical Society 2004, 126, 10854-10855 (also see the highlight in C&EN News, 2004, August 23, p. 27; as well as in Materials Today, 2004, November, p. 9).
- 158 Edge spreading lithography and its application to the fabrication of mesoscopic gold and silver rings
McLellan, J. M.; Geissler, M. and Xia, Y. Journal of the American Chemical Society 2004, 126, 10830-10831.
- 157 Polyol synthesis of silver nanoparticles: Use of chloride and oxygen to promote the formation of single-crystal, truncated cubes and tetrahedrons
Wiley, B.; Herricks, T.; Sun, Y. and Xia, Y. Nano Letters 2004, 4, 1733-1739.
- 156 Photocatalytic deposition of gold nanoparticles on electrospun nanofibers of titania
Li, D.; McCann, J. T.; Gratt, M. and Xia, Y. Chemical Physics Letters 2004, 394, 387-391.
- 155 Nanofibers of conjugated polymers prepared by electrospinning with a two-capillary spinneret
Li, D.; Babel, A.; Jenekhe, S. A. and Xia, Y. Advanced Materials 2004, 16, 6026-6028.
- 154 Comparative study of monolayers self-assembled from octadecylisocyanide and octadecanethiol on polycrystalline Pt substrates
Geissler, M.; Chen, J. and Xia, Y. Langmuir 2004, 20, 6993-6997.
- 153 Ag nanowires coated with Ag/Pd alloy sheaths and their use as substrates for reversible adsorption and desorption of hydrogen
Sun, Y.; Tao, Z.; Chen, J.; Herricks, T. and Xia, Y. Journal of the American Chemical Society 2004, 126, 5940-5941.
- 152 Synthesis and optical properties of nanorattles and multiple-walled nanoshells/nanotubes made of metal alloys
Sun, Y.; Wiley, B. J.; Li, Z.-Y. and Xia, Y. Journal of the American Chemical Society 2004, 126, 9399-9406 (see highlight at <http://www.nanopicoftoday.org/2004Picts/July2004/nanorattles.htm>).
- 151 Direct fabrication of composite and ceramic hollow nanofibers by electrospinning

- Li, D. and Xia, Y. *Nano Letters* 2004, 5, 933-938 (also see the highlight in *C&EN News*, 2004, April 26, p. 6; as well as in *Materials Today*, 2004, June, p. 14).
- 150 Geometry and surface state effects on the mechanical response of Au nanostructures
Mook, W. M.; Jungk, J. M.; Cordill, M. J.; Moody, N. R.; Sun, Y.; Xia, Y. and Gerberich, W. W. *Zeitschrift fuer Metallkunde* 2004, 95, 416-424.
- 149 Ethylene glycol-mediated synthesis of metal oxide nanowires
Jiang, X.; Wang, Y.; Herricks, T. and Xia, Y. *Journal of Materials Chemistry* 2004, 14, 695-703.
- 148 Synthesis and crystallization of hybrid spherical colloids composed of polystyrene cores and silica shells
Lu, Y.; McLellan, J. and Xia, Y. *Langmuir* 2004, 20, 3464-3470.
- 147 Single crystalline nanowires of lead: Large-scale synthesis, mechanistic studies, and transport measurements
Wang, Y.; Jiang, X.; Herricks, T. and Xia, Y. *Journal of Physical Chemistry B* 2004, 108, 8631-8640.
- 146 Electrospinning nanofibers as uniaxially aligned arrays and layer-by-layer stacked films
Li, D.; Wang, Y. and Xia, Y. *Advanced Materials* 2004, 16, 361-366.
- 145 Multiple-walled nanotubes made of metals
Sun, Y. and Xia, Y. *Advanced Materials* 2004, 16, 264-268.
- 144 Template-engaged synthesis of RuSe₂ and Pd₁₇Se₁₅ nanotubes by reacting precursor salts with selenium nanowires
Jiang, X.; Mayers, B.; Wang, Y.; Cattle, B. and Xia, Y. *Chemical Physics Letters* 2004, 385, 472-476.
- 143 Mechanistic study on the replacement reaction between silver nanostructures and chloroauric acid in aqueous medium
Sun, Y. and Xia, Y. *Journal of the American Chemical Society* 2004, 126, 3892-3901.
- 2003**
- 142 One-dimensional nanostructures: Synthesis, characterization, and applications
Xia, Y.; Yang, P.; Sun, Y.; Wu, Y.; Mayers, B.; Gates, B.; Yin, Y.; Kim, F. and Yan, H. *Advanced Materials* 2003, 15, 353-389 (invited review article; it was highlighted on the front cover; it was featured by ISI as one of the top 20 most cited article in the area of materials science from 1996 to 2006; it was also selected as the ISI Current Classic in Materials Science for December 2007. This review article has received more than 4000 citations to date, and had the greatest absolute increase in citations of all materials science papers. <http://www.in-cites.com/currentclassics/december2007.html>).
- 141 Chemistry and physics of nanowires
Xia, Y. and Yang, Y. *Advanced Materials* 2003, 15, 351-352 (a special issue on nanowires).
- 140 One-dimensional nanostructures of chalcogens and chalcogenides
Mayers, B. T.; Gates, B. and Xia, Y. *International Journal of Nanotechnology*, 2003, 1/2, 89-107 (invited review article).
- 139 A solution-phase, precursor route to polycrystalline SnO₂ nanowires that can be used for gas sensing under ambient conditions
Wang, Y.; Jiang, X. and Xia, Y. *Journal of the American Chemical Society* 2003, 125, 16176-16177 (also see the highlight at the Heart Cut, 2004, February 23, <http://www.chemistry.org>).
- 138 Magnetic nanofibers of nickel ferrite prepared by electrospinning
Li, D.; Herricks, T. and Xia, Y. *Applied Physics Letters* 2003, 83, 4586-4588.
- 137 Hollow nanostructures of platinum with controllable dimensions can be synthesized by templating against selenium nanowires and colloids
Mayers, B.; Jiang, X.; Sunderland, D.; Cattle, B. and Xia, Y. *Journal of the American Chemical Society* 2003, 125, 13364-13365.
- 136 Alloying and dealloying processes involved in the preparation of metal nanoshells through a galvanic replacement reaction
Sun, Y. and Xia, Y. *Nano Letters* 2003, 3, 1569-1572.
- 135 Asymmetric dimers can be formed by dewetting half-shells of gold deposited on the surfaces of spherical oxide colloids
Lu, Y.; Xiong, H.; Jiang, X.; Xia, Y.; Prentiss, M. and Whitesides, G. M. *Journal of the American Chemical Society* 2003, 125, 12724-12725.

- 134 Colloidal crystals with tunable colors and their use as photonic papers
Fudouzi, H. and Xia, Y. *Langmuir* 2003, 19, 9653-9658 (it was highlighted in *Materials Today*, 2003, December, p. 7).
- 133 Template-assisted self-assembly of spherical colloids into complex and controllable structures
Xia, Y.; Yin, Y.; Lu, Y. and McLellan, J. *Advanced Functional Materials* 2003, 13, 907-918 (cover feature article).
- 132 Enhancement of coherent X-ray diffraction from nanocrystals by introduction of X-ray optics
Robinson, I. K.; Pfeiffer, F.; Vartanyants, I. A.; Sun, Y. and Xia, Y. *Optics Express* 2003, 11, 2329-2334.
- 131 Direct synthesis of Se@CdSe nanocables and CdSe nanotubes by reacting cadmium salts with Se nanowires
Jiang, X.; Mayers, B.; Herricks, T. and Xia, Y. *Advanced Materials* 2003, 15, 1740-1743.
- 130 Langmuir-Blodgett silver nanowire monolayers for molecular sensing using surface-enhanced Raman spectroscopy
Tao, A.; Kim, F.; Hess, C.; Goldberger, J.; He, R.; Sun, Y.; Xia, Y. and Yang, P. *Nano Letters* 2003, 3, 1229-1233.
- 129 Sonochemical synthesis of trigonal selenium nanowires
Mayers, B. T.; Liu, K.; Sunderland, D. and Xia, Y. *Chemistry of Materials* 2003, 15, 3852-3858.
- 128 Electrospinning of polymeric and ceramic nanofibers as uniaxially aligned arrays
Li, D.; Wang, Y. and Xia, Y. *Nano Letters* 2003, 3, 1167-1171 (it was highlighted as Editor's Choice in *Science*, 2003, 301, p. 567).
- 127 Single crystalline nanowires of lead can be synthesized through thermal decomposition of lead acetate in ethylene glycol
Wang, Y.; Herricks, T. and Xia, Y. *Nano Letters* 2003, 3, 1163-1166.
- 126 Polyol synthesis of uniform silver nanowires: A plausible mechanism and the supporting evidence
Sun, Y.; Mayers, B.; Herricks, T. and Xia, Y. *Nano Letters* 2003, 3, 955-960.
- 125 Photonic papers and inks: Color writing with colorless materials
Fudouzi, H. and Xia, Y. *Advanced Materials* 2003, 15, 892-896 (cover communication).
- 124 Monodispersed spherical colloids of titania: Synthesis, characterization, and crystallization
Jiang, X.; Herricks, T. and Xia, Y. *Advanced Materials* 2003, 15, 1205-1209.
- 123 Transformation of silver nanospheres into nanobelts and triangular nanoplates through a thermal process
Sun, Y.; Mayers, B. and Xia, Y. *Nano Letters* 2003, 3, 675-679.
- 122 Gold and silver nanoparticles: A class of chromophores with colors tunable in the range from 400 to 750 nm
Sun, Y. and Xia, Y. *Analyst* 2003, 128, 686-691.
- 121 Fabrication of titania nanofibers by electrospinning
Li, D. and Xia, Y. *Nano Letters* 2003, 3, 555-560.
- 120 Triangular nanoplates of silver: Synthesis, characterization, and use as sacrificial templates for generating triangular nanorings of gold
Sun, Y. and Xia, Y. *Advanced Materials* 2003, 15, 695-699.
- 119 Metal nanostructures with hollow interiors
Sun, Y.; Mayers, B. and Xia, Y. *Advanced Materials* 2003, 15, 641-646 (research news article, it was selected by ISI as the hot paper in materials science for the September of 2004).
- 118 Synthesis and characterization of monodispersed core-shell spherical colloids with movable cores
Kamata, K.; Lu, Y. and Xia, Y. *Journal of the American Chemical Society* 2003, 125, 2384-2385.
- 117 Self-assembly of spherical colloids into helical chains with well-controlled handedness
Yin, Y. and Xia, Y. *Journal of the American Chemical Society* 2003, 125, 2048-2049.
- 116 Fabrication and characterization of photonic crystals with well-controlled thickness and stop band attenuation
Gates, B.; Lu, Y.; Li, Z.-Y. and Xia, Y. *Applied Physics A* 2003, 76, 509-513.
- 115 Template-directed growth of (100)-oriented colloidal crystals
Yin, Y.; Li, Z.-Y. and Xia, Y. *Langmuir* 2003, 19, 622-631.

2002

- 114 Shape-controlled synthesis of gold and silver nanoparticles
Sun, Y. and Xia, Y. *Science* 2002, 298, 2176-2179 (also see the perspective in *Science*, 2002, 298, pp. 2139-2140; as well as highlights in *C&EN News*, 2002, December 16, p. 31; *Materials Today*, 2003, March, p. 12;

- Nature Materials, <http://www.nature.com/materials/nanozone/news/021219>; and nanotechnology.org. It was selected by ISI as the highly cited chemistry article for the March of 2004).
- 113 CuO nanowires can be synthesized by heating copper substrates in air
Jiang, X.; Herricks, T. and Xia, Y. Nano Letters 2002, 2, 1333-1338.
 - 112 A sonochemical approach to the synthesis of crystalline selenium nanowires in solutions and on solid supports
Gates, B.; Mayers, B.; Grossman, A. and Xia, Y. Advanced Materials 2002, 14, 1749-1752.
 - 111 Uniform silver nanowire synthesis by reducing AgNO₃ with ethylene glycol in the presence of seeds and poly(vinyl pyrrolidone)
Sun, Y.; Yin, Y.; Mayers, B. T.; Herricks, T. and Xia, Y. Chemistry of Materials 2002, 14, 4736-4745.
 - 110 Increased sensitivity of surface plasmon resonance of gold nanoshells compared to that of gold solid colloids in response to environmental changes
Sun, Y. and Xia, Y. Analytical Chemistry 2002, 74, 5297-5305.
 - 109 Colloidal crystals made of polystyrene spheroids: Fabrication and structural/optical characterization
Lu, Y.; Yin, Y.; Li, Z.-Y. and Xia, Y. Langmuir 2002, 18, 7722-7727.
 - 108 Synthesis and self-assembly of Au@SiO₂ core-shell colloids
Lu, Y.; Yin, Y.; Li, Z.-Y. and Xia, Y. Nano Letters 2002, 2, 785-788 (it was highlighted on the front cover).
 - 107 Synthesis and characterization of crystalline Ag₂Se nanowires through a template-engaged reaction at room temperature
Gates, B.; Mayers, B.; Wu, Y.; Sun, Y.; Cattle, B.; Yang, P. and Xia, Y. Advanced Functional Materials 2002, 12, 679-686.
 - 106 Template-engaged replacement reaction: A one-step approach to the large-scale synthesis of metal nanostructures with hollow interiors
Sun, Y.; Mayers, B. T. and Xia, Y. Nano Letters 2002, 2, 481-485.
 - 105 One-dimensional nanostructures of trigonal tellurium with various morphologies can be synthesized using a solution-phase approach
Mayers, B. T. and Xia, Y. Journal of Materials Chemistry 2002, 12, 1875-1881.
 - 104 Large-scale synthesis of uniform silver nanowires through a soft, self-seeding, polyol process
Sun, Y. and Xia, Y. Advanced Materials 2002 14, 833-837.
 - 103 Toward a fully integrated positive-pressure driven microfabricated liquid analyzer
Vahey, P. G.; Smith, S. A.; Costin, C. D.; Xia, Y.; Brodsky, A.; Burgess, L. W. and Synovec, R. E. Analytical Chemistry 2002, 74, 177-184.
 - 102 Growth of large colloidal crystals with their (100) planes oriented parallel to the surfaces of supporting substrates
Yin, Y. and Xia, Y. Advanced Materials 2002, 14, 605-608 (research news article).
 - 101 Silver nanowires can be directly coated with amorphous silica to generate well-controlled coaxial nanocables of silver/silica
Yin, Y.; Lu, Y.; Sun, Y. and Xia, Y. Nano Letters 2002, 2, 427-430.
 - 100 Modifying the surface properties of superparamagnetic iron oxide nanoparticles through a sol-gel approach
Lu, Y.; Yin, Y.; Mayers, B. T. and Xia, Y. Nano Letters 2002, 2, 183-186.
 - 99 Crystalline silver nanowires by soft solution processing
Sun, Y.; Gates, B.; Mayers, B. and Xia, Y. Nano Letters 2002, 2, 165-168.
 - 98 Synthesis and characterization of MgO nanowires through a vapor-phase precursor method
Yin, Y.; Zhang, G. and Xia, Y. Advanced Functional Materials 2002, 12, 293-298.
 - 97 Formation of tellurium nanotubes through concentration depletion at the surfaces of seeds
Mayers, B. and Xia, Y. Advanced Materials 2002, 14, 279-282 (it was highlighted on the cover).
 - 96 Synthesis and characterization of uniform nanowires of trigonal selenium
Gates, B.; Mayers, B.; Cattle, B. and Xia, Y. Advanced Functional Materials 2002, 12, 219-227.
 - 95 Synthesis and characterization of stable aqueous dispersions of silver nanoparticles through the Tollens process
Yin, Y.; Li, Z.-Y.; Zhong, Z.; Gates, B.; Xia, Y. and Vekateswaran, S. Journal of Materials Chemistry 2002, 12, 522-527.

2001

- 94 Building complex structures from monodisperse spherical colloids
Xia, Y.; Gates, B. and Yin, Y. Australian Journal of Chemistry 2001, 54, 287-290 (invited feature article, it was highlighted on the cover).
- 93 Surface patterning and its application in wetting/dewetting studies
Xia, Y.; Qin, D. and Yin, Y. Current Opinion in Colloid & Interface Science 2001, 6, 54-64 (invited review article).
- 92 Omnidirectional absolute band gaps in two-dimensional photonic crystals
Li, Z.-Y. and Xia, Y. Physical Review B 2001, 64(15), 153108 (rapid communication).
- 91 Single-crystalline nanowires of Ag₂Se can be synthesized by templating against nanowires of trigonal Se
Gates, B.; Wu, Y.; Yin, Y.; Yang, P. and Xia, Y. Journal of the American Chemical Society 2001, 123, 11500-11501.
- 90 Photonic crystals that can be addressed with an external magnetic field
Gates, B. and Xia, Y. Advanced Materials 2001, 13, 1605-1608 (it was highlighted on the cover).
- 89 Template-assisted self-assembly: A practical route to complex aggregates of monodispersed colloids with well-defined sizes, shapes, and structures
Yin, Y.; Lu, Y.; Gates, B. and Xia, Y. Journal of the American Chemical Society 2001, 123, 8718-8729 (it was highlighted as Editor's Choice in *Science*, 2001, 293, p. 1560).
- 88 Large-scale synthesis of monodisperse nanorods of Se/Te alloys through a homogeneous nucleation and solution growth process
Mayers, B. T.; Gates, B.; Yin, Y. and Xia, Y. Advanced Materials 2001, 13, 1380-1384.
- 87 Growth of large crystals of monodispersed spherical colloids in fluidic cells fabricated using non-photolithographic methods
Lu, Y.; Yin, Y.; Gates, B. and Xia, Y. Langmuir 2001, 17, 6344-6350 (it was highlighted on the cover).
- 86 Photonic band-gap properties of opaline lattices of spherical colloids doped with various concentrations of smaller colloids
Gates, B. and Xia, Y. Applied Physics Letters 2001, 78, 3178-3180.
- 85 Optimization of elastomeric phase masks for near-field photolithography
Li, Z.-Y.; Yin, Y. and Xia, Y. Applied Physics Letters 2001, 78, 2431-2433 (it was highlighted in Photonics Spectra, 2001, June, p. 11).
- 84 Synthesis and characterization of mesoscopic hollow spheres of ceramic materials with functionalized interior surfaces
Yin, Y.; Lu, Y.; Gates, B. and Xia, Y. Chemistry of Materials 2001, 13, 1146-1148.
- 83 Assembly of monodispersed spherical colloids into one-dimensional aggregates characterized by well-defined structures and lengths
Yin, Y.; Lu, Y. and Xia, Y. Journal of Materials Chemistry 2001, 11, 987-989.
- 82 Self-assembly of monodispersed spherical colloids into complex aggregates with well-defined sizes, shapes, and structures
Yin, Y. and Xia, Y. Advanced Materials 2001, 13, 267-271.
- 81 A self-assembly approach to the formation of asymmetric dimers from monodispersed spherical colloids
Yin, Y.; Lu, Y. and Xia, Y. Journal of the American Chemical Society 2001, 123, 771-772.
- 80 Optical photonic band gaps and the Lamb shift
Li, Z.-Y. and Xia, Y. Physical Review B, 2001, 63, 121305 (rapid communication).
- 79 Growth of a new UV nonlinear optical crystal: KBe₂(BO₃)F₂
Tang, D.; Xia, Y.; Wu, B. and Chen, C. Journal of Crystal Growth 2001, 222(1-2), 125-129.
- 78 Three-dimensional photonic crystals with non-spherical colloids as building blocks
Lu, Y.; Yin, Y. and Xia, Y. Advanced Materials 2001, 13, 415-420 (research news article).
- 77 Self-assembly approaches to three-dimensional photonic crystals
Xia, Y.; Gates, B. and Li, Z.-Y. Advanced Materials 2001, 13, 409-413 (research news article, it was highlighted on the cover).
- 76 Preparation and characterization of micrometer-sized "egg shells"
Lu, Y.; Yin, Y. and Xia, Y. Advanced Materials 2001, 13, 271-274.

- 75 Full vectorial model for quantum optics in three-dimensional photonic crystals
Li, Z.-Y. and Xia, Y. *Physical Review A* 2001, 63, 043817-1-11.
- 74 A self-assembly approach to the fabrication of patterned, two-dimensional arrays of microlenses of organic polymers
Lu, Y.; Yin, Y. and Xia, Y. *Advanced Materials* 2001, 13, 34-37.
- 73 Photonic crystals
Xia, Y. *Advanced Materials* 2001, 13, 369 (a special issue focused on photonic crystals).

2000

- 72 Monodispersed colloidal spheres: Old materials with new applications
Xia, Y.; Gates, B.; Yin, Y. and Lu, Y. *Advanced Materials* 2000, 12, 693-713 (invited review article, it was featured by ISI as one of the top 20 most cited articles in the area of materials science from 1996 to 2006).
- 71 A solution-phase approach to the synthesis of uniform nanowires of crystalline selenium with lateral dimensions in the range of 10-30 nm
Gates, B.; Yin, Y. and Xia, Y. *Journal of the American Chemical Society* 2000, 122, 12582-12583.
- 70 A soft lithographic approach to the fabrication of nanostructures of single crystalline silicon with well-defined dimensions and shapes
Yin, Y.; Gates, B. and Xia, Y. *Advanced Materials* 2000, 12, 1426-1430 (it was highlighted on the inside cover).
- 69 Crystallization of mesoscopic colloids into 3D opaline lattices in packing cells fabricated by replica molding
Mayers, B. T.; Gates, B. and Xia, Y. *Advanced Materials* 2000, 12, 1629-1632 (research news article).
- 68 Soft lithographic approach to the fabrication of highly ordered 2D arrays of magnetic nanoparticles on the surfaces of silicon substrates
Zhong, Z.; Gates, B.; Xia, Y. and Qin, D. *Langmuir* 2000, 16, 10369-10375.
- 67 Polymer-controlled growth of CdS nanowires
Zhan, J. H.; Yang, X. G.; Wang, D. W.; Li, S. D.; Xie, Y.; Xia, Y. and Qian, Y. *Advanced Materials* 2000, 12, 1348-1351.
- 66 Fabrication and characterization of chirped 3D photonic crystals
Gates, B. and Xia, Y. *Advanced Materials* 2000, 12, 1329-1332.
- 65 Tuning the photonic bandgap properties of crystalline arrays of polystyrene beads by annealing at elevated temperatures
Gates, B.; Park, S. H. and Xia, Y. *Advanced Materials* 2000, 12, 653-656.
- 64 Development of a positive pressure driven microfabricated liquid chromatographic analyzer through rapid prototyping with poly(dimethylsiloxane) – Optimizing chromatographic efficiency with sub-nanoliter injections
Vahey, P. G.; Park, S. H.; Marquardt, B. J.; Xia, Y.; Burgess, L. W. and Synovec, R. E. *Talanta* 2000, 51, 1205-1212.
- 63 Multilayered supramolecular structures self-assembled from polyelectrolytes and cyclodextrin host-guest complexes
Dreja, M.; Kim, I. T.; Yin, Y. and Xia, Y. *Journal of Materials Chemistry* 2000, 10, 603-605.
- 62 Preparation of mesoscale hollow spheres of TiO₂ and SnO₂ by templating against crystalline arrays of polystyrene beads
Zhong, Z.; Yin, Y.; Gates, B. and Xia, Y. *Advanced Materials* 2000, 12, 206-209.

1999

- 61 Unconventional methods for fabricating and patterning nanostructures
Xia, Y.; Rogers, J. A.; Paul, K. E. and Whitesides, G. M. *Chemical Reviews* 1999, 99, 1823-1848 (invited review article).
- 60 Assembly of nanoparticles into opaline structures over large areas
Gates, B.; Qin, D. and Xia, Y. *Advanced Materials* 1999, 11, 466-469.
- 59 A three-dimensional photonic crystal operating in the visible region
Park, S. H.; Gates, B. and Xia, Y. *Advanced Materials* 1999, 11, 462-466 (it was highlighted on the cover).
- 58 Fabrication of ordered two-dimensional arrays of micro- and nanoparticles using patterned self-assembled monolayers as templates

- Qin, D.; Xia, Y.; Xu, B.; Yang, H.; Zhu, C. and Whitesides, G. M. *Advanced Materials* 1999, 11, 1433-1437.
- 57 Fabrication and characterization of porous membranes with highly ordered three-dimensional periodic structures
Gates, B.; Yin, Y. and Xia, Y. *Chemistry of Materials* 1999, 11, 2827-2836.
- 56 Formation of patterned microstructures of polycrystalline ceramics from precursor polymers using micromolding in capillaries
Beh, W. S.; Xia, Y. and Qin D. *Journal of Materials Research* 1999, 14, 3995-4003.
- 55 Fabrication of three-dimensional photonic crystals for use in the spectral region from ultraviolet to near-infrared
Xia, Y.; Gates, B. and Park, S. H. *Journal of Lightwave Technology* 1999, 17, 1956-1962.
- 54 Formation of patterned microstructures of conducting polymers by soft lithography, and applications in microelectronic device fabrication
Beh, W. S.; Kim, I. T.; Qin, D.; Xia, Y. and Whitesides, G., M. *Advanced Materials* 1999, 11, 1038-1041.
- 53 Assembly of mesoscale particles over large areas and its application in fabricating tunable optical filters
Park, S. H. and Xia, Y. *Langmuir* 1999, 15, 266-273.
- 52 Materials research in China: Successes and problems
Xia, Y. and Li, R. K. *Advanced Materials* 1999, 11, 1065-1066 (a special issue focused on materials research in China).

1998

- 51 Soft lithography
Xia, Y. and Whitesides, G. M. *Annual Review of Materials Science* 1998, 28, 153-184 (invited review article, it was highlighted by ISI as a highly-cited MEMS article for June 2005; it was also featured by ISI as one of the top 20 most cited article in the area of materials science from 1996 to 2006).
- 50 Soft lithography
Xia, Y. and Whitesides, G. M. *Angewandte Chemie International Edition* 1998, 37, 551-575 (review article).
- 49 Macroporous membranes with highly ordered and three-dimensionally interconnected spherical pores
Park, S. H. and Xia, Y. *Advanced Materials* 1998, 10, 1045-1046 (research news article).
- 48 Fabrication of three-dimensional macroporous membranes with assemblies of microspheres as templates
Park, S. H. and Xia, Y. *Chemistry of Materials* 1998, 10, 1745-1848.
- 47 Crystallization of mesoscale particles over large areas
Park, S. H.; Qin, D. and Xia, Y. *Advanced Materials* 1998, 10, 1028-1031.
- 46 Use of electroless silver as the substrate in microcontact printing of alkanethiols and its application in microfabrication
Xia, Y.; Venkateswaran, N.; Qin, D.; Tien, J. and Whitesides, G. M. *Langmuir* 1998, 14, 363-371.
- 45 Fabrication of microstructures using shrinkable polystyrene films
Zhao, X.-M.; Xia, Y.; Schueller, O. J. A.; Qin, D. and Whitesides, G. M. *Sensors & Actuators A* 1998, 65, 209-217.
- 44 Photolithography with transparent reflective photomasks
Qin, D.; Xia, Y.; Black, A. J. and Whitesides, G. M. *Journal of Vacuum Science & Technology B* 1998, 16, 98-103.

1997

- 43 Microscopic patterning of orientated mesoscopic silica through guided growth
Trau, M.; Yao, N.; Kim, E.; Xia, Y.; Whitesides, G. M. and Aksay, I. A. *Nature* 1997, 390, 674-676.
- 42 Selective deposition of conducting polymers on hydroxyl-terminated surfaces with printed monolayers of alkylsiloxanes as templates
Huang, Z.; Wang, P.-C.; MacDiarmid, A. G.; Xia, Y. and Whitesides, G. M. *Langmuir* 1997, 13, 6480-6484.
- 41 Solvent-assisted microcontact molding: A convenient method for fabricating three-dimensional structures on surfaces of polymers
Kim, E.; Xia, Y.; Zhao, X.-M. and Whitesides, G. M. *Advanced Materials* 1997, 9, 651-654.
- 40 Elastomeric light valves
Qin, D.; Xia, Y. and Whitesides, G. M. *Advanced Materials* 1997, 9, 407-410.
- 39 Nanometer scale patterning and pattern transfer on amorphous Si, crystalline Si, and SiO₂ surfaces using self-assembled monolayers

- Wang, D.; Thomas, S. G.; Wang, K. L.; Xia, Y. and Whitesides, G. M. *Applied Physics Letters* 1997, 70, 1593-1595.
- 38 Selective deposition of films of polypyrrole, polyaniline and nickel on hydrophobic/hydrophilic patterned surfaces and applications
Huang, Z.; Wang, P.-C.; Feng, J.; MacDiarmid, A. G.; Xia, Y. and Whitesides, G. M. *Synthetic Metals* 1997, 85, 1375-1376.
- 37 Fabrication of polymeric microstructures with high aspect ratios using shrinkable polystyrene films
Zhao, X.-M.; Xia, Y.; Qin, D. and Whitesides, G. M. *Advanced Materials* 1997, 9, 251-254.
- 36 Extending microcontact printing as a microlithographic technique
Xia, Y. and Whitesides, G. M. *Langmuir* 1997, 13, 2059-2067.
- 35 Replica molding using polymeric materials: A practical step toward nanomanufacturing
Xia, Y.; McClelland, J. J.; Gupta, R.; Qin, D.; Zhao, X.-M.; Sohn, L. L.; Celotta, R. and Whitesides, G. M. *Advanced Materials* 1997, 9, 147-149.
- 34 Soft lithographic methods for nanofabrication
Zhao, X.-M.; Xia, Y. and Whitesides, G. M. *Journal of Materials Chemistry* 1997, 7, 1069-1074 (invited feature article).
- 33 Replica molding: Complex optics at lower costs
Whitesides, G. M. and Xia, Y. *Photonics Spectra* 1997, January, 90-91 (invited feature article).

1996

- 32 Complex optical surfaces by replica molding against elastomeric masters
Xia, Y.; Kim, E.; Zhao, X.-M.; Rogers, J. A.; Prentiss, M. and Whitesides, G. M. *Science* 1996, 273, 347-349.
- 31 Pattern transfer: Self-assembled monolayers as ultrathin resists
Xia, Y.; Zhao, X.-M. and Whitesides, G. M. *Microelectronic Engineering* 1996, 32, 255-268 (review article).
- 30 Microcontact printing with a cylindrical rolling stamp: A practical step toward automatic manufacturing of patterns with submicrometer-sized features
Xia, Y.; Qin, D. and Whitesides, G. M. *Advanced Materials* 1996, 8, 1015-1017.
- 29 Rapid prototyping of complex structures with feature sizes larger than 20 μm
Qin, D.; Xia, Y. and Whitesides, G. M. *Advanced Materials* 1996, 8, 917-919.
- 28 Fabrication of three-dimensional micro-structures: Microtransfer molding
Zhao, X.-M.; Xia, Y. and Whitesides, G. M. *Advanced Materials* 1996, 8, 837-840.
- 27 Controlling cell attachment on contoured surfaces with self-assembled monolayers of alkanethiolates on gold
Mrksich, M.; Chen, C. S.; Xia, Y.; Dike, L. E.; Ingber, D. E. and Whitesides, G. M. *Proceedings of the National Academy of Sciences USA* 1996, 93, 10775-10778.
- 26 Shadowed sputtering of gold on V-shaped microtrenches etched in Si and applications in microfabrication
Xia, Y. and Whitesides, G. M. *Advanced Materials* 1996, 8, 765-768.
- 25 Non-photolithographic methods for fabrication of elastomeric stamps for use in microcontact printing
Xia, Y.; Tien, J.; Qin, D. and Whitesides, G. M. *Langmuir* 1996, 12, 4033-4038.
- 24 Fabrication of single-mode polymeric waveguides using micromolding in capillaries
Zhao, X.-M.; Stoddart, A.; Smith, S. P.; Kim, E.; Xia, Y.; Prentiss, M. and Whitesides, G. M. *Advanced Materials* 1996, 8, 420-424.
- 23 Micromolding in capillaries: Applications in materials science
Kim, E.; Xia, Y. and Whitesides, G. M. *Journal of the American Chemical Society* 1996, 118, 5722-5731.
- 22 Micromolding of polymers in capillaries: Applications in microfabrication
Xia, Y.; Kim, E. and Whitesides, G. M. *Chemistry of Materials* 1996, 8, 1558-1567.
- 21 Two- and three-dimensional crystallization of polymeric microspheres by micromolding in capillaries
Kim, E.; Xia, Y. and Whitesides, G. M. *Advanced Materials* 1996, 8, 245-247.
- 20 Microcontact printing of alkanethiols on copper and its application in microfabrication
Xia, Y.; Kim, E.; Mrksich, M. and Whitesides, G. M. *Chemistry of Materials* 1996, 8, 601-603.
- 19 Microcontact printing of alkanethiols on silver and its application in microfabrication
Xia, Y.; Kim, E. and Whitesides, G. M. *Journal of the Electrochemical Society* 1996, 143, 1070-1079.

1995

- 18 Polymer microstructures formed by moulding in capillaries
Kim, E.; Xia, Y. and Whitesides, G. M. *Nature* 1995, 376, 581-584 (cover article).
- 17 Microcontact printing of octadecylsiloxane on the surface of silicon dioxide and its application in microfabrication
Xia, Y.; Mrksich, M.; Kim, E. and Whitesides, G. M. *Journal of the American Chemical Society* 1995, 117, 9576-9577.
- 16 Use of controlled reactive spreading of liquid alkanethiol on the surface of gold to modify the size of features produced by microcontact printing
Xia, Y. and Whitesides, G. M. *Journal of the American Chemical Society* 1995, 117, 3274-3275.
- 15 Patterned self-assembled monolayers formed by microcontact printing direct selective metallization by chemical-vapor-deposition on planar and nonplanar substrates
Jeon, N. L.; Nuzzo, R. G.; Xia, Y.; Mrksich, M. and Whitesides, G. M. *Langmuir* 1995, 11, 3024-3026.
- 14 Lithographic molding: A convenient route to structures with sub-micrometer dimensions
Wilbur, J. L.; Kim, E.; Xia, Y. and Whitesides, G. M. *Advanced Materials* 1995, 7, 649-652 (research news article).
- 13 A selective etching solution for use with patterned self-assembled monolayers of alkanethiolates on gold
Xia, Y.; Zhao, X.-M.; Kim, E. and Whitesides, G. M. *Chemistry of Materials* 1995, 7, 2332-2337.
- 12 Reduction in the size of features of patterned SAMs generated by microcontact printing with mechanical compression of the stamp
Xia, Y. and Whitesides, G. M. *Advanced Materials* 1995, 7, 471-473.
- 11 New development of nonlinear-optical crystals for the ultraviolet region with molecular engineering approach
Chen, C.; Wang, Y.; Xia, Y.; Wu, B.; Tang, D.; Wu, K.; Zheng, W.; Yu, L. and Mei, L. *Journal of Applied Physics* 1995, 77, 2268-2272.
- 10 New nonlinear-optical crystals for UV and VUV harmonic generation
Xia, Y.; Chen, C.; Tang, D. and Wu, B. *Advanced Materials* 1995, 7, 79-81 (research news article).
- 9 Vapor-phase secondary doping of polyaniline
Min, Y.; Xia, Y.; MacDiarmid, A. G. and Epstein, A. J. *Synthetic Metals* 1995, 69, 159-160.
- 8 Camphorsulfonic acid fully doped polyaniline emeraldine salt—Conformations in different solvents studied by an ultraviolet-visible-near-infrared spectroscopic method
Xia, Y.; Wiesinger, J. M.; MacDiarmid, A. G. and Epstein, A. J. *Chemistry of Materials* 1995, 7, 443-445.

1994

- 7 Camphorsulfonic acid fully doped polyaniline emeraldine salt—*in situ* observation of electronic and conformational changes induced by organic vapors by an ultraviolet-visible-near-infrared spectroscopic method
Xia, Y.; MacDiarmid, A. G. and Epstein, A. J. *Macromolecules* 1994, 27, 7212-7214.
- 6 Polar orientation of inorganic anionic groups in the crystal lattice
Xia, Y. *Advanced Materials* 1994, 6, 510-511 (talking point article).
- 5 Room temperature synthesis of poly(2,5-dimethoxy-1,4-phenylenevinylene) by the chloride sulfonium salt route
Xia, Y.; MacDiarmid, A. G. and Epstein, A. J. *Advanced Materials* 1994, 6, 293-295.

1993 and before

- 4 Minimum smoke solid rocket propellants: An experimental study
Li, S. and Xia, Y. *Journal of Propulsion Technology* 1989, 1, 47-53.
- 3 Application of graph theory to chemical kinetics
Xia, Y. *University Chemistry* 1988, 4, 43-46.
- 2 Recent developments in minimum smoke rocket propellants
Li, S. and Xia, Y. *Shanghai Aerospace* 1988, 4, 45-50 (review article).
- 1 A chain reaction model for aluminum aggregation in solid rocket propellant
Xia, Y. and Li, S. *Journal of Aerospace Power* 1988, 8, 247-251.

Book Chapters

- 19 Electrospun polymer nanofibers
Liu, W.; Lu, P. and Xia, Y. in McGraw-Hill Yearbook of Science & Technology, McGraw-Hill, 2013, pp. 116-119.
- 18 Gold nanocages: A multifunctional platform for molecular optical imaging and photothermal treatment
Au, L.; Cobley, C. M.; Chen, J. and Xia, Y. in *Nanoplatfrom-Based Molecular Imaging* (Ed.: X. Chen), John Wiley & Sons, 2011, pp. 615-638.
- 17 Gold nanocages for cancer imaging and therapy
Au, L.; Chen, J.; Wang, L. V. and Xia, Y. in *Cancer Nanotechnology* (Eds.: Grobmer, S. R. and Moudgil, B. M.), Springer, 2010, pp. 83-100.
- 16 Shape-controlled synthesis of palladium nanostructures
Xiong, Y. and Xia, Y. in *Functional Nanomaterials: A Chemistry and Engineering Perspective* (Eds.: Chen. S. and Lin, W.), University of Science and Technology of China Press, 2009, pp. 3-37.
- 15 Edge lithography
Geissler, M.; McLellan, J. M.; Lee, E. P. and Xia, Y. in *Unconventional Nanopatterning and Applications* (Eds.: Lee, H. H. and Rogers, J. A.), John Wiley & Sons, 2009, pp. 167-194.
- 14 Electrospinning nanofibers with controlled structures and complex architectures
Li, D.; McCann, J. T.; Marquez, M. and Xia, Y. in *Annual Review Nano Research Vol.1* (Eds.: Cao, G. and Brinker, C. J.), World Scientific, NJ, 2007, pp. 189-214.
- 13 Self-Assembly of colloidal building blocks into complex and controllable structures
McLellan, J.; Lu, Y.; Jiang, X. and Xia, Y. in *Self-Assembly: Chemical Techniques* (Ed.: Huck, W. T. S.), Springer, New York, 2005, pp. 187-216.
- 12 Photonic crystals: The concept, fabrication, and utilization
Xia, Y.; Kamata, K. and Lu, Y. in *Nanoscience and Nanotechnology* (Ed.: Heflin, R.), Kluwer Publisher, 2004, pp. 505-529.
- 11 Photonic papers: Colloidal Crystals with tunable optical properties
Fudouzi, H., Lu, Y. and Xia, Y. in *Chromogenic Phenomena in Polymers: Tunable Optical Properties* (Eds: Jenekhe, S. and Kiserow, D. J.), ACS, Washington DC, 2004, pp. 329-337.
- 10 Colloidal crystals: Recent developments and niche applications
Xia, Y. and Fudouzi, H., Lu, Y. and Yin, Y. in *Colloids and Colloid Assemblies* (Ed.: Caruso, F.), Wiley-VCH, Weinheim, Germany, 2004, pp. 284-316.
- 9 Metal nanowires synthesized by solution-phase methods
Sun, Y. and Xia, Y. in *Nanowires and Nanobelts: Materials, Properties and Devices* (Ed.: Wang, Z. L.), Kluwer Publisher, 2003, pp. 211-234.
- 8 Macroporous materials containing three-dimensionally periodic structures
Xia, Y.; Lu, Y.; Kamata, K.; Gates, B. and Yin, Y. in *Chemistry of Nanostructured Materials* (Ed.: Yang, P.), World Scientific, 2003, pp. 69-100.
- 7 Self-assembly of monodispersed spherical colloids into complex structures
Xia, Y.; Gates, B.; Yin, Y. and Sun, Y. in *Handbook of Surface Colloid Chemistry* (Ed.: Birdi, K. S.), CRC Press, 2002, pp. 555-579.
- 6 Self-assembled monolayer films: Microcontact printing
Xia, Y. and Whitesides, G. M. in *Encyclopedia of Materials: Science and Technology* (Eds.: Ulman, A. and Kramer, E.), Pergamon, Amsterdam, 2001, pp. 8309-8315.
- 5 Self-assembled monolayers: Applications in surface modification and micropatterning
Xia, Y.; Gates, B. and Yin, Y. in *Biochip Technology* (Eds.: Cheng J. and Kricka, L.), Harwood Academic Publishers, 2001, pp. 39-62.
- 4 Self-assembling systems on scales from nanometers to millimeters: Design and discovery
Isaacs, L.; Chin, D. N.; Bowden, N.; Xia, Y. and Whitesides, G. M. in *Supramolecular Technology* (Ed.: Reinhoudt, D. N.), John Wiley & Sons, England, 1999, pp. 1-46.
- 3 Microfabrication, microstructures and microsystems
Qin, D.; Xia, Y.; Rogers, J. A.; Jackman, R. J.; Zhao, X.-M. and Whitesides, G. M. in *Topics in Current Chemistry* (Eds.: A. Manz and H. Becker), Vol. 194, Springer-Verlag, Berlin, 1998, pp. 1-20.
- 2 Microcontact printing of SAMs

Tien, J.; Xia, Y. and Whitesides, G. M. in *Thin Films: Self-Assembled Monolayers of Thiols* (Ed.: Ulman, A.), Academic Press, Boston, 1998, Vol. 24, pp. 228-251.

- 1 Polyaniline: Synthesis, conformational structures, and applications
Xia, Y. in *Electrical and Optical Polymer Systems: Fundamentals, Methods, and Applications* (Eds.: Wise, D. L.; Wnek, G. E., Trantolo, D. J., Cooper, T. M., Gresser, J. D.), Marcel Dekker, Inc., New York, 1998, pp. 359-386.

Proceedings

- 9 Bioconjugated Au/Ag nanocages as a novel optical imaging contrast and thermal therapeutic agent
Chen, J.; Saeki, F.; Wiley, B. J.; Cang, H.; Au, L.; Zhang, H.; Cobb, M. J.; Kimmey, M. B.; Xia, Y. and Li, X. Conference on Lasers & Electro-Optics (CLEO), 2005, 2052-2054.
- 8 Uniaxial alignment of electrospun nanofibers
Li, D.; McCann, J. T. and Xia, Y., in *Polymeric Nanofibers* (Eds.: Reneker, D. H. and Fong, H.), ACS, Washington DC, 2005, Vol. 918, pp. 319-329 (featured on the book cover).
- 7 A Soft Lithographic Approach to the Fabrication of Single Crystalline Silicon Nanostructures with Well-Controlled Dimensions and Shapes
Yin, Y., Gates, B. and Xia, Y. MRS Symposium Proceeding 2001, 636, D4.2.1-6.
- 6 Fabrication of Micro- and Nanostructures with Monodispersed Colloidal Particles as the Active Components
Gates, B., Mayers, B., Li, Z.-Y. and Xia, Y. MRS Symposium Proceeding 2001, 636, D9.15.1-6.
- 5 Photonic Bandgap Properties of Thin Films Patterned with Three-Dimensional Periodic Structures
Xia, Y. and Gates, B. Proc. Am. Chem. Soc. Division of Polymeric Materials Science and Engineering, 2000, 83, 174-175.
- 4 Self-Assembly of Colloidal Particles into Three-Dimensionally Ordered Arrays and Its Applications
Gates, B., Park, S. H. and Xia, Y. SPIE Proceeding 2000, 3937, 36-43.
- 3 Self-Assembly of Meso- and Nanoparticles into 3D Ordered Arrays and Its Applications
Gates, B. and Xia, Y. MRS Symposium Proceeding 2000, 576, 149-154.
- 2 Fabrication and Characterization of 2D and 3D Ordered Arrays of Nanoparticles
Gates, B.; Zhong, Z. and Xia, Y. MRS Symposium Proceeding 2000, 571, 115-120.
- 1 Soft lithography
Xia, Y. and Whitesides, G. M. ACS Polymeric Materials Science and Engineering, 1997, 77, 596-598.

PATENTS

- 24 Surgical suture materials with porous sheaths for drug delivery
Xia, Y.; Li, J. Zhu, C.; Linderman, S. W. and Thomopoulos, S. United States Patent pending.
- 23 Polyhedral metal nanocages with well-defined facets and ultrathin walls and methods of making and uses thereof
Xia, Y.; Qin, D.; Zhang, L.; Wang, X.; Choi, S.-I.; Lee, S.; Sun, X.; Kim, J. and Zhao, M. United States Patent pending.
- 22 Layered platinum on free-standing palladium nanosubstrates for electrocatalytic applications and methods of making thereof
Xia, Y.; Xie, S.; Choi, S.-I.; Wang, X.; Park, J. and Zhang, L. United States Patent pending.
- 21 Platinum group metal (PGM) catalysts for automotive emissions treatment
Karpov, A.; Preli, D.; Wassermann, K.; Sundermann, A.; Choi, S.-I.; Lu, P. and Xia, Y. 10,201,804; WO 2016/123534 A1
- 20 Rhodium-containing catalysts for automotive emissions treatment
Karpov, A.; Preli, D.; Wassermann, K.; Sundermann, A.; Choi, S.-I. and Xia, Y. United States Patent 10,183,276, WO 2016/123523 A1.
- 19 Biomedical patches with aligned fibers
MacEwan, M.; Xie, J.; Zack, R. and Xia, Y. United States Patent 10,149,749.
- 18 Silver nanowires, methods of making silver nanowires, core-shell nanostructures, methods of making core-shell nanostructures, core-frame nanostructures, methods of making core-frame nanostructures
Qin, D.; Xia, Y.; Yang, Y.; Li, J.; Sun, X. and Rosa da Silva, R. United States Patent 9,878,306; United States Patent 10,286,382.

- 17 Methods for production of silver nanostructures
Xia, Y.; Im, S.-I.; Lee, Y. T.; Sun, Y. and Wiley, B. United States Patent 9,109,270; United States Patent 9,388,480.
- 16 Spatially-controlled syntheses of palladium-rhodium hetero-nanostructures
Xia, Y. and Xie, S. United States Patent 9,023,223.
- 15 Methods of making polymer hollow particles with controllable holes in their surfaces
Xia, Y.; Im, S.-H. and Jeong, U. United States Patent 8,969,955.
- 14 Polymer nanofiber scaffold for a heparin/fibrin based growth factor delivery system
Thamopoulos, S.; Sakiyama-Elbert, S.; Xia, Y.; Silva, M.; Gelberman, R.; Schwartz, A. and Xie, J. United States Patent 8,673,323; United States Patent 9,375,516.
- 13 Dual-oxide sinter resistant catalyst
Xia, Y.; Campbell, C. T.; Dai, Y.; Lim, B.; Grayson, B. A. and Fanson, P. T. United States Patent 8,349,761.
- 12 Crystalline noble metal nanostructures and methods for their preparation
Xia, Y. and Xiong, Y. United States Patent 8,257,465.
- 11 Synthesis of platinum nanostructures
Xia, Y.; Chen, J. and Thurston, H. E. United States Patent 8,114,187.
- 10 Methods of etching articles using microcontact printing
Whitesides, G. M.; Xia, Y.; Wilbur, J. L.; Jackman, R. J.; Kim, E.; Prentiss, M. G.; Mrksich, M.; Kumar, A.; Gorman, C. B. Biebuyck, H. and Berggren, K. K. United States Patent 7,875,197.
- 9 Methods of nanostructure formation and shape selection
Xia, Y. and Sun, Y. United States Patent 7,585,349; United States Patent 9,394,168.
- 8 Electrospinning of fine hollow fibers
Xia, Y. and Li, D. United States Patent 7,575,707.
- 7 Molded waveguides
Kim, E.; Xia, Y.; Mrksich, M.; Jackman, R. J.; Zhao, X.-M.; Smith, S. P.; Prentiss, M. G.; Whitesides, G. M. and Marzolin, C. United States Patent 6,660,192; United States Patent 8,012,382.
- 6 Self-assembled monolayer directed patterning of surfaces
Clem, P. G.; Jeon, N. L.; Mrksich, M.; Nuzzo, R. G.; Payne, D. A.; Whitesides, G. M. and Xia, Y. United States Patent 6,518,168.
- 5 Methods of forming articles including waveguides via capillary micromolding and microtransfer molding
Kim, E.; Xia, Y.; Mrksich, M.; Jackman, R. J.; Zhao, X.-M.; Smith, S. P.; Prentiss, M. G.; Whitesides, G. M. and Marzolin, C. United States Patent 6,355,198; United States Patent 6,752,942; AU Patent 199723247; PCT/US97/04005.
- 4 Elastomeric light valves
Qin, D.; Xia, Y. and Whitesides, G. M. United States Patent 6,304,364.
- 3 Microcontact printing on surfaces and derivative articles
Whitesides, G. M.; Xia, Y.; Wilbur, J. L.; Jackman, R. J.; Kim, E.; Prentiss, M. G.; Mrksich, M.; Kumar, A.; Gorman, C.; Biebuyck, H. and Berggren, K. K. United States Patent 6,180,239.
- 2 Methods of etching articles via microcontact printing
Whitesides, G. M.; Xia, Y.; Wilbur, J. L.; Jackman, R. J.; Kim, E.; Prentiss, M. G.; Mrksich, M.; Kumar, A.; Gorman, C.; Biebuyck, H. and Berggren, K. K. United States Patent 5,900,160
- 1 Methods for preparing conductive polyanilines
MacDiarmid, A. G.; Xia, Y. and Wiesinger, J. M. United States Patent 5,403,913.