EVELYN N. WANG

DEPARTMENT HEAD AND FORD PROFESSOR OF ENGINEERING

MECHANICAL ENGINEERING
MASSACHUSETTS INSTITUE OF TECHNOLOGY
enwang@mit.edu

Professor Evelyn N. Wang is the Ford Professor of Engineering and Head in the Department of Mechanical Engineering at the Massachusetts Institute of Technology. Professor Wang earned her B.S. degree in Mechanical Engineering from the Massachusetts Institute of Technology; and her S.M. and Ph.D. degrees in Mechanical Engineering from Stanford University. She was a postdoctoral associate at Bell Laboratories, Alcatel Lucent from 2006-2007. She joined the MIT faculty in 2007. Professor Wang teaches and conducts research in the area of micro/nanoscale heat and mass transfer.

Professor Wang's research program combines fundamental studies of micro/nanoscale heat and mass transport processes with the development of novel engineered structures to create innovative solutions in thermal management, energy, and water harvesting systems. Her work in thermophotovoltaics was recognized as the 2016 Biggest Clean Energy Advances in Technology Review and 2017 10 Breakthrough Technologies in Technology Review, and 2019 Department of Energy Frontiers Research Center Ten of Ten Awards. Her work extracting water from air has won her the title of 2017 Foreign Policy's Global ReThinker and the 2018 8th Prince Sultan bin Abdulaziz International Prize for Water.

Professor Wang has published over 180 archival journal papers in prestigious journals including Science, Nature Materials, Nature Nanotechnology, Nature Communications, Nature Energy, Nano Letters, ACS Nano, Journal of Heat Transfer, International Journal of Heat and Mass Transfer, 8 book chapters, and numerous conference papers. In addition, her research has led to 16 patents and patent applications. She has advised 37 Master's students, 22 PhD students and 24 Postdoctoral Associates now pursuing successful careers in industry, national labs, and academia. Three of her students have started companies based on the technologies developed during their PhDs. 20 of her students and postdocs are pursuing faculty positions including at University of Illinois Urbana Champaign, University of Michigan, University of California at Santa Barbara, Rice University, Rensselaer Polytechnic Institute, Drexel University, Syracuse University, Indian Institute of Technology Patna, Shanghai Jiao Tong University, and KAIST.

Professor Wang's research has been honored with awards including the 2008 DARPA Young Faculty Award, the 2011 Air Force Office of Scientific Research Young Investigator Award, the 2012 Office of Naval Research Young Investigator Award, 2012 Bergles-Rohsenow Young Investigator Award in Heat Transfer, 2017 ASME Gustus L. Larson Memorial Award, 8th Prince Sultan bin Abdulaziz International Prize for Water, 2020 ASME ICNMM Prominent Researcher Award and a fellow of the ASME. She served as the Associate Director of the Solid State Solar Thermal Energy Conversion (S^3TEC) Center, an Energy Frontier Research Center, funded by the US Department of Energy. She is the co-founder of the first 2015 Gordon Research Conference on Micro and Nanoscale Phase Change Heat Transfer and has been extensively involved as a committee member and organizer of national and international conferences.

Curriculum Vitae

EVELYN N. WANG

Ford Professor of Engineering and Department Head
Mechanical Engineering Department
Massachusetts Institute of Technology
77 Massachusetts Ave. 3-174
Cambridge, MA 02139

Email: enwang@mit.edu
Website: drl.mit.edu
Tel: (617) 253-3523
Fax: (617) 258-9346

EDUCATION

Ph.D. 2006	Mechanical Engineering, Stanford University *National Defense Science and Engineering Graduate Research Fellow* Thesis: Characterization of Microfabricated Two-Phase Heat Sinks for IC Cooling Applications Advisors: Thomas W. Kenny and Kenneth E. Goodson
M.S. 2001	Mechanical Engineering, Stanford University *National Defense Science and Engineering Graduate Research Fellow*
B.S. 2000	Mechanical Engineering, Massachusetts Institute of Technology

PROFESSIONAL EXPERIENCE

7/18-present	Department Head, Mechanical Engineering Department, MIT
7/17-present	Professor, Mechanical Engineering Department, MIT
7/17-6/18	Associate Head for Operations, Mechanical Engineering Department, MIT
9/15-8/17	Associate Director of Microsystems Technology Laboratory (MTL), MIT
7/14-6/17	Associate Professor with tenure, Mechanical Engineering Department, MIT
10/14-5/15	Visiting Associate Professor, Mechanical Engineering Department, Stanford University (on sabbatical)
10/14-5/15	Technology Expert and Researcher, Advanced Technologies and Projects, Google, Mountain View, CA (on sabbatical)
8/13-7/18	Associate Director of Solid State Solar Thermal Energy Conversion Center (S^3TEC), Funded by the DOE Energy Frontier Research Center Program
7/11-6/14	Associate Professor without tenure, Mechanical Engineering Department, MIT
7/07-6/11	Assistant Professor, Mechanical Engineering Department, MIT
2/06-4/07	Postdoctoral Researcher, Bell Laboratories, Alcatel Lucent, Murray Hill, NJ

HONORS & AWARDS

2021	Ford Professor of Engineering Chair
2021	IIT Wanger Institute for Sustainable Energy Research Distinguished Lecture, Illinois Institute of Technology
2021	Ahuja Distinguished Lecture, Ohio State University
2020	ASME ICNMM Prominent Researcher Award

2020	One of Ten Influential Women in Engineering, ASME Mechanical Engineering Magazine
2020	Outstanding Paper Award from Microsystems & Nanoengineering
2020	2020 MRS Best Poster Award
2019	Outstanding Editor Award of Microsystems & Nanoengineering
2018	8th Prince Sultan bin Abdulaziz International Prize for Water
2018	Viskanta Fellowship, Purdue University
2017	ASME Gustus L. Larson Memorial Award
2017	MIT Bose Award
2017	Foreign Policy's 2017 Global ReThinker
2017	MIT Technology Review 1 of 10 Breakthrough Technologies
2017	Scientific American and World Economic Forum 1 of 10 Emerging Technologies
2017	MIT Committed to Caring Award
2017	Best Poster Award, ASME ICNMM
2016	ASME Electronic Packaging and Photonic Division Women of the Year
2016	MIT Technology Review One of the Biggest Clean Energy Advances
2016	MIT Greenlabs Innovation Award
2016	Best Poster Awards, ITherm
2016	Best Poster Award, ASME ICNMM
2016	Singapore Research Professor
2015	Gail E. Kendall Professor Chair
2015	ASME Fellow
2015	Defense Science Study Group
2014	Best Paper Award, ITherm
2014	Best Poster Award, ITherm (2^{nd} prize)
2012	ASME Bergles-Rohsenow Young Investigator Award in Heat Transfer
2012	ONR Young Investigator Award
2012	ASME Micro/Nanoscale Heat and Mass Transfer International Conference Best Paper Award (1^{st} Prize)
2011	AFOSR Young Investigator Award
2010	Best Paper Award, ITherm
2008	DARPA Young Faculty Award
2008	Esther and Harold E. Edgerton Assistant Professor Chair
1998-present	Member of Tau Beta Pi Engineering Honor Society
1998-present	Member of Pi Tau Sigma Mechanical Engineering Honor Society

SELECT PROFESSIONAL SERVICE:

Within MIT

7/18-present	Department Head, Mechanical Engineering Department, MIT
4/21-present	Faculty Steering Committee for Safe and Sustainable Lab Task Force
4/20-present	Co-organizer of MIT InnoTherm virtual seminar series
8/19-12/19	Department Head Advisory Search Committee in Material Science and Engineering
1/19-6/19	College of Computing Working Group on Faculty Appointments
9/19-present	Member of MIT.nano Internal Advisory Board
9/19-4/20	Member of Climate Action Symposia Organizing Committee
7/18-present	Member of Engineering Dean's Council, MIT
10/18	Co-chair of Inaugural Rising Stars in Mechanical Engineering, MIT
9/17-6/18	Associate Department Head for Operations, Mechanical Engineering Department, MIT
7/17-6/18	Lincoln Laboratory-Campus Interaction Committee

9/15-8/17	Associate Director of Microsystems Technology Laboratory, MIT
8/13-7/18	Associate Director of Solid State Solar Thermal Energy Conversion Center (S^3TEC), Funded by the DOE Energy Frontier Research Center Program
6/10-9/17	Co-Chair of MechE Strategic Planning Committee
6/14-6/18	Co-Chair of MechE—Lincoln Laboratory Task Force
10/16-6/17	Chair of MechE Thermal Science Faculty Search Committee and Member of Broad Faculty Search Committee
12/11-9/14	Member of MechE Broad Faculty Search Committee
12/13-4/14	Member of Graduate MechE Admissions Committee
9/13-9/14	Member of Energy Education Task Force & Energy Minor Oversight Committee
4/13-7/13	Department Head Search Committee
10/12-9/14	Member of MechE Graduate Program Committee
7/12-6/16	Member of Microsystems Technology Laboratory (MTL) Seminar Series Committee
9/11-5/12	Member of MechE Broad Faculty Search Committee
7/11-9/11	Member of MechE Strategic Planning Committee
11/09-1/17	Member of MIT King Fahd University of Petroleum and Minerals Executive Committee
1/09-5/10	Member of MechE Graduate Curriculum Committee
12/07-4/08	Member of MechE Graduate Admissions Committee
11/07-5/08	Member of MechE Energy Faculty Search Committee
9/08-8/14	Organizer of MechE Micro/Nano Seminar Series
9/08-12/08	Organizer of MechE Women in Engineering Seminar Series

Outside Service

1/21-present	ASME Technical Committee on Publications and Communications
9/21-present	Mechanical and Aerospace Engineering Future Leaders Seminar Series Committee
10/20-present	Georgia Tech Department of Mechanical Engineering External Advisory Board
5/20-4/21	Track co-organizer for IEEE Electron Devices Technology and Manufacturing (EDTM) Conference
1/20-present	Nano Letters Editorial Advisory Board
1/20-present	Joule Advisory Board
9/19-11/19	Co-Organizer of Panel on AI/ML in Mechanical Engineering at ASME Department Heads Meeting
2/19-12/19	DRINC Executive Governance Board
9/18-present	Boston University Department of Mechanical Engineering Visiting Committee
3/18-9/20	Defense Science Study Group
12/17-present	Associate Editor for Journal of Heat Transfer
3/18-9/18	Science Committee, 2018 Micro Nano Flows
8/17-present	Executive Committee of ASME International Conference for Nano Micro Minichannels
5/18-7/18	Awards Committee, 2018 ASME International Conference for Nano Micro Minichannels
6/16-3/17	International Science Committee, 10th Int. Conf. Boiling and Condensation Heat Transfer
2/17-1/19	Scientific Advisory Board, NSF Engineering Research Center for Power Optimization of Electro- Thermal Systems (POETS)
6/15-present	Associate Editor for Nature Microsystems and Nanoengineering
1/15-8/17	Chair for 2017 ASME International Conference for Nano Micro Minichannels
1/15-1/17	Chair for 2017 Gordon Conference for Micro and Nano Structures for Phase-Change Heat Transfer
9/15-8/17	Associate Director of Microsystems Technology Laboratory, MIT
8/13-7/18	Associate Director of Solid State Solar Thermal Energy Conversion Center
1/15-8/16	Co-Chair for 2016 ASME International Conference for Nano Micro Minichannels

3/14-7/15	Executive Committee of 2015 Transducers
1/14-present	Associate Editor, Nanoscale and Microscale Thermophysical Engineering
8/14-7/15	Track Organizer for 2015 Interpack and ASME International Conference for Nano Micro Minichannels
9/13-1/15	Vice-Chair and Co-Founder of 2015 Gordon Conference for Micro and Nano Structures for Phase-Change Heat Transfer
8/13-3/15	Organization Committee for 9th International Conference on Boiling and Condensation Heat Transfer
10/14-12/15	Symposium Co-Organizer for 2015 Materials Research Society Fall Meeting
9/14-1/15	MEMS 2015 Technical Program Committee
8/13-8/14	Track Organizer for 2014 ASME International Conference for Nano Micro Minichannels
5/13-5/14	Guest Co-Editor for special issue in Nanoscale and Microscale Thermophysical Engineering
8/14-10/15	Organization Committee for 9th International Conference on Boiling and Condensation Heat Transfer
2/12-5/13	Workshop Co-Organizer of 2013 International Workshop on Micro Nanostructures for Phase-Change Heat Transfer
8/12-12/13	Track Organizer for 2013 ASME International Conference for Nano Micro Minichannels
8/12-4/13	IEEE NEMS 2013 Technical Program Committee
7/12-7/13	Session Co-Chair for ASME 2013 Summer Heat Transfer Conference Nanoscale Panel
5/12-6/13	2013 Transducers Technical Program Committee
7/12-12/12	ASME K-9 Nanoscale Thermal Transport Committee
4/11-11/12	Symposium Co-Organizer for 2012 Materials Research Society Fall Meeting
7/11-7/12	Symposium Organizer for 2012 ASME International Conference for Nano Micro Minichannels
8/11-3/12	Track Co-Organizer for 2012 ASME International Conference of Micro/Nanoscale Heat and Mass Transfer
11/11-4/12	IEEE International Reliability Physics Symposium Technical Program Committee
11/10	Session Chair for APS Division of Fluid Mechanics Conference
8/10	Session Chair for ASME International Heat Transfer Conference
1/10-7/10	Scientific Committee for UIT National Heat Transfer Congress, Brescia, Italy
2/09-12/09	Session Chair for ASME International Conference of Micro/Nanoscale Heat and Mass Transfer
9/07-2/08	Co-Chair MEMS Education Workshop Committee

Tau Beta Pi (TBP)
Pi Tau Sigma (PTS)
Sigma Xi
American Society of Mechanical Engineers (ASME) – Fellow
Materials Research Society (MRS)
American Association for the Advancement of Science (AAAS)

PUBLICATIONS

https://scholar.google.com/citations?user=OmYXk9QAAAAJ&hl=en (Google Scholar)

BOOKS

B1. E.N. Wang, Guest Editor, Annual Review of Heat Transfer, vol. 18, 2016.

INVITED BOOK CHAPTERS

BC1. Lenert, Y. Nam, and E.N. Wang, "Heat Transfer Fluids," Book Chapter in Solar Thermal Challenges Volume, Annual Review of Heat Transfer, 15(15), 93-129, 2012.

BC2. Miljkovic, N. Preston, D.J., and E.N. Wang, "Recent Developments in Altered Wettability for Enhancing Condensation" Encyclopedia of Two-Phase Heat Transfer and Flows, 2015.

BC3. Adera, S., Feng, J. and E.N. Wang, "Surface Engineering, Tailored Wettability, and Applications" Entry in Encyclopedia of Nanotechnology, DOI 10.1007/978-94-007-6178-0_100967-1, 2015.

BC4. Narayanan, S., Li, X., Kim, H., Umans, A., and E. N. Wang, "Recent Advances in Adsorption-based Heating and Cooling Systems," Book Chapter in Annual Review of Heat Transfer, vol 19, 199-239, 2016.

BC5. Antao, D.S., Zhu, Y. and E.N. Wang, "Boiling on Enhanced Surfaces," Book Chapter in Handbook of Thermal Science and Engineering, 1-47, 2017.

BC6. Zhu, Y., Antao, D.S., and E.N. Wang, "Bio-Inspired Surfaces for Enhanced Boiling," Book Chapter in Bio-inspired Engineering of Thermal Materials, Wiley, 2018.

BC7. Strobach, E., Bhatia, B., Zhao, L., and E.N. Wang, "Thermal Performance of High-Efficiency Window Technologies," Book Chapter in Annual Review of Heat Transfer, vol 21, 59-97, 2019.

BC8. Zhu, Y., Mutha, H., Zhao, Y, and E.N. Wang, "Manipulating Water and Heat with Nanoengineered Surfaces," Book Chapter in Women in Nanotechnology, Springer, 85-99, 2019.

JOURNAL PUBLICATIONS

J1. Balandin, A., Wang, K.L., Cai, S., Li, R., Viswanathan, C.R., Wang, E.N., and M. Wojtowicz, "Investigation of Flicker Noise Level and Deep Levels in AlGaN/GaN Heterostructure Field Effect Transistors," Journal of Electronic Materials, 29(3), 297-301, 2000.

J2. Wang, E.N., Zhang, L., Jiang, L., Koo, J.-M., Maveety, J.G., Sanchez, E.A., Goodson, K.E., and T.W. Kenny, "Micromachined Jets for Liquid Impingement Cooling of VLSI Chips," Journal of MicroElectroMechanical Systems, 13(15), 833-842, 2004.

J3. Wang, E.N., Devasenathipathy, S., Santiago, J.G., Goodson, K.E., and T.W. Kenny, "Nucleation and Growth of Vapor Bubbles in a Heated Silicon Microchannel," Journal of Heat Transfer, 126(4), 497, 2004.

J4. Burney, J., Bay, T.J., Brink, P.L, Cabrera, B., Castle, J.P, Romani, R.W., Tomada, A., Nam, S.W., Miller, A.J., Marinis, J., Wang, E., and B.A. Young, "Development and Characterization of a TES Optical Imaging Array for Astrophysics Applications" Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment [01689002] 520.1-3 (2004): 533-536.

J5. Zhang, L., Wang, E.N., Goodson, K.E., and T.W. Kenny, "Phase Change Phenomena in Silicon Microchannels," International Journal of Heat and Mass Transfer, 48(8), 1572-1582, 2005.

J6. Hidrovo, C.H., Kramer, T.A., Wang, E.N., Vigneron, S., Steinbrenner, J.E., Koo, J.-M., Wang, F.-M., Fogg, D.W., Flynn, R.D., Lee, E.S., Cheng, C.-H., Kenny, T.W., Eaton, J.K., and K.E. Goodson, "Two-Phase Microfluidics for Semiconductor Circuits and Fuel Cells," Heat Transfer Engineering, 27(4), 53-63, 2006.

J7. Kenny, T.W., Goodson, K.E., Santiago, J.G., Wang, E., Koo, J.-M., Jiang, L., Zhang, L., Fogg, D., Yao, S., Rose, K., Flynn, R., Cheng, C.-H., and C. Hidrovo, "Advanced Cooling Technologies for Microprocessors," International Journal of High Speed Electronics and Systems, 16, 301-313, 2006.

J8. Wang, E.N., Devasenathipathy, S., Lin, H., Hidrovo, C.H., Santiago, J.G., Goodson, K.E., and T.W. Kenny," A Hybrid Method for Bubble Reconstruction in Two-Phase Microchannels," Experiments in Fluids, 40, 847-858, 2006.

J9. Krupenkin, T.N., Taylor, J.A., Wang, E.N., Kolodner, P., Hodes, M., and T.R. Salamon, "Reversible Wetting-dewetting Transitions on Electrically Tunable Superhydrophobic Nanostructured Surfaces," Langmuir, 23, 9128-9133, 2007.

J10. Wang, E.N., Bucaro, M., Taylor, J.A., Kolodner, P., Aizenberg, J., and T. Krupenkin, "Droplet Mixing Using Electrically Tunable Superhydrophobic Nanostructured Surfaces," Microfluidics and Nanofluidics, 7(1), 137-140, 2008.

J11. Alexander, B.A., and E.N. Wang, "Design of a Microbreather for Two-Phase Microchannel Heat Sinks," Nanoscale and Microscale Thermophysical Engineering, 13(3), 151-164, 2009.

J12. Xiao, R., Chu, K.-H., and E.N. Wang, "Multi-layer Liquid Spreading on Superhydrophilic Nanostructured Surfaces," Applied Physics Letters, 94(19), 193104, 2009.

J13. Chu, K.-H., Xiao, R., and E.N. Wang, "Uni-directional Spreading on Asymmetric Nanostructured Surfaces," Nature Materials, 9, 413-417, 2010.

J14. Xiao, R., Enright, R., and E.N. Wang, "Prediction and Optimization of Liquid Propagation in Micropillar Arrays," Langmuir, 26(19), 15070-15075, 2010.

J15. Won, Y., Wang, E.N., Goodson, K.E., and T.W. Kenny, "3-D Visualization of Flow in Microscale Jet Impingement Systems," International Journal of Thermal Sciences, 50(3), 325-331, 2011.

J16. Allison, J.M., Staats, W.L., McCarthy, M., Jenicek, D., Edoh, A.K., Lang, J.H. , Wang, E.N. , and J.G. Brisson, "Enhancement of Convective Heat Transfer in an Air-cooled Heat Exchanger Using Interdigitated Impeller Blades," International Journal of Heat and Mass Transfer, 54(21), 4549-4559, 2011.

J17. Miljkovic, N. and E.N. Wang, "Modeling and Optimization of Hybrid Solar Thermoelectric Systems with Thermosyphons," Solar Energy, 85(11), 2845-2855, 2011.

J18. Miljkovic, N., Enright, R., Maroo, S.C., Cho, H.J., and E.N. Wang, "Liquid Evaporation on Superhydrophobic and Superhydrophilic Nanostructured Surfaces," Journal of Heat Transfer, 133(8), 080903, 2011.

J19. Xiao R. and E.N. Wang, "Microscale Liquid Dynamics and the Effect on Macroscale Propagation in Pillar Arrays," Langmuir, 27(17), 10360-10364, 2011.

J20. Humplik, T., Lee, J., O'Hern, S.C., Fellman, B.A., Baig, M.A., Hassan, S.F., Atieh, M.A., Rahman, F., Laoui, T., Karnik, R., and E.N. Wang, "Nanostructured Materials for Water Desalination," Nanotechnology, 22(29), 292001, 2011.

J21. Veeraragavan, A., Lenert, A., Yilbas, B., Al-Dini, S., and E.N. Wang, "Analytical Model for the Design of Volumetric Solar Flow Receivers," International Journal of Heat and Mass Transfer, 55(4), 556-564, 2012.

J22. Lenert, A. and E.N. Wang, "Optimization of Nanofluid Volumetric Receivers for Solar Thermal Energy Conversion," Solar Energy, 86(1), 253-265, 2012.

J23. Miljkovic, N. Enright, R., and E.N. Wang, "Effect of Droplet Morphology on Growth Dynamics and Heat Transfer During Condensation on Superhydrophobic Nanostructured Surfaces," ACS Nano, 6(2), 1776-1785, 2012.

J24. McCarthy, M., Gerasopoulos, K., Enright, R., Culver, J.N., Ghodssi, R., and E.N. Wang, "Biotemplated Hierarchical Surfaces and the Role of Dual Length Scales on the Repellency of Impacting Droplets," Applied Physics Letters, 100(26), 263701, 2012.

J25. Miljkovic, N., Enright, R., and E.N. Wang, "Liquid Freezing Dynamics on Hydrophobic and Superhydrophobic Surfaces," Journal of Heat Transfer, 134(8), 08090, 2012.

J26. Chu, K.H., Enright, R., and E.N. Wang, "Structured Surfaces for Enhanced Pool Boiling Heat Transfer," Applied Physics Letters, 100(24), 241603, 2012.

J27. Peters, T.B., McCarthy, M., Allison, J., Dominguez-Espinosa, F. A., Jenicek, D., Kariya, H.A., Staats, W.L., Brisson, J.G., Lang, J.H., and E.N. Wang, "Design of an Integrated Loop Heat Pipe Air-

Cooled Heat Exchanger for High Performance Electronics," IEEE Transactions on Components, Packaging and Manufacturing Technology, 2(10), 1637-1648, 2012.

J28. Enright, R., Miljkovic, N., Al-Obeidi, A., Thompson, C.V., and E.N. Wang, "Superhydrophobic Condensation: The Role of Length Scale and Energy Barriers," Langmuir, 28(40), 14424-14432, 2012.

J29. Raj, R., Enright, R., Zhu, Y., Adera, S., and E.N. Wang, "A Unified Model for Contact Angle Hysteresis on Heterogeneous and Superhydrophobic Surfaces," Langmuir, 28(45), 15777-15788, 2012.

J30. Wang, E.N. and R. Karnik, "Graphene Cleans Up Water," News and Views in Nature Nanotechnology, 7, 552–554, 2012.

J31. Lenert, A., Nam, Y., Yilbas, B., and E.N. Wang, "Focusing of Phase Change Microparticles for Local Heat Transfer Enhancement in Laminar Flows," International Journal of Heat and Mass Transfer, 56(1), 380-389, 2013.

J32. Miljkovic, N, Enright, R., Nam, Y., Lopez, K., Dou, N., Sack, J., and E.N. Wang, "Jumping-Droplet-Enhanced Condensation on Scalable Superhydrophobic Nanostructured Surfaces," Nano Letters, 13(1), 179-187, 2013.

J33. Enright, R., Miljkovic, N. Dou, N., Nam, Y.-S., and E.N. Wang, "Condensation on Superhydrophobic Copper Oxide Nanostructures," Journal of Heat Transfer, 135(9), 091304, 2013.

J34. Miljkovic, N. and E.N. Wang, "Condensation Heat Transfer on Superhydrophobic Surfaces," Invited review in MRS Bulletin Issue on Interfacial Materials with Special Wettability, 38(5), 397-406, 2013.

J35. Raj, R., Maroo, S., and E.N. Wang, "Wettability of Graphene," Nano Letters, 13(4), 1509-1514, 2013.

J36. Xiao, R., Maroo, S., and E.N. Wang, "Negative Pressures in Nanoporous Membranes for Thin Film Evaporation," Applied Physics Letters, 102(12), 123103, 2013.

J37. Chu, K.-H., Joung, Y.S., Enright, R., Buie, C.R., and E.N. Wang, "Hierarchically Structured Surfaces in Boiling Critical Heat Flux Enhancement," Applied Physics Letters, 102(15), 151602, 2013.

J38. McKay, I.S., and E.N. Wang, "Thermal Pulse Energy Harvesting," Energy, 57(1), 632-640, 2013.

J39. Xiao, R., Miljkovic, N., Enright, R., and E.N. Wang, "Immersion Condensation on Oil-infused Heterogeneous Surfaces for Enhanced Heat Transfer," Scientific Reports, 3(1988), 1-6, 2013.

J40. Miljkovic, N., Xiao, R., Preston, D.J., Enright, R., McKay, I.S., and E.N. Wang, "Condensation on Hydrophilic, Hydrophobic, Nanostructured Superhydrophobic and Oil-Infused Surfaces," Journal of Heat Transfer, 135(8), 080906, 2013.

J41. Miljkovic, N., Preston, D.J., Enright, R., Adera, S., Nam, Y., and E.N. Wang, "Jumping Droplet Dynamics on Scalable Nanostructured Superhydrophobic Surfaces," Journal of Heat Transfer, 135(8), 080907, 2013.

J42. Xiao, R., and E.N. Wang, "Pulsed Evaporative Transient Thermometry for Temporally-Resolved Thermal Measurements," International Journal of Heat and Mass Transfer, 67, 147-152, 2013.

J43. Miljkovic, N., Enright, R., and E.N. Wang, "Modeling and Optimization of Superhydrophobic Condensation," Journal of Heat Transfer, 135(11), 111004, 2013.

J44. Kariya, H.A., Peters, T.B., Cleary, M., Hanks, D.F., Staats, W., Brisson, J., and E.N. Wang, "Development and Characterization of an Air-Cooled Loop Heat Pipe with a Wick in the Condenser," Journal of Thermal Science and Engineering Applications, 6(1), 011010, 2013.

J45. Muzychka, Y.S., Bagnall, K.R., and E.N. Wang, "Thermal Spreading Resistance and Heat Source Temperature in Compound Orthotropic Systems with Interfacial Resistance," IEEE Transactions on Components, Packaging and Manufacturing Technology, 3(11), 1826-1841, 2013.

J46. Adera, S, Raj, R., Enright, R., and E.N. Wang, "Non-Wetting Droplets on Hot Superhydrophilic Surfaces," Nature Communications, 4, 2013.

J47. Miljkovic, N., Preston, D.J., Enright, R., and E.N. Wang, "Electrostatic Charging of Jumping Droplets on Superhydrophobic Surfaces," Nature Communications, 4, 2013.

J48. Miljkovic, N., Preston, D.J., Enright, R., and E.N. Wang, "Electric-Field-Enhanced Condensation on Superhydrophobic Nanostructured Surfaces," ACS Nano, 7(12), 11043-11054, 2013.

J49. Bagnall, K.R., Muzychka, Y.S., and E. N. Wang, "Application of the Kirchhoff Transform to Thermal Spreading Problems with Convection Boundary Conditions," IEEE Transactions on Components, Packaging and Manufacturing Technology, 4(3), 408-420, 2014.

J50. Lenert, A., Bierman, D.M., Nam, Y.-S., Chan, W.R., Celanovic, I., Soljacic, M., and E.N. Wang, "A Nanophotonic Solar Thermophotovoltaic Device." Nature Nanotechnology, 9(2), p. 126-130, 2014.

J51. Nam, Y., Yeng, Y.X., Bermel, P., Celanovic, I., Soljacic, M., and E.N. Wang, "Modeling of Solar Thermophotovoltaic Energy Conversion Systems with Two-Dimensional Tantulum Photonic Crystals," Solar Energy Materials and Solar Cells, 122, 287-296, 2014.

J52. Humplik, T, Raj, R., Maroo, S.C., Laoui, T., and E.N. Wang, "Framework Water Capacity and Infiltration Pressure of MFI Zeolites," Microporous and Mesoporous Materials, 190, p. 84-91, 2014.

J53. Chou, J.B., Yeng, Y.W., Lenert, A., Rinnerbauer, V., Celanovic, I., Soljacic, M., Wang, E.N., S.-G. Kim, "Design of Wide-angle Selective Absorbers/Emitters with Dielectric Filled Metallic Photonic Crystals for Energy Applications," Optics Express, 22(1), p. 144-154, 2014.

J54. Bagnall, K.R., Muzychka, Y.S., and E.N. Wang, "Analytical Solution for Temperature Rise in Complex, Multi-layer Structures with Discrete Heat Sources," IEEE Transactions on Components, Packaging and Manufacturing Technology, 4(5), p.817-30, 2014.

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C80. Preston, D.J., Lu, Z., Song, Y., Wilke, K.L., Zhu, Y., Antao, D.S., and E.N. Wang, "Gravitationally-Driven Wicking for Enhanced Condensation Heat Transfer," International Conference on Nanochannels, Microchannels, and Minichannels, Cambridge, MA, August 27-30, 2017.

C81. Wilke, K.L., Antao, D.S., Xu, Z., Preston, D.J., and E.N. Wang, "Nanostructure Enhanced Internal Flow Condensation," International Conference on Nanochannels, Microchannels, and Minichannels, Cambridge, MA, August 27-30, 2017.

C82. Leroy, A., Bhatia, B., Wilke, K., Ilic, O., Soljacic, M., and E. N. Wang, "High Performance Incandescent Light Bulb Using a Selective Emitter and Nanophotonic Filters" Proceedings of SPIE, San Diego, CA, August 6-10, 2017.

C83. Preston, D.J., Antao, D.S., Zhao, Y., Wilke, K.L., and E.N. Wang, "Heat Transfer Enhancement during Condensation of Hydrocarbons with Slippery Liquid-Infused Porous Surfaces for Improved Natural Gas Processing Efficiency," ASTFE 4th International Workshop on Heat Transfer, Las Vegas, NV, April 2-5, 2017.

C84. Lu, Z., Preston, D.J., Antao, D.S., Zhu, Y., and E.N. Wang, "Capillary Surface in Micropillar Arrays," APS March Meeting, New Orleans, LA, March 13-17, 2017.

C85. Preston, D.J., Lu, Z., Zhao, Y., Antao, D.S., Wilke, K.L., and E.N. Wang, "Optimal Design of Slippery Liquid-Infused Porous Surfaces for Enhanced Condensation of Low Surface Tension Fluids," APS March Meeting, New Orleans, LA, March 13-17, 2017.

C86. Wilke, K.L., Barabadi, B., Lu, Z., Zhang, T.J., and E.N. Wang, "Comprehensive Study of Thin Film Evaporation from Nanoporous Membranes for Enhanced Thermal Management," APS March Meeting, New Orleans, LA, March 13-17, 2017.

C87. Zhao, Y., Preston, D.J., Lu, Z., and E.N. Wang, "Dropwise Condensation Enhancement on Geometric Features," APS March Meeting, New Orleans, LA, March 13-17, 2017.

C88. Preston, D.J., Anders, A., Barabadi, B., Tio, E., Zhu, Y., Dai, D.A., and E.N. Wang, "Electrowetting-on-Dielectric Actuation of a Spatial and Angular Manipulation MEMS Stage," IEEE MEMS, Las Vegas, NV, January 22-26, 2017.

C89. Sircar, J. D., Hanks, D. F., Lu, Z., Salamon, T., Bagnall, K. R., Narayanan, S., Antao, D., Barabadi, B., and E. N. Wang "High Heat Flux Evaporation from Nanoporous Silicon Membranes," IEEE Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (ITherm), 505-513, 2017.

C90. Wilke, K., Preston, D.J., Lu, Z., and E.N. Wang, "Design of Hydrophobic Reentrant Structures for Condensation Applications," The 10th International Conference on Boiling and Condensation Heat Transfer, Nagasaki, Japan, March 12-15, 2018.

C91. Kelsall, C.C., Bierman, D.M., Leroy, A., Bhatia, B., and E.N. Wang, "Cavity absorber-emitters for high-temperature solar thermophotovoltaics," International Heat Transfer Conference 16, Beijing, China, August 10-15, 2018.
C92. Lu, Z., Wilke, K., Preston, D.J., Kinefuchi, I., and E.N. Wang, "Evaporation from ultra-thin nanoporous membranes into liquid-moist air systems," International Heat Transfer Conference 16, Beijing, China, August 10-15, 2018.
C93. Preston, D.J., Wilke, K., Lu, Z., Zhao, Y., Becerra, L., and E.N. Wang, "Gravitationally-driven wicking condensation," International Heat Transfer Conference 16, Beijing, China, August 10-15, 2018.
C94. Song, Y., Zhu, Y., Preston, D.J., Cho, H.J., Lu, Z., and E.N. Wang, "Investigating the relationship between surface wickability and critical heat flux during pool boiling," International Heat Transfer Conference 16, Beijing, China, August 10-15, 2018.
C95. Wilke, K.L., Kalinina, K., Zhu, Y., Preston, D.J., Antao, D.S., Adera, S., and E.N. Wang, "Enhancement of dry-out heat flux in non-uniform variable permeability wicking structures," International Heat Transfer Conference 16, Beijing, China, August 10-15, 2018.
C96. Xu, Z., Zhang, L., Wilke, K.L., and E.N. Wang, "Modeling of jumping-droplet condensation with dynamic droplet growth," International Heat Transfer Conference 16, Beijing, China, August 10-15, 2018.
C97. Zhang, L., Zhu, Y., Rao, S., Bagnall, K.R., Antao, D.S., Leroy, A., Zhao, L., Bhatia, B., Kelsall, C.C., and E.N. Wang, "In situ temperature measurement of evaporation in micropillar wick structures using micro-Raman spectroscopy," International Heat Transfer Conference 16, Beijing, China, August 10-15, 2018.
C98. Zhao, L., Bhatia, B., Cooper, T., Strobach, E., Yang, S., Weinstein, L., Chen, G., and E.N. Wang, "Intermediate temperature solar thermal collector enabled by non-evacuated transparent aerogel and non-tracking compound parabolic concentrator," International Heat Transfer Conference 16, Beijing, China, August 10-15, 2018.
C99. Vaartstra, G., Lu, Z., and E.N. Wang, "Comprehensive Modeling of Capillary Flow and Evaporation in Micropillar Wicks," American Physical Society Division of Fluid Dynamics, Atlanta, GA, November 18-20, 2018
C100. Song, Y.,, Bush, J.W.M., and E.N. Wang, "Criteria for Antibubble Formation," APS Division of Fluid Dynamics, Atlanta, GA, November 18-20, 2018.
C101. Vaartstra, G.. Lu, Z., and E.N. Wang, "Modeling Temperature Distributions and Dryout Heat Flux for Thin Film Evaporation in Micropillar Wicks," Gordon Research Conference Micro and Nanoscale Phase Change Heat Transfer, Lucca, Italy, February 3-8, 2019.
C102. Yuan, Z., Vaartstra, G., Shukla, P., Said, M., Reda, S., and E.N. Wang, A.K. Coskun, "Two-Phase Vapor Chambers with Micropillar Evaporators: A New Approach to Remove Heat from Future High-Performance Chips," IEEE Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems, Las Vegas, NV, May 29-31, 2019.
C103. Yuan, Z., Vaartstra, G., Shukla, P., Said, M., Reda, S., and E.N. Wang, A.K. Coskun, "Two-Phase Vapor Chambers with Micropillar Evaporators: A New Approach to Remove Heat from Future High-Performance Chips," IEEE Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems, Las Vegas, NV, May 29-31, 2019.
C104. Leroy, A., Bhatia, B., Zhao, L., and E.N. Wang, "Optimizing Optical and Thermal Properties of Polyethylene Aerogels for Radiative Cooling," Materials Research Society 2019 Fall Meeting, Boston, MA, December 1-6, 2019.
C105. Song, Y., Preston, D.J., Zhang, L., and E.N. Wang, "Effect of contaminant adsorption on critical heat flux during pool boiling," The 2nd Pacific Rim Thermal Engineering Conference, Maui, HI, December 13-17, 2019.
C106. Leroy, A., Bhatia, B., Kelsall, C.C., Castillejo-Cuberos, A., Di Capua, M., Zhao, L., Zhang, L., Guzman, A.M., and E.N. Wang, "Polyethylene Aerogel Covers for Sub-Ambient Radiative Cooling," The 2nd Pacific Rim Thermal Engineering Conference, Maui, HI, December 13-17, 2019.

C107. Yuan, Z., Vaartstra, G., Shukla, P., Lu, Z., Wang, E.N., Reda, S., and A.K. Coskun, "A Learning-Based Thermal Simulation Framework for Emerging Two-Phase Cooling Technologies," Design, Automation and Test in Europe Conference, Grenoble, France, March 9-13, 2020.

PATENTS AND TECHNOLOGY DISCLOSURES

P1. K.E. Goodson, D.E. Huber, L. Jiang, T.W. Kenny, J-M Koo, J.C. Mikkelsen, J.G. Santiago, E.N. Wang, S. Zheng, L. Zhang, D. Laser, and C.-H. Chen, "Electroosmotic Microchannel Cooling System," U.S. Patent No. 6,942,018, September 13, 2005.

P2. E.N. Wang, J.G. Brisson, J.H. Lang, S.A. Jacobson, and M. McCarthy, "Heat Exchangers and Related Methods," U.S. Patent No.: 8,678,075, March 2014.

P3. J. Culver, R. Enright, K. Gerasopoulos, R. Ghodssi, M. McCarthy, and E.N. Wang, "Superhydrophobic Surfaces," U.S. Patent No.: 8986814, March 24, 2015.

P4. E.N. Wang, Y. Nam, R. Enright, S. Maroo, I.S. McKay, and S. Narayanan, "Adsorption System," US US Patent No: 10139169, November 27, 2018.

P5. E.N. Wang, Y. Nam, R. Enright, and N. Miljkovic, "Superhydrophobic Nanostructures," Application No.13/582,260, August 2012.

P6. E.N. Wang, R. Enright, and K.-H. Chu, "Hierarchical Structured Surfaces," Application No. 13/827,874, March 2013.

P7. E.N. Wang, R. Enright, N. Miljkovic, and R. Xiao, "Heterogeneous Surfaces," U.S. Patent No. 9689631, June 27, 2017.

P8. E.N. Wang, R. Xiao, and Y. Zhu, "Magnetically Tunable Microstructured Surfaces," U.S. Patent No.: 9,610,580, April 4, 2017.

P9. R. Enright, S. Maroo, S. Narayanan, R. Raj, E.N. Wang, and R. Xiao, "Evaporative Heat Transfer System, " US. Patent No.: 9,835,363, December 5, 2017.

P10. I. S. McKay and E.N. Wang, "Thermal Pulse Energy Harvesting Strategy and Device," US. Patent No.: 10072638, September 11, 2018.

P11. Enright, N. Miljkovic, D. Preston, and E.N. Wang, "Condensation on Surfaces," US. Patent No.: 10161037, December 25, 2018.

P12. G. Chen, E.N. Wang, A. Lenert, H. Ghasemi, S. Yerci, K. McEnaney, S. Boriskina, and S.Yang, "Internally-Heated Thermal and Externally-Cool Photovoltaic Cascade Solar System for the Full Solar Spectrum Utilization," US. Patent No.: 10,043,932, August 7, 2018.

P13. M. Soljacic, G. Chen, I. Celanovic, D. Kraemer, A. Lenert, K. McEnaney, Y.S. Nam, E. N. Wang, W. Chan, and D. M. Bierman, "Spectrally-Engineered Area-Optimized Solar Thermal Power Generators," U.S. Patent No.: 9,929,690, March 27, 2018.

P14. I. McKay, E.N. Wang, S. Yang, and H. Kim, "Percolated Microstructures for Multi-Modal Transport Enhancement in Porous Active Materials" U.S. Application No.: 61/903558, November 13, 2013.

P15. H.-J. Cho, and E..N. Wang "Tunable Nucleate Boiling Using Electric Fields and Ionic Surfactants" US. Patent No.: 9,841,186, March 13, 2018.

P16. E.N. Wang, Y. Zhu, K.-H., Chu, and D. Antao,"Enhanced Flow Boiling Heat Transfer Through Microchannels with Structured Surfaces" U.S. Patent No. 10867887, December 15, 2020.

P17. B. Bhatia, D. Bierman, David; S. Boriskina, G. Chen, T. Cooper, X. Huang, J. Loomis, E. Strobach, E.N. Wang, L. Weinstein, S. Yang, L. Zhao,"Solar Thermal Aerogel Receiver (STAR)" US Patent No. 10889501, January 12, 2021.

P18. D. Antao, D. J. Preston, E. N. Wang, Y. Zhu. "Wicking Condensation" MIT Case No. 18601, 2016.

P19. A. Anders, D. J. Preston, E.N. Wang, "Electrowetting-Actuated Spatial and Angular Manipulation Device," MIT Case No. 18651, 2016.

P20. H. Kim, S. Narayanan, S. Rao, A. Umans, Ari, E.N. Wang, S. Yang, "Sorption-based Atmospheric Water Harvesting Device," US Patent No. 10640954, May 5, 2020.

P21. H. Kim, X. Li, S., Narayanan, S. Rao, A. Umans, Ari, E.N. Wang, S. Yang, "Structural and Thermal Enhancements for Design, Fabrication, Integration, and Performance of Compact Adsorption Climate Control Systems" MIT Case No. 19154J, 2016.
P22. B. Bhatia, G., Chen, T. Cooper, S., Lin, E. Strobach, E.N. Wang, L., Weinstein, Lee, S. Yang, L. Zhao, X., Zhao, "Energy Efficient, Soundproofing Windows and Window Retrofits" U.S. Application No.: 16/394447. April 25, 2019.
P23. B. Bhatia, A. Leroy, Arny, Y. Shen, M. Soljacic, E.N. Wang, "Passive Radiative Cooling During the Day," U.S. Application No.: 16/460683, July 2, 2019.
P24. A., Anders, L. Becerra, M. Drake, J. Ferrua, D. Preston, E. N. Wang, "Fume Hood Feedback Device" MIT Case No. 19881J, 2017.
P25. I. S. McKay, S. Narayana, and E.N. Wang, "Bi-directional Porous Media Phase Change Heat Exchanger," US Patent No. 10739089, August, 11, 2020.
P26. A. Henry and E.N. Wang, "Deposition Prevention by Sweep Gas," US Patent No. 10465995, November 5, 2019.
P27. D.J. Preston and E.N. Wang, "Lubricant Infused Surfaces," U.S. Application No.: 16/194262, November 16, 2018.
P28. S. Cruz, E.N. Wang, and K. Wilke, "Robust, Repairable, High Thermal Conductance Hydrophobic Coatings," U.S. Application No.: 16/882524, May 24, 2020.
P29. O. J. Akinsulire, M. Bucci, B. A. Phillips, M. M. Rahman, Y. Song, G. Su., C. Wang, and E.N. Wang, "Critical Heat Flux (CHF) Enhancing Surface Treatment," U.S. Application No.: 16/993207, August 13, 2020.

INVITED PRESENTATIONS

I1. September-October 2005, "Microfabricated Two-Phase Heat Sinks for IC Cooling Applications," Intel Corporation, Portland, OR. Also at: Sandia National Laboratory, Livermore, CA. Bell Labs, Lucent Technologies, Murray Hill, NJ.
I2. January-May 2006, "Characterization of Microfabricated Two-Phase Heat Sinks for IC Cooling Applications," Department of Mechanical Engineering, University of California, Berkeley. Also at: University of Washington, Seattle, WA., University of California, Riverside, CA., University of Illinois, Urbana-Champaign, IL., University of California, Los Angeles, CA.
I3. July 2007, "MEMS Technology for Advanced Thermal Management," Northrop Grumman, Los Angeles, CA.
I1. July 2008, "Multi-phase Fluidics on Nanostructured Surfaces," US-Japan Joint Seminar on Nanoscale Transport Phenomena-Science and Engineering, Boston, MA.
I2. December 2008, "Tunable Nanoengineered Surfaces for Microfluidics and Energy," 37th New England Complex Fluids Workshop, Harvard University, Cambridge, MA.
I3. April 2009, "MEMS: Small Systems with Big Impacts," Engineering Colloquium, Wellesley College, Wellesley, MA.
I4. June 2009, "Tunable Nanoengineered Surfaces for Microfluidics and Energy," California NanoSystems Institute Seminar Series, University of California, Santa Barbara, CA.
I5. June 2009, "Tunable Nanoengineered Surfaces for Microfluidics and Energy," Department of Microelectronics, Peking University, Beijing, China.
I6. June 2009, "Tunable Nanoengineered Surfaces for Microfluidics and Energy," Department of Precision Instruments and Mechanology, Tsinghua University, Beijing, China.
I7. October 2009, "Tunable Nanostructured Arrays for Stable High Flux Microchannel Heat Sinks," DARPA YFA'07 Highlights, DARPA, Arlington, VA.
I8. January 2010, "Nanoengineered Surfaces for Microfluidic-based Thermal Management Devices," Reliability, Packaging, Testing, and Characterization of MEMS and MOEMS at SPIE Photonics West, San Francisco, CA.

I9. June 2010, "Nanoengineered Surfaces: Transport Phenomena and Thermal Management Applications," Keynote Lecture at the XXVIII UIT National Heat Transfer Conference, Brescia, Italy, June 21-23, 2010.
I10. November 2010, "Nanoengineered Surfaces for Energy Efficient Systems," Department of Mechanical, Aerospace, and Nuclear Engineering Colloquium, Rensellaer Polytechnic University, NY.
I11. April 2011, "Controlled Liquid Dynamics on Nanoengineered Surfaces," Condensed Matter Seminar, Amherst, MA.
I12. June 2011, "Nanoengineered Surfaces for Energy Efficient Systems," Waterloo Institute of Nanotechnology, University of Waterloo, Canada.
I13. June 2011, "Nanoengineered Surfaces for Microfluidics and Energy Systems," Ontario on a Chip, Toronto, Canada, June 9-10, 2011.
I14. July 2011, "Nanoengineered Surfaces for Energy Efficient Systems," ASME 2011 9th International Conference on Nanochannels, Microchannels, and Minichannels, Edmonton, Alberta, Canada, June 19, 22, 2011.
I15. August 2011, "Advancements in Solar Thermal Energy Conversion Systems," National Renewable Energy Laboratory, Golden, CO.
I16. November 2011, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Department of Mechanical Engineering, Stanford University, Stanford, CA.
I17. November 2011, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Nano Seminar, University of California Berkeley, Berkeley, CA.
I18. November 2011, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Department of Mechanical Engineering, Duke University, Durham, NC.
I19. March 2012, "Droplet Dynamics on Nanoengineered Surfaces for Energy Applications," ASME Micro/Nanoscale Heat and Mass Transfer International Conference, Atlanta, GA, March 3-6, 2012.
I20. July 2012, "Enhanced Boiling and Condensation with Nanoengineered Surface Design," Keynote Lecture at ASME 2012 10th International Conference on Nanochannels, Microchannels and Minichannels, ICNMM2012, Rio Grande, Puerto Rico, July 8-12, 2012.
I21. July 2012, Invited Panel, Opportunities in Thermal Concentrating Solar Power (CSP), 2012 ASME Summer Heat Transfer Conference, Rio Grande, Puerto Rico, July 8-12, 2012.
I22. September 2012, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Advanced Heat Exchangers/Electronics Cooling Consortium, University of Maryland, College Park, MD.
I23. September 2012, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Department of Mechanical and Aerospace Engineering, Ohio State University, OH.
I24. October 2012, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Department of Mechanical Engineering, Georgia Institute of Technology, GA.
I25. November 2012, "Nanoengineered Surfaces for Advanced Thermal Management and Energy
I26. Applications," Graduate School of Engineering, Nagoya University, Nagoya, Japan.
I27. November 2012, Invited Panel, Significant Questions in Thermal Energy Storage, ASME IMECE 2012, Houston, TX, November 9-15, 2012.
I28. December 2012, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," 2012 Nanotek and Expo 2012, Philadelphia, PA, December 3-5, 2012.
I29. January 2013, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Masdar Institute, Abu Dhabi, United Arab Emirates.
I30. January 2013, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Nanyang Technological University, Singapore.
I31. February 2013, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign, IL.
I32. March 2013, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Department of Mechanical Engineering, Stevens Institute, Hoboken, NJ.

I33. March 2013, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Department of Mechanical Engineering, University of Michigan, Ann Arbor, MI.
I34. April 2013, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Department of Mechanical Engineering, Boston University, Boston, MA.
I35. May 2013, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Department of Mechanical and Aerospace Engineering, UCLA, Los Angeles, CA.
I36. May 2013, "Nanoengineered Surfaces for Enhanced Phase-Change Heat Transfer," Department of Mechanical Engineering, Stanford University, Stanford, CA.
I37. May 2013, "Nanoengineered Surfaces for Enhanced Phase-Change Heat Transfer," Department of Mechanical Engineering, UC Berkeley, Berkeley, CA.
I38. May 2013, "Nanoengineered Surfaces for Enhanced Phase-Change Heat Transfer," Department of Energy and Power Engineering, Huazhong University of Science and Technology, Wuhan, China.
I39. May 2013, "Nanoengineered Surfaces for Enhanced Phase-Change Heat Transfer," Department of Mechanical Engineering, Department of Materials Science and Engineering (joint seminar), Shanghai Jiao Tong University, Shanghai, China.
I40. May 2013, "Nanoengineered Surfaces for Enhanced Phase-Change Heat Transfer," Department of Energy and Resources Engineering, Peking University, Beijing, China.
I41. May 2013, "Nanoengineered Surfaces for Enhanced Phase-Change Heat Transfer," Department of Thermal Engineering, Tsinghua University, Beijing, China.
I42. July 2013, Invited Panel, Great Experiments in Heat Transfer, ASME 2013 Summer Heat Transfer Conference, Minneapolis, MN, July 14-19, 2013.
I43. September 2013, "Nanoengineered Surfaces for Enhanced Phase Change Heat Transfer," Advanced Heat Exchangers/Electronics Cooling Consortium, University of Maryland, College Park, MD.
I44. September 2013, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Department of Mechanical & Aerospace Engineering, Princeton University.
I45. October 2013, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Technical University of Denmark (DTU), Denmark.
I46. October 2013, "Nanoengineered Surfaces: Transport Phenomena and Energy Applications," Department of Mechanical Engineering, University of Colorado at Boulder, CO.
I47. November 2013, "Nanoengineered Surfaces for Thermal Energy Applications," Department of Physics, Northeastern University, MA.
I48. December 2013, "Enhanced Condensation Heat Transfer on Engineered Superhydrophobic Surfaces," MRS Fall Meeting, Boston, MA.
I49. January 2014, "Nanoengineered Surfaces for Thermal Energy Applications," Masdar Institute, Abu Dhabi, UAE.
I50. February 2014, "Nanoengineered Surfaces for Thermal Energy Applications," Polymer Science and Engineering Seminar Series, Amherst, MA.
I51. February 2014, "Nanoengineered Surfaces for Thermal Energy Applications," University of Maryland, College Park, MD.
I52. April 2014, "Nanoengineered Surfaces for Thermal Energy Applications," Spring New England Section of the APS, Boston College, MA.
I53. September 2014, "Nanoengineered Surfaces for Thermal Energy Applications," Air Force Research Laboratory, Dayton, OH.
I54. September 2014, "Nanoengineered Surfaces for Thermal Energy Applications," Lincoln Laboratory, Lexington, MA.
I55. December 2014, "Advanced Thermal Management Techniques," Northrop Grumman Aerospace Systems, Redondo Beach, CA.
I56. April 2015, "From Nanoscale Surface Engineering to Macroscale Energy Systems," Mechanical Engineering Department, UC Berkeley, Berkeley, CA.
I57. April 2015, "Nanoengineered Devices for Thermal Management and Solar Thermal Energy Conversion," IEEE Nanotechnology Council, Santa Clara, CA.

I58. May 2015, “From Nanoscale Surface Engineering to Macroscale Energy Systems,” Sandia National Laboratory, Livermore, CA.
I59. May 2015, “From Nanoscale Surface Engineering to Macroscale Energy Systems,” Lawrence Berkeley National Laboratory, Berkeley, CA.
I60. July 2015, “Nanoengineered Surfaces for Enhanced Condensation Heat Transfer,” Tech Talk, 2015 ASME Joint International Technical Conference and Exhibition on Packaging and Integration of Electronic and Photonic Microsystems & International Conference on Nanochannels, Microchannels, and Minichannels, San Francisco, CA.
I61. July 2015, Invited Panel, Women in Technology Panel, 2015 ASME Joint International Technical Conference and Exhibition on Packaging and Integration of Electronic and Photonic Microsystems & International Conference on Nanochannels, Microchannels, and Minichannels, San Francisco, CA.
I62. September 2015, “High Flux Nanostructured Two-Phase Thermal Management Strategies,” 2015 Electronics Packaging Symposium Technology Advances in Small Scale Systems and Microelectronics Packaging, GE Global Research, Niskayuna, NY.
I63. September 2015, “From Nanoscale Surface Engineering to Macroscale Energy Systems,” Department of Mechanical Engineering, Texas A&M University, College Station, TX.
I64. October 2015, “From Nanoscale Surface Engineering to Macroscale Energy Systems,” Nanoscale Science and Engineering Seminar, UC Berkeley, Berkeley, CA.
I65. December 2015, “Hierarchical Structures for Thermal Management and Energy Conversion,” 2015 Materials Research Society Fall Meeting, Boston, MA.
I66. December 2015, “Nanomaterials-Enabled Advanced Thermo-Adsorptive Battery for Electric Vehicle Climate Control,” 2015 Materials Research Society Fall Meeting, Boston, MA.
I67. December 2015, “Nanoengineered Surfaces for Thermal Energy Conversion,” Plenary Talk, PowerMEMS, Boston, MA.
I68. May 2016, "Manipulation of Liquid-Vapor Phase-Change Processes via Nanoengineered Surfaces," Keynote Lecture, 9th International Conference on Multiphase Flow, Florence, Italy.
I69. July 2016, "Nanoengineered Surfaces for Thermal Energy Conversion," Keynote Lecture, 10th Australasian Heat & Mass Transfer Conference, Brisbane, Australia.
I70. July 2016, "From Nanoscale Surface Engineering to Macroscale Energy Systems," Distinguished Lecture, School of Mechanical and Mining Engineering, University of Queensland, Brisbane, Australia.
I71. July 2016, "Nanoengineered Surfaces for Thermal Energy Conversion," Invited Plenary Talk, Joint Symposium of the 18th Annual Conference of the Chinese Society of Micro-nano Technology and the Microsystems & Nanoengineering Summit 2016, Beijing, China.
I72. November 2016, "Liquid-Vapor Phase-Change Via Nanoengineered Surfaces," Keynote at 4th International Forum on Heat Transfer, Sendai, Japan.
I73. November 2016, "Nanoscale Surface Engineering to Macroscale Thermal Energy Systems ," International Institute for Carbon-Neutral Energy Research, Kyushu University, Fukuoka, Japan.
I74. November 2016, “Nanoengineered Devices for High Performance Thermal Management,” Intel Corp, Chandler, AZ.
I75. November 2016, "Spectral Enhancement of a Solar Thermophotovoltaic Device ," MRS Fall Meeting 2016, Boston, MA.
I76. December 2016, "Nanoscale Surface Engineering to Macroscale Thermal Energy Systems ," Department of Mechanical Engineering, Carnegie Mellon University, Pittsburgh, PA.
I77. December 2016, "From Nanoscale Surface Engineering to Macroscale Thermal Energy Systems ," Department of Mechanical Engineering, Worcester Polytechnic Institute, Worcester, MA.
I78. January 2017, "Nanoengineered Materials for Advanced Thermal Energy Systems ," Southern University of Science and Technology, Shenzhen, China.
I79. April 2017, "From Nanoscale Surface Engineering to Macroscale Thermal Energy Systems," Plenary Talk, 2nd Thermal and Fluids Engineering Conference and 4th International Workshop on Heat Transfer, Las Vegas, NV.

I80. April 2017, "From Nanoscale Surface Engineering to Macroscale Thermal Energy Systems," Department of Mechanical Engineering Seminar, University of Minnesota, Minneapolis, MN.
I81. June 2017, "Nanoengineered Devices for Solar Energy Conversion," 2017 Transducers, Kaohsiung, Taiwan.
I82. October 2017, "From Nanoengineered Materials to Energy and Water Harvesting Devices," Department of Chemistry, University of North Carolina – Chapel Hill, NC.
I83. October 2017, "Nanoengineered Structures for Advanced Energy and Water Technologies," Department of Mechanical Engineering, Boston University, Boston, MA.
I84. November 2017, "Advanced Materials for Energy and Water,"EmTech - Technology Review, Cambridge, MA.
I85. November 2017, "Design of Liquid Infused Surfaces for Enhanced Condensation Heat Transfer," MRS Fall Meeting, Boston, MA.
I86. November 2017, "Nanoengineered Materials for Liquid-Vapor Phase Change," 2017 Fall MRS Meeting, Boston, MA.
I87. April 2018, "Nanoengineered Structures for Advanced Energy and Water Technologies," Department of Mechanical Engineering and Applied Mechanics, University of Pennsylvania, Philadelphia, MA.
I88. April 2018, "Atmospheric water harvesting device for arid climates," Technology Idol, Global Water Summit, Paris, France.
I89. May 2018, "Advancing Energy and Water Technologies via Nanoengineered Materials," Energy Seminar, Stanford University, Stanford, CA.
I90. July 2018, "Transport in Porous Media for Energy and Water Applications," GRC on Flow and Transport in Permeable Media, Sunday River, ME.
I91. January 2019, "Nanoengineered Materials for Enhanced Thermal Energy Devices," Southern University of Science and Technology, Shenzhen, China.
I92. April 2019, "Nanoengineered Materials and Thermal Engineering for Advanced Energy and Water Technologies," Distinguished Seminar, Mechanical Engineering Department, Columbia University, New York, NY.
I93. April 2019, "Nanoengineered Materials and Thermal Engineering for Advanced Energy and Water Technologies," Viskanta Fellowship Seminar, Department of Mechanical Engineering, Purdue University, West Lafayette, IN.
I94. April 2019, "Nanoengineered Materials and Thermal Engineering for Advanced Energy and Water Technologies," Department of Materials Science and Engineering, College Station, TX.
I95. April 2019, "Elucidating Liquid-Vapor Phase Change via Engineered Nanostructures," 2019 Spring MRS Meeting, Phoenix, AZ.
I96. June 2019, "Tailoring Wetting and Phase-Change for the Extremes," Harrington Symposium on the Physics of Microfluidics, Austin, TX
I97. July 2019, "Nanoengineered Materials for Enhanced Liquid-Vapor Phase-Change," 6th ASME International Conference of Micro/Nanoscale Heat and Mass Transfer, Dalian, China.
I98. November 2019, "Nanoengineered Materials for Advanced Energy and Water Technologies," Department of Materials Science & NanoEngineering, Rice University, Houston, TX.
I99. December 2019, "Nanoengineered Materials for Advanced Energy and Water Technologies," Symposium X, MRS Fall Meeting, Boston, MA.
I100. May 2020, "Nanoengineered Materials for Advanced Energy and Water Technologies," U.S. Army Natick Soldier Systems Center, virtual.
I101. July 2020, "Nanoengineered Materials and Thermal Engineering for Advanced Energy and Water Technologies," iCANX, virtual.
I102. July 2020, "Understanding and Tailoring Liquid-Vapor Phase-Change with Nanoengineered Structures for Advanced Energy and Water Technologies," International Conference on Nanochannels, Microchannels, and Minichannels, virtual.

I103. November 2020, "Nanoengineered Materials and Thermal Engineering for Advanced Energy and Water Technologies," MechSE Department Seminar, University of Illinois Urbana-Champaign, virtual.
I104. November 2020, "Opportunities for Advanced Thermal Management with Liquid-Vapor Phase Change," NSF Workshop New Frontiers of Thermal Transport, virtual.
I105. February 2021, "Nanoengineered Materials and Thermal Engineering for Advanced Energy and Water Technologies," Ahuja Distinguished Lecture Series, Ohio State University, virtual.
I106. March 2021, "Nanoengineered Materials and Thermal Engineering for Advanced Energy and Water Technologies," Department of Mechanical Engineering, University of Wisconsin – Madison, virtual.
I107. March 2021, "Scalable Solar-Driven Water Productive Devices," International Conference on Water Resources and Arid Environments (ICWRAE), virtual.
I108. April 2021, "Nanoengineered Materials and Thermal Engineering for Advanced Energy and Water Technologies," 2021 Distinguished Lectures Series, IIT Wanger Institute for Sustainable Energy Research (WISER), Illinois Institute of Technology, virtual.