

# Nenad Miljkovic

**Assistant Professor**  
**Department of Mechanical Science and Engineering**  
**University of Illinois at Urbana-Champaign**

2136 Mechanical Engineering Laboratory  
105 South Mathews Avenue  
Urbana, IL, 61801  
[nmiljkov@illinois.edu](mailto:nmiljkov@illinois.edu)  
<http://etrl.mechanical.illinois.edu>  
[Google Scholar](#)  
[ResearchGate](#)

## EDUCATION

**Massachusetts Institute of Technology** Cambridge, MA  
Ph.D., Mechanical Engineering June 2011 – June 2013  
Thesis: [Development and Characterization of Micro/Nanostructured Surfaces for Enhanced Condensation](#)  
Major: Phase Change Heat and Mass Transfer (GPA 5.0/5.0)  
Minor: Quantum and Solid State Physics (GPA 4.9/5.0)  
Adviser: Evelyn N. Wang  
Thesis Committee: Gang Chen, Bora Mikic

**Massachusetts Institute of Technology** Cambridge, MA  
M.S., Mechanical Engineering (GPA 5.0/5.0) Sep. 2009 – June 2011  
Thesis: [Hybrid Solar Thermoelectric Systems Utilizing Thermosyphons for Bottoming Cycles](#)  
Adviser: Evelyn N. Wang

**University of Waterloo** Waterloo, ON, Canada  
BAsC, Mechanical Engineering (GPA 4.0/4.0) Sept. 2004 – June 2009

## EMPLOYMENT

**University of Illinois** (Urbana-Champaign, IL) Aug. 2014 – present  
Assistant Professor (100%), Department of Mechanical Science and Eng.  
Assistant Professor (0%), Frederick Seitz Materials Research Laboratory

**University of Illinois** (Urbana-Champaign, IL) Oct. 2013 – Aug. 2014  
Adjunct Assistant Professor (0%), Department of Mechanical Science and Eng.

**Massachusetts Institute of Technology** (Cambridge, MA) Sep. 2013 – Jul. 2014  
Postdoctoral Associate, Adviser: Gang Chen

**Massachusetts Institute of Technology** (Cambridge, MA) May 2013 – Sep. 2013  
Postdoctoral Associate, Adviser: Evelyn N. Wang

**Massachusetts Institute of Technology** (Cambridge, MA) Sep. 2009 – April 2013  
Research Assistant

## AWARDS

Alexander Graham Bell Canada Graduate Scholarship (CGS)	2009-2010
ASME Micro/Nano Heat & Mass Transfer International Conference Best Paper Award	2012
Wunsch Foundation Silent Hoist and Crane Award - Outstanding Graduate Research	2013
List of Teachers Ranked as Excellent by Their Students	2014, 15, 16, 17
Jahrestreffen der ProcessNet-Fachgruppe Wärme- und Stoffübertragung Best Poster Award	2016
NSF CAREER Award	2016
ACS Petroleum Research Fund Doctoral Young Investigator Award	2016
IEEE Applied Power Electronics Conference (APEC) Best Poster Award	2017
ONR Young Investigator Award	2017
United Kingdom Royal Society of Engineering Distinguished Visiting Fellow	2017

## PAPERS IN REFEREED JOURNALS

### Published and In Press

- 1) J. Oh, C. Dana, S. Hong, J. Roman, K.H. Jo, J. Nguyen, D. Crokek, M. Alleyne, N. Miljkovic, "[Exploring the Role of Habitat on the Wettability of Cicada Wings](#)," *ACS Applied Materials & Interfaces*, **in press**.
- 2) P.B. Weisensee, J. Ma, Y.H. Shin, J. Tian, Y. Chang, W.P. King, N. Miljkovic, "Droplet impact on vibrating superhydrophobic surfaces," *Physical Review Fluids*, **in press**.
- 3) P. Birbarah, N. Miljkovic, "[Internal Convective Jumping-Droplet Condensation in Tubes](#)," *International Journal of Heat and Mass Transfer*, **114**, p. 1025–1036, 2017.
- 4) A. Shahriari, P. Birbarah, J. Oh, N. Miljkovic, V. Bahadur, "[Electric-Field-Based Control and Enhancement of Boiling and Condensation](#)," *Nanoscale and Microscale Thermophysical Engineering*, **21**(2), p. 102-121, 2017.
- 5) J. Oh, P. Birbarah, T. Foulkes, S.L. Yin, M. Rentauskas, J. Neely, R.C.N. Pilawa-Podgurski, N. Miljkovic, "[Jumping-Droplet Electronics Hot-Spot Cooling](#)," *Applied Physics Letters*, **110**, 123017, 2017.
- 6) P.B. Weisensee, Y. Wang, Q. Hongliang, D. Schultz, W.P. King, N. Miljkovic, "[Condensate droplet size distribution on lubricant-infused surfaces](#)," *International Journal of Heat and Mass Transfer*, **109**, p. 187–199, 2017.
- 7) H. Cha, J.M. Chun, Y. Xu, N. Miljkovic, "[Focal Plane Shift Imaging for the Analysis of Multi-Droplet Jumping](#)," *Journal of Heat Transfer*, **139**(2), 020903, 2017.
- 8) P.B. Weisensee, J. Tian, N. Miljkovic, W.P. King, "[Springboard Droplet Bouncing on Flexible Superhydrophobic Substrates](#)," *Journal of Heat Transfer*, **139**(2), 020902, 2017.
- 9) S. Chavan, J. Carpenter, M. Nallapaneni, J.-Y. Chen, N. Miljkovic, "[Bulk Water Freezing Dynamics on Superhydrophobic Surfaces](#)," *Applied Physics Letters*, **110**(4), 041604, 2017.
- 10) P. Birbarah, N. Miljkovic, "[External convective jumping-droplet condensation on a flat plate](#)," *International Journal of Heat and Mass Transfer*, **107**, p. 74-88, 2017.
- 11) H. Cha, C. Xu, J. Sotelo, J.M. Chun, Y. Yokoyama, R. Enright, N. Miljkovic, "[Coalescence-Induced Nanodroplet Jumping](#)," *Physical Review Fluids*, **1**, 064102, 2016.
- 12) H. Cha, J.M. Chun, J. Sotelo, N. Miljkovic, "[Focal Plane Shift Imaging for the Analysis of Dynamic Wetting Processes](#)," *ACS NANO*, **10**(9), p. 8223–8232, 2016.
- 13) S. Chavan, H. Cha, D. Orejon, K. Nawaz, N. Singla, Y.-F. Yeung, D. Park, D.H. Kang, Y. Chang, Y. Takata, N. Miljkovic, "[Heat Transfer through a Condensate Droplet on Hydrophobic and Nanostructured Superhydrophobic Surfaces](#)," *Langmuir*, **32**(31), p. 7774-7787, 2016.
- 14) P.B. Weisensee, J. Tian, N. Miljkovic, W.P. King, "[Water droplet impact on elastic superhydrophobic surfaces](#)," *Scientific Reports*, **6**(30328), 2016.
- 15) A. Cavalli, D.J. Preston, E. Tio, D.W. Martin, N. Miljkovic, E.N. Wang, F. Blanchette, J. Bush, "[Electrically Induced Drop Detachment and Ejection](#)," *Physics of Fluids*, **28**, 022101, 2016.
- 16) M.-K. Kim, H. Cha, P. Birbarah, S. Chavan, C. Zhong, Y. Xu, N. Miljkovic, "[Enhanced Jumping Droplet Departure](#)," *Langmuir*, **31** (49), p. 13452–13466, 2015.
- 17) G. Ni, N. Miljkovic, H. Ghasemi, X. Huang, S.V. Boriskina, C.-T. Lin, J.J. Wang, Y. Xu, M.M. Rahman, T.J. Zhang, G. Chen, "[Volumetric Solar Heating of Nanofluids for Direct Vapor Generation](#)," *Nano Energy*, **17**, p. 290–301, 2015.
- 18) P. Birbarah, Z. Li, A. Pauls, N. Miljkovic, "[A Comprehensive Model of Electric-Field-Enhanced Jumping-Droplet Condensation on Superhydrophobic Surfaces](#)," *Langmuir*, **31** (28), p. 7885–7896, 2015.
- 19) D.J. Preston, D.L. Mafra, N. Miljkovic, J. Kong, E.N. Wang, "[Scalable Graphene Coatings for Enhanced Condensation Heat Transfer](#)," *Nano Letters*, **15**(5), p. 2902–2909, 2015.
- 20) R. Enright, N. Miljkovic, J. Sprittles, K. Nolan, R. Mitchell, E.N. Wang, "[How Coalescing Droplets Jump](#)," *ACS NANO*, **8**(10), p. 10352–10362, 2014.
- 21) N. Miljkovic, D.J. Preston, R. Enright, E.N. Wang, "[Jumping-droplet electrostatic energy harvesting](#)," *Applied Physics Letters*, **105**(1), 013111, 2014.
- 22) D.J. Preston, N. Miljkovic, J. Sack, R. Enright, J. Queeney, E.N. Wang, "[Effect of hydrocarbon adsorption on the wettability of rare earth oxide ceramics](#)," *Applied Physics Letters*, **105**(1), 011601, 2014.
- 23) H. Ghasemi, G. Ni, A.M. Marconnet, J. Loomis, S. Yerci, N. Miljkovic, G. Chen, "[Solar steam generation by heat localization](#)," *Nature Communications*, **5**, 4449, 2014.
- 24) N. Miljkovic, D.J. Preston, R. Enright, E.N. Wang, "[Ostwald Ripening During Freezing on Scalable Superhydrophobic Surfaces](#)," *Journal of Heat Transfer*, **136**(8), 080901, 2014.
- 25) D.J. Preston\*, N. Miljkovic\*, R. Enright, E.N. Wang, "[Jumping Droplet Electrostatic Charging and Effect on Vapor Drag](#)," *Journal of Heat Transfer*, **136**(8), 080909, 2014. \*Equal Contribution
- 26) R. Enright, N. Miljkovic, J. L. Alvarado, K. Kim, J. W. Rose, "[Dropwise Condensation on Micro- and Nanostructured Surfaces](#)," *Nanoscale and Microscale Thermophysical Engineering*, **18**(3), p. 223-250, 2014.

- 27) [N. Miljkovic](#), D.J. Preston, R. Enright, E.N. Wang, "[Electric-Field-Enhanced Condensation on Superhydrophobic Nanostructured Surfaces](#)," *ACS NANO*, **7**(12), p. 11043–11054, 2013.
- 28) [N. Miljkovic](#), D.J. Preston, R. Enright, E.N. Wang, "[Electrostatic Charging of Jumping Droplets](#)," *Nature Communications*, **4**, 2517, 2013.
- 29) [N. Miljkovic](#), R. Enright, Y. Nam, K. Lopez, N. Dou, J. Sack, E.N. Wang, "[Jumping-Droplet-Enhanced Condensation on Scalable Superhydrophobic Nanostructured Surfaces](#)," *Nano Letters*, **13**(1), p. 179-187, 2013.
- 30) [N. Miljkovic](#), E.N. Wang, "[Condensation Heat Transfer on Superhydrophobic Surfaces](#)," *MRS Bulletin*, **38**(5), p. 397-406, 2013. (Featured on Front Cover).
- 31) R. Xiao, [N. Miljkovic](#), R. Enright, E.N. Wang, "[Immersion Condensation on Oil-Infused Heterogeneous Surfaces for Enhanced Heat Transfer](#)," *Scientific Reports*, **3**(1988), 2013.
- 32) [N. Miljkovic](#), R. Enright, E.N. Wang, "[Modeling and Optimization of Superhydrophobic Condensation](#)," *Journal of Heat Transfer*, **135**(11), 111004, 2013.
- 33) R. Enright, [N. Miljkovic](#), N. Dou, Y. Nam, E.N. Wang, "[Condensation on Superhydrophobic Copper Oxide Nanostructures](#)," *Journal of Heat Transfer*, **135**(9), 091304, 2013.
- 34) [N. Miljkovic](#), D.J. Preston, R. Enright, S. Adera, Y. Nam, E.N. Wang, "[Jumping Droplet Dynamics on Scalable Nanostructured Superhydrophobic Surfaces](#)," *Journal of Heat Transfer*, **135**(8), 080907, 2013.
- 35) [N. Miljkovic](#), R. Xiao, D.J. Preston, R. Enright, I. McKay, E.N. Wang, "[Condensation on Hydrophilic, Hydrophobic, Nanostructured Superhydrophobic and Oil-Infused Surfaces](#)," *Journal of Heat Transfer*, **135**(8), 080906, 2013.
- 36) R. Enright, [N. Miljkovic](#), A. Al-Obeidi, C.V. Thompson, E.N. Wang, "[Condensation on Superhydrophobic Surfaces: The Role of Local Energy Barriers and Structure Length Scale](#)," *Langmuir*, **28**(40), p. 14424-14432, 2012.
- 37) [N. Miljkovic](#), R. Enright, E.N. Wang, "[Effect of Droplet Morphology on Growth Dynamics and Heat Transfer during Condensation on Superhydrophobic Nanostructured Surfaces](#)," *ACS NANO*, **6**(2), p. 1776-1785, 2012.
- 38) [N. Miljkovic](#), R. Enright, E.N. Wang, "[Liquid Freezing Dynamics on Hydrophobic and Superhydrophobic Surfaces](#)," *Journal of Heat Transfer*, **134**(8), 080902, 2012.
- 39) [N. Miljkovic](#), R. Enright, S.C. Maroo, H.J. Cho, E.N. Wang, "[Liquid Evaporation on Superhydrophobic and Superhydrophilic Nanostructured Surfaces](#)," *Journal of Heat Transfer*, **133**(8), 080903, 2011.
- 40) [N. Miljkovic](#), E.N. Wang, "[Modeling and Optimization of Hybrid Solar Thermoelectric Systems with Thermosyphons](#)," *Solar Energy*, **85**(11), p. 2845-2855, 2011.

## BOOKS AND BOOK CHAPTERS

- 1) [N. Miljkovic](#), D. J. Preston, E. N. Wang, "[Recent Developments in Altered Wettability for Enhancing Condensation](#)," *Encyclopedia of Two-Phase Heat Transfer and Flow II*, Volume 3, World Scientific Publishing, ISBN: 978-981-4623-27-8, June 2015.

## PAPERS AND PRESENTATIONS IN REFEREED CONFERENCE PROCEEDINGS

- 1) J. Oh, C. Dana, [N. Miljkovic](#), D. M. Crokek, K. Jo, M. Alleyne, "A comparative study of cicada wing surface wettability and self-cleaning properties to aid in the design of innovative engineered materials", to be presented at Entomology 2017, Denver, CO, November 5-8, 2017.
- 2) P. Birbarah, [N. Miljkovic](#), "Internal Convective Jumping-Droplet Condensation in Tubes", to be presented at the 15th International Conference on Nanochannels, Microchannels, and Minichannels, ICNMM2017, Cambridge, MA, August 27-31, 2017.
- 3) A. A. Gunay, S. Sett, [N. Miljkovic](#), "A Spatially-Steady Method to Study Droplet Evaporation Dynamics", to be presented at the 15th International Conference on Nanochannels, Microchannels, and Minichannels, ICNMM2017, Cambridge, MA, August 27-31, 2017.
- 4) A. A. Gunay, N. Nagarajan, M. Lopez, A. Lenert, [N. Miljkovic](#), "Aerogel Solar Thermal Absorbers", to be presented at the 15th International Conference on Nanochannels, Microchannels, and Minichannels, ICNMM2017, Cambridge, MA, August 27-31, 2017.
- 5) S. Chavan, D. Park, J.Y. Chen, W.Y. Park, [N. Miljkovic](#), "Dynamic Defrosting on Superhydrophobic and Bi-Philic Surfaces", to be presented at the 15th International Conference on Nanochannels, Microchannels, and Minichannels, ICNMM2017, Cambridge, MA, August 27-31, 2017.
- 6) S. Chavan, M. Yazdani, R. Enright, [N. Miljkovic](#), "Biphilic Jumping-Droplet Condensation", to be presented at the 15th International Conference on Nanochannels, Microchannels, and Minichannels, ICNMM2017, Cambridge, MA, August 27-31, 2017.

- 7) T. Yang, P. B. Weisensee, J. G. Kang, B. Kwon, X. Li, P. Braun, N. Miljkovic, W. P. King, “Millimeter-Scale Thermal Switch Based on Liquid Metal Droplet”, to be presented at the ASME International Conference on Nanochannels, Microchannels and Minichannels, ICNMM2017, Cambridge, MA, August 27-31, 2017.
- 8) K. Coulson, S. Sinha, N. Miljkovic, “Modeling of Thermal-Hydraulic Transport in Composite Heat Pipes”, to be presented at the 15th International Conference on Nanochannels, Microchannels, and Minichannels, ICNMM2017, Cambridge, MA, August 27-31, 2017.
- 9) P. Weisensee, J. Ma, J. Tian, W. P. King, N. Miljkovic, “Water Droplet Impact Dynamics on Active and Passive Vibrating Surfaces”, Proceedings of the 3rd International Conference on Droplets, University of California Los Angeles, USA, July 24th to 26th, 2017.
- 10) J. Oh, P. Shivapooja, R. J. Service, S. Hong, J. K. Roman, K. D. Jo, C. Dana, J. Nguyen, D. Crokek, M. Alleyne, N. Miljkovic, “Cicada-inspired anti-microbial structured surfaces”, Proceedings of the ASME Summer Heat Transfer Conference, HT2017, Bellevue, WA, July 9-14, 2017.
- 11) J. Oh, R. Zhang, P. P. Shetty, J. A. Krogstad, P. V. Braun, N. Miljkovic, “Thin Film Condensation on Biphilic Inverse Opal Structures”, Proceedings of the ASME Summer Heat Transfer Conference, HT2017, Bellevue, WA, July 9-14, 2017.
- 12) K. S. Boyina, S. Chavan, K. Kumar, D. Park, Y. Yu, J. Carpenter, N. Miljkovic, “Jumping-Droplet-Enhanced Condensation in Non-Condensable Gas Environments”, Proceedings of the ASME Summer Heat Transfer Conference, HT2017, Bellevue, WA, July 9-14, 2017.
- 13) K. S. Boyina, S. Chavan, K. Kumar, D. Park, Y. Yu, J. Carpenter, N. Miljkovic, “Condensation Frosting on Meter Scale Superhydrophobic Heat Exchangers”, Proceedings of the ASME Summer Heat Transfer Conference, HT2017, Bellevue, WA, July 9-14, 2017.
- 14) A. Wu, H. Cha, N. Miljkovic, “Droplet Impact Induced Degradation of Hydrophobic Coatings”, Proceedings of the ASME Summer Heat Transfer Conference, HT2017, Bellevue, WA, July 9-14, 2017.
- 15) A. Wu, N. Miljkovic, “Lubricant-Infused Surface Degradation through Condensation Induced Lubricant Drainage”, Proceedings of the ASME Summer Heat Transfer Conference, HT2017, Bellevue, WA, July 9-14, 2017.
- 16) A. Wu, N. Miljkovic, “Droplet Cloaking Imaging and Characterization”, Proceedings of the ASME Summer Heat Transfer Conference, HT2017, Bellevue, WA, July 9-14, 2017.
- 17) H. Cha, M.-K. Kim, J. Yang, A. Wu, N. Miljkovic, “Spontaneous Evaporating Microdroplet Sliding on Hydrophobic Surfaces,” Proceedings of the ASME Summer Heat Transfer Conference, HT2017, Bellevue, WA, July 9-14, 2017.
- 18) H. Cha, M.-K. Kim, S. Lee, A. Wu, N. Miljkovic, “Agglomerate-Deposition-Mediated Heterogeneous Nucleation during Atmospheric Water Vapor Condensation,” Proceedings of the ASME Summer Heat Transfer Conference, HT2017, Bellevue, WA, July 9-14, 2017.
- 19) H. Cha, S. Lee, J. M. Chun, N. Miljkovic, “Focal Plane Shift Imaging for the Measurement of Contact Angles,” Proceedings of the ASME Summer Heat Transfer Conference, HT2017, Bellevue, WA, July 9-14, 2017.
- 20) P. Weisensee, Y. Wang, Q. Hongliang, D. Schultz, W. P. King, N. Miljkovic, “Dropwise Condensation on Lubricant-Infused Surfaces: The Distribution of Droplet Sizes”, Proceedings of the ASME Summer Heat Transfer Conference, HT2017, Bellevue, WA, July 9-14, 2017.
- 21) P. Weisensee, J. Ma, Y. H. Shin, Y. Chang, J. Tian, W. P. King, N. Miljkovic, “Controlling the Contact Times of Bouncing Droplets: Droplet Impact on Vibrating Surfaces”, Proceedings of the ASME Summer Heat Transfer Conference, HT2017, Bellevue, WA, July 9-14, 2017.
- 22) J. Ma, P.B. Weisensee, Y.H. Shin, Y. Chang, J. Tian, W.P. King, N. Miljkovic, “Water Droplet Impact on Vibrating Rigid Superhydrophobic Surfaces”, Proceedings of the 19th International Conference on Experimental Fluid Mechanics, ICEFM2017, Brisbane, Australia, April, 3-4, 2017.
- 23) J. Colmenares, C. Barth, T. Foulkes, K. Coulson, J. Sotelo, T. Modeer, N. Miljkovic, R.C.N. Pilawa-Podgurski, “[Experimental Evaluation of a 1 kW, Single-Phase, 3-Level Gallium Nitride Inverter in Extreme Cold Environment](#)”, Proceedings of the IEEE Applied Power Electronics Conference, APEC2017, Tampa, FL, March 26-30, 2017.
- 24) T. Foulkes, J. Oh, P. Birbarah, J. Neely, N. Miljkovic, R.C.N. Pilawa-Podgurski, “[Active Hot Spot Cooling of GaN Transistors With Electric Field Enhanced Jumping Droplet Condensation](#)”, Proceedings of the IEEE Applied Power Electronics Conference, APEC2017, Tampa, FL, March 26-30, 2017. **Best Poster Award.**
- 25) K.S. Boyina, S. Chavan, K. Kumar, D. Park, Y. Yu, J. Carpenter, N. Miljkovic, “Fundamental Studies of Condensation Frosting on Meter Scale Superhydrophobic Heat Exchangers,” Proceedings of the Micro and Nanoscale Phase Change Heat Transfer Gordon Research Conference – The Role of Surface Structures, Galveston, TX, January 8-13, 2017.

- 26) P.B. Weisensee, Y. Wang, Q. Hongliang, D. Schultz, W.P. King, N. Miljkovic, "Condensate Droplet Size Distribution on Lubricant Infused Surfaces", Proceedings of the Micro and Nanoscale Phase Change Heat Transfer Gordon Research Conference – Fundamental Mechanisms to Applications of Phase Change Heat Transfer, Galveston, TX, January 8-13, 2017.
- 27) H. Cha, C. Xu, J. Sotelo, J. M. Chun, Y. Yokoyama, R. Enright, N. Miljkovic, "Nanodroplet Jumping on Superhydrophobic Surfaces," Proceedings of the Micro and Nanoscale Phase Change Heat Transfer Gordon Research Conference – Fundamental Mechanisms to Applications of Phase Change Heat Transfer, Galveston, TX, January 8-13, 2017.
- 28) P. Birbarah, N. Miljkovic, "External Convective Jumping-Droplet Condensation on a Flat Plate", Proceedings of the Micro and Nanoscale Phase Change Heat Transfer Gordon Research Conference - Fundamental Mechanisms to Applications of Phase Change Heat Transfer, Galveston, TX, January 8-13, 2017.
- 29) S. Chavan, D. Park, N. Singla, N. Miljkovic, "Individual Water Droplet Freezing Dynamics on Non-Wetting Surfaces," Proceedings of the Micro and Nanoscale Phase Change Heat Transfer Gordon Research Conference – The Role of Surface Structures, Galveston, TX, January 8-13, 2017.
- 30) J. Oh, P. Birbarah, T. Foulkes, S. Yin, J. Neely, R. Pilawa-Podgurski, N. Miljkovic, "Active Hot Spot Cooling with Electric-Field-Enhanced Condensation," Proceedings of the Micro and Nanoscale Phase Change Heat Transfer Gordon Research Conference – The Role of Surface Structures, Galveston, TX, January 8-13, 2017.
- 31) P. Escobar, N. Miljkovic, A. Guzmán, "Experimental Thermal Characterization of a Hybrid Solar Thermoelectric (HSTE) System," Proceedings of the ASME International Mechanical Engineering Congress and Exposition, Phoenix, AZ, November 11-17, 2016.
- 32) P. Weisensee, J. Tian, N. Miljkovic, W. King, "Droplet Impact on Flexible Substrates for Advanced Thermal Management", Proceedings of the ASME Summer Heat Transfer Conference, HT2016, Washington, DC, July 10-14, 2016.
- 33) P. Weisensee, J. Tian, N. Miljkovic, W. King, "Pancake Droplet Bouncing on Flexible Superhydrophobic Substrates", Proceedings of the ASME Summer Heat Transfer Conference, HT2016, Washington, DC, July 10-14, 2016.
- 34) S. Chavan, K. Nawaz, N. Singla, Y.-F. Yeung, D. Park, D. H. Kang, Y. Chang, N. Miljkovic, "Heat Transfer through a Condensate Droplet," Proceedings of the ASME Summer Heat Transfer Conference, HT2016, Washington, DC, July 10-14, 2016.
- 35) S. Chavan, H. Gunnam, N. Miljkovic, "Frost Wave Propagation on Hydrophilic, Hydrophobic and Superhydrophobic Surfaces", Proceedings of the ASME Summer Heat Transfer Conference, HT2016, Washington, DC, July 10-14, 2016.
- 36) S. Chavan, M. Nallapaneni, N. Miljkovic, "Water Freezing Dynamics on Superhydrophobic Surfaces", Proceedings of the ASME Summer Heat Transfer Conference, HT2016, Washington, DC, July 10-14, 2016.
- 37) S. Chavan, N. Singla, N. Miljkovic, "Delayed Water Droplet Freezing on Superhydrophobic Surfaces", Proceedings of the ASME Summer Heat Transfer Conference, HT2016, Washington, DC, July 10-14, 2016.
- 38) A.A. Gunay, N. Nagarajan, M. Atten, J. Sotelo, N. Miljkovic, "Optimized Silica Aerogel Solar Thermal Absorbers", Proceedings of the ASME Summer Heat Transfer Conference, HT2016, Washington, DC, July 10-14, 2016.
- 39) H. Cha, J. M. Chun, N. Miljkovic, "Focal Plane Shift Imaging for the Analysis of Jumping-Droplet Condensation," Proceedings of the ASME Summer Heat Transfer Conference, HT2016, Washington, DC, July 10-14, 2016.
- 40) H. Cha, C. Xu, J. M. Chun, M. Y. Ye, N. Miljkovic, "Coalescence-Induced Water Nanodroplet Jumping on Superhydrophobic Surfaces," Proceedings of the ASME Summer Heat Transfer Conference, HT2016, Washington, DC, July 10-14, 2016.
- 41) H. Cha, J. M. Chun, Y. Xu, N. Miljkovic, "Multi-Droplet Coalescence-Induced Droplet-Jumping on Superhydrophobic Surfaces," Proceedings of the ASME Summer Heat Transfer Conference, HT2016, Washington, DC, July 10-14, 2016.
- 42) P. Birbarah, Z. Li, N. Miljkovic, "Trajectory Analysis during Jumping-Droplet Condensation for Heat Flux, Droplet Charge, and Surface Charge Sensing", Proceedings of the ASME Summer Heat Transfer Conference, HT2016, Washington, DC, July 10-14, 2016
- 43) P. Birbarah, N. Miljkovic, "Internal and External Forced-Convection Jumping-Droplet Condensation on Superhydrophobic Surfaces", Proceedings of the ASME Summer Heat Transfer Conference, HT2016, Washington, DC, July 10-14, 2016.

- 44) H. Cha, J. M. Chun, J. Sotelo, [N. Miljkovic](#), "Focal Plane Shift Imaging for the Analysis of Jumping Droplet Condensation," Proceedings of the 17th International Symposium on Flow Visualization, Gatlinburg, Tennessee, June 19-22, 2016.
- 45) H. Cha, J. M. Chun, J. Sotelo, [N. Miljkovic](#), "Focal Plane Shift Imaging for the Analysis of Jumping Droplet Condensation," Proceedings of the 17th International Symposium on Flow Visualization, Gatlinburg, Tennessee, June 19-22, 2016.
- 46) P. Weisensee, J. Tian, [N. Miljkovic](#), W. King, "Droplet Impact on Flexible Substrates for Advanced Thermal Management", Jahrestreffen der ProcessNet-Fachgruppe Wärme- und Stoffübertragung, Kassel, Germany, March 1-2, 2016, [Best Poster Award](#).
- 47) B. Bhatia, D.J. Preston, D.M. Bierman, [N. Miljkovic](#), A. Lenert, R. Enright, Y. Nam, K. Lopez, N. Dou, J. Sack, W.R. Chan, I. Celanović, M. Soljačić, E.N. Wang, "[Nanoengineered Surfaces for Thermal Energy Conversion](#)," PowerMEMS, Boston, MA, December 1-4, 2015. Published in: Journal of Physics: Conference Series 660, 012036, 2015.
- 48) A. Cavalli, D. Preston, Z. Wang, E. Tio, D.W. Martin, [N. Miljkovic](#), E.N. Wang, F. Blanchette, J.W.M. Bush, F. Mugele, "Electrically-Induced Drop Detachment and Ejection," Droplets 2015, University of Twente, The Netherlands, October 6-8, 2015.
- 49) S. Chavan, K. Nawaz, Y.-F. Yeung, [N. Miljkovic](#), "Heat Transfer through a Condensate Droplet," Proceedings of the International Technical Conference and Exhibition on Packaging and Integration of Electronic and Photonic Microsystems Conference, InterPACK2015, San Francisco, CA, July 6-9, 2015.
- 50) A. Aili, M. Alhosani, [N. Miljkovic](#), T.J. Zhang, "Additive Fabrication of Superomniphobic Mushroom-Like Micro Structures with Inkjet Printing," Proceedings of the International Technical Conference and Exhibition on Packaging and Integration of Electronic and Photonic Microsystems Conference, InterPACK2015, San Francisco, CA, July 6-9, 2015.
- 51) M.-K. Kim, H. Cha, Y. Xu, C. Zhong, [N. Miljkovic](#), "Enhancing the Coalescence-Induced Jumping Droplet Velocity via Multi-Droplet Coalescence," Proceedings of the International Technical Conference and Exhibition on Packaging and Integration of Electronic and Photonic Microsystems Conference, InterPACK2015, San Francisco, CA, July 6-9, 2015.
- 52) P. Birbarah, [N. Miljkovic](#), "Modeling and Optimization of Electric-Field-Enhanced Condensation," Proceedings of the 9th International Conference on Boiling and Condensation Heat Transfer, Boulder, CO, April 26-30, 2015.
- 53) D.J. Preston, D.L. Mafera, [N. Miljkovic](#), J. Kong, E.N. Wang, "Enhanced Condensation Heat Transfer with Scalable Graphene Coatings," Proceedings of the 9th International Conference on Boiling and Condensation Heat Transfer, Boulder, CO, April 26-30, 2015.
- 54) D.J. Preston, [N. Miljkovic](#), J. Sack, J. Queeney, A. Krishnamachar, E.N. Wang, "Role of Nanostructure Size and Coating Quality in Delay of Surface Flooding during Jumping Droplet Condensation," Micro and Nanoscale Phase Change Heat Transfer Gordon Research Conference – The Role of Surface Structures, Galveston, TX, January 11-16, 2015.
- 55) R. Enright, [N. Miljkovic](#), J. Sprittles, K. Nolan, R. Mitchell, E.N. Wang, "How Coalescing Droplets Jump," Micro and Nanoscale Phase Change Heat Transfer Gordon Research Conference – The Role of Surface Structures, Galveston, TX, January 11-16, 2015.
- 56) G.W. Ni, [N. Miljkovic](#), H. Ghasemi, S. Boriskina, C.-T. Lin, Y. Xu, G. Chen, "Non-Localized Solar Heating of Nanofluids for Steam Generation," Materials Research Society Fall Meeting & Exhibit, Boston, MA, November 30–December 5, 2014.
- 57) [N. Miljkovic](#), D.J. Preston, R. Enright, E.N. Wang, "[Electric-Field-Enhanced Jumping-Droplet Condensation](#)," Proceedings of the 15<sup>th</sup> International Heat Transfer Conference (IHTC-15), Kyoto, Japan, August 10-15, 2014.
- 58) D.J. Preston, [N. Miljkovic](#), J. Sack, R. Enright, J. Queeney, E.N. Wang, "[Effect of Hydrocarbon Adsorption on the Wettability of Rare Earth Oxide Ceramics](#)," Proceedings of the 15<sup>th</sup> International Heat Transfer Conference (IHTC-15), Kyoto, Japan, August 10-15, 2014.
- 59) [N. Miljkovic](#), D.J. Preston, R. Enright, E.N. Wang, "Jumping Droplet Atmospheric Power Generation," Proceedings of the ASME 8th International Conference on Energy Sustainability, Boston, MA, June 30–July 2, 2014.
- 60) G.W. Ni, [N. Miljkovic](#), H. Ghasemi, S. Boriskina, C.-T. Lin, Y. Xu, G. Chen, "Non-Localized Solar Heating of Nanofluids for Steam Generation," Proceeding of the ASME 8th International Conference on Energy Sustainability, Boston, MA, June 30–July 2, 2014.
- 61) [N. Miljkovic](#), D.J. Preston, E.N. Wang, "[Jumping-Droplet Energy Harvesting with Nanoengineered Surfaces](#)," Proceedings of Solid-State Sensor, Actuator, and Microsystems Workshop (HH 2014), Hilton Head, SC, June 8-12, 2014.

- 62) [N. Miljkovic](#), D.J. Preston, R. Enright, E.N. Wang, “Electric Field Manipulation of Charged Jumping Droplets for Enhanced Heat Transfer and Electrokinetic Measurements,” Proceedings of the 4th Micro/Nanoscale Heat and Mass Transfer International Conference, Hong Kong, China, December 11-14, 2013.
- 63) D.J. Preston, [N. Miljkovic](#), E.N. Wang, “Scalable Growth of Superhydrophobic Zinc Oxide Nanowires on Common Industrial Substrates for Enhanced Condensation Heat Transfer,” Proceedings of the 4th Micro/Nanoscale Heat and Mass Transfer International Conference, Hong Kong, China, December 11-14, 2013.
- 64) [N. Miljkovic](#), D.J. Preston, R. Enright, E.N. Wang, “[Dynamics of Coalescence-Induced Jumping Water Droplets](#),” 66th Annual Meeting of the APS Division of Fluid Dynamics (Gallery of Fluid Motion - video), Pittsburgh, PA, November 24-26, 2013, [Featured on the APS 2013 Video Gallery](#).
- 65) D.J. Preston, [N. Miljkovic](#), R. Enright, E.N. Wang, “Vapor Flow Entrainment of Jumping Water Droplets,” 66th Annual Meeting of the APS Division of Fluid Dynamics (Gallery of Fluid Motion - poster), Pittsburgh, PA, November 24-26, 2013.
- 66) [N. Miljkovic](#), D.J. Preston, R. Enright, E.N. Wang, “Electrostatic Charging of Coalescence Induced Jumping Water Droplets,” 66th Annual Meeting of the APS Division of Fluid Dynamics (Gallery of Fluid Motion - poster), Pittsburgh, PA, November 24-26, 2013, [Featured on the APS 2013 Image Gallery](#).
- 67) D.J. Preston, [N. Miljkovic](#), R. Enright, A. Limia, E.N. Wang, “[Effect of Vapor Flow on Jumping Droplets during Condensation on Superhydrophobic Surfaces](#),” 66th Annual Meeting of the APS Division of Fluid Dynamics, Pittsburgh, PA, November 24-26, 2013.
- 68) [N. Miljkovic](#), D.J. Preston, R. Enright, A. Limia, E.N. Wang, “[Electric Field Enhanced Jumping-Droplet Condensation](#),” 66th Annual Meeting of the APS Division of Fluid Dynamics, Pittsburgh, PA, November 24-26, 2013.
- 69) [N. Miljkovic](#), D.J. Preston, E.N. Wang, “Transient Pressure-Based Condensation Heat Transfer Measurement,” Proceedings of the ASME International Mechanical Engineering Congress & Exposition, San Diego, CA, November 15-21, 2013.
- 70) H. Ghasemi, A. M. Marconnet, [N. Miljkovic](#), G. Chen, “On the Bubble Generation on the Surface of Plasmonic and Non-Plasmonic Nano Particles Under Solar Illumination,” Proceedings of the ASME International Mechanical Engineering Congress & Exposition, San Diego, CA, November 15-21, 2013.
- 71) [N. Miljkovic](#), D.J. Preston, R. Enright, E.N. Wang, “Superhydrophobic Surfaces for High Performance Condensation Heat Transfer and Atmospheric Power Generation,” Proceedings of the ASME International Mechanical Engineering Congress & Exposition, San Diego, CA, November 15-21, 2013.
- 72) A. Lenert, D. M. Bierman, V. Rinnerbauer, [N. Miljkovic](#), I. Celanovic, M. Soljacic, E. N. Wang, “Highly temperature-dependent radiative transfer and energy conversion in spectrally-engineered solar thermophotovoltaics,” Proceedings of the ASME International Mechanical Engineering Congress & Exposition, San Diego, CA, November 15-21, 2013.
- 73) [N. Miljkovic](#), D.J. Preston, R. Enright, E.N. Wang, “Jumping Droplet Electrostatic Charging,” Proceedings of the ASME International Mechanical Engineering Congress & Exposition, San Diego, CA, November 15-21, 2013.
- 74) D.J. Preston, [N. Miljkovic](#), R. Enright, E.N. Wang, “Vapor Drag on Jumping Droplets during Condensation,” Proceedings of the ASME International Mechanical Engineering Congress & Exposition, San Diego, CA, November 15-21, 2013.
- 75) [N. Miljkovic](#), D.J. Preston, R. Enright, E.N. Wang, “Ostwald Ripening During Freezing on Scalable Superhydrophobic Surfaces,” Proceedings of the ASME Summer Heat Transfer Conference, Minneapolis, MN, July 14-18, 2013.
- 76) [N. Miljkovic](#), D.J. Preston, R. Enright, E.N. Wang, “Jumping Droplet Condensation on Structured Superhydrophobic Surfaces for High Performance Heat Transfer,” Proceedings of the ASME Summer Heat Transfer Conference, Minneapolis, MN, July 14-18, 2013.
- 77) [N. Miljkovic](#), D.J. Preston, R. Enright, R. Mitchell, R. Yang, K.K. Gleason, C.V. Thompson, E.N. Wang, “Electric-Field-Enhanced Jumping-Droplet Condensation,” Proceedings of the ASME Summer Heat Transfer Conference, Minneapolis, MN, July 14-18, 2013.
- 78) K.-H. Chu, [N. Miljkovic](#), R. Enright, E.N. Wang, “Copper Oxide Hierarchical Surfaces for Enhanced Pool Boiling Heat Transfer,” Proceedings of the ASME Summer Heat Transfer Conference, Minneapolis, MN, July 14-18, 2013.
- 79) R. Xiao, [N. Miljkovic](#), R. Enright, E.N. Wang, “[Immersion Condensation on Scalable Oil-Infused Nanostructures for High Performance Thermal Management](#),” Proceedings of the 17th International Conference on Solid-State Sensors, Actuators and Microsystems, Barcelona, Spain, June 16-20, 2013.

- 80) K.-H. Chu, Y. Zhu, N. Miljkovic, Y. Nam, R. Enright, E.N. Wang, "[Enhanced Boiling Heat Transfer With Copper Oxide Hierarchical Surfaces](#)," Proceedings of the 17th International Conference on Solid-State Sensors, Actuators and Microsystems, Barcelona, Spain, June 16-20, 2013.
- 81) N. Miljkovic, D.J. Preston, R. Enright, R. Yang, K.K. Gleason, E.N. Wang, "[Electric Charging Effects on Condensed Droplet Jumping](#)," APS March Meeting, Baltimore, MD, March 18-22, 2013.
- 82) R. Enright, N. Miljkovic, M. Morris, E.N. Wang, "[Condensed droplet jumping: Capillary to inertial energy transfer](#)," APS March Meeting, Baltimore, MD, March 18-22, 2013.
- 83) N. Miljkovic, R. Enright, Y. Nam, K. Lopez, N. Dou, J. Sack, E.N. Wang, "Jumping-Droplet-Enhanced Condensation on Scalable Superhydrophobic Nanostructured Surfaces," APS March Meeting, Baltimore, MD, March 18-22, 2013.
- 84) N. Miljkovic, R. Xiao, D.J. Preston, R. Enright, I. McKay, E.N. Wang, "Condensation on Hydrophilic, Hydrophobic, Nanostructured Superhydrophobic and Oil-Infused Surfaces," Proceedings of the ASME International Mechanical Engineering Congress & Exposition, Houston, TX, November 9-15, 2012.
- 85) N. Miljkovic, D.J. Preston, R. Enright, S. Adera, Y. Nam, E.N. Wang, "Jumping Droplet Dynamics on Scalable Nanostructured Superhydrophobic Surfaces," Proceedings of the ASME International Mechanical Engineering Congress & Exposition, Houston, TX, November 9-15, 2012.
- 86) N. Miljkovic, R. Enright, E.N. Wang, "High Angle Environmental Scanning Electron Microscopy for the Study of Dropwise Condensation on Nano-structured Superhydrophobic Surfaces," Microscopy and Microanalysis, Phoenix, AZ, July 29 - August 2, 2012.
- 87) R. Enright, N. Miljkovic, A. Al-Obeidi, C.V. Thompson, E.N. Wang, "Superhydrophobic Condensation: the Role of Energy Barriers and Size Scale," Proceedings of the ASME International Conference on Nanochannels, Microchannels, and Minichannels, Rio Grande, PR, July 8-12, 2012.
- 88) N. Miljkovic, R. Enright, Y. Nam, E.N. Wang, "Modeling and Optimization of Condensation Heat Transfer on Micro and Nanostructured Superhydrophobic Surfaces," Proceedings of the ASME International Conference on Nanochannels, Microchannels, and Minichannels, Rio Grande, PR, July 8-12, 2012.
- 89) N. Miljkovic, R. Enright, Y. Nam, E.N. Wang, "Modeling and Optimization of Condensation Heat Transfer on Micro and Nanostructured Superhydrophobic Surfaces," Proceedings of the ASME Summer Heat Transfer Conference, Rio Grande, PR, July 8-12, 2012.
- 90) R. Xiao, N. Miljkovic, R. Enright, E.N. Wang, "Increased Nucleation Density on Liquid-Solid Composite Surfaces for Enhanced Dropwise Condensation Heat Transfer," Proceedings of the ASME Summer Heat Transfer Conference, Rio Grande, PR, July 8-12, 2012.
- 91) R. Xiao, R. Enright, N. Miljkovic, E.N. Wang, "Oil-infused Superhydrophobic Silicon Surfaces for Enhanced Water Condensation Heat Transfer," Proceedings of Solid-State Sensor, Actuator, and Microsystems Workshop, Hilton Head, SC, June 3-7, 2012.
- 92) R. Enright, N. Dou, N. Miljkovic, Y. Nam, E.N. Wang, "[Condensation on Superhydrophobic Copper Oxide Nanostructures](#)," Proceedings of the 3rd Micro/Nanoscale Heat and Mass Transfer International Conference, Atlanta, GA, March 3-6, 2012.
- 93) N. Miljkovic, R. Enright, E.N. Wang, "[Growth Dynamics during Dropwise Condensation on Nanostructured Superhydrophobic Surfaces](#)," Proceedings of the 3rd Micro/Nanoscale Heat and Mass Transfer International Conference, Atlanta, GA, March 3-6, 2012, **Best Paper Award**.
- 94) N. Miljkovic, R. Enright, E.N. Wang, "Liquid Freezing Dynamics on Hydrophobic and Superhydrophobic Surfaces," Proceedings of the ASME International Mechanical Engineering Congress & Exposition, Denver, CO, November 11-17, 2011.
- 95) N. Shukla, N. Miljkovic, R. Enright, E.N. Wang, "Thermal resistance of thin water films during phase-change," APS March Meeting, Dallas, Texas, March 21-25, 2011.
- 96) N. Miljkovic, R. Enright, S.C. Maroo, H.J. Cho, E.N. Wang, "Liquid Evaporation on Superhydrophobic and Superhydrophilic Nanostructured Surfaces," Proceedings of the ASME International Mechanical Engineering Congress & Exposition, Vancouver, Canada, November 12-18, 2010.
- 97) N. Miljkovic, E.N. Wang, "[Performance of Glass Heat Pipes for Solar Thermoelectric Energy Systems](#)," Proceedings of the 14<sup>th</sup> International Heat Transfer Conference (IHTC-14), Washington, DC, August 8-13, 2010.

## INVITED TALKS AND SEMINARS

- 1) Bingham Young University, "Nanoengineered Surfaces for Enhanced Energy Transfer," Provo, UT, September 25, 2017.
- 2) Center of Excellence for Integrated Thermal Management of Aerospace Vehicles, "Tutorial on Nanoengineered Functional Surfaces," Torrance, CA, February 23, 2017.

- 3) British Petroleum, "Nanoengineered Surfaces for Enhanced Energy Transfer," Naperville, IL, February 2, 2017.
- 4) Kyushu University, "Superhydrophobic Surfaces for Enhanced Anti-Icing," Kyushu, Japan, February 4, 2016.
- 5) British Petroleum & Institute for Complex Adaptive Matter (ICAM) - Designer Surfaces Workshop, "Metal Oxide Nanoengineered Surfaces for Enhanced Phase Change Heat Transfer," Imperial College London, September 21, 2015.
- 6) Northern Illinois University – Department of Physics Graduate Colloquium, "Nanoengineered Surfaces for Enhanced Phase Change in Energy Applications," DeKalb, IL, September 11, 2015.
- 7) Google, "Nanoengineered Surfaces for Enhanced Condensation in Energy Applications," Mountain View, CA, July 13, 2015.
- 8) Kyushu Institute of Technology, "Nanoengineered Surfaces for Enhanced Condensation in Energy Applications," Kyushu, Japan, March 12, 2015.
- 9) Kyushu University, "Nanoengineered Surfaces for Enhanced Condensation in Energy Applications," Kyushu, Japan, March 11, 2015.
- 10) ILP National Oilwell Varco Visit, "Nanoengineered Surfaces for Enhanced Condensation in Energy and Water Applications," Boston, MA, February 26, 2014.
- 11) ILP Air Liquide Lab Visit, "Nanoengineered Surfaces for Enhanced Condensation in Energy and Water Applications," Boston, MA, February 19, 2014.
- 12) Air Conditioning and Refrigeration Center, University of Illinois at Urbana-Champaign, "Nanoengineered Surfaces for Enhanced Condensation," Urbana, IL, October 15, 2013.
- 13) University of Illinois at Urbana-Champaign, "Nanoengineered Surfaces for Enhanced Condensation in Energy and Water Applications," Urbana, IL, August 8, 2013.
- 14) EPRI Lab Visit, "Nanoengineered Surfaces for Enhanced Heat Transfer," Boston, MA, August 2, 2013.
- 15) Bosch Lab Visit, "Nanostructured Heat Exchangers," Boston, MA, July 29, 2013.
- 16) ILP Exxon Mobile Lab Visit, "Nanoengineered Surfaces for Enhanced Heat Transfer," Boston, MA, February 19, 2013.
- 17) ILP Air Liquide Lab Visit, "Nanoengineered Surfaces for Enhanced Heat Transfer," Boston, MA, November 15, 2012.
- 18) MIT Energy Night 2012, "Advancements in Thermal Management through Condensation," Boston, MA, October 19, 2012.
- 19) ILP Osaka Gas Lab Visit, "Modeling and Optimization of Hybrid Solar Thermoelectric (HSTE) Systems with Thermosyphons," Boston, MA, October 18, 2012.
- 20) Skolkovo-MIT Seminar, "Nanoengineered Surfaces for Enhanced Heat Transfer," Boston, MA, May 8, 2012.
- 21) MIT Micro Nano Seminar, "Effect of Droplet Morphology on Growth Dynamics and Heat Transfer during Condensation on Superhydrophobic Nanostructured Surfaces," Boston, MA, September 28, 2011.

#### KEYNOTE LECTURES

- 1) ASME International Conference on Nanochannels, Microchannels and Minichannels, ICNMM2017, "Towards Durable Hydrophobicity and Omniphobicity," Cambridge, MA, August 27-31, 2017.
- 2) The 17<sup>th</sup> International Symposium on Flow Visualization, "Droplet Visualizations on Nanoengineered Surfaces for Enhanced Energy Transfer," Gatlinburg, TN, June 20, 2016.

#### PATENTS (GRANTED AND APPLICATIONS)

- 1) D.J. Preston, D.L. Mafra, N. Miljkovic, R. Raj, J. Kong, E.N. Wang. Graphene Condenser Coatings, Application #: **Pending**.
- 2) N. Miljkovic, D.J. Preston, R. Enright, E.N. Wang. Jumping-Droplet Electrostatic Energy Harvesting, Application #: **US 62022330**.
- 3) N. Miljkovic, D.J. Preston, D.S. Antao, S. Narayanan, J. Feng, J.H. Sack, D. Saranadhi, E.N. Wang. Jumping Droplet Condensers, Application #: **Pending**.
- 4) S. Boriskina, G. Chen, H. Ghasemi, A. Lenert, K. McEnaney, E.N. Wang, S. Yang, S. Yerci, N. Miljkovic. Internally-Heated Thermal and Externally-Cool Photovoltaic Cascade Solar System for the Full Solar Spectrum Utilization, Application #: **US 61/868715**.
- 5) S. Boriskina, G. Chen, H. Ghasemi, A. Lenert, K. McEnaney, E.N. Wang, S. Yang, S. Yerci, N. Miljkovic. Internally-Heated Thermal and Externally-Cool Photovoltaic Cascade Solar System for the Full Solar Spectrum Utilization, Application #: **US 61/935005**.

- 6) S. Boriskina, G. Chen, H. Ghasemi, A. Lenert, K. McEnaney, E.N. Wang, S. Yang, S. Yerci, N. Miljkovic. Internally-Heated Thermal and Externally-Cool Photovoltaic Cascade Solar System for the Full Solar Spectrum Utilization, Application #: **US 62/014768**.
- 7) E.N. Wang, R. Enright, Y. Nam, N. Miljkovic. Superhydrophobic Nanostructures, Application #: **US 20130244001A1**.
- 8) R. Xiao, N. Miljkovic, R. Enright, E.N. Wang. Heterogeneous Surfaces. **US 9,689,631**.
- 9) N. Miljkovic, D.J. Preston, R. Enright, E.N. Wang. Electric Field Enhanced Condensation. Application #: **US 61/846,696**.
- 10) J.J. Niewels, O.S. Ansari, W.C. Janzen, M.K. Zuraw, N. Miljkovic. Molding-system viscous-drag sensor. **US 7,393,198**.
- 11) T.D. Brand, N. Miljkovic. Hot Runner Melt Pre-Compression Method A. **US 20080296805**.
- 12) T.D. Brand, N. Miljkovic. Hot Runner Melt Pre-Compression Method B. **US 20080296806**.

## **TEACHING and MENTORING EXPERIENCE**

### Classroom Experience

- 1) ME 420 – Intermediate Heat Transfer, fall 2017, University of Illinois at Urbana-Champaign.
- 2) ME 320 – Heat Transfer, spring 2017, University of Illinois at Urbana-Champaign, 45 undergraduate students.
- 3) ME 521 – Convective Heat Transfer, spring 2016, University of Illinois at Urbana-Champaign, 26 graduate students.
- 4) ME 597 – Independent Study, fall 2015, University of Illinois at Urbana-Champaign, 5 graduate students.
- 5) ME 420 – Intermediate Heat Transfer, fall 2015, University of Illinois at Urbana-Champaign, 30 graduate, 1 undergraduate student.
- 6) ME 597 – Independent Study, spring 2015, University of Illinois at Urbana-Champaign, 6 graduate students.
- 7) ME 597 – Independent Study, fall 2014, University of Illinois at Urbana-Champaign, 4 graduate students.
- 8) ME 420 – Intermediate Heat Transfer, fall 2014, University of Illinois at Urbana-Champaign, 30 graduate, 1 undergraduate student.
- 9) 2.006 - Thermal-Fluids Engineering II, 1 Lecture on condensation heat transfer section to undergraduate class, November, 2012, MIT.
- 10) 2.55 – Advanced Heat and Mass Transfer, 1 Lecture on condensation heat transfer/radiation to graduate class, April, 2013, MIT.

### Mentoring Experience (\*Alumni)

#### Postdoctoral Scholars

- 1) Soumyadip Sett. Joined my lab in September 2016.
- 2) Longnan Li, Joined my lab in July 2017.

#### Visiting Scholars

- 3) Aihua Liu – Visiting Scholar. Aihua started working in my lab in December 2016. Aihua is a visiting associate professor from Wuhan University in China.
- 4) Xiao Yan – Visiting Scholar. Xiao started working in my lab in December 2016. Xiao is a visiting PhD student from the Institute of Nuclear and New Energy Technology (INET), Tsinghua University, China. Xiao is sponsored by the China Scholarship Council.
- 5) \*Mohammad Razavi – Visiting Scholar. Mohammad worked in my lab from November 2016 to August 2017. Mohammad was a visiting PhD student from the Department of Polymer Engineering, Isfahan University of Technology, IUT, Isfahan, Iran.
- 6) \*Longnan Li – Visiting Scholar. Longnan worked in my lab in January 2017. Longnan was a visiting PhD student from Sogang University in South Korea.
- 7) \*Dong Niu – Visiting Scholar. Worked in my lab from January to July 2017. Dong was a visiting PhD student from Xi'an Jiaotong University, China. Dong was sponsored by the Chia Scholarship Council.
- 8) \*Baojin Qi – Visiting Scholar. Baojin started working in my lab in June 2016. Baojin was a visiting associate professor from Xi'an Jiaotong University in China sponsored by the Chia Scholarship Council.
- 9) \*Yukihiro Yokohama – Visiting Scholar. Yukihiro worked in my lab (ETRL) from July 2015 to June 2016. Yukihiro works for the Japanese Patent Office.

## Graduate

- 1) Jingcheng Ma – M.S. Student. Joined my lab in August 2017. Jingcheng is pursuing his M.S. degree in Mechanical Science and Engineering. He is co-advised by Professor David Cahill.
- 2) Hanyang Zhao – PhD. Student. Joined my lab in June 2017. Hanyang is pursuing his PhD degree in Mechanical Science and Engineering.
- 3) Kazi Fable - M.S. Student. Joined my lab in May 2017. Kazi is pursuing his M.S. degree in Mechanical Science and Engineering.
- 4) Jahid Hoque – M.S. Student. Joined my lab in January 2017. Jahid is pursuing his M.S. degree in Mechanical Science and Engineering.
- 5) Thomas Foulkes – PhD Student. Joined my lab in January 2017. Tom is pursuing his PhD. Degree in Electrical Engineering and is co-advised by Professor Robert Pilawa-Podgurski of the ECE department.
- 6) Tianyu Yang - M.S. Student. Joined my lab in September 2016. Tianyu is pursuing her M.S. degree in Mechanical Science and Engineering. She is co-advised by Professor William P. King.
- 7) Keith Coulson – M.S. Student. Joined my lab in September 2016. Keith is pursuing his M.S. degree in Mechanical Science and Engineering. He is co-advised by Professor Sanjiv Sinha.
- 8) James Carpenter – M.S. Student. Joined my lab in September 2016. James is pursuing his M.S. degree in Mechanical Science and Engineering.
- 9) Alex Wu – M.S. Student. Joined my lab in September 2016. Alex is pursuing his M.S. degree in Mechanical Science and Engineering.
- 10) Kalyan Boyina – M.S. Student. Joined my lab in January 2016. Kalyan is currently pursuing his PhD degree in my lab.
- 11) Hanmesh Gunnam – M.S. Student. Joined my lab in January 2016. Hanmesh is pursuing his M.S. degree in Mechanical Science and Engineering.
- 12) Junho Oh – PhD. Student. Joined my lab in January 2016. Junho is pursuing his PhD degree in my lab.
- 13) \*Jesus Sotelo – M.S. Student. Joined my lab in September 2015. Jesus obtained his M.S. degree in Mechanical Science and Engineering at UIUC in June 2017. He is currently a working for Boeing.
- 14) Hyeongyun Cha – M.S. Student. Joined my lab in May 2015. Completed M.S. in my lab in June 2016. Hyeongyun is currently pursuing his PhD degree in my lab.
- 15) \*Patricia B. Weisensee – PhD Student. Joined my lab in February 2015. Patty obtained her PhD degree in Mechanical Science and Engineering at UIUC in December 2016. She was co-advised by Professor William P. King and myself. Patty obtained her M.S. degree in the Materials Science and Engineering department at UIUC working under the advisement of Professor David Cahill. She is currently an assistant professor of Mechanical Engineering at the Washington University in St. Louis.
- 16) Patrick Birbarah – M.S. Student. Joined my lab in August 2014. Completed M.S. in my lab in June 2016. Patrick is currently pursuing his PhD degree in my lab.
- 17) Shreyas Chavan – M.S. Students. Joined my lab in August 2014. Completed M.S. in my lab in June 2016. Shreyas is currently pursuing his PhD degree in my lab.
- 18) Alperen Gunay – M.S. Student. Joined my lab in August 2014. Completed M.S. in my lab in June 2016. Alperen currently pursuing his PhD degree in my lab.
- 19) Moonkyung Kim – M.S. Student. Joined my lab in August 2014. Completed M.S. in my lab in June 2016. Moonkyung is currently pursuing his PhD degree in my lab.

## Undergraduate

- 1) Junyoung Ahn - B.S. Student. Joined my lab as an undergraduate researcher in January 2017. Junyoung is pursuing his B.S. degree in Mechanical Science and Engineering.
- 2) Peter Sokalski - B.S. Student. Joined my lab as an undergraduate researcher in January 2017. Peter is pursuing his B.S. degree in Mechanical Science and Engineering.
- 3) Marisa Gnadl - B.S. Student. Joined my lab as an undergraduate researcher in January 2017. Marissa is pursuing her B.S. degree in Mechanical Science and Engineering.
- 4) Derek Dai – B.S. Student. Joined my lab as an undergraduate researcher in January 2017. Derek is pursuing his B.S. degree in Mechanical Science and Engineering.
- 5) Leicheng Zhang (Tsinghua University, China) – B.S. Student. Joined my lab as a visiting undergraduate researcher for the summer of 2017.
- 6) Anand Thamban (National Institute of Technology Karnataka, Surathkal, India) - B.S. Student. Joined my lab as a visiting undergraduate researcher for the summer of 2017.
- 7) Carter Wood - B.S. Student. Joined my lab as an undergraduate researcher in September 2016. Carter is pursuing his B.S. degree in Mechanical Science and Engineering.
- 8) Sang A. Lee - B.S. Student. Joined my lab as an undergraduate researcher in June 2016. Sang A. is pursuing her B.S. degree in Mechanical Science and Engineering.

- 9) \*Nealay Kalita - B.S. Student. Joined my lab as an undergraduate researcher in June 2016. Nealay is pursuing his B.S. degree in Mechanical Science and Engineering.
- 10) Jorge Anaya - B.S. Student. Joined my lab as an undergraduate researcher in June 2016. Jorge is pursuing his B.S. degree in Mechanical Science and Engineering.
- 11) \*Jonah Nguyen - B.S. Student. Joined my lab as an undergraduate researcher in June 2016. Jonah is obtained his B.S. degree in Agricultural Engineering in May of 2017.
- 12) Yangxue Yu - B.S. Student. Joined my lab as an undergraduate researcher in June 2016. Yangxue is pursuing her B.S. degree in Mechanical Science and Engineering.
- 13) Sabrina Yin - B.S. Student. Joined my lab as an undergraduate researcher in June 2016. Sabrina did an REU experience in the ETRL during the summer of 2016. Sabrina is pursuing her B.S. degree in Mechanical Science and Engineering.
- 14) Ryan O'Sullivan - B.S. Student. Joined my lab as an undergraduate researcher in June 2016. Ryan obtained his B.S. degree in Mechanical Science and Engineering in June of 2017. Ryan is currently working as a Technology Analyst at Accenture.
- 15) Jason Yang - B.S. Student. Joined my lab as an undergraduate researcher in June 2016. Jason is pursuing his B.S. degree in Mechanical Science and Engineering.
- 16) \*Jacky Tam - B.S. Student. Joined my lab as an undergraduate researcher in June 2016. Jacky is pursuing his B.S. degree in Mechanical Science and Engineering.
- 17) \*Shreyas Hegde (NITS India) - B.S. Student. Joined my lab as a visiting undergraduate researcher for the summer of 2016. Shreyas is currently pursuing his B.S. degree in Mechanical Engineering at National Institute of Technology - Suratkal, India.
- 18) \*Kishan Kumar (NITS India) - B.S. Student. Joined my lab as a visiting undergraduate researcher for the summer of 2016. Kishan is currently pursuing his B.S. degree in Mechanical Engineering at National Institute of Technology - Suratkal, India.
- 19) \*Jingcheng Ma (SHJT China) - B.S. Student. Joined my lab as a visiting undergraduate researcher for the summer of 2016. Jingcheng obtained his B.S. degree in Mechanical Engineering at Shanghai Jiao Tong University, China in July 2017 and is currently pursuing his M.S. degree in the ETRL.
- 20) \*Yunbo Wang (HUST China) - B.S. Student. Joined my lab as a visiting undergraduate researcher for the summer of 2016. Yunbo is currently pursuing his B.S. degree in Mechanical Engineering at Huazhong University of Science and Technology, China.
- 21) Mateusz Lopez - B.S. Student. Joined my lab as an undergraduate researcher in January 2016. Mat is pursuing his B.S. degree in Mechanical Science and Engineering.
- 22) Juo-Yun Chen - B.S. Student. Joined my lab as an undergraduate researcher in January 2016. Juo-Yun is pursuing her B.S. degree in Mechanical Science and Engineering.
- 23) SoHyeon 'Leah' Youn - B.S. Student. Joined my lab as an undergraduate researcher in September 2015. Leah is pursuing her B.S. degree in Mechanical Science and Engineering.
- 24) \*Jeffrey Jun - B.S. Student. Joined my lab as an undergraduate researcher in August 2015 and finished in June of 2016. Jeff is pursuing his B.S. degree in Mechanical Science and Engineering.
- 25) \*Chengpu Li - B.S. Student. Joined my lab as an undergraduate researcher from August 2015 to December 2016. Chengpu obtained his B.S. degree in Mechanical Science and Engineering and is currently working for EnCore Aerospace.
- 26) \*Deokgeun "Daniel" Park - B.S. Student. Joined my lab as an undergraduate researcher in August 2015 to December 2016. Daniel is pursuing his B.S. degree in Mechanical Science and Engineering.
- 27) Sean Ebihara - B.S. Student. Joined my lab as an undergraduate researcher in June 2015. Sean is pursuing his B.S. degree in Chemistry/Chemical Engineering at UIUC.
- 28) \*Jae Min Chun - B.S. Student. Joined my lab as an undergraduate researcher in May 2015 to December 2016. Jae Min obtained his B.S. degree in Mechanical Science and Engineering at UIUC and is currently pursuing his M.S. degree in Mechanical Science and engineering at UIUC.
- 29) \*Maneesh Nallapaneni (NITW India) - B.S. Student. Joined my lab as a visiting undergraduate researcher for the summer of 2015. Maneesh is currently pursuing his M.S. degree in Mechanical Engineering at Northwestern University.
- 30) \*Micheal Ye - B.S. Student. Joined my lab as an undergraduate summer researcher in 2015. Micheal is pursuing his B.S. degree in Mechanical Science and Engineering at UIUC.
- 31) Yujin Chang - B.S. Student. Joined my lab as an undergraduate researcher in March 2015. Yujin is pursuing her B.S. degree in Mechanical Science and Engineering at UIUC.
- 32) Dong Hoon Kang - B.S. Student. Joined my lab as an undergraduate researcher in March 2015. Dong Hoon is pursuing his B.S. degree in Mechanical Science and Engineering at UIUC.
- 33) \*Qian Wang - B.S. Student. Joined my lab as an undergraduate researcher in April 2015 and finished in June of 2016. Qian is pursuing his M.S. degree in Mechanical Engineering at Stanford University.

- 34) Naveen Nagarajan - B.S. Student. Joined my lab as an undergraduate researcher in March 2015. Naveen is pursuing his B.S. degree in Mechanical Science and Engineering at UIUC.
- 35) Nitish Singla - B.S. Student. Joined my lab as an undergraduate researcher in February 2015. Nitish obtained his B.S. degree in Mechanical Science and Engineering at UIUC in 2017. Nitish is currently working at AIG.
- 36) \*Junjiao Tian - B.S. Student. Joined my lab as an undergraduate researcher in January 2015. Junjiao is pursuing his B.S. degree in Mechanical Science and Engineering at UIUC.
- 37) \*Michael Atten – B.S. Student. Joined my lab as an undergraduate researcher in October 2014 and finished in December 2015. Michael is pursuing his M.S degree in Mechanical Science and Engineering at UIUC.
- 38) \*Jesus Sotelo – B.S. Student. Joined my lab as an undergraduate researcher in October 2014 and finished in August of 2015. Jesus is currently pursuing his M.S. degree in Mechanical Science and Engineering at UIUC.
- 39) \*Steven Yeung – B.S. Student. Joined my lab as an undergraduate researcher in October 2014 and finished in December of 2015. Steven is currently pursuing graduate studies in the Mechanical Engineering Department at MIT.
- 40) \*Chen Zhong – B.S. Student. Joined my lab as an undergraduate researcher in October 2014 and finished in December of 2015. Chen is currently pursuing his M.S. degree in Mechanical Engineering at Stanford University.
- 41) \*Hannah Xu – B.S. Student. Joined my lab as an undergraduate researcher in October 2014 and finished in December of 2015. Hannah is pursuing her B.S. degree in Mechanical Science and Engineering at UIUC.
- 42) \*Zhaoer Li – B.S. Student. Joined my lab as an undergraduate researcher in November 2014 to August 2016. Zhaoer obtained his B.S. degree in Mechanical Science and Engineering at UIUC in 2017, and is currently pursuing his M.S. degree at the University of Michigan.
- 43) \*Alexander Pauls – B.S. Student. Joined my lab as an undergraduate researcher in November 2014. Alexander is pursuing his B.S. degree in Mechanical Science and Engineering at UIUC.
- 44) \*Saketh Undurty – B.S. Student. Joined my lab as an undergraduate researcher in October 2014 and finished in August of 2015. Saketh is pursuing his B.S. degree in Computer Science at UIUC.
- 45) \*William Moy – B.S. Student. Worked in my lab as an undergraduate researcher from November 2014 to June 2015, graduating with his B.S. degree in Mechanical Science and Engineering at UIUC in June of 2015. William is currently working for the Watlow Electric Manufacturing Company.
- 46) Alexander Limia (MIT) – Supervised as part of summer research program, “[Electrowetting Actuation of Jumping Droplets](#).” Summer 2013. Alex is currently pursuing graduate studies in the Mechanical Engineering Department at the Georgia Institute of Technology.
- 47) Ian McKay (MIT) – Supervised and advised on undergraduate research and B.S. thesis, “[Transient Thermoelectric Power Generation](#).” Fall 2012, Ian is currently pursuing his Ph.D. in the Mechanical/Chemical Engineering departments at Stanford University.
- 48) Jean Sack (MIT) – MIT undergraduate research – “Structured surfaces for enhanced condensation.” Summer 2012, winter 2013. Jean is currently pursuing graduate studies in the Mechanical Engineering department at MIT at the DRL. I helped advise her on her M.S. thesis, “Quantification of robustness and durability of superhydrophobic coatings.” June 2103 – August 2014.
- 49) Ken Lopez (MIT) – Supervised and advised on undergraduate research and B.S. thesis, “[Hierarchical superhydrophobic aluminum surfaces for condensation applications](#).” Ken is currently pursuing graduate studies in the Mechanical Engineering department at Stanford University.
- 50) Nicholas Dou (MIT) - Supervised and advised on undergraduate research and B.S. thesis, “[Condensation on superhydrophobic copper oxide nanostructures](#).” Nicholas is currently pursuing graduate studies in the Mechanical Engineering department at the California Institute of Technology.

#### High School

- 1) Allison Bookstein (MIT) – Supervised and advised on research activities as part of a summer high school student program. Summer 2011. Allison is currently pursuing a B.S. degree in Mechanical and Industrial Engineering at the University of Maryland, College Park.

#### **ACADEMIC AND PROFESSIONAL ACTIVITIES**

##### Editorships

Journal: World of Mechanical Engineering – Member of the International Editorial Board

##### Professional Society Memberships

American Chemical Society (ACS)  
American Association for the Advancement of Science (AAAS)  
American Physical Society (APS)  
American Society of Mechanical Engineers (ASME)  
Institute of Electrical and Electronics Engineers (IEEE)  
Materials Research Society (MRS)

Referee for

ACS Applied Materials and Interfaces, 2010-present  
ACS Industrial & Engineering Chemistry Research, 2015-present  
ACS Journal of Physical Chemistry, 2013-present  
ACS NANO, 2010-present  
Advanced Engineering Materials, 2014-present  
Advanced Materials, 2014-present  
Angewandte Chemie, 2015-present  
Applied Physics Letters, 2010-present  
Applied Thermal Engineering, 2015-present  
ASME Journal of Heat Transfer, 2010-present  
Chemical Physics Letters, 2012-present  
Chemical Engineering and Processing, 2013-present  
Chemical Engineering and Technology, 2017-present  
Energy, 2014-present  
Experimental Thermal and Fluid Science, 2014-present  
IEEE – Transactions on Nanotechnology, 2015 - present  
International Journal of Heat and Mass Transfer, 2013-present  
Journal of Heat Transfer, 2012-present  
Langmuir, 2010-present  
Nano Letters, 2012-present  
Numerical Heat Transfer, 2013-present  
Proceedings of the National Academy of Sciences, 2014-present  
RSC Advances – 2016-present  
RSC Chemical Science – 2016-present  
Scientific Reports, 2014-present  
Small, 2016 - present

Conference Session/Topic Organizer

- 1) The 10th International Conference on Boiling & Condensation Heat Transfer, Nagasaki, Japan, March 12-15, 2018 - **Member of the International Science Committee, Session Chair.**
- 2) ASME 2017 International Mechanical Engineering Congress and Exposition, IMECE2017 - Topic 10-17 Visualization of Heat Transfer, Tampa, FL, November 3-9, 2017, **Topic Co-Organizer.**
- 3) ASME 15th International Conference on Nanochannels, Microchannels, and Minichannels, ICNMM2017 – Track 12 Conjugate Micro- and Nano-Scale Heat Transfer, Cambridge, MA, August 27-31, 2017, **Track Co-Chair.**
- 4) ASME 2017 Summer Heat Transfer Conference – Track 17 Phase-Change Heat Transfer at Micro/Nano-Scale and Track 15 Visualization of Heat Transfer, Bellevue, WA, July 9-14, 2017, **Topic Organizer.**
- 5) ASME 2016 Summer Heat Transfer Conference – Track 4 Nanoscale Thermal Transport, Washington DC, July 10-14, 2016, **Topic Organizer and Session Chair.**
- 6) ASME 2015 InterPACK/ICNMM Conference – Topic 6-4 Pool Boiling and Condensation, San Francisco, CA, July 6-9, 2015, **Topic Organizer and Session Chair.**
- 7) 9th International Conference on Boiling and Condensation Heat Transfer – Session Condensation 2, Boulder, CO, April 26-30, 2015, **Session Chair.**
- 8) The 15<sup>th</sup> International Heat Transfer Conference – Session CDS4 - Condensation, Kyoto, Japan, August 10-15, 2014, **Session Chair.**
- 9) ASME 8th International Conference on Energy Sustainability – Session 1-9-1 Micro and Nano Technology for Phase-Change Applications, Boston, MA, June 30–July 2, 2014, **Session Chair.**
- 10) ASME 4th Micro/Nanoscale Heat & Mass Transfer International Conference – Session 11-3 Liquid Flow and Heat Transfer at Small Scales (II), Hong Kong, China, December 11-14, 2013, **Session Chair.**
- 11) ASME International Mechanical Engineering Congress & Exposition – Session 9-3-14 Nanoscale Phase-Change and Near-Field Heat Transfer, San Diego, CA, November 15-21, 2013, **Session Chair.**

#### Review Panels

- 1) U.S. Army Corps of Engineers' Engineer Research and Development Center (ERDC) – May 2016
- 2) U.S. Army Corps of Engineers' Engineer Research and Development Center (ERDC) – May 2015
- 3) NSF CBET – January 2015
- 4) NSF CBET – September 2016

#### Departmental Committees

- 1) UIUC Graduate Programs Committee (GPC) Member – Fall 2014, Spring 2015, Fall 2015, Spring 2016

#### External Committees

- 1) Vice-Chair of the ASME Heat Transfer Division K-22 Committee on Visualization (2017 – 2019)
- 2) Member of the ASME Heat Transfer Division K9 Committee on Nanoscale Thermal Transport

#### Consulting Activities

- 1) nuAngle Ltd. - June 2015

## SELECTED MEDIA COVERAGE

[“Miljkovic group develops improved technique to optically image dynamic droplet processes,”](#) J. Cation, **UIUC MechSE News**, November 1, 2016.

“Thin coating on condensers could make power plants more efficient,” D. L. Chandler, [MIT News](#), [Nanowerk](#), [Phys.Org](#), [Gizmag](#), [Product Design & Development](#), May 29, 2015.

[“Graphene as hydrophobic surface coating presented in new paper,”](#) J. Cation, **UIUC MechSE News**, April 22, 2015.

[“Miljkovic pleased to join ‘powerhouse’ Illinois,”](#) M. Staub, **UIUC MechSE News**, October 1, 2014.

“Steam from the sun,” D. L. Chandler, [MIT News](#), [Clean Technica](#), [Phys.Org](#), [Azom](#), [Science Recorder](#), [Yahoo News](#), [Take Part](#), [Climate Progress](#), July, 2014.

[“A Simple Sun-Soaking ‘Sponge’ Could Provide A Boost to Solar-Powered Steam Generation,”](#) C. Poladian, **International Business Times**, July 21, 2014

[“Sponge Converts Sunlight into Steam for Electricity,”](#) T. Staedter, **Discovery News**, July 22, 2014.

[“Solar Sponge Efficiently Makes Steam,”](#) D. Main, **Popular Science**, July 25, 2014.

[“Picking up steam,”](#) **The Economist**, from the print edition, August 2, 2014.

[“System Converts Solar Efficiently to Steam,”](#) C. Graber, **Scientific American**, August 4, 2014.

[“Sponge takes light to make steam,”](#) Nature Publishing Group, **Nature**, Vol. **511** (7511), 2014.

“Getting a charge out of water droplets,” D. L. Chandler, [MIT News](#), [MIT Front Page](#), [Phys.Org](#), [Nanowerk](#), [The Economic Times](#), [News Tonight Africa](#), [R&D Magazine](#), [India Times](#), [BostInno](#), [Azom](#), [Yahoo News](#), [Science Daily](#), [Clean Technica](#), [NASDAQ](#), [The Times of India](#), July, 2014.

[“MIT Develops Phone That Charges From WATER,”](#) T. Tamblyn, **The Huffington Post**, July 17, 2014.

[“Charging up with jumping droplets,”](#) I. Randall, **Physics World**, July 18, 2014.

[“Bouncing water droplets could be used to charge phones,”](#) K. Collins, **Wired**, July 18, 2014.

[“Electricity Generation Discovery Paves Way for Rain-Powered Smartphones,”](#) A. Cuthbertson, **International Business Times**, July 15, 2014.

[“Charging Your Phone with Jumping Droplets,”](#) N. S. Giges, **ASME**, November 27, 2014.

“Research update: Electric fields can push droplets from surfaces,” D. L. Chandler, [MIT News](#), [Phys.Org](#), [Nanowerk](#), [Product Design & Development](#), [ECN](#), December, 2013.

[“Electric Fields Pushing Droplets from Surfaces,”](#) C. Deemer, **Nanotech**, Dec. 29, 2013.

[“Faculty Highlight: Evelyn Wang,”](#) D. Paiste, **MIT News**, Nov. 4, 2013.

[“Electric Water Droplets and a Secret to Long Life \(in Rats. Anyway\),”](#) D. Quenqua, **New York Times**, Oct. 7, 2013.

[“Fuel savings of 1-2% for CCGT possible from superhydrophobic surfaces,”](#) M. Ramsay, **Gas to Power Journal**, Oct. 27, 2013.

[“Jumping Water Droplets Could Be Used to Generate Energy. Study Suggests,”](#) T. Kemsley, **Nature World News**, Oct. 3, 2013.

[“Jumping Droplets Could Lead to Improved Power Plant Condensers,”](#) J. Fenner, **Guardian Express**, Oct. 3, 2013.

[“Amid the quest for self-cleaning windows, MIT scientists found a brand new source of green energy,”](#) T. Woody, **QUARTZ**, Oct. 4, 2013.

[“Could tiny water droplets lower your electric bill?”](#) E. Barber, **The Christian Science Monitor**, Oct. 3, 2013.

[“How tiny water droplets could lower your electric bill,”](#) C. Kerns, **National Monitor**, Oct. 11, 2013.

[“Jumping Droplets: Electrically Charged Water Droplets Could Increase Efficiency Of Power Plants,”](#) T. Green, **International Business Times**, Oct. 2, 2013.

[“Droplets get a charge out of jumping,”](#) D.L. Chandler, [MIT News](#), [Phys.Org](#), [Nanowerk](#), [R&D Magazine](#), [EurekAlert](#), [Science Newline](#), [Science Daily](#), [AZO Nano](#), [Scientific Computing](#), [Franchise Herald](#), [French Tribune](#), [Boston Business Journal](#), [University Herald](#), October, 2013.

[“Explained: Hydrophobic and hydrophilic,”](#) D.L. Chandler, **MIT News**, July 16, 2013.

[“Jumping droplets repel each other,”](#) Nature Publishing Group, **Nature**, Vol. **502** (7469), 2013.

[“Better droplet condensation could boost power efficiency,”](#) D.L. Chandler, [MIT News](#), [Phys.Org](#), [Nanowerk](#), June 21, 2013.

[“Interfacial Materials with Special Wettability,”](#) **MRS Bulletin Cover**, Volume 38, Issue 5, 2013.

[“Water leaps from leaf-like nanoscale pattern; desalination and power plants could benefit,”](#) D. Kelly, **Environmental Monitor Magazine**, Jan. 11, 2013.

[“Research update: Jumping droplets help heat transfer,”](#) D.L. Chandler, [MIT News](#), [MIT Front Page](#), [NSF News](#), [Phys.Org](#), January, 2013.

[“Harnessing Solar energy,”](#) N.W. Stauffer, **MIT News**, Dec. 13, 2012.

[“Harnessing Solar energy,”](#) N.W. Stauffer, **MIT Energy Futures Magazine**, Autumn 2012.

[“At MIT, droplets dropping faster prove efficiency for powerplants,”](#) I.D. Muri, **CBS Smart Planet**, March 4, 2012.

[“Making droplets drop faster,”](#) D.L. Chandler, [MIT News](#), [MIT Front Page](#), [Phys.Org](#), [Science Daily](#), [AZO Nano](#), [The Engineer](#), [AZOM](#), February, 2012.

[“Nano-patterns enhance condensation,”](#) **Water Desalination Report**, Vol. **48** (8), 2012.

[“Solar Design From MIT Does Double Duty,”](#) P. Danko, **Environmental News Network**, Nov. 11, 2011.

[“Solar Energy: Will it Become the New Normal?”](#) J. Orovic, **International Business Times**, Oct. 31, 2011.

[“MIT Researchers Create a Way to Generate Heat and Electricity From Solar Energy,”](#) M. Smith, **Reuters**, Oct. 25, 2011.

[“The Future of Solar Tech: MIT Develops Solar Power System that can Produce Heat and Electricity Simultaneously,”](#) E. Devaney, **New England Post**, Oct. 21, 2011.

[“A New Approach to Solar Power,”](#) D.L. Chandler, [MIT News](#), [MIT Front Page](#), [Phys.Org](#), [Energy Harvesting Journal](#), [R&D Magazine](#), [AZO Cleantech](#), [TG Daily](#), [BostInno](#), October, 2011.

[“In MechE, Viable Clean Energy Isn’t Just Wishful Thinking,”](#) **MIT MechEConnects**, Vol. **2** (2), 2011.