Xiaodong (Chris) Li
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University of South Carolina
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Professional Experience

10/09-present: CEC Distinguished Professor in Mechanical Engineering, University of South Carolina
8/09-present: Professor, Department of Mechanical Engineering, University of South Carolina
8/07-present: University Campus Director, South Carolina Space Grant Consortium
8/02-7/09: Associate Professor, Department of Mechanical Engineering, University of South Carolina
7/95-7/02: Research Associate 2/Postdoctoral Researcher/Visiting Scholar, Nanotribology Laboratory for Information Storage and MEMS/NEMS, Ohio State University
11/94-7/95: Postdoctoral Researcher, Laboratory for Advanced Materials Processing, Pohang University of Science and Technology
12/93-11/94: Scientific Visitor, Department of Materials, University of Oxford
8/88-12/93: Assistant Professor/Lecturer, School of Materials Science and Engineering, Harbin Institute of Technology

Education/Professional Preparation

Postdoc. Mechanical Engineering, Ohio State University, 1996
Ph.D. Materials Science and Engineering, Harbin Institute of Technology, 1993
M.S. Materials Science and Engineering, Harbin Institute of Technology, 1988
B.S. Mechanical Engineering, Harbin Shipbuilding Engineering Institute, 1985

Honors and Awards

- USC College of Engineering and Computing Research Achievement Award, 2011
- Michael J. Mungo Undergraduate Teaching Award Nominee, 2011
- Professional Engineering Publisher's PE Prize, 2008
- USC College of Engineering and Computing Research Progress Award, 2008
- Michael J. Mungo Graduate Teaching Award Nominee, 2008
- Michael J. Mungo Undergraduate Teaching Award Nominee, 2008
- USC College of Engineering Yong Investigator Award Nominee, 2007
- Michael J. Mungo Graduate Teaching Award Nominee, 2007
- Michael J. Mungo Undergraduate Teaching Award Nominee, 2006
- Research Progress Award Nominee, USC College of Engineering and Information Technology, 2006
- Reviewer, National Science Foundation Metals program, 2007, 2008, and 2009
- Review Panel, South Korea Science and Engineering Foundation World Class University Program, 2008
- Review Panel, National Science Foundation Nano and Bio Mechanics Program, 2006
- Review Panel, National Science Foundation SBIR Program, 2006
- Invited external PhD thesis examiner, Hong Kong University of Science and Technology, 2006
- A teacher in the Department who was most influential in helping to prepare students for becoming engineering professionals, 2005, 2006
- Michael J. Mungo Graduate Teaching Award Nominee, 2005

- Two of Xiaodong Li's PhD students received University Outstanding Graduate Student Awards (in 2005 and 2006, respectively)
- One of the 100 most popular papers in the Journal – Nanotechnology in 2004
- Featured article in the Journal – Nanotechnology in 2004
- NSF Fellowship to the NSF Summer Institute on Nano Mechanics and Materials, 2003
- Research achievements have been reported by international news and magazines.
  - New York Times
  - Chemistry World News, December 7, 2010
  - Ceramic Today, December 8, 2010
  - ScienceDaily, April 20, 2010
  - MSNBC, April 1, 2010
  - Chemistry World News, March 16, 2010
  - Discovery News, April 1, 2010
  - physorg.com, April 7, 2010
  - swissinfo.ch, April 8, 2010
  - The Times of India, April 13, 2010
  - Canadian Business Magazine, May 10, 2010
  - news.com.au, April 12, 2010
  - TechNewsDaily, April 12, 2010
  - Nanowerk Spotlight, Nanowerk, April 6, 2010
  - USC News, April 5, 2010
  - Research Highlights, Nature China, April 7, 2010
  - Look-ahead, June 2010 Issue of Cutting Tool Magazine
  - Nanowerk Spotlight, Nanowerk, March 26, 2010
  - Nanowerk Spotlight, Nanowerk, October 14, 2006
  - Research News, September 2004 issue of Materials Today
  - USC Research News, 2004
  - USC News, October 22, 2004
  - Taiwan Nanotechnology News Letter, Vol. II, No. 19, 2003
  - News of the Southeastern Innovation Corridor, Swamp Fox, Nov. 17, 2003
  - News, www.nano.com.tw, October 17, 2003
  - News, HighTech online, October 21, 2003
  - News, nanotechweb.org, October 14, 2003
  - Research News, December 2002 issue of Materials Today
  - News and Updates, July 2000 issue of JOM
  - News, October 2000 issue of Advanced Engineering Materials
  - Technical News, November 2000 issue of Euromaterials
  - Materials Progress, December 2000 issue of Advanced Materials & Processes
- Outstanding Service Award, Journal of Advanced Materials, Society for the Advancement of Materials and Process Engineering, 2000
- Outstanding Achievement Award, Computer Microtribology and Contamination Research Laboratory, Ohio State University, 1998
- Fellowship (Exchange Program), The Royal Society, UK, 1994
- Scientific and Technical Progress Award, The Chinese Ministry of Aviation and Aerospace, 1993
- Young Faculty Award for Excellence in Teaching, Harbin Institute of Technology, 1991

Editorial Advisory Board/Editorial Board/Editorial Review Board

- Guest Editor, Experimental Mechanics, Special Issue - Advanced Vision Based Methods and Measurements

- Guest Editor, Experimental Mechanics, Special Issue - Emerging Methods to Understand Mechanical Behavior
- Guest Editor, Metallurgical and Materials Transactions A, Special Issue - Mechanical Behavior of Nanostructured Materials
- Guest Editor, JOM – Nanomechanical Testing
- Advisor to JOM
- Editorial Board, International Journal of Applied Mechanics
- Editorial Board, Journal of Biomaterials and Nanobiotechnology
- Editorial Board, Journal of Nanoscience Letters
- Editorial Board, International Journal of Nanotechnology and Applications
- Editorial Advisory Board, Recent Patents in Nanotechnology
- Editorial Advisory Board, Open Nanoscience Journal
- Editorial Review Board, Journal of Advanced Materials
- International Board of Review, Journal of Materials Engineering and Performance
- Review Panel, National Science Foundation Nanomanufacturing Program, 2010
- Review Panel, National Science Foundation Materials Processing and Manufacturing, 2010
- Review Panel, South Korea Science and Engineering Foundation World Class University Program, 2008
- Review Panel, National Science Foundation Nano and Bio Mechanics Program, 2006
- Review Panel, National Science Foundation SBIR Program, 2006
- Review proposals for the following funding agencies
  - National Science Foundation
  - US Army Research Office
  - The National Academies/AFSOR
  - US Civilian Research and Development Foundation
  - The Israel Academy of Sciences and Humanities
  - The Petroleum Research Fund
  - Korean National Science Foundation
  - University of Wisconsin -Milwaukee's Research Growth Initiative Program
- Review papers for the following 103 journals (including Science)
  - ACS Nano
  - Acta Biomaterialia
  - Acta Materialia
  - Advanced Functional Materials
  - Advanced Materials
  - American Mineralogist
  - Applied Physics Letters
  - Applied Surface Science
  - Carbon
  - Central European Journal of Physics
  - Chemical Physics Letters
  - Chemistry of Materials
  - Computational Materials Science
  - Composites B
  - Composites Science and Technology
  - Crystal Growth & Design
  - Current Nanoscience
  - Current Opinion in Solid State and Materials Science
  - Diamond and Related Materials
  - Electrochimica Acta
  - European Polymer Journal
  - Experimental Mechanics

Fatigue and Fracture of Engineering Materials and Structures
Fibers and Polymers
IEEE Transactions on Nanotechnology
International Journal of Applied Ceramic Technology
International Journal of Applied Mechanics
International Materials Review
Journal of Advanced Materials
Journal of Alloys and Compounds
Journal of American Ceramic Society
Journal of Applied Physics
Journal of Applied Polymer Science
Journal of Biomaterials and Nanobiotechnology
Journal of Biomedical Materials Research Part A
Journal of Biomedical Materials Research Part B
Journal of Chemical Physics
Journal of Computer-Aided Molecular Design
Journal of Crystal Growth
Journal of Electronic Materials
Journal of Electronic Packaging
Journal of Engineering Materials and Technology
Journal of Experimental Nanoscience
Journal of Information Storage and Processing Systems
Journal of Magnetism of Magnetic Materials
Journal of Manufacturing Science and Engineering
Journal of Materials Engineering and Performance
Journal of Materials Processing Technology
Journal of Materials Research
Journal of Materials Science
Journal of Materials Science & Technology
Journal of the Mechanics and Physics of Solids
Journal of Micromechanics and Microengineering
Journal of Nanomaterials
Journal of Nano Research
Journal of Physical Chemistry
Journal of Physics and Chemistry of Solids
Journal of Physics: Condensed Matter
Journal of Physics D: Applied Physics
Journal of Pressure Vessel Technology
Journal of Royal Society Interface
Journal of Strain Analysis for Engineering Design
Journal of Structural Biology
Journal of Vacuum Science and Technology
Ceramics International
Materials Characterization
Materials Chemistry and Physics
Materials and Design
Materials Research Bulletin
Materials Science and Engineering A
Materials Science and Engineering C
Materials Science in Semiconductor Processing
Macromolecular Rapid Communications
Measurement Science and Technology
Mechanics of Materials

Medical Engineering & Physics
Microelectronics Reliability
Nano
Nanotechnology
Nanoscale
Nanoscale Research Letters
Nanoscience and Nanotechnology Letters
Nano Letters
Nano Today
Proceedings of Royal Society A
Recent Patents in Nanotechnology
Surface and Interface Analysis
Science
Small
Pharmaceutical Research
Philosophical Magazine
Physica E
Physical Review Letters
Polymer
Polymer Engineering & Science
Scripta Materialia
Semiconductor Science and Technology
Superlattices and Microstructures
Surface and Coatings Technology
Surface Science
Thin Solid Films
Tribology International
Ultramicroscopy
Wear

Symposiums and Sessions Organized/Chaired

- Session Co-Chair - "International Workshop on Nanoindentation Related Research (4th International Workshop on Materials Behavior at Micro- and Nano-Scale)," Xi'an, China, May 19-21, 2011.
- Co-Organizer – "International Workshop on Nanoindentation Related Research (4th International Workshop on Materials Behavior at Micro- and Nano-Scale)," Xi'an, China, May 19-21, 2011.
- Session Co-Chair – "Advances in Mechanics of One-Dimensional Micro/Nano Materials: Nanomechanics: Size Scale and Theory," TMS 2011, 140th Annual Meeting & Exhibition, San Diego, California, February 27 - March 3, 2011.
- Session Chair – "Controlled Processing of Nanoparticle-based Materials and Nanostructured Films: Low Dimensional Nanomaterials I," MS&T'2010, Materials Science & Technology 2010 Conference & Exhibition, Houston, Texas, October 17-21, 2010.
- Co-Organizer - symposium "Controlled Processing of Nanoparticle-based Materials and Nanostructured Film," MS&T'2010, Materials Science & Technology 2010 Conference & Exhibition, Houston, Texas, October 17-21, 2010.
- Session Co-Chair – "International Workshop on Materials Behavior at the Micro- and Nano-Scale," Xi'an, China, June 8-11, 2009.
- Session Co-Chair - symposium "Advances in Composite, Cellular and Natural Materials: Metal Matrix Composites," TMS 2010, 139th Annual Meeting & Exhibition, Seattle, WA, February 14-18, 2010.

- Session Co-Chair – symposium "Mechanical Behavior of Nanomaterials-Experiments and Modeling," 2009 MSR Fall Meeting, Boston, MI, November 30 – December 4, 2009.
- Organizer - session "Mechanics and Materials in Energy Systems," 2009 ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Lake Buena Vista, Florida, November 13-19, 2009.
- Co-Chair – symposium "Controlled Processing of Nanoparticle-based Materials and Nanostructured Film," MS&T'09, Material Science & Technology 2009 Conference & Exhibition, Pittsburgh, PA, October 25-29, 2009.
- Co-Organizer – symposium "Controlled Processing of Nanoparticle-based Materials and Nanostructured Film," MS&T'09, Material Science & Technology 2009 Conference & Exhibition, Pittsburgh, PA, October 25-29, 2009.
- Session Co-Chair -"2009 SEM Fall Symposium and Workshop - Advanced Image-Based Measurement Methods: Recent Developments and Applications in Engineering and Medicine," Columbia, SC, October 5-7, 2009.
- Co-Organizer- "2009 SEM Fall Symposium and Workshop - Advanced Image-Based Measurement Methods: Recent Developments and Applications in Engineering and Medicine," Columbia, SC, October 5-7, 2009.
- Session Chair – "Sumer School of Advanced Function Materials 2009," Shenyang, China, July 7 - 9, 2009.
- Session Co-Chair – "International Workshop on Size Effect on Materials Mechanical Behavior," Beijing, China, May 24-26, 2009.
- Co-Organizer – "International Workshop on Size Effect on Materials Mechanical Behavior," Beijing, China, May 24 - 26, 2009.
- Co-Chair, symposium "Mechanical Behavior Nanostructured Materials," TMS 2009, 138th Annual Meeting & Exhibition, San Francisco, California, February 15-19, 2009.
- Co-Organizer - symposium "Mechanical Behavior of Nanostructured Materials," TMS 2009, 138th Annual Meeting & Exhibition, San Francisco, California, February 15-19, 2009.
- Co-Chair - Session "Nanostructured and Materials in Energy Systems," 2008 ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Boston, MA, October 31- November 6, 2008.
- Session Co-Chair – "Micro- and Nano- Mechanical Behavior of Materials – Ceramics," MS&T '08, Material Science & Technology 2008 Conference & Exhibition, Pittsburgh, PA, October 5-9, 2008.
- Co-Organizer - symposium "Emerging Methods to Understand Mechanical Behavior" TMS 2008, 137th Annual Meeting & Exhibition, New Orleans, LA March 9–13, 2008.
- Co-Organizer- symposium "Characterization of Mechanical Behavior at Small Length Scales," 32nd International Cocoa Beach Conference & Exposition on Advanced Ceramics and Composites, Daytona Beach, Florida, January 27-February 1, 2008.
- Session Chair-"Mechanical Behavior, Design, and Reliability of Small Scale Systems," 32nd International Cocoa Beach Conference & Exposition on Advanced Ceramics and Composites, Daytona Beach, Florida, January 27-February 1, 2008.
- Session Co-Chair-"Nanotechnology Panel," 2007 ASME Pressure Vessels and Piping/CREEP8 Conference, San Antonio, Texas, July 22-26, 2007.
- Co-Organizer - symposium "Nanostructured Materials including Nanocrystalline Materials, Nanoporous Materials, Active Nanomaterials and Structures," 2007 ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Seattle, Washington, November 12-15, 2007.
- Session Chair- "Nanostructured Materials," ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Seattle, Washington, November 12-15, 2007.

- Session Chair- "Mechanics of Nanofabrication and Nanostructure Growth," 2007 ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Seattle, Washington, November 12-15, 2007.
- Session Co-Chair –"Deformation Mechanisms at Nano-scale Contacts," MRS Spring Meeting, San Francisco, CA, April 9-13, 2007
- Organizer- symposium "Mechanics of Nanomaterials and Micro/Nanodevices –Experimental and Modeling" in MS&T'07, Material Science & Technology 2006 Conference & Exhibition, Detroit, MI, September 16-20, 2007.
- Organizer – session "In-situ Nanoscale Imaging and Mechanical Testing" SEM Annual Conference, Springfield, MA, June 3-6, 2007.
- Co-Chair - session "Nanomaterial Applications to Transportation" ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Chicago, Illinois, November 5-10, 2006.
- Organizer- symposium "Nanomechanical Characterization and Size Dependent Mechanical Properties" MS&T'06, Material Science & Technology 2006 Conference & Exhibition, Cincinnati, Ohio, October 15-19, 2006.

Professional Memberships

- Member of the Materials Research Society (MRS) (2004- present)
- Member of the American Ceramic Society (ACerS) (2005- present)
- Member of the Society of Experimental Mechanics (SEM), USA (2003- present)
- Member of the American Society of Mechanical Engineers (ASME), USA (1998-present)
- Member of the Minerals, Metals & Materials Society (TMS), USA (1998-present)
- Active Member of the New York Academies of Science, USA (1998-1999)
- Member of the Society of Nanoscience and Nanotechnology (2006-present)
- TMS - Nanomechnical Materials Behavior Committee Member (2004 - present)
- TMS - Nanomechnical Materials Behavior Committee Vice Chair (2009 2010)
- TMS - Nanomechnical Materials Behavior Committee Chair (2011 - 2012)
- TMS – Mechanical Behavior of Materials Committee Member (2006-present)
- ASME - Multifunctional Materials Committee (2006-present)
- SEM- Time Dependent Materials Committee (2007-present)
- SEM- Biological Systems and Materials Committee (2008-present)

Publications (Peer-Reviewed)

***H index factor: 26**
***Published papers have been cited over 2,800 times (according to Science Citation Index)**
***Journal Impact factors are based on 2010 Science Citation Index Report**
***Times cited for each paper are based on Science Citation Index Database of 08/08/2011**

(173 total, including 11 in Nano Letters, 2 in Advanced Materials, 1 in Advanced Functional Materials, 1 in Advanced Energy Materials, 1 in Physical Review Letters, 2 in Small, 1 in Chemistry of Materials, 4 in Journal of Materials Chemistry, 1 in MRS Bulletin, 1 in Acta Biomaterialia, 8 in Applied Physics Letters, 6 in Acta Materialia, 2 in Philosophical Magazine, 3 in Carbon, 6 in Nanotechnology, 7 in Journal of Applied Physics, 3 in Journal of Materials Research, 4 in Scripta Materialia, and 6 in Journal of Biomedical Materials Research)

173. Zaiwang Huang, Haoze Li, Zhiliang Pan, Qiuming Wei, Xiaodong Li, "Dynamic Self-stiffening in Nacre," submitted for publication.
172. Gangsheng Zhang and Xiaodong Li, "Unveiling Dome-shaped Aragonite Platelets in Nacre," submitted for publication.
171. Xinyong Tao, Lixin Dong, Bradley J. Nelson, and Xiaodong Li, "Nano-ElectroMechanical Position/Force Sensing Based on Ductile Peapod B_4C Nanowires," submitted for publication.

170. Haoze Li, Zhi-Hui Xu, and Xiaodong Li, "Nanoscale Structural and Mechanical Characterization of Conch Shell (Busycon carica)," submitted for publication.
169. Jianfeng Zang, Lihong Bao, Richard A. Webb, and Xiaodong Li, "Electron Beam Irradiation Stiffens Zinc Tin Oxide Nanowires," submitted for publication.
168. Zhi-Hui Xu, Yingchao Yang, Zaiwang Huang, and Xiaodong Li, "Elastic Modulus of Biopolymer Matrix in Nacre Measured Using Coupled Atomic Force Microscopy Bending and Inverse Finite Element Techniques," submitted for publication.
167. Xinyong Tao, Yiping Li, Jun Du, Yingchao Yang, Yang Xia, Hui Huang, Yongping Gan, Wenkui Zhang, and Xiaodong Li "Biotemplate Synthesis, Structural and Mechanical Characterization of TiC Nanorods," submitted for publication.
166. Yong Sun, Elizabeth N. Hoffman, Poh-Sang Lam, and Xiaodong Li, "Evaluation of Local Stress Evolution from Metallic Whisker Formation," *Scripta Materialia* (in press) (Impact Factor: 2.806).
165. Rui Li, Lihong Bao, and Xiaodong Li, "Synthesis, Structural, Optical and Mechanical Characterization of SrB_2O_4 Nanorods," *CrystEngComm* (in press) (Impact Factor: 4.006).
164. Jianfeng Zang and Xiaodong Li, "In Situ Synthesis of Ultrafine MnO_2/Polypyrrole Nanorod Composites for High Performance Supercapacitors," *Journal of Materials Chemistry* (in press) (Impact Factor: 5.099).
163. Xinyong Tao, Yiping Li, Jun Du, Wenkui Zhang, Hui Huang, Yongping Gan, and Xiaodong Li, "Bamboo: Green Carbon Source and Porous Template for One-pot Synthesis of Carbide (SiC, B_4C, TiC, TaC, NbC, $Ti_xNb_{1-x}C$, and $Ta_xNb_{1-x}C$) Nanowires," *Journal Of Materials Chemistry* (in press) (Impact Factor: 5.099).
162. Xinyong Tao, Jun Du, Yiping Li, Yingchao Yang, Zheng Fan, Yongping Gan, Hui Huang, Wenkui Zhang, Lixin Dong, and Xiaodong Li, "Bamboo Fiber Generated TaC Nanowire / Activated Carbon Microfiber Hybrid Structures for Electrochemical Energy Storage Systems," *Advanced Energy Materials* (in press).
161. Zhi-Hui Xu and Xiaodong Li, "Deformation Strengthening of the Biopolymer Matrix of Nacre," *Advanced Functional Materials* (in press) (Impact Factor: 8.486).
160. Yingchao Yang, Guofeng Wang, and Xiaodong Li, "Water Molecule Induced Stiffening in ZnO Nanobelts," *Nano Letters*, 11 (2011) 2845-2848. (Impact Factor: 12.186).
159. Laying Wu, Jianfeng Zang, Andrew L. Lee, Zhongwei Niu, Gary Horvath, Vaughn Braxton, Arief Cahyo Wibowo, Michael A. Bruckman, Soumitra Ghoshroy, Hans-Conrad zur Loye, Xiaodong Li, and Qian Wang, "Electrospinning Fabrication, Structural and Mechanical Characterization of Rod-like Virus-based Composite Nanofibers," *Journal of Materials Chemistry*, 21 (2011) 8550-8557. (Impact Factor: 5.099).
158. Lihong Bao, Jianfeng Zang and Xiaodong Li, "Flexible Zn_2SnO_4/MnO_2 Core/Shell Nanocable - Carbon Microfiber Hybrid Composites for High-Performance Supercapacitor Electrodes," *Nano Letters,* 11 (2011) 1215-1220. (Impact Factor: 12.186)
157. Zhanjun Gu, Yingchao Yang, Kaiyuan Li, Xinyong Tao, Gyula Eres, Jane Y. Howe, Litong Zhang, Xiaodong Li, and Zheng Wei Pan, "Ultra-Tough Carbon Nanotube Reinforced Silicon Carbide Composites by Chemical Vapor Infiltration," *Carbon*, 49 (2011) 2475-2482. (Impact Factor: 4.893)
156. Zhi-Hui Xu, Helena Jin, Wei-Yang Lu, Michael A. Sutton, and Xiaodong Li, "Influence of Scanning Rotation on Nanoscale Artificial Strain in Open-loop Atomic Force Microscopy," *Experimental Mechanics,*51 (2011) 619-624. (Impact Factor: 1.854)
155. Jianfeng Zang, Zhi-Hui Xu, Richard A. Webb, and Xiaodong Li, "Electrical Self-healing of Mechanically Damaged Zinc Oxide Nanobelts," *Nano Letters,* 11 (2011) 241-244. (Impact Factor: 12.186)
154. Zhi-Hui Xu, Yingchao Yang, Peng Huang, and Xiaodong Li, "Determination of Interfacial Properties of Thermal Barrier Coatings by Shear Test and Inverse Finite Element Method," *Acta Materialia,* 58 (2010) 5972-5979. (Impact Factor: 3.781)

153. Chia-Hung Lin, Hai Ni, Xinnan Wang, Ming Chang, Yuh J. Chao, Juti Rani Deka, Xiaodong Li, "In-situ Nanomechanical Characterization of Single Crystalline Boron Nanowires by Buckling," *Small,* 6 (2010) 927-931. (Impact Factor: 7.333; 2 citations)
152. Xiaodong Li, Ioannis Chasiotis, and Takayuki Kitamura, "In situ Scanning Probe Microscopy Nanomechanical Testing," *MRS Bulletin,* 35 (2010) 361-367. (Impact Factor: 4.747; 2 citations)
151. Zhi-Hui Xu, Young-Bae Park, and Xiaodong Li, "Nano/Micro-mechanical and Tribological Characterization of Ar, C, N, and Ne Ion Implanted Si," *Journal of Materials Research,* 25 (2010) 880-889. (Impact Factor: 1.395)
150. Yongda Yan, Zhengjiang Hu, Xueshen Zhao, Tao Sun, Shen Dong, and Xiaodong Li, "Top-down Nanomechanical Machining of Three-dimensional Nanostructures by Atomic Force Microscopy," *Small,* 6 (2010) 724-728. (Impact Factor: 7.333; 4 citations)
149. Haibo Guo, Yue Qi, and Xiaodong Li, "Adhesion at Diamond/Metal Interfaces: A Density Functional Theory Study," *Journal of Applied Physics,* 107 (2010) 033722. (Impact Factor: 2.064)
148. Xinyong Tao, Lixin Dong, Xinnan Wang, Wenkui Zhang, Bradley J. Nelson, and Xiaodong Li, "B_4C Nanowire - Carbon Microfiber Hybrid Structures and Composites from Cotton T-shirts," *Advanced Materials,* 22 (2010) 2055-2059. (Impact Factor: 10.857; 3 citations)
147. Lihong Bao, Zhi-Hui Xu, Rui Li, and Xiaodong Li, "Catalyst-Free Synthesis and Structural and Mechanical Characterization of Single Crystalline $Ca_2B_2O_5{\cdot}H_2O$ Nanobelts and Stacking Faulted $Ca_2B_2O_5$ Nanogrooves," *Nano Letters,* 10 (2010) 255-262. (Impact Factor: 12.186; 6 citations)
146. Guoxin Cao, Xi Chen, Zhi-Hui Xu and Xiaodong Li, "Measuring Mechanical Properties of Micro-and Nano-Fibers Embedded in an Elastic Substrate: Theoretical Framework and Experiment," *Composites: Part B,* 41 (2010) 33–41. (Impact Factor: 1.763; 1 citation)
145. Haibo Guo, Xingcheng Xiao, Yue Qi, Zhihui Xu, and Xiaodong Li, "Enhance Diamond Coating Adhesion by Oriented Interfacial Interlayer Microcracking," *Journal of Applied Physics*, 106 (2009) 123514. (Impact Factor: 2.064)
144. Jinzhu Tan, Y. J. Chao, Xiaodong Li, and J. W. Van Zee, "Microindentation Test for Assessing the Mechanical Properties of Silicone rubber Exposed to a Simulated PEM Fuel Cell Environment," *Journal of Fuel Cell Science and Technology,* 6 (2009) 041017. (Impact Factor: 0.884; 2 citations)
143. Xiaodong Li and Xinhang Zhang, "Nanomechanical Testing: Challenges and Opportunities," *JOM*, 61 (12) (2009) 18. (Impact Factor: 1.175)
142. Zaiwang Huang and Xiaodong Li, "Nanoscale Structural and Mechanical Characterization of Heat Treated Nacre," *Materials Science and Engineering C*, 29 (2009) 1803-1807. (Impact Factor: 2.178; 1 citation)
141. Xiaodong Li and Zaiwang Huang, "Unveiling the Formation Mechanism of Pseudo-Single Crystal Aragonite Platelets in Nacre," *Physical Review Letters*, 102 (2009) 075502. (Impact Factor: 7.621; 11 citations)
140. Jianhua Rong, Fiona Oberbeck, Xinnan Wang, Xiaodong Li, Jerry Oxsher, Zhongwei Niu, and Qian Wang, "Tobacco Mosaic Virus Templated Synthesis of One Dimensional Inorganic-polymer Hybrid Fibres," *Journal of Materials Chemistry*, 19 (2009) 2841-2845. (Impact Factor: 5.099; 6 citations)
139. P. Venkateswaran, Zhi-Hui Xu, Xiaodong Li, and Anthony P. Reynolds, "Determination of Mechanical Properties of Al-Mg Alloys Dissimilar Friction Stir Welded Interface by Indentation Methods," *Journal of Materials Science*, 44 (2009) 4140-4147. (Impact Factor: 1.855; 14 citations)
138. Guofeng Wang and Xiaodong Li, "Predicting Young's Modulus of Nanowires from First-principles Calculations on Their Surface and Bulk Materials," *Journal of Applied Physics,* 104 (2009) 113517. (Impact Factor: 2.064; 8 citations)

137. Rui Li, Xinyong Tao, and Xiaodong Li, "Low Temperature, Organic-Free Synthesis of $Ba_3B_6O_9(OH)_6$ Nanorods and β-BaB_2O_4 Nanospindles," *Journal of Materials Chemistry,* 19 (2009) 983-987. (Impact Factor: 5.099; 7 citations)
136. Yong Sun, Jin Liang, Zhi-Hui Xu, Guofeng Wang, and Xiaodong Li, "In-situ Observation of Small-scale Deformation in a Lead-free Solder Alloy," *Journal of Electronic Materials,* 38 (2009) 400-409. (Impact Factor: 1.390; 2 citation)
135. Linhua Zou, Helena Jin, Wei-Yang Lu, and Xiaodong Li, "Nanoscale Structural and Mechanical Characterization of the Cell Wall of Bamboo Fibers," *Materials Science and Engineering C,* 28 (2009) 1501-1508. (Impact Factor: 2.178; 6 citations)
134. Zhi-Hui Xu, Xiaodong Li, Michael A Sutton, and Ning Li, "Drift and Spatial Distortion Elimination in Atomic Force Microscopy Images by Digital Image Correlation Technique," *Journal of Strain Analysis for Engineering Design*, 43 (2008) 729-743. (Impact Factor: 0.897; 9 citations)
133. Jinzhu Tan, Yuh. J. Chao, John. W. Van Zee, Xiaodong Li, Xinnan Wang, Min Yang, "Assessment of Mechanical Properties of Fluoroelastomer and EPDM in a Simulated PEM Fuel Cell Environment by Microindentation Test", *Materials Science and Engineering A*, 496 (2008) 464-470. (Impact Factor: 2.090; 7 citations)
132. Yii-Der Wu, Chi-Hui Chien, Yuh J. Chao, Mark W. Hamrick, Willliam D. Hill, Jack Yu, and Xiaodong Li, "Granulocyte Colony Stimulating Factor (G-CSF) Treatment Alters Femoral Biomechanical Properties in C57BL/6 Mice," *Journal of Biomedical Materials Research Part A*, 87 (2008) 972-979. (Impact Factor; 3.044)
131. K.S. Kanaga Karuppiah, Angela L. Bruck, Sriram Sundararajan, Jun Wang, Zhiqun Lin, Zhi-Hui Xu, and Xiaodong Li, "Friction and Wear Behavior of Ultra-high Molecular Weight Polyethylene as a Function of Polymer Crystallinity," *Acta Biomaterialia*, 4 (2008) 1401-1410. (Impact Factor: 4.822; 5 citations)
130. Ping Zhou, Chengwei Wu, and Xiaodong Li, "Three-Point Bending Young's Modulus of Nanowires," *Measurement Science and Technology*, 19 (2008) 115703. (Impact Factor: 1.350; 4 citations)
129. Zhi-Hui Xu, Michael A. Sutton, and Xiaodong Li, "Mapping Nanoscale Wear Field by Combined Atomic Force Microscopy and Digital Image Correlation Techniques," *Acta Materialia*, 56 (2008) 6304–6309. (Impact Factor: 3.781; 4 citations)
128. Xinyong Tao, Jie Liu, Goutam Koley, and Xiaodong Li, "B/SiO_x Nanonecklace Reinforced Nanocomposites by Unique Mechanical Interlocking Mechanism," *Advanced Materials*, 20 (2008) 4091-4096. (Impact Factor: 10.857; 6 citations)
127. Xiaodong Li, Linhua Zou, Hai Ni, Anthony P. Reynolds, Changan Wang, and Yong Huang, "Micro/Nanoscale Mechanical Characterization and In-Situ Observation of Cracking of Laminated Si_3N_4/BN Composites," *Materials Science and Engineering C*, 28 (2008) 1501–1508. (Impact Factor: 2.178; 2 citations)
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15. Xiaodong Li, Jiahu Ouyang, and Zhongda Yin, "Effect of Laser Surface Heardening on the Wear Resistance of Cr12MoV Steel", *Proceedings of Satellite Conference of China Association for Science and Technology - First Academic Annual Meeting of Youth and Harbin Second Academic Conference of Youth (Science and Engineering)*, Edited by Zhengfu Cao, Harbin Instituite of Technology Press, Harbin, 1992, pp. 280-282 (in Chinese).

14. Xiaodong Li, Zechun Li, and Zhongda Yin, "Spinodal Decomposition of Fe-Mo Alloys", *Proceedings of Satellite Conference of China Association for Science and Technology - First Academic Annual Meeting of Youth and Harbin Second Academic Conference of Youth (Science and Engineering)*, Edited by Zhengfu Cao, Harbin Instituite of Technology Press, Harbin, 1992, pp. 304-307 (in Chinese).
13. Xiaodong Li, You Wang, and Jiajun Liu, "A Study of Dry Sliding Friction of Eutectoid Steel," *Wear*, 150 (1991) 59-65. (Impact factor: 1.635, 6 citations)
12. Zhongda Yin, Mingzhe Zheng, and Xiaodong Li, "Mössbauer Study of the Spinodal Decomposition of a 10Ni Alloy," *Chinese Science Bulletin*, 36 (1991) 1159-1161. (Impact Factor: 1.087)
11. Xiaodong Li and Zhongda Yin, "Microstructure of Laser Melted Layer on Cr12MoV Steel," *Acta Metallurgica Sinica*, 4 (1991) 296-298. (Impact Factor: 0.477)
10. Zhongda Yin and Xiaodong Li, "Study on Laser Rapid Melting-Solidifying of 4Cr5MoV1Si Steel Surface," *Chinese Journal of Lasers*, 18(9) (1991) 709-711(in Chinese).
9. Xiaodong Li, Zhongda Yin, and You Wang, "Structure Feature of 4Cr5MoV1Si Steel Treated by Laser Rapid Melting," *Laser Technology*, 15(6) (1991) 341-343 (in Chinese).
8. Xiaodong Li and Zhongda Yin, "Microstructure of the Laser Quenched Layer of Cr12MoV Steel," *Physical Testing and Chemical Analysis, Part A: Physical Testing*, 27(1) (1991) 13-15 (in Chinese).
7. Zhingda. Yin, Xiaodong Li, and Mingzhe. Zheng, "A Small Angle X-ray Scattering Study of the Early Stages of Decomposition in 10Ni Maraging Steel," *Materials Chemistry and Physics*, 26 (1990) 527-534. (Impact Factor: 2.353; 2 citations)
6. Zhongda Yin, Xiaodong Li, Mingzhe Zheng, and Jianying Che, "Modulated Structures in 10Ni and 18Ni Maraging Steels," *Chinese Journal of Metals Science and Technology*, 6 (1990) 368-370.
5. Zhongda Yin, Mingzhe Zheng, Jiangying Che, and Xiaodong Li, "Modulated Structures in Maraging Steels," *Materials Science Progress*, 4 (1990) 425-428 (in Chinese).
4. Zhongda Yin and Xiaodong Li, "Microstructure and Wear Resistance of Cr12MoV Steel after Laser Surface Hardening," *Heat Treatment of Metals*, (11) (1989) 3-5 (in Chinese).
3. Zhongda Yin and Xiaodong Li, "Structural Characterization of Laser Surface Treated Cr12MoV Steel," *Physical Test*, (3) (1988) 8-16 (in Chinese).
2. Zhongda Yin and Xiaodong Li, "Laser Surface melting-solidifying of 4Cr5MoV1Si Steel," *Army Materials Science and Technology*, (4) (1988) 28-31 (in Chinese).
1. Maoyuan Ma, Tiejun Chang, Zhaoyu Liu, and Xiaodong Li, "Transformation Mechanisms of Retained Austenite in the Carbonized Layer of 18Cr2Ni4WA Steel during High Temperature Tempering," *Heat Working Technology*, (6) (1986) 50-56 (in Chinese).

Book Chapters

8. Hongsheng Gao and Xiaodong Li, "Mechanical Characterization of Polymer Nanocomposites **(invited),**" *Bottom-up Nanofabrication: Supramolecules, Self-Assemblies, and Organized Films*, Edited by Katsuhiko Ariga, American Scientific Publishers, California, 2009, Vol. 2, pp. 451-463.
7. Zhongke Wang, Hai Ni, and Xiaodong Li, "Boron Nanomaterials: Synthesis, Characterization and Applications **(invited)**," *Bottom-up Nanofabrication: Supramolecules, Self-Assemblies, and Organized Films*, Edited by Katsuhiko Ariga, American Scientific Publishers, California, 2009, Vol. 6, pp. 301-313.
6. Zhi-Hui Xu and Xiaodong Li, "Residual Stress Determination using Nanoindentation Technique **(invited)**," Micro and Nano Mechanical Testing of Materials and Devices, Edited by Fuqian Yang and James C.M. Li, Springer, 2008, pp. 139-153.
5. Bharat Bhushan and Xiaodong Li, "Nanomechanical Characterization of Ceramic Materials **(invited),**" *High Pressure Surface Science and Engineering*, Edited by Y. Gogotsi and V. Domnich, IOP Publishing, Bristol, 2003, pp 321-348.

4. Xiaodong Li, "Transmission Electron Microscopy," *X-ray and Electron Microscopy Analyses of Materials*, Edited by Y. Zhou, Harbin Institute of Technology Press, Harbin, 1991, pp. 68-80 (in Chinese).
3. Xiaodong Li, "Replica Techniques," *X-ray and Electron Microscopy Analyses of Materials*, Edited by Y. Zhou, Harbin Institute of Technology Press, Harbin, 1991, pp. 81-89 (in Chinese).
2. Xiaodong Li, "Transmission Electron Microscopy Structure, Sample Preparation and Observation," *X-ray and Electron Microscopy Analyses of Materials*, Edited by Y. Zhou, Harbin Institute of Technology Press, Harbin, 1991, pp. 157-162 (in Chinese).
1. Xiaodong Li, "Scanning Electron Microscopy and Electron Probe Structures and Sample Analyses," *X-ray and Electron Microscopy Analyses of Materials*, Edited by Y. Zhou, Harbin Institute of Technology Press, Harbin, 1991, pp. 162-166 (in Chinese).

Invited Plenary Lectures/Keynotes/Talks at International Conferences/Workshops

40. Xiaodong Li, "Unveiling the Strengthening and Toughening Mechanisms of Nacre - Lessons from Nature," TMS 2012, 141st Annual Meeting & Exhibition, Orlando, FL, March 11-15, 2012 **(invited talk).**
39. Xiaodong Li, "Environmental Effects on the Mechanical Behavior and Function Performance of Nanostructures," Plasticity 2012, San Juan, Puerto Rico, January 3-8, 2012 **(invited keynote).**
38. Xiaodong Li, "Unveiling the Strengthening and Toughening Mechanisms of Nacre - Lessons from Nature," 36th International Conference and Exposition on Advanced Ceramics and Composites (ICACC'12), Daytona Beach, Florida, January 22-27, 2012. **(invited talk).**
37. Xiaodong Li, "What Roles do Nanostructures Play in the Strengthening and Toughening of Nacre? Lessons from Nature," 2011 MRS Fall Meeting, Boston, MA, November 27 - December 1, 2011 **(invited talk).**
36. Xiaodong Li, "Unveiling the Strengthening and Toughening Mechanisms of Nacre - Lessons from Nature," Xiangshan Science Conference on Biomimetic Materials and Devices, Beijing, China, October 17-19, 2011 **(invited talk).**
35. Xiaodong Li, "Unveiling the Strengthening and Toughening Mechanisms of Nacre - Lessons from Nature," 2011 ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Denver, Colorado, November 11- 17, 2011 **(invited keynote).**
34. Xiaodong Li, "Environmental Effects on the Mechanical Behavior and Function Performance of Nanostructures," International Workshop on Nanoindentation Related Research, Xi'an, China, May 19-21, 2011 **(invited talk).**
33. Elizabeth N. Hoffman, Yong Sun, Poh-Sang Lam, and Xiaodong Li, "Role of Stress and Oxidation on Metallic Whisker Growth," TMS 2011, 140th Annual Meeting & Exhibition, San Diego, California, February 27 - March 3, 2011 **(invited talk).**
32. Xiaodong Li, "Environmental Effects on the Mechanical Behavior and Function Performance of Nanostructures," TMS 2011, 140th Annual Meeting & Exhibition, San Diego, California, February 27 - March 3, 2011 **(invited talk).**
31. Xiaodong Li, "Unveiling Deformation and Toughening Mechanisms of Nacre," 35th International Conference and Exposition on Advanced Ceramics and Composites (ICACC'11), Daytona Beach, Florida, January 23-28, 2011 **(invited talk).**
30. Xiaodong Li, "In situ Atomic Force Microscopy Nanomechanical Testing and Nanofabrication," 2010 MRS Fall Meeting, Boston, MA, November 29 - December 3, 2010 **(invited talk).**
29. Xiaodong Li, "In-situ AFM and Nanoindentation Mechanical Testing," International Workshop on Materials Behavior at the Micro- and Nano-Scale," Xi'an, China, June 8-11, 2010 **(invited talk).**
28. Xinyong Tao, Jie Liu, Goutam Koley, and Xiaodong Li, "B/SiO_x Nanonecklace Reinforced

Nanocomposites by Unique Mechanical Interlocking Mechanism," TMS 2010, 139th Annual Meeting & Exhibition, Seattle, WA, February 14-18, 2010 **(invited talk).**

27. Xiaodong Li, "Deformation and Toughening Mechanisms of Natural Biological Nanocomposites - Lessons from Nature," The 3rd International Conference on One-dimentional Nanomaterials (ICON 2009), Atlanta, Georgia, December 7- 9, 2009 **(invited).**
26. Xiaodong Li and Zaiwang Huang, "Unveiling the Formation Mechanism of Pseudo Single-Crystal Aragonite Platelets in Nacre," MS&T'09, Material Science & Technology 2009 Conference & Exhibition, Pittsburgh, PA, October 25-29, 2009 **(invited talk).**
25. Zhi-Hui Xu, Xiaodong Li, Michael A. Sutton, and Ning Li, "Drift and Spatial Distortion Elimination in Atomic Force Microscopy Images by the Digital Image Correlation Technique," 2009 SEM Fall Symposium and Workshop - Advanced Image-Based Measurement Methods: Recent Developments and Applications in Engineering and Medicine, Columbia, SC, October 5-7, 2009 **(invited talk).**
24. Xiaodong Li, "Deformation and Toughening Mechanisms of Natural Biological Nanocomposites - Lessons from Nature," Sumer School of Advanced Function Materials 2009, Shenyang, China, July 7 - 9, 2009 **(invited talk).**
23. Xiaodong Li, "Deformation and Toughening Mechanisms of Natural Biological Nanocomposites- Lessons from Nature," International Workshop on Size Effect on Materials Mechanical Behavior, Beijing, China, May 24-26, 2009 **(invited talk).**
22. Xiaodong Li, "What Roles do Nanostructures Play in the Strengthening and Toughening of Nacre?," MS&T '08, Material Science & Technology 2008 Conference & Exhibition, Pittsburgh, PA, October 5-9, 2008 **(invited talk).**
21. Xiaodong Li, "Nanomechanics of Biological Systems," 2008 MRS Spring Meeting, San Francisco, CA, March 24-28, 2008 **(invited talk).**
20. Xiaodong Li, "Nanomechanical Testing and Size Effect of Low-dimensional Nanostructures," ACER /ASTM Workshop on Strength and Fracture Standards at Micro and Nano Scales, Daytona Beach, Florida, January 27, 2008 **(invited talk).**
19. Xiaodong Li, "Deformation and Toughening Mechanisms of Nanograins - Lessons from Nature," TMS 2008, 137th Annual Meeting & Exhibition, New Orleans, LA, March 9-13, 2008 **(invited talk).**
18. Xiaodong Li, "Micro/Nanomechanical Characterization of Coatings and its Applications to Fuel Cell Systems," TMS 2008, 137th Annual Meeting & Exhibition, New Orleans, LA, March 9-13, 2008 **(invited talk).**
17. Xiaodong Li, "Deformation and Toughening Mechanisms of Natural Nanocomposites - Lessons from Nature," 32nd International Conference & Exposition on Advanced Ceramics & Composites, Daytona Beach, Florida, January 27-February 1, 2008 **(invited talk).**
16. Xiaodong Li, "Experimental Nanomechanics and Nanomachining of Low-dimensional Nanostructures," International Workshop on One-Dimensional Nano-Structured Materials: Properties, Devices and MEMS, Beijing and Nanchang, China, June 24-28, 2007 **(invited plenary lecture)**.
15. Xiaodong Li (panelist on nanotechnology), "Nanotechnology Panel," NanoASME 2007 ASME Pressure Vessels and Piping/CREEP8 Conference, San Antonio, Texas, July 22-26, 2007 **(invited talk).**
14. Xiaodong Li, "Structural and Mechanical Characterization of Biomaterials - Lessons from Nature, " ICMCTF 2007, 34th the International Conference on Metallurgical Coatings and Thin Films, San Diego, California, April 23-27, 2007 **(invited talk).**
13. Xiaodong Li, "Application of Digital Image Correlation Techniques to Atomic Force Microscopy: Challenges and Opportunities," 2007 SEM Annual Conference, Springfield, MA, June 3-6, 2007 **(invited talk).**
12. Xiaodong Li, "Experimental Mechanics of Nanostructures – Challenges and Opportunities," TMS 2007, 136th Annual Meeting & Exhibition, Orlando, Florida, February 25 - March 1, 2007 **(invited talk).**

11. Xiaodong Li, "Atomic Force Microscopy Nanometrology and In-situ Mechanical Testing - Challenges and Opportunities," TMS 2007, 136th Annual Meeting & Exhibition, Orlando, Florida, February 25 - March 1, 2007 **(invited talk).**
10. Xiaodong Li, "Nanoscale Deformation and Toughening Mechanisms of Nacre," 2006 MRS Fall Meeting, Boston, MA, November 27 - December 1, 2006 **(invited talk).**
9. Xiaodong Li, "Nanoscale Structural and Mechanical Characterization of Natural Nanocomposites -Seashells," MS&T'06, Material Science & Technology 2006 Conference & Exhibition, Cincinnati, Ohio, October 15-19, 2006 **(invited talk).**
8. Xiaodong Li, "Nanomechanical and Interface Properties" The Chem-Semi Nnaotechnology Modeling Workshop, Gaitherburg, Maryland, May 24-25, 2006 **(invited talk).**
7. Xiaodong Li, "Nanomechanical Testing and Nanomechanical Machining of Nanobuilding Blocks," TMS 2006, 135th Annual Meeting Exhibition, San Antonio, Texas, March 12-16, 2006 **(invited talk).**
6. Xiaodong Li, "Structural and Mechanical Characterization of Polymer Nanocomposites," TMS 2006, 135th Annual Meeting Exhibition, San Antonio, Texas, March 12-16, 2006 **(invited talk).**
5. Xiaodong Li, "Nanomechanical Testing and Mechanical Machining of Zero- and One-dimensional Nanobuilding Blocks," China International Conference on Nanoscience and Technology (Chinanano2005), Beijing, China, June 9-11, 2005 **(invited talk).**
4. Xiaodong Li and Zhi-Hui Xu, "Development of a Nanoindentation-Based Nanoscale Residual Stress Measurement Technique and Its Applications to Solid Surfaces and Thin Films," MS&T'05, Materials Science & Technology 2005 Conference and Exhibition, Pittsburgh, PA, September 25-28, 2005 **(invited talk).**
3. Xiaodong Li, "Experimental Nanomechanics and Nanomechanical Machining of Nanobuilding Blocks," Nanomechanics: Sensors and Actuators Conference- ASME, Knoxville, Tennessee, May 16-18, 2005 **(invited talk).**
2. Xiaodong Li, "Nanoindentation Mechanical Testing of Bulk and Thin Films of Ferric Materials," 107th Annual Meeting & Exposition of The American Ceramic Society, Baltimore, Maryland, April 10-13, 2005 **(invited talk).**
1. Xiaodong Li, "AFM Imaging and Nanomechanical Testing of Cells and Tissues" 2005 Spring MRS Meeting, San Francisco, CA, March 28- April 12005 **(invited talk).**

Invited University/Industry Seminars

28. Xiaodong Li, "Electrical Self-healing of Mechanically Damaged Zinc Oxide Nanobelts," Harbin Institute of Technology, June 2, 2011 **(invited).**
27. Xiaodong Li, "Environmental Effects on the Mechanical Behavior of Nanostructures," Harbin Institute of Technology, May 31, 2011 **(invited).**
26. Xiaodong Li, "Unveiling the Strengthening and Toughening Mechanisms of Nacre - Lessons from Nature," Jilin University, May 27, 2011 **(invited).**
25. Xiaodong Li, "Unveiling the Strengthening and Toughening Mechanisms of Nacre - Lessons from Nature," Beijing University of Technology, May 23, 2011 **(invited).**
24. Xiaodong Li, "Unveiling the Strengthening and Toughening Mechanisms of Nacre - Lessons from Nature," Xi'an University of Technology, May 19, 2011 **(invited).**
23. Xiaodong Li, "Differences and Challenges in Doctoral Education in USA and China," Harbin Institute of Technology, June 26, 2010 **(invited).**
22. Xiaodong Li, "In situ Atomic Force Microscopy Nanomechanical Testing and Nanofabrication," Xi'an Jiaotong University, June 18, 2010 **(invited).**
21. Xiaodong Li, "Deformation and Toughening Mechanisms of Natural Biological Nanocomposites – Lessons from Nature," Harbin Normal University, July 6, 2009 **(invited).**
20. Xiaodong Li, "Deformation and Toughening Mechanisms of Natural Biological Nanocomposites – Lessons from Nature," Harbin University of Science and Technology, May 31, 2009 **(invited).**

19. Xiaodong Li, "Experimental Nanomechanics," Harbin Institute of Technology, May 13, 2009 **(invited).**
18. Xiaodong Li, "Deformation and Toughening Mechanisms of Natural Biological Nanocomposites – Lessons from Nature," Harbin Institute of Technology, May 13, 2009 **(invited).**
17. Xiaodong Li, "Nanoindentation Principles and Their Applications to Solid Surface and Thin Films," Harbin Institute of Technology, July 22, 2008 **(invited).**
16. Xiaodong Li, "Experimental Nanomechanics," University of North Carolina at Charlotte, March 20, 2008 **(invited).**
15. Xiaodong Li, "Deformation and Toughening Secrets of Natural Biological Nanocomposites - Lessons from Nature," University of Georgia, October 11, 2007 **(invited).**
14. Xiaodong Li, "Strengthening and Toughening Mechanisms of Natural Biological Nanocomposites - Lessons from Nature," General Motor Corporation, September 19, 2007 **(invited).**
13. Xiaodong Li, "Experimental Nanomechanics of Low-dimensional Nanomaterials and Biomaterials," Dalian University of Technology, July 2, 2007 **(invited).**
12. Xiaodong Li, "Experimental Nanomechanics of Nano Building Blocks and Biomaterials," Johns Hopkins University, December 1, 2006 **(invited).**
11. Xiaodong Li, "Experimental Nanomechanics of Nanostructures and Biomaterials," Rice University, October 11, 2006 **(invited).**
10. Xiaodong Li, "Nanoscale Structural and Mechanical Characterization of Low-dimensional Nanomaterials and Biomaterials, Challenges and Opportunities," Clemson University, December 7, 2006 **(invited).**
9. Xiaodong Li, "In-situ Nanomechanical Testing of Nanomaterials and Biomaterials – Challenges and Opportunities," Veeco Metrology Group, June 21, 2006 **(invited).**
8. Xiaodong Li, "Nanoscale Structural and Mechanical Characterization of Low-dimensional Nanomaterials and Biomaterials," University of California at Riverside, April 21, 2006 **(invited).**
7. Xiaodong Li, "Nanomechanical Testing and Nanomachining of Low-Dimensional Nanomaterials," North Carolina State University, March 31, 2006 **(invited).**
6. Xiaodong Li, "Nanoscale Mechanical Characterization of Low-Dimensional Nanomaterials And Biomaterials," Harbin Institute of Technology, June 15, 2005 **(invited).**
5. Xiaodong Li, "Nanoscale Imaging and Mechanical Testing of Cells and Tissues," Medical University of South Carolina, October 31, 2005 **(invited).**
4. Xiaodong Li, "Micro/Nanoscale Mechanical and Tribological Characterization of Amorphous Carbon Coatings," BMW Manufacturing Corp., Spartanburg, SC, June, 2003 **(invited).**
3. Xiaodong Li, "Micro/Nanoscale Mechanical and Tribological Studies of Information Storage Devices and MEMS/NEMS," University of South Carolina, April 2002 **(invited).**
2. Xiaodong Li, "Micro/Nanoscale Mechanical and Tribological Studies of Information Storage Devices and MEMS/NEMS," Western Michigan University, March 2002 **(invited).**
1. Xiaodong Li, "Micro/Nanoscale Mechanical and Tribological Studies of Information Storage Devices and MEMS/NEMS," University of South Florida, March 2002 **(invited).**

Contributed Talks at National/International Conferences/Workshops

107. Haoze Li, Zhi-Hui Xu, and Xiaodong Li, "Nanoscale Structural and Mechanical Characterization of Conch Shells," 2011 ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Denver, Colorado, November 11- 17, 2011.
106. Xiaodong Li, Yingchao Yang, Jianfeng Zang, Zhi-Hui Xu, and Richard A. Webb, "Environmental Effects on the Mechanical Behavior and Function Performance of Nanostructures," 2011 ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Denver, Colorado, November 11- 17, 2011.

105. Xiaodong Li, "Unveiling the Deformation and Toughening Mechanisms of Nacre – Lessons from Nature," TMS 2011, 140th Annual Meeting & Exhibition, San Diego, California, February 27 - March 3, 2011.
104. Xinyong Tao, Lixin Dong, Xinnan Wang, Wenkui Zhang, Bradley Nelson, Xiaodong Li, "Boron Carbide-Nanowires/Carbon-Microfiber Hybrid Structures and Composites from Cotton T-shirts," TMS 2011, 140th Annual Meeting & Exhibition, San Diego, California, February 27 - March 3, 2011.
103. Xinyong Tao, Lixin Dong, Xinnan Wang, Wenkui Zhang, Bradley Nelson, and Xiaodong Li, "B_4C Nanowire - Carbon Microfiber Hybrid Structures and Composites from Cotton T-shirts," 2010 ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Vancouver, British Columbia, Canada, November 12- 18, 2010.
102. Xinyong Tao, Lixin Dong, Xinnan Wang, Wenkui Zhang, Bradley Nelson, and Xiaodong Li, "B_4C Nanowire - Carbon Microfiber Hybrid Structures and Composites from Cotton T-shirts," MS&T '10, Materials Science & Technology 2010 Conference & Exhibition, Houston, Texas, October 17-21, 2010.
101. Xiaodong Li and Zaiwang Huang, "Unveiling the Formation Mechanism of Pseudo Single-Crystal Aragonite Platelets in Nacre," TMS 2010, 139th Annual Meeting & Exhibition, Seattle, WA, February 14-18, 2010.
100. Xiaodong Li and Zaiwang Huang, "Unveiling the Formation Mechanism of Nanostructured Aragonite Platelets in Nacre," 2009 MRS Fall Meeting, Boston, MA, November 30 – December 4, 2009.
99. Zhi-Hui Xu, Xiaodong Li, Michael A. Sutton, and Ning Li, "Drift and Spatial Distortion Elimination in Atomic Force Microscopy Images by the Digital Image Correlation Technique," 2009 MRS Fall Meeting, Boston, MA, November 30 – December 4, 2009.
98. Zhi-Hui Xu, Michael A. Sutton, and Xiaodong Li, "Mapping Nanoscale Wear Field by Combined Atomic Force Microscopy and Digital Image Correlation Techniques," 2009 MRS Fall Meeting, Boston, MA, November 30 – December 4, 2009.
97. Xinyong Tao, Jie Liu, Goutam Koley, and Xiaodong Li, "B/SiO_x Nanonecklace Reinforced Nanocomposites by Unique Mechanical Interlocking Mechanism," 2009 ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Lake Buena, FL, November 13- 19, 2009.
96. Zhi-Hui Xu, Yong-Bae Park, and Xiaodong Li, "Micro/Nanomechanical and Tribological Characterization of Ion Implanted Silicon," 2009 ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Lake Buena, FL, November 13-19, 2009.
95. Xinyong Tao, Jie Liu, Goutam Koley, and Xiaodong Li, "B/SiO_x Nanonecklace Reinforced Nanocomposites by Unique Mechanical Interlocking Mechanism," MS&T '09, Materials Science & Technology 2009 Conference & Exhibition, Detroit, Michigan, October 25-29, 2009.
94. Zaiwang Huang and Xiaodong Li, "Nanoscale Structural and Mechanical Characterization of Heat Treated Natural Nanoparticle-based Material – Nacre," MS&T '09, Materials Science & Technology 2009 Conference & Exhibition, Detroit, Michigan, October 25-29, 2009.
93. Yong Sun, Zaiwang Huang, and Xiaodong Li, "Synthesis, Structural and Mechanical Characterization of Artificial Nacre Nanocomposites," MS&T '09, Materials Science & Technology 2009 Conference & Exhibition, Detroit, Michigan, October 25-29, 2009.
92. Yiping Zhao and Xiaodong Li, "Understanding and Preventing Nanocarpeting Effect, NSF CMMI Engineering Research and Innovation Conference," Honolulu, Hawaii, June 22-25, 2009.
91. Xiaodong Li, "Synthesis of Necklace-Shaped Boron and Boride Nanowires for Polymer Nanocomposite Applications," NSF CMMI Engineering Research and Innovation Conference, Honolulu, Hawaii, June 22-25, 2009.

90. Zhi-Hui Xu, Helen Jin, Wei-Yang Lu, and Xiaodong Li, "Mapping Small Scale Damage by Combined Atomic Force Microscopy and Digital Image Correlation Techniques," 2009 SEM Annual Conference, Albuquerque, New Mexico, June 2-5, 2008.
89. Xinyong Tao, Jie Liu, Goutam Koley, and Xiaodong Li, B/SiO_x Nanonecklace Reinforced Nanocomposites by Unique Mechanical Interlocking Mechanism, TMS 2009, 138th Annual Meeting & Exhibition, San Francisco, CA, February 15-19, 2009.
88. Zaiwang Huang and Xiaodong Li, Temperature Effect on the Structure and Mechanical Properties of Nacre, TMS 2009, 138th Annual Meeting & Exhibition, San Francisco, CA, February 15-19, 2009.
87. Young-Bae Park, Matthew Dicken, Zhi-Hui Xu, Xiaodong Li Nanoindentation induced domain switching in a tetragonal $BaTiO_3$ single crystal, 2008 ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Boston, MA, October 31- November 6, 2008.
86. Xiaodong Li, Zhi-Hui Xu, Zaiwang Huang, Wei-Che Chang, Yuh J. Chao, Rizhi Wang, and Min Chang, Deformation and Toughening Mechanisms of Nacre, 2008 ASME Annual Conference, International Mechanical Engineering Congress & Exposition (IMECE), Boston, MA, October 31- November 6, 2008.
85. Yong Sun, Jin Liang and Xiaodong, Novel 3-D Micro/Nanostructured Sn/SnO_2 Films, MS&T '08, Material Science & Technology 2008 Conference & Exhibition, Pittsburgh, PA, October 5-9, 2008.
84. Xiaodong Li, Zhi-Hui Xu, Wei-Che Chang, Yuh J. Chao, Rizhi Wang, and Min Chang, Nanoscale Structural and Mechanical Characterization of Nacre, 2008 SEM Annual Conference, Orlando, FL, June 2-5, 2008.
83. Guofeng Wang and Xiaodong Li, Relation Between the Elastic Modulus of ZnO Nanowires and its Size: Surface Stress Effect, 2006 Spring MRS Meeting, San Francisco, CA, March 25 - 28, 2008.
82. Zhi-Hui Xu, Xiaodong Li, Michael Sutton, and Ning Li, "Drift and Spatial Distortion Elimination in Atomic Force Microscopy Images by Digital Image Correclation Technique," TMS 2007, 137th Annual Meeting Exhibition, New Orleans, Louisiana, March 9-13, 2008.
81. Xinyong Tao and Xiaodong Li, "Catalyst-free Synthesis, Structural and Mechanical Characterization of Twinned $Mg_2B_2O_5$ Nanowires," NSF CMMI Engineering Research and Innovation Conference, Knoxville, TN, January 7-11, 2008
80. Zhi-Hui Xu, Xiaodong Li and Michael A. Sutton, Surface Nanowear Determination of Soft Gold Coating Using Atomic Force Microscopy and Digital Image Correlation Techniques, 2007 MRS Fall Meeting, Boston, MA, November 26 - 29, 2007.
79. Xinnan Wang, Zhongwei Niu, Siqi Li, Qian Wang, and Xiaodong Li, "Nanomechanical Characterization of Polyaniline Coated Tobacco Mosaic Virus Nanotubes," 2007 ASME International Mechanical Engineering Congress & Exhibition, Seattle, Washington, November 11-15, 2007.
78. Xiaodong Li, Yong Sun, and Zhi-Hui Xu, "In Situ Observation of Deformation and Fracture of Lead-Free Solder Alloys," 2007 ASME International Mechanical Engineering Congress & Exhibition, Seattle, Washington, November 11-15, 2007.
77. Xiaodong Li, "In Situ Observation of Small Scale Deformation and Fracture with an Atomic Force Microscope," 2007 ASME International Mechanical Engineering Congress & Exhibition, Seattle, Washington, November 11-15, 2007.
76. Xiaodong Li and Hai Ni, "Synthesis, Structural and Mechanical Characterization of One-dimensional Boron and Boride Nanostructures," 2007 ASME International Mechanical Engineering Congress & Exhibition, Seattle, Washington, November 11-15, 2007.
75. Xiaodong Li and Linhua Zou, "Nanoscale Structural and Mechanical Characterization of a Natural Nanocomposite Material-Bamboo," 2007 ASME International Mechanical Engineering Congress & Exhibition, Seattle, Washington, November 11-15, 2007.
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Courses Taught at USC

Graduate Courses:

Developed and taught a new graduate level 3 credit course – EMCH 778 Nanomaterials (taught 5 semesters)

- Michael J. Mungo Graduate Teaching Award Nominee, 2008
- Michael J. Mungo Graduate Teaching Award Nominee, 2007
- Michael J. Mungo Graduate Teaching Award Nominee, 2005
- Student evolution over the past nine years: **4.81/5.00**

EMCH 778 – Nanomaterials – Spring 2011, Spring 2010, Spring 2009, Spring 2007, Spring 2006, Spring 2004

Undergraduate Courses:

EMCH 371 Engineering Materials	3 credit hours	(taught 10 semesters)
EMCH 371 Engineering Materials Lab	1 credit hour	(taught 9 semesters)
EMCH 377 Manufacturing Processes	3 credit hours	(taught 6 semesters)

- Michael J. Mungo Undergraduate Teaching Award Nominee, 2011
- Michael J. Mungo Undergraduate Teaching Award Nominee, 2008
- Michael J. Mungo Undergraduate Teaching Award Nominee, 2006
- A teacher in the Department who was most influential in helping to prepare students for becoming engineering professionals, 2005, 2006
- Student evolution over the past nine years: **4.57/5.00**

EMCH 371- Fall 2010, Fall 2007, Spring 2007, Fall 2006, Spring 2005, Fall 2004, Spring 2004, Fall 2003, Spring 2003, Fall 2002

EMCH 377- Fall 2009, Spring 2009, Spring 2008, Spring 2006, Fall 2005, Spring 2005