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PROFESSIONAL EXPERIENCE

- Peking University, Beijing, China
  B.S., College of Chemistry and Molecular Engineering (Sep. 2002-Jul. 2006)
- Georgia Institute of Technology, Atlanta, GA
  Postdoctoral Researcher, Department of Materials Science & Engineering (Jan. 2011-Jun. 2011)
  Ph.D., Department of Materials Science & Engineering (Aug. 2006-Dec. 2010)
- University of Illinois at Urbana-Champaign, Urbana, IL
  Postdoctoral Researcher, Frederick Seitz Materials Research Laboratory (Jul. 2011-Jun. 2015)
- University of California, San Diego, La Jolla, CA
  Assistant Professor, Department of NanoEngineering (Jul. 2015-present)
  Faculty Affiliate, Materials Science and Engineering Program (Jul. 2015-present)
  Faculty Affiliate, Institute of Engineering Medicine (Sep. 2016-present)

JOURNAL PUBLICATIONS

1. Y.-F. Yue, W. Sun, E.-Q. Gao, C.-J. Fang, **S. Xu**, C.-H. Yan, *Syntheses and crystal structures of three Mn (II) complexes with 2-hydroxynicotinate,* Inorganica Chimica Acta 360, 1466-1473 (2007)
2. Y.-F. Yue, E.-Q. Gao, C.-J. Fang, **S. Xu**, C.-H. Yan, *Structures and/or magnetic properties of three 1D ladder-type manganic and cadmium compounds with open-chain diazine Schiff-base ligands,* Journal of Molecular Structure 841, 67-72 (2007)
3. Y.-F. Yue, C.-J. Fang, E.-Q. Gao, C. He, S.-Q. Bai, **S. Xu**, C.-H. Yan, *Four thiocyanato-bridged cadmium (II) polymeric complexes based on open chain diazine ligands,* Journal of Molecular Structure 875, 80-85 (2008)
4. **S. Xu**, C. Lao, B. Weintraub, Z. L. Wang, *Density-controlled growth of aligned ZnO nanowire arrays by seedless chemical approach on smooth surfaces,* Journal of Materials Research 23, 2072-2077 (2008)
5. Y. Wei, Y. Ding, C. Li, **S. Xu**, J.-H. Ryo, R. Dupuis, A. K. Sood, D. L. Polla, Z. L. Wang, *Growth of vertically aligned ZnO nanobelt arrays on GaN substrate,* The Journal of Physical Chemistry C 112, 18935-18937 (2008)
6. **S. Xu**, Y. G. Wei, J. Liu, R. Yang, Z. L. Wang, *Integrated Multilayer Nanogenerator Fabricated Using Paired Nanotip-to-Nanowire Brushes,* Nano Letters 8, 4027-4032 (2008)
7. **S. Xu**, Y. Wei, M. Kirkham, J. Liu, W. Mai, D. Davidovic, R. L. Snyder, Z. L. Wang, *Patterned Growth of Vertically Aligned ZnO Nanowire Arrays on Inorganic Substrates at Low Temperature without Catalyst,* Journal of the American Chemical Society 130, 14958-14959 (2008)
8. Y. Ding, **S. Xu**, Y. Zhang, A. C. Wang, M. H. Wang, Y. Xiu, C. P. Wong, Z. L. Wang, *Modifying the anti-wetting property of butterfly wings and water strider legs by atomic layer deposition coating: surface materials versus geometry,* Nanotechnology 19, 355708 (2008)
9. R. A. Rosenberg, M. A. Haija, K. Vijayalakshmi, J. Zhou, **S. Xu**, Z. L. Wang, *Depth resolved luminescence from oriented ZnO nanowires,* Applied Physics Letters 95, 243101 (2009)
10. Y. Xi, J. Song, **S. Xu**, R. Yang, Z. Gao, C. Hu, Z. L. Wang, *Growth of ZnO nanotube arrays and nanotube based piezoelectric nanogenerators,* Journal of Materials Chemistry 19, 9260-9264 (2009)
11. Y. Ding, **S. Xu**, Z. L. Wang, *Structural colors from Morpho peleides butterfly wing scales,* Journal of Applied Physics 106, 074702 (2009)

12. P. Fei, P.-H. Yeh, J. Zhou, **S. Xu**, Y. Gao, J. Song, Y. Gu, Y. Huang, Z. L. Wang, *Piezoelectric potential gated field-effect transistor based on a free-standing ZnO wire,* Nano Letters 9, 3435-3439 (2009)
13. **S. Xu**, N. Adiga, S. Ba, T. Dasgupta, C. F. J. Wu, Z. L. Wang, *Optimizing and Improving the Growth Quality of ZnO Nanowire Arrays Guided by Statistical Design of Experiments,* ACS Nano 3, 1803-1812 (2009)
14. **S. Xu**, Y. Ding, Y. G. Wei, H. Fang, Y. Shen, A. K. Sood, D. L. Polla, Z. L. Wang, *Patterned Growth of Horizontal ZnO Nanowire Arrays,* Journal of the American Chemical Society 131, 6670-6671 (2009)
15. K. I. Park, **S. Xu**, Y. Liu, G. T. Hwang, S. J. L. Kang, Z. L. Wang, K. J. Lee, *Piezoelectric BaTiO3 Thin Film Nanogenerator on Plastic Substrates,* Nano Letters 10, 4939-4943 (2010)
16. **S. Xu**, B. J. Hansen, Z. L. Wang, *Piezoelectric-nanowire-enabled power source for driving wireless microelectronics,* Nature Communications 1, 93 (2010)
17. S. Zhang, Y. Shen, H. Fang, **S. Xu**, J. Song, Z. L. Wang, *Growth and replication of ordered ZnO nanowire arrays on general flexible substrates,* Journal of Materials Chemistry 20, 10606-10610 (2010)
18. Q. Yang, X. Guo, W. Wang, Y. Zhang, **S. Xu**, D. H. Lien, Z. L. Wang, *Enhancing sensitivity of a single ZnO micro-/nanowire photodetector by piezo-phototronic effect,* ACS Nano 4, 6285-6291 (2010)
19. **S. Xu**, C. Xu, Y. Liu, Y. Hu, R. Yang, Q. Yang, J. H. Ryou, H. J. Kim, Z. Lochner, S. Choi, R. Dupuis, Z. L. Wang, *Ordered Nanowire Array Blue/Near-UV Light Emitting Diodes,* Advanced Materials 22, 4749-4753 (2010)
20. Y. Wei, C. Xu, **S. Xu**, C. Li, W. Wu, Z. L. Wang, *Planar Waveguide−Nanowire Integrated Three-Dimensional Dye-Sensitized Solar Cells,* Nano Letters 10, 2092-2096 (2010)
21. **S. Xu**, Y. Qin, C. Xu, Y. G. Wei, R. S. Yang, Z. L. Wang, *Self-powered nanowire devices,* Nature Nanotechnology 5, 366-373 (2010)
22. **S. Xu**, Y. Shen, Y. Ding, Z. L. Wang, *Growth and Transfer of Monolithic Horizontal ZnO Nanowire Superstructures onto Flexible Substrates,* Advanced Functional Materials 20, 1493-1495 (2010)
23. Y. Shen, J. I. Hong, **S. Xu**, S. Lin, H. Fang, S. Zhang, Y. Ding, R. L. Snyder, Z. L. Wang, *A General Approach for Fabricating Arc-Shaped Composite Nanowire Arrays by Pulsed Laser Deposition,* Advanced Functional Materials 20, 703-707 (2010)
24. Z. L. Wang, R. Yang, J. Zhou, Y. Qin, C. Xu, Y. Hu, **S. Xu**, *Lateral nanowire/nanobelt based nanogenerators, piezotronics and piezo-phototronics,* Materials Science and Engineering: R: Reports 70, 320-329 (2010)
25. Q. Yang, W. Wang, **S. Xu**, Z. L. Wang, *Enhancing light emission of ZnO microwire-based diodes by piezo-phototronic effect,* Nano Letters 11, 4012-4017 (2011)
26. **S. Xu**, Z. L. Wang, *Oxide nanowire arrays for light-emitting diodes and piezoelectric energy harvesters,* Pure and Applied Chemistry 83, 2171-2198 (2011)
27. **S. Xu**, Z. L. Wang, *One-dimensional ZnO nanostructures: Solution growth and functional properties,* Nano Research 4, 1013-1098 (2011)
28. Y. Liu, A. Das, **S. Xu**, Z. Lin, C. Xu, Z. L. Wang, A. Rohatgi, C. P. Wong, *Hybridizing ZnO Nanowires with Micropyramid Silicon Wafers as Superhydrophobic High-Efficiency Solar Cells,* Advanced Energy Materials 2, 47-51 (2012)
29. Y. Zhang, H. Fu, Y. Su, **S. Xu**, H. Cheng, J. A. Fan, K.-C. Hwang, J. A. Rogers, Y. Huang, *Mechanics of ultra-stretchable self-similar serpentine interconnects,* Acta Materialia 61, 7816-7827 (2013)
30. Y. Zhang, **S. Xu**, H. Fu, J. Lee, J. Su, K.-C. Hwang, J. A. Rogers, Y. Huang, *Buckling in serpentine microstructures and applications in elastomer-supported ultra-stretchable electronics with high areal coverage,* Soft Matter 9, 8062-8070 (2013)
31. **S. Xu**, Y. H. Zhang, J. Cho, J. Lee, X. Huang, L. Jia, J. A. Fan, Y. W. Su, J. Su, H. G. Zhang, H. Y. Cheng, B. W. Lu, C. J. Yu, C. Chuang, T. I. Kim, T. Song, K. Shigeta, S. Kang, C. Dagdeviren, I. Petrov, P. V. Braun,

Y. G. Huang, U. Paik, J. A. Rogers, *Stretchable batteries with self-similar serpentine interconnects and integrated wireless recharging systems,* Nature Communications 4, 1543 (2013)

32. E. H. Kil, K. H. Choi, H. J. Ha, **S. Xu**, J. A. Rogers, M. R. Kim, Y. G. Lee, K. M. Kim, K. Y. Cho, S. Y. Lee, *Imprintable, Bendable, and Shape‐Conformable Polymer Electrolytes for Versatile‐Shaped Lithium‐Ion Batteries,* Advanced Materials 25, 1395-1400 (2013)
33. **S. Xu**, Y. H. Zhang, L. Jia, K. E. Mathewson, K. I. Jang, J. Kim, H. R. Fu, X. Huang, P. Chava, R. H. Wang, S. Bhole, L. Z. Wang, Y. J. Na, Y. Guan, M. Flavin, Z. S. Han, Y. G. Huang, J. A. Rogers, *Soft Microfluidic Assemblies of Sensors, Circuits, and Radios for the Skin,* Science 344, 70-74 (2014)
34. K.-I. Jang, S.Y. Han, **S. Xu**, K.E. Mathewson, G.T. Kim, J.W. Jeong, Y.H. Zhang, R.C. Webb, J.W. Lee, T. Dawidczyk, Y.M. Song, W.H. Yeo, S.I. Rhee, J.H. Chung, B.G. Kim, H.U. Chung, D.J. Lee, Y.Y. Yang, R. Carbonari, J.G. Gaspar, M. Fabiani, G. Gratton, Y.G. Huang and J.A. Rogers, *Fabrication Procedure for Rugged and Breathable Forms of Stretchable Electronics with Adherent and Composite Substrates*, Protocol Exchange, doi:10.1038/protex.2014.020 (2014)
35. K.-I. Jang, S. Y. Han, **S. Xu**, K. E. Mathewson, Y. Zhang, J.-W. Jeong, G.-T. Kim, R. C. Webb, J. W. Lee, T. J. Dawidczyk, R. H. Kim, Y. M. Song, W.-H. Yeo, S. Kim, H. Cheng, S. I. Rhee, J. Chung, B. Kim, H. U. Chung, D. Lee, Y. Yang, M. Cho, J. G. Gaspar, R. Carbonari, M. Fabiani, G. Gratton, Y. Huang, J. A. Rogers, *Rugged and breathable forms of stretchable electronics with adherent composite substrates for transcutaneous monitoring,* Nature Communications 5, 4779 (2014)
36. Y. H. Zhang, H. R. Fu, **S. Xu**, J. A. Fan, K. C. Hwang, J. Q. Jiang, J. A. Rogers, Y. G. Huang, *A hierarchical computational model for stretchable interconnects with fractal-inspired designs,* Journal of the Mechanics and Physics of Solids 72, 115-130 (2014)
37. Y. Zhang, S. Wang, X. Li, J. A. Fan, **S. Xu**, Y. M. Song, K. J. Choi, W. H. Yeo, W. Lee, S. N. Nazaar, *Experimental and theoretical studies of serpentine microstructures bonded to prestrained elastomers for stretchable electronics,* Advanced Functional Materials 24, 2028-2037 (2014)
38. J. Kim, A. Banks, H. Cheng, Z. Xie, **S. Xu**, K.-I. Jang, J. W. Lee, Z. Liu, P. Gutruf, X. Huang, P. Wei, F. Liu, K. Li, M. Dalal, R. Ghaffari, X. Feng, Y. Huang, S. Gupta, U. Paik, J. A. Rogers, *Epidermal Electronics with Advanced Capabilities in Near-Field Communication,* Small 11, 906–912 (2015)
39. K.-I. Jang, H. U. Chung, **S. Xu**, C. H. Lee, H. Luan, J. Jeong, H. Cheng, G.-T. Kim, S. Y. Han, J. W. Lee, J. Kim, M. Cho, F. Miao, Y. Yang, H. N. Jung, M. Flavin, H. Liu, G. W. Kong, K. J. Yu, S. I. Rhee, J. Chung, B. Kim, J. W. Kwak, M. H. Yun, J. Y. Kim, Y. M. Song, U. Paik, Y. Zhang, Y. Huang, J. A. Rogers, *Soft network composite materials with deterministic and bio-inspired designs,* Nature Communications 6, 6566 (2015)
40. **S. Xu**, Z. Yan, K.-I. Jang, W. Huang, H. Fu, J. Kim, Z. Wei, M. Flavin, J. McCracken, R. Wang, A. Badea, Y. Liu, D. Xiao, G. Zhou, J. Lee, H. U. Chung, H. Cheng, W. Ren, A. Banks, X. Li, U. Paik, R. G. Nuzzo, Y. Huang, Y. Zhang, J. A. Rogers, *Assembly of micro/nanomaterials into complex, three-dimensional architectures by compressive buckling,* Science 347, 154-159 (2015)
41. H. Ning, J. H. Pikul, R. Zhang, X. Li, **S. Xu**, J. Wang, J. A. Rogers, W. P. King, P. V. Braun, *Holographic patterning of high-performance on-chip 3D lithium-ion microbatteries,* Proceedings of the National Academy of Sciences 112, 6573-6578 (2015)
42. J. Kim, A. Banks, Z. Xie, S. Y. Heo, P. Gutruf, J. W. Lee, **S. Xu**, K.-I. Jang, F. Liu, G. Brown, J. Choi, J. H. Kim, X. Feng, Y. Huang, U. Paik, J. A. Rogers, *Miniaturized Flexible Electronic Systems with Wireless Power and Near-Field Communication Capabilities,* Advanced Functional Materials 25, 4761-4767 (2015)
43. H. Fu, **S. Xu**, R. Xu, J. Jiang, Y. Zhang, J. A. Rogers, Y. Huang, *Lateral buckling and mechanical stretchability of fractal interconnects partially bonded onto an elastomeric substrate,* Applied Physics Letters 106, 091902 (2015)
44. J. W. Lee, R. Xu, S. Lee, K.-I. Jang, Y. Yang, A. Banks, K. J. Yu, J. Kim, **S. Xu**, S. Ma, S. W. Jang, P. Won, Y. Li, B. H. Kim, J. Y. Choe, S. Huh, Y. H. Kwon, Y. Huang, U. Paik, J. A. Rogers, *Soft, thin skin-mounted power management systems and their use in wireless thermography,* Proceedings of the National Academy of Sciences 113, 6131-6136 (2016)

45. J. Kim, G. A. Salvatore, H. Araki, A. M. Chiarelli, Z. Xie, A. Banks, X. Sheng, Y. Liu, J. W. Lee, K.-I. Jang, S. Y. Heo, K. Cho, H. Luo, B. Zimmerman, J. Kim, L. Yan, X. Feng, **S. Xu**, M. Fabiani, G. Gratton, Y. Huang, U. Paik, J. A. Rogers, *Battery-free, stretchable optoelectronic systems for wireless optical characterization of the skin,* Science Advances 2, e1600418 (2016)

46. K.-I. Jang, H. N. Jung, J. W. Lee, **S. Xu**, Y. H. Liu, Y. Ma, J.-W. Jeong, Y. M. Song, J. Kim, B. H. Kim, A. Banks, J. W. Kwak, Y. Yang, D. Shi, Z. Wei, X. Feng, U. Paik, Y. Huang, R. Ghaffari, J. A. Rogers, *Ferromagnetic, Folded Electrode Composite as a Soft Interface to the Skin for Long-Term Electrophysiological Recording,* Advanced Functional Materials 26, 7281-7290 (2016)

47. A. M. V. Mohan, N. Kim, Y. Gu, A. J. Bandodkar, J.-M. You, R. Kumar, J. F. Kurniawan, **S. Xu**, J. Wang, *Merging of Thin- and Thick-Film Fabrication Technologies: Toward Soft Stretchable "Island–Bridge" Devices,* Advanced Materials Technologies 2, 1600284 (2017)

48. H. Zhang, H. Ning, J. Busbee, Z. Shen, C. Kiggins, Y. Hua, J. Eaves, J. Davis, T. Shi, Y.-T. Shao, J.-M. Zuo, X. Hong, Y. Chan, S. Wang, P. Wang, P. Sun, **S. Xu**, J. Liu, P. V. Braun, *Electroplating lithium transition metal oxides,* Science Advances 3, e1602427 (2017)

49. A. J. Bandodkar, J.-M. You, N.-H. Kim, Y. Gu, R. Kumar, A. M. V. Mohan, J. Kurniawan, S. Imani, T. Nakagawa, B. Parish, M. Parthasarathy, P. P. Mercier, **S. Xu**, J. Wang, *Soft, stretchable, high power density electronic skin-based biofuel cells for scavenging energy from human sweat,* Energy & Environmental Science 10, 1581-1589 (2017)

50. K.-I. Jang, K. Li, H. U. Chung, **S. Xu**, H. N. Jung, Y. Yang, J. W. Kwak, H. H. Jung, J. Song, C. Yang, A. Wang, Z. Liu, J. Y. Lee, B. H. Kim, J.-H. Kim, J. Lee, Y. Yu, B. J. Kim, H. Jang, K. J. Yu, J. Kim, J. W. Lee, J.-W. Jeong, Y. M. Song, Y. Huang, Y. Zhang, J. A. Rogers, *Self-assembled three dimensional network designs for soft electronics,* Nature Communications 8, 15894 (2017)

51. J.M. McCracken, **S. Xu**, A. Badea, K.-I. Jang, Z. Yan, D.J. Wetzel, K.W. Nan, Q. Lin, M.D. Han, M.A. Anderson, J.W. Lee, Z.J. Wei, M. Pharr, R.H. Wang, J. Su, S. Rubakhin, J.V. Sweedler, J.A. Rogers and R.G. Nuzzo, Adaptive 3D Cellular Contact Guidance and Hydrogel Integration onto Compressively Buckled Micro-Scaffolds via Direct Ink Writing, Advanced Biological Materials 1, 1700068 (2017)

PATENTS

1. Z.L. Wang, **S. Xu**, "Stacked Mechanical Nanogenerator Comprising Piezoelectric Semiconducting Nanostructures and Schottky Conductive Contacts", U.S. patent 8,003,982 (2011) (**Licensed to Newnagy, Tangshan, China**)
2. Z.L. Wang, **S. Xu**, "Growth and Transfer of Monolithic Horizontal Nanowire Superstructures onto Flexible Substrates", U.S. patent 8,518,736 (2012)
3. Z.L. Wang, S. Das, **S. Xu**, D.J. Yuan, R. Guo, Y.G. Wei, W.Z. Wu, "Large-Scale Fabrication of Vertically Aligned ZnO Nanowire Arrays", U.S. patent 8,367,462 (2013)
4. J.A. Rogers, **S. Xu**, J.A. Fan, "Stretchable Electronic Systems with Fluid Containment", U.S. patent US20140220422 A1 (2013) (**Licensed to MC10 Inc., Boston MA**)
5. J.A. Rogers, **S. Xu**, J.A. Fan, Y.G. Huang, Y.H Zhang, "Stretchable Electronic Systems with Containment Chambers", World patent, WO2014124049 A3 (2015)
6. J.A. Rogers, **S. Xu**, Z. Yan, Y.H. Zhang, Y.G. Huang, "Deterministic Assembly of Functional Micro/Nanomaterials into Complex, Three-Dimensional Architectures by Compressive Buckling", U.S. patent, US9324733 B2 (2016)
7. **S. Xu**, "Closed-Loop Actuating and Sensing Epidermal Systems", U.S. patent, pending (2017)

BOOK CHAPTERS

1. **S. Xu**, B. Weintraub, Z.L. Wang, ZnO Nanowire Arrays on Flexible Substrates: Wet Chemical Growth and Applications in Energy Conversion, in *Semiconductor Nanomaterials for Flexible Technologies*, ed. J.A. Rogers and Y. Sun, William Andrew (2010)

2. Z.L. Wang, S.M. Lee, J.H. Song, X.D. Wang, R.S. Yang, Y. Qin, Y.F. Hu, **S. Xu**, G. Zhu, C. Xu, M.B. Lee, Nanowires for Piezoelectric Nanogenerator, in *Semiconductor Nanowires: From Next-Generation Electronics to Sustainable Energy*, ed. W. Lu and J. Xiang, The Royal Society of Chemistry (2015)

INVITED PRESENTATIONS

- 2014 Workshop on Origami Engineering, University of Illinois at Urbana Champaign, Urbana, IL
- 2015 ECS Fall Meeting, Phoenix, AZ
- 2015 Nano-EP Seminar, University of Illinois at Urbana Champaign, Urbana, IL
- 2016 Air Force Research Laboratory Materials and Manufacturing Directorate, Dayton, OH
- 2016 ECS Spring Meeting, San Diego, CA
- 2016 COMS Emerging Technologies (CMOSET) Conference, Montreal, QC, Canada
- 2016 NSF-KAUST Research Conference on Electronic Materials, Device, and Systems for Sustainable Future, Thuwal, Saudi Arabia
- 2017 MRS/Kavli Future of Materials Workshop, Phoenix, AZ
- 2017 "Rapid Response" Program by Institute for Materials Science of Los Alamos National Laboratory, Los Alamos, NM
- 2017 International Workshop on Thin-Films for Electronics, Electro-Optics, Energy, and Sensors, Dayton, OH
- 2017 Biomedical Engineering Summit, Shenzhen, China
- 2017 Engineering Mechanics Institute Conference, San Diego, CA
- 2017 MEMS Engineer Forum, Tokyo, Japan
- 2017 "Distinguided Lectureship" in Weldon School of Biomedical Engineering at Purdue University, West-Lafayette, IN
- 2017 SPIE Defense & Commercial Sensing, Anaheim, CA
- 2017 UCSD-NYMU Bilateral Symposium, Taipei, Taiwan
- 2018 International Union of Materials Research Societies – International Conference on Electronics Materials, Daejeon, Korea
- 2018 Emerging Technologies Conferences, Whistler, BC, Canada

TEACHING & MENTORING

- Georgia Institute of Technology, Atlanta, GA
  Guest lecturer, ME undergraduate course "Cutting Edge Technologies" (Spring 2010)
  Guest lecturer, MSE graduate course "Nanomaterials & Nanotechnology" (Fall 2009, 2010)
  Sole instructor, CHEM undergraduate course "Inorganic Chemistry Lab" (Spring 2007)
- University of Illinois at Urbana-Champaign, Urbana, IL (2011-2015)
  Mentor for 3 graduate students and 16 undergraduate students
- University of California, San Diego, La Jolla, CA
  Mentor for local high school student (2015-present)
  Advisor for "Regents Scholar" freshman (2015-present)
  CENG176B Chemical Engineering Process Laboratory (Spring 2016)
  NANO156/MAE166 Nanomaterials (Fall 2016)
  NANO4 Experience NanoEngineering (Winter 2016)
  CENG176A Chemical Engineering Process Laboratory (Winter 2016)
  NANO4 Experience NanoEngineering (Winter 2017)

CENG176A Chemical Engineering Process Laboratory (Winter 2017)

AWARDS & HONORS

- 2004 National Scholarship (Second Prize), Peking University
- 2005 National Scholarship (First Prize), Peking University
- 2008 Research Initiation Award, Georgia Institute of Technology
- 2009 Research Initiation Award, Georgia Institute of Technology
- 2009 Graduate Student Silver Award, Materials Research Society
- 2009 Outstanding Student Research Gold Award, Taiwan Semiconductor Manufacturing Company
- 2009 Award for Outstanding Self-financed Students Abroad, Chinese Government
- 2010 Sigma Xi Best Ph.D. Thesis Award, Georgia Institute of Technology
- 2010 Student Paper Award, Science Applications International Corporation
- 2011 Prize for Young Chemists, International Union of Pure and Applied Chemistry
- 2016 Global Research Outreach Award, Samsung
- 2016 Galvanizing Engineering in Medicine Award, University of California, San Diego
- 2016 Bright Mind Lectureship, NSF-KAUST
- 2017 Distinguished Lecturer, Weldon School of Biomedical Engineering at Purdue University
- 2017 Non-Tenured Faculty Award, 3M

SYNERGISTIC ACTIVITIES

- 2015 National Science Foundation Review Panel
- 2015 Sandia National Laboratories DOE Center for Integrated Nanotechnologies user proposal review committee
- 2016 Review committee chair of the Frontiers of Innovation Scholars Program Fellowship at UCSD
- 2016 Reviewer for the selection of Early-Career Research Fellows of the Gulf Research Program of the National Academies of Sciences, Engineering, and Medicine
- 2016 Sandia National Laboratories DOE Center for Integrated Nanotechnologies user proposal review committee
- 2017 Reviewer for ACS Petroleum Research Fund
- 2017 Session chair for the Inaugural Biomedical Engineering Summit in Shenzhen, China
- 2017 Sandia National Laboratories User Proposals for the Nano-Electronics and Mechanics Thrust review committee
- 2017 January Imechanica Journal Club Themes and Discussion Leader
- 2017 National Science Foundation Review Panel
- 2018 Symposium Organizer for Electrochemical Society Spring Meeting in Seattle, WA
- *Ad hoc* reviewer for journals including ACS Applied Materials & Interfaces, ACS Nano, Advanced Materials, Advanced Energy Materials, Advanced Optical Materials, Angewandte Chemie International Edition, Applied Physics Letters, Chemical Communications, Chemistry of Materials, Energy & Environmental Science, IEEE Electron Device Letters, Journal of Materials Chemistry, Journal of the American Ceramic Society, Journal of the American Chemical Society, Nano Energy, Nano Letters, Nano Research,

Nanoscale, Nanotechnology, Nature Communications, Nature Materials, npj Flexible Electronics, Science Advances, and Scientific Reports