

XIN YONG

Department of Mechanical Engineering
Affiliated Faculty, Materials Science and Engineering Program
State University of New York at Binghamton
4400 Vestal Parkway East, Binghamton, NY, USA, 13902-6000

Phone: (607) 777-4981

Fax: (607) 777-4620

Email: xyong@binghamton.edu Website: <http://bingweb.binghamton.edu/~xyong/>

EDUCATION

PhD in Mechanical Engineering 05/2008-05/2012

Rensselaer Polytechnic Institute, Troy, NY; Advisor: Lucy T. Zhang

Dissertation: "Non-equilibrium molecular simulations of simple fluid transport at fluid-solid interfaces and fluidic behaviors at nanoscale."

BS in Physics with Double Major in Economics 09/2003-07/2007

Peking University, Beijing, China

PROFESSIONAL APPOINTMENTS

Associate Professor 09/2020-present

*State University of New York at Binghamton
Department of Mechanical Engineering
Affiliated Faculty, Materials Science and Engineering Program*

Assistant Professor 09/2014-09/2020

*State University of New York at Binghamton
Department of Mechanical Engineering
Affiliated Faculty, Materials Science and Engineering Program*

Postdoctoral Associate; Advisor: Anna C. Balazs 06/2012-07/2014

*University of Pittsburgh
Department of Chemical and Petroleum Engineering*

Research Assistant 05/2008-05/2012

*Rensselaer Polytechnic Institute
Department of Mechanical, Aerospace, and Nuclear Engineering*

Undergraduate Research Assistant 05/2006-12/2007

*Peking University
School of Physics*

Research Intern; Advisor: Qi-Kun Xue 05/2005-01/2006

*Chinese Academy of Sciences, Institute of Physics
State Key Laboratory for Surface Physics*

CURRENT RESEARCH INTERESTS

- Agent-based modeling of bacterial swarm colony expansion and morphogenesis
- Molecular dynamics modeling of small molecule-biomembrane interactions for understanding bacterial outer membrane vesicle biogenesis
- Capillary assembly and interfacial transport of colloidal particles on the surface of drying droplets
- Mass and heat transfer in electrospray deposition of colloidal suspensions and polymer solutions
- Microstructures of polymer and nanoparticle assembly in thin films of polymer nanocomposites

PUBLICATIONS

Book Chapters

1. **X. Yong**, S. C. Snow, O. Kuksenok, A. C. Balazs, Developing Hybrid Modeling Methods to Simulate Self-Assembly in Polymer Nanocomposites, in *Self-Assembling Systems: Theory and Simulation*; L. -T. Yan, Ed.; Wiley: West Sussex, U.K., 2016.
2. **X. Yong**, E. J Crabb, N. M. Moellers, I. Salib, G. T. McFarlin IV, O. Kuksenok, A. C. Balazs, Harnessing Self-healing Vesicles to Pick up and Drop off Janus Particles, in *Self-Assembly: From Surfactants to Nanoparticles*; R. Nagarajan, Ed.; Wiley: Hoboken, NJ, U.S.A., 2019.

Journal Articles

1. L. Lei, S. Chen, C. J. Nachtigal, T. F. Moy, **X. Yong**, J. P. Singer, "Homogeneous Gelation Leads to Nanowire Forests in the Transition Between Electrospray and Electrospinning, *Mater. Horiz.* DOI: 10.1039/D0MH00872A.
2. Y. Li, F. Liu, S. Chen, A. Tsyrenova, K. Miller, E. Olson, R. Mort, D. Palm, C. Xiang, **X. Yong**, S. Jiang, Self-Stratification of Amphiphilic Janus Particles at Coating Surfaces, *Mater. Horiz.* **7**, 2047-2055, 2020 (featured as the front cover).
3. S. Chen, E. Olson, S. Jiang, **X. Yong**, Nanoparticle assembly modulated by polymer chain conformation in composite materials, *Nanoscale* **12**, 14560-14572, 2020
4. X. Chen, A. Miller, S. Cao, Y. Gan, J. Zhang, Q. He, R. Q. Wang, **X. Yong**, P. Qin, B. Lapizco-Encinas, K. Du, Rapid Escherichia coli Trapping and Retrieval from Bodily Fluids via a Three-Dimensional Bead-Stacked Nanodevice, *ACS Appl. Mater. Interfaces* **12**, 7888-7896, 2020 (featured as the complementary cover).
5. S. Chen, **X. Yong**, Janus Nanoparticles Enable Entropy-Driven Mixing of Bi-component Hydrogels, *Langmuir* **35**, 14840-14848, 2019.
6. S. Qin, **X. Yong**, Controlling the stability of Pickering emulsions by pH-responsive nanoparticles, *Soft Matter* **15**, 3291-3330, 2019 (featured as the front cover).
7. Q. Cheng, W. Xu, S. Qin, S. Das, T. Jin, A. Li, A. C. Li, B. Qie, P. Yao, H. Zhai, C. Shi, **X. Yong**, Y. Yang, Full Dissolution of the Whole Lithium Sulfide Family (Li₂S₈ to Li₂S) in a Safe Eutectic Solvent for Rechargeable Lithium-Sulfur Batteries, *Angew. Chemie Int. Ed.* **58**, 5557-5561, 2019.
8. Y. Li, S. Chen, S. Demirci, S. Qin, Z. Xu, E. Olson, F. Liu, D. Palm, **X. Yong**, S. Jiang, Morphology evolution of Janus dumbbell nanoparticles in seeded emulsion polymerization, *J. Colloid Interface Sci.* **543**, 34-42, 2019 (featured as the inside cover).
9. M. Zhao, W. Luo, **X. Yong**, Harnessing complex fluid interfaces to control colloidal assembly and deposition, *J. Colloid Interface Sci.* **540**, 602-611, 2019.

10. A. Li, J. W. Schertzer, **X. Yong**, Molecular conformation affects the interaction of the *Pseudomonas* quinolone signal with the bacterial outer membrane, *J. Biol. Chem.* **294**, 1089-1094, 2019 (selected as the representative 'Computational Biology' article for "The year in JBC: 2019" collection and featured in the cover art).
11. A. Li, J. W. Schertzer, **X. Yong**, Molecular dynamics modeling of *Pseudomonas aeruginosa* outer membranes, *Phys. Chem. Chem. Phys.* **20**, 23635-23648, 2018.
12. S. Chen, **X. Yong**, Dissipative particle dynamics modeling of hydrogel swelling by osmotic ensemble method, *J. Chem. Phys.* **149**, 094904 (2018).
13. H. N. Dalgamoni, **X. Yong**, Axisymmetric lattice Boltzmann simulation of droplet impact on solid surfaces, *Phys. Rev. E* **98**, 013102 (2018).
14. K. Miller, A. Tsyrenova, S. M. Anthony, S. Qin, **X. Yong**, S. Jiang, Drying mediated orientation and assembly structure of amphiphilic Janus particles, *Soft Matter* **14**, 6793-6798 (2018) (featured as the back cover).
15. A. Ghafouri, M. Zhao, T. J. Singler, **X. Yong**, P. R. Chiarot, Interfacial Targeting of Sessile Droplets Using Electrospray, *Langmuir* **34**, 7445-7454 (2018).
16. S. Qin, J. Kang, **X. Yong**, Structure and Dynamics of Stimuli-Responsive Nanoparticle Monolayers at Fluid Interfaces, *Langmuir* **34**, 5581-5591 (2018).
17. M. Zhao, **X. Yong**, Nanoparticle motion on the surface of drying droplets, *Phys. Rev. Fluids* **3**, 034201 (2018).
18. N. A. Brown, Y. Zhu, G. K. German, **X. Yong**, P. R. Chiarot, Electrospray Deposit Structure of Nanoparticle Suspensions, *J. Electrostat.* **90**, 67-73 (2017).
19. N. A. Brown, Y. Zhu, A. Li, M. Zhao, **X. Yong**, P. R. Chiarot, Electrospray Deposit Structure of Nanoparticle Suspensions, *J. Micro Nano-Manuf.* **5**, 040906 (2017).
20. S. Qin, **X. Yong**, Interfacial Adsorption of pH-Responsive Polymers and Nanoparticles, *Soft Matter* **13**, 5137-5149 (2017).
21. M. Zhao, **X. Yong**, Modeling Evaporation and Particle Assembly in Colloidal Droplets, *Langmuir* **33**, 5734-5744 (2017).
22. **X. Yong**, Hydrodynamic Interactions and Entanglements of Polymer Solutions in Many-Body Dissipative Particle Dynamics, *Polymers* **8**, 426 (2016).
23. **X. Yong**, S. Qin, T. J. Singler, Nanoparticle-Mediated Evaporation at Liquid-Vapor Interfaces, *Extreme Mechanics Letters* **7**, 90-103 (2016).
24. **X. Yong**, Modeling the Assembly of Polymer-Grafted Nanoparticles at Oil-Water Interfaces, *Langmuir* **31**, 11458-11469 (2015).
25. Y. Liu, **X. Yong**, G. McFarlin, O. Kukseknok, J. Aizenberg, A. C. Balazs, Designing a gel-fiber composite to extract nanoparticles from solution, *Soft Matter* **11**, 8692-8700 (2015).
26. Y. Liu, G. T. McFarlin, IV, **X. Yong**, O. Kukseknok, A. C. Balazs, Designing Composite Coatings That Provide a Dual Defense against Fouling, *Langmuir* **31**, 7524-7532 (2015).
27. **X. Yong**, O. Kukseknok, A. C. Balazs, Modeling free radical polymerization using dissipative particle dynamics, *Polymer* **72**, 217-225 (2015).
28. **X. Yong**, A. Simakova, S. Averick, J. Gutierrez, O. Kukseknok, A. C. Balazs, K. Matyjaszewski, Stackable, Covalently Fused Gels: Repair and Composite Formation, *Macromolecules* **48**, 1169-1178 (2015).

29. S. Averick, O. Karácsny, J. Mohin, **X. Yong**, N. M. Moellers, B. F. Woodman, W. Zhu, R. A. Mehl, A. C. Balazs, T. Kowalewski, K. Matyjaszewski, Cooperative, Reversible Self-Assembly of Covalently Pre-Linked Fiber Proteins into Giant Fibrous Structures, *Angew. Chemie Int. Ed.* **53**, 8050-8055 (2014).
30. O. Kuksenok, D. Deb, **X. Yong**, A. C. Balazs, Designing biomimetic reactive polymer gels, *Mater. Today* **17**, 486-493 (2014).
31. **X. Yong**, E. J Crabb, N. M. Moellers, A. C. Balazs, Self-healing Vesicles Deposit Lipid-coated Janus Particles into Nanoscopic Trenches, *Langmuir* **29**, 16066-16074 (2013).
32. **X. Yong**, O. Kuksenok, K. Matyjaszewski, A. C. Balazs, Harnessing Interfacially-Active Nanorods to Regenerate Severed Polymer Gels, *Nano Lett.* **13**, 6269-6274 (2013); Highlighted in: BBC News, Yahoo News.
33. **X. Yong**, L. T. Zhang, Toward Generating Low-Friction Nanoengineered Surfaces with Liquid-Vapor Interfaces, *Langmuir* **29**, 12623-12627 (2013).
34. **X. Yong**, L. T. Zhang, Thermostats and thermostat strategies for molecular dynamics simulations of nanofluidics, *J. Chem. Phys.* **138**, 084503 (2013).
35. I. Salib,* **X. Yong**,* E. J Crabb, N. M. Moellers, G. T. McFarlin, IV, O. Kuksenok, A. C. Balazs, Harnessing Fluid-Driven Vesicles to Pick Up and Drop Off Janus Particles, *ACS Nano* **7**, 1224-1238 (2013) (*equal contribution); Highlighted in: *Nature Nanotech.* **8**, 157 (2013).
36. **X. Yong**, L. T. Zhang, Slip in nanoscale shear flow: mechanisms of interfacial friction, *Microfluid. Nanofluid.* **14**, 299-308 (2013).
37. **X. Yong**, L. T. Zhang, Nanoscale simple fluid behavior under steady shear, *Phys. Rev. E* **85**, 051202 (2012).
38. **X. Yong**, L. T. Zhang, Examining different NEMD methods in simulating nanoscale fluid at high shear rates, *Proc. Inst. Mech. Eng. Part N J. Nanoeng. Nanosyst.* **224**, 19-29 (2010). (Invited Article)
39. **X. Yong**, L. T. Zhang, Investigating liquid-solid interfacial phenomena in a Couette flow at nanoscale, *Phys. Rev. E* **82**, 056313 (2010).
40. **X. Yong**, L. T. Zhang, Nanoscale Wetting on Groove-Patterned Surfaces, *Langmuir* **25**, 5045-5053 (2009).

INVITED PRESENTATIONS AND SEMINARS

1. "Atomistic Modeling of Small-Molecule Induced Outer Membrane Vesicle Formation," *The Second Joint SIAM/CAIMS Annual Meeting (AN20)* (Virtual), 07/2020.
2. "Transport Phenomena at Soft Matter Interfaces," State University of New York at Binghamton, Department of Mechanical Engineering, Binghamton, NY, 10/2019.
3. "Small Molecule-Membrane Interactions Drive Bacterial Membrane Vesicle Formation," University of Vermont, Department of Physics, Burlington, VT, 10/2019.
4. "Computational Modeling of Colloids at Fluid Interfaces," State University of New York at Buffalo, Department of Mechanical and Aerospace Engineering, Buffalo, NY, 10/2019.
5. "Brand new 'coffee ring': interfacial transport and assembly," Iowa State University, Department of Materials Science and Engineering, Ames, IA, 04/2019.
6. "Brand new 'coffee ring': interfacial transport and assembly," Rochester Institute of Technology, Department of Mechanical Engineering, Rochester, NY, 04/2019.

7. "pH-responsive polymer-grafted nanoparticles: from colloidal monolayer to Pickering emulsion," *256th ACS National Meeting & Exposition*, Boston, MA, 08/2018.
8. "Designing Bio-inspired Functional Materials," State University of New York at Binghamton, Department of Mechanical Engineering, Binghamton, NY, 04/2014.
9. "Designing Bio-inspired Functional Materials," University of Illinois at Chicago, Department of Mechanical and Industrial Engineering, Chicago, IL, 04/2014.

SELECTED MEDIA COVERAGE

1. "How a certain bacterium communicates and makes us sick," [Phys.org](#), [EurekAlert!](#), [ScienceDaily](#), [Deccan Chronicle](#), Feb. 26, 2019.
2. "New manufacturing technique could improve common problem in printing technology," [Phys.org](#), [EurekAlert!](#), [Nanowerk](#), [ScienceDaily](#), Aug. 16, 2018.
3. "Carnegie Mellon Chemists Create Nanofibers Using Unprecedented New Method," Jocelyn Duffy, [Phys.org](#), [Science Daily](#), [EurekAlert!](#), [Nanowerk](#), July 31, 2014.
4. "Material heal thyself," [Yahoo News](#), Dec. 15, 2013.
5. "Amphibian-Like Synthetic Gel Could Repair Itself," [Discovery News](#), Dec. 13, 2013.
6. "Synthetic gel copies amphibians' ability to re-grow," [BBC News](#), Dec. 12, 2013.
7. "Nanorods Enable Regeneration of Damaged or Severed Materials," [IEEE Spectrum](#), Dec. 3, 2013.
8. "This New Polymer Regenerates Large Parts of Itself, Like Lizards Do," [Gizmodo](#), Nov. 27, 2013.
9. "Nanofluidic: Nanoparticles go with the flow," [Nature Nanotechnology](#), Volume 8, Issue 3, 157, 2013.

RESEARCH GRANTS

Proposals Funded

- "Small-molecule membrane interactions as a driver of bacterial outer membrane vesicle biogenesis across species," *National Institute of General Medical Sciences, Academic Research Enhancement Award (R15)*, \$448,200, 06/01/2020-05/31/2023, PI: Jeffrey Schertz; Co-I: Xin Yong.
- "Capillary-Assisted Printing of Structural Colloidal Monolayers," *National Science Foundation, Division of Civil, Mechanical, and Manufacturing (CMMI), Advanced Manufacturing Program*, \$500,000, 06/01/2020-05/31/2023, PI: Xin Yong; Co-PIs: Paul R. Chiarot, Pong-Yu Huang.
- "Convection-Assisted Assembly of Non-Iridescent Photonic Glasses," *Small Scale Systems Integration and Packaging (S3IP) Center of Excellence, ADL Small Grant*, \$2,500, 05/08/2017-05/07/2018, PI: Xin Yong.
- "Mesoscale Modeling of Stimuli-Responsive Composite Colloids at Oil-Water Interfaces," *American Chemical Society Petroleum Research Fund, Doctoral New Investigator Grants Program*, \$110,000, 09/01/2016-08/31/2020, PI: Xin Yong.
- "Evaluating the Bilayer-Couple Model of Outer Membrane Vesicle Biogenesis Using Novel Asymmetric Membrane Templates," *National Institute of Allergy and Infectious Diseases, Exploratory/Developmental Research Grant Award (R21)*, \$399,850, 01/01/2016-12/31/2018, PI: Jeffrey Scherzer; Co-Is: Paul Chiarot, Xin Yong.

- “Inkjet-Electrospray Hybrid Printing: Understanding the Processing-Structure Relationship,” *National Science Foundation, Division of Civil, Mechanical, and Manufacturing (CMMI), Materials Engineering and Processing Program*, \$399,970, 09/01/2015-08/31/2019, PI: Xin Yong; Co-PIs: Paul Chiarot, Timothy J. Singler.

User Proposals Awarded

- “Active Filament Model of Bacterial Swarm Expansion,” *Brookhaven National Laboratory, Center for Functional Nanomaterials, Computing Facilities*, Total Allocation Accumulated: 400,000 CPU Hours, 01/01/2020-12/31/2021, PI: Xin Yong.
- “Small-molecule membrane interactions as a driver of bacterial outer membrane vesicle biogenesis across species,” *NSF Extreme Science and Engineering Discovery Environment (XSEDE), TACC Stampede2*, Total Allocation: 1,600 Node Hours, 04/15/2019-04/14/2020, PI: Xin Yong.
- “Mesoscale Modeling of Stimuli-Responsive Pickering Emulsions,” *Brookhaven National Laboratory, Center for Functional Nanomaterials, Computing Facilities*, Total Allocation Accumulated: 1,730,000 CPU Hours, 01/01/2018-12/31/2019, PI: Xin Yong.

TEACHING

Undergraduate-Level Courses

Engineering Analysis (ME 302) Fall 2015, Fall 2016, Fall 2018

Graduate-Level Courses

Computational Fluid Dynamics and Heat Transfer (ME 541)	Spring 2016, Spring 2017
Computational Fluid Dynamics and Heat Transfer (ME541)	Spring 2020
Mesoscale Modeling of Complex Fluids (ME 641)	Spring 2015, Fall 2017
Analytical Methods I (ME 535)	Fall 2014, Fall 2017, Fall 2018
Transport Phenomena I (ME540)	Spring 2017, Spring 2018
Fundamentals of Energy Transport (ME540)	Spring 2020
Applied Mathematical Methods (ME533)	Fall 2019

GRADUATE STUDENT ADVISING

PhD Theses in Progress

Emad Pirhadi (09/2019-present, Mechanical Engineering)
Shensheng Chen (09/2016-present, Mechanical Engineering)

PhD Theses Completed

Hussein N. Dalgamoni (02/2016-12/2019, Mechanical Engineering)
PhD Thesis: “Axisymmetric Lattice Boltzmann Model of Droplet Impact on Solid Surfaces”
Present Position: The Hashemite University, Jordan

Ao Li (09/2016-09/2019, Mechanical Engineering)
PhD Thesis: “Numerical Modeling of Small Molecule Induced Outer Membrane Vesicle Biogenesis”
Present Employer: MathWorks

Shiyi Qin (09/2015-06/2019, Mechanical Engineering)
PhD Thesis: “Numerical Modeling of Stimuli-Responsive Composite Colloid at Water-Oil Interfaces”
Present Employer: Northwestern University

Mingfei Zhao (01/2015-03/2019, Mechanical Engineering)

PhD Thesis: "Numerical Modeling of Particle Assembly in Evaporating Colloidal Droplets"

Present Employer: University of Chicago

MS Theses

Chunheng Zhao (09/2016-05/2018, Mechanical Engineering)

MS Thesis: "Investigation of the Plateau-Rayleigh Instability of Fluid Rivulets Using the Lattice Boltzmann Method"

Ao Li (09/2014-05/2016, Mechanical Engineering)

MS Thesis: "Numerical simulations of electrospray deposition of nanoparticle inks"

Peijun Yu (09/2014-05/2016, Mechanical Engineering)

MS Thesis: "Mesoscale modeling of mechanical responses in polymeric systems"

UNDERGRADUATE STUDENT ADVISING

Undergraduate Research Mentoring

State University of New York at Binghamton

Mithila N. Farin (Double BS 2022, Mathematics and Biochemistry)

Tyler F. Moy (BS 2020, Mechanical Engineering)

Adrian J. Diaz (BS 2020, Mechanical Engineering)

Jonathan M. Blisko (BS 2020, Mechanical Engineering)

Joseph M. Prisaznuk (BS 2020, Mechanical Engineering)

Pranshu Babber (BS 2020, Mechanical Engineering)

Rebecca E. Schneider (BS 2020, Mechanical Engineering)

Wilson Luo (BS 2019, Mechanical Engineering)

Andy Zou (BS 2019, Mechanical Engineering)

Tanjil S. Uddin (BS 2019, Biological Sciences)

Lawrence Zhao (BS 2018, Biological Sciences)

Junhyunk Kang (BS 2018, Mechanical Engineering)

Giomar I. Condori (BS 2018, Biological Sciences)

Jiamin Li (BS 2017, Mathematics)

Sumiao Pang (BS 2016, Bioengineering)

Juan C. Medina (BS 2016, Mechanical Engineering)

Jefferson Fideles da Silva (Visiting Scholar from the Federal University of Minas Gerais, Brazil)

University of Pittsburgh

Stephen C. Snow (BS 2017, Computer Engineering)

Gerald T. McFarlin, IV (BS 2014, Chemical Engineering)

Emily J Crabb (BS 2015, Computer Engineering/Physics) (2014 Barry M. Goldwater Scholarship winner)

Nicholas M. Moellers (BS 2015, Computer Engineering)

Undergraduate Capstone Project Advising

"Human Powered Vehicle Challenge"

2019-2020: Victoria A Schutrum, Jan P Cygan, Brendan M Sullivan, Edward A Roth, Jyoshith Anand

2018-2019: Joseph Anderson, Godfrey Fenton, Samuel Lamont, Anthony Lord, Edgar Sarmiento

2017-2018: Matthew S. Woodworth, Thomas J. Brinskelle, Joseph M. DeBonis, Joshua M. Kerwin, Chris R. LaTourette, James M. Paufve, William J. Potts

2016-2017: Victor M. Esposito, Patrick O. O'Brien, Ryan P. Kremler, Kyle P. Steubing, Jhoan C. Avila

2015-2016: Parker Beckett, Brandon Pereyra, Kai Sen Lathrop, Allen He, Joseph Karp

PROFESSIONAL ACTIVITIES

- **Society Service**

Organizing committee member, *66th Annual Meeting of the American Physical Society's Division of Fluid Dynamics*, Pittsburgh, PA, 11/2013.

Symposium organizer, "Surface, Interface, and Coating Materials," *ACS Fall 2020 National Meeting & Expo*, San Francisco, CA, 08/2020.

Symposium organizer, "Surface, Interface, & Coating Materials," *256th ACS National Meeting & Exposition*, Boston, MA, 06/2018.

Symposium organizer, "Self-Assembly of Nanoparticles in Drying Liquid: Beyond 'Coffee-Ring'," "Mechanics and Physics of Soft Materials – Instability and Manufacturing of Soft Materials," *18th U.S. National Congress for Theoretical and Applied Mechanics*, Chicago, IL, 06/2018.

Session chair, "Biofluids: Red Blood Cell Dynamics and Clotting," *68th Annual Meeting of the American Physical Society's Division of Fluid Dynamics*, Boston, MA, 11/2015.

Session chair, "Microscale Flows: Interfaces and Wetting," *67th Annual Meeting of the American Physical Society's Division of Fluid Dynamics*, San Francisco, CA, 11/2014.

Session chair, "Drops XV: Superhydrophobic Surfaces," *66th Annual Meeting of the American Physical Society's Division of Fluid Dynamics*, Pittsburgh, PA, 11/2013.

- **Journal Reviewer**

ACS Applied Bio Materials, ACS Applied Polymer Materials, ACS Infectious Diseases, Advanced Science, APL Materials, Applied Physics Letters, Carbohydrate Polymers, Chemical Engineering & Technology, Chemical Science, Computational Materials Science, Computers and Fluids, Engineering Computations, Fluid Dynamics Research, Fluids, International Journal of Ceramic Engineering and Science, International Journal of Heat and Mass Transfer, Journal of Biomolecular Structure & Dynamics, Journal of Chemical Physics, Journal of Colloid and Interface Science, Journal of Mechanical Science and Technology, Journal of Molecular Liquids, Journal of Physical Chemistry C, Journal of Physical Chemistry Letters, Journal of Polymer Science, Part B: Polymer Physics, Journal of Vacuum Science & Technology B, Lab on a Chip, Langmuir, Materials Horizons, Physical Chemistry Chemical Physics, Physical Review Applied, Physical Review E, Physical Review Letters, Physics and Chemistry of Liquids, Physics of Fluids, Processes, RSC Advances, Science Advances, Scientific Reports, Soft Matter

- **PhD Thesis Reviewer**

Indian Institute of Technology Madras

- **Proposal Panel and Ad Hoc Reviewer**

ACS Petroleum Research Fund, French National Research Agency, U.S. National Science Foundation, Natural Sciences and Engineering Research Council of Canada, United States Department of Agriculture, National Fund for Scientific and Technological Development of Chile

- **Membership**

American Physical Society (APS), American Chemical Society (ACS), Biophysical Society (BPS), Materials Research Society (MRS), Society for Industrial and Applied Mathematics (SIAM)

DEPARTMENTAL, SCHOOL, AND UNIVERSITY COMMITTEES

Member, Smart Energy TAE Steering Committee, Binghamton University	2015-2016
Member, Communications & Marketing, Watson School of Engineering and Applied Science	2016-2018
Member, Application Review Committee, Materials Science and Engineering Program	2019-2020
Member, Undergraduate Studies Committee, Mechanical Engineering Department	2020-2021
Member, Graduate Studies Committee, Mechanical Engineering Department	2015-2020
Member, Seminar Committee, Mechanical Engineering Department	2014-2021

HONORS AND AWARDS

Watson School Recognition Award for Early-State Distinguished Research	05/2020
ACS Petroleum Research Fund Doctoral New Investigator Award	09/2016
SUNY Individual Development Award	01/2016, 02/2017
SUNY Presidential Discretionary Salary Award (Performance)	12/2015, 12/2016, 12/2018, 12/2019
Travel Grant, 62nd Annual Meeting of the APS DFD	11/2009
Travel Award, NSF CMMI Research and Innovation Conference 2009	03/2009
Excellent Bachelor Thesis, Peking University	07/2007