

Ronggui Yang

Professor, ASME Fellow

S.P. Chip and Lori Johnson Fellow in Engineering

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SHORT BIO:

Dr. Ronggui Yang is the S.P. Chip and Lori Johnson Faculty Fellow and a Professor of Mechanical Engineering directing the Nano-enabled Energy Conversion, Storage, and Thermal Management Systems group (NEXT) at the University of Colorado Boulder (CU-Boulder). Dr. Yang is also a Faculty Fellow for the Materials Science and Engineering Program and a Faculty Affiliate for the CU/NREL Renewable and Sustainable Energy Institute at CU-Boulder. Dr. Yang received his Ph.D degree focusing on Nanoscale Heat Transfer with Professor Gang Chen in Mechanical Engineering and Professor Mildred S. Dresselhaus in Physics and Electrical Engineering from MIT in February 2006. Since January 2006, he started his faculty career as an Assistant Professor at CU-Boulder and has been promoted to Associate Professor (two-years ahead of normal tenure clock) in summer 2011 and to Full Professor in summer 2016. Prior to MIT, he had a Master's degree in MEMS from UCLA in 2001, a Master's degree in Engineering Thermophysics from Tsinghua University in Beijing in 1999, and a Bachelor's degree in Thermal Engineering from Xi'an Jiaotong University in 1996. His research interests are on the fundamentals of nanoscale transport phenomena (thermal, electrical, thermoelectric, phase-change) and the applications of micro/nanotechnologies for thermal, energy and water systems. His notable contributions include developing multiscale simulation framework for thermal and thermoelectric transport in nanostructured materials, the first experimental demonstration of quasi-ballistic phonon transport using ultrafast pump-and-probe method with soft X-ray, and most recently on the development of hybrid micro/nano-structured surfaces for phase-change heat transfer enhancement. Dr. Ronggui Yang has published ~120 journal papers, delivered ~80 invited seminars and is associated with >140 invited and contributed conference talks and posters that garnered numerous best paper/presentation/poster awards. His journal papers are highly cited, with an H-index of 30, a total citation > 4500 times as of December 30, 2016, and an annual citation > 800 times per ISI Web of Science since 2015 (an H-Index of 37, a total citation > 7000 times as of December 30, 2016, and an annual citation > 1200 times since 2015, per Google Scholar). His innovative research has won him numerous awards including the 2014 ITS Young Investigator in Thermoelectrics from International Thermoelectric Society (ITS), the 2010 ASME Bergles-Rohsenow Young Investigator Award in Heat Transfer, an NSF CAREER Award in 2009, the MIT Technology Review's TR35 Award and the DARPA Young Faculty Award in 2008, the 2005 Goldsmid Award for Research Excellence in Thermoelectrics by a Graduate Student from ITS, and a NASA Tech Brief Award for a Technical Innovation in 2004. He has also won the Provost's Achievement Award (2012), the Dean's Performance Award (2010), the Woodward Outstanding Faculty of Mechanical Engineering (2011) and the Outstanding Research Award in Mechanical Engineering (2008) from the University of Colorado Boulder. He was endowed with the S.P. Chip and Lori Johnson Faculty Fellow for 2013-2017 and the Sanders Faculty Fellow for 2008-2012. Dr. Yang is also well recognized for his professional services. Dr. Yang is currently the Chair (2015-2017) and the Founding Vice-Chair (2012-2015) of the K-9 Technical Committee on Nanoscale Thermal Transport of ASME Heat Transfer Division. In 2015, Dr. Yang is elected a Fellow of ASME. He is also an Associate Editor for ASME Journal of Heat Transfer and and Associate Editor for Heat Transfer Research published by Begell House Inc.

EDUCATION:

- **Massachusetts Institute of Technology (MIT)**, GPA:5.0/5.0, Feb. 2006
Ph.D. in Mechanical Engineering (Heat Transfer), Minor: Solid State Electronics
Dissertation: Nanoscale Heat Conduction with Applications in Nanoelectronics and Thermoelectrics.
Dissertation Advisor: Professor Gang Chen
Committee: Gang Chen, Mildred S. Dresselhaus, John H. Lienhard, Borivoje B. Mikic
- **University of California, Los Angeles (UCLA)**, GPA: 3.85/4.0, June 2001
M.S. in Mechanical Engineering (Micro-Electro-Mechanical Systems)
- **Tsinghua University**, Beijing, China, GPA:85/100, July 1999
M.S. in Engineering Thermophysics
- **Xi'an Jiaotong University**, Xi'an, China, GPA: 85/100, July 1996
B.S. in Thermal Engineering

RESEARCH INTERESTS:

- Micro/Nanoscale and Ultrafast Transport Phenomena
- Micro/Nano-Enabled Thermal Management for Electronics and Energy Systems
- Micro- and Nanotechnologies for Energy Conversion and Storage
- MEMS/NEMS and Micro-/Nano- Fabrication

POSITIONS HELD:

07/2016 - Full Professor of Mechanical Engineering, CU-Boulder.
11/2012 - Faculty Fellow, Materials Science and Engineering Program, CU-Boulder.
09/2009 - Faculty Affiliate, CU/NREL Renewable and Sustainable Energy Institute (RASEI).
06/2014 - Co-Founder, Kelvin Thermal Technologies, Inc., Boulder, CO.
07/2011-06/2016 Associate Professor of Mechanical Engineering, CU-Boulder.
01/2006-07/2011 Assistant Professor of Mechanical Engineering, CU-Boulder.
09/2001-12/2005 Graduate Research Assistant, Mechanical Engineering, MIT.
09/1999-07/2001 Graduate Research Assistant, Mechanical and Aerospace Engineering, UCLA.
09/1996-07/1999 Graduate Research Assistant, Thermal Engineering, Tsinghua Univ., China

AWARDS AND DISTINCTIONS:

2016 Invited Participants, Arab-American Frontiers in Science, Engineering, and Medicine (NAS & NAE)
2015 Fellow, American Society of Mechanical Engineering (ASME)
2014 Marquis Who's Who in America (from 69th and subsequent editions).
2014 ITS Young Investigator Award, International Thermoelectric Society (ITS)
2013-2017 S.P. Chip and Lori Johnson Faculty Fellow of Engineering, CU-Boulder.
2013 Outstanding Research Award, Department of Mechanical Engineering, CU-Boulder
2013 JSPS Invitation Fellow (Short Term), Japan Society for the Promotion of Science.
2012 Provost's Faculty Achievement Award, Office of the Provost, CU-Boulder.
2011 Steve Woodward Outstanding Faculty Award, Department of Mechanical Engineering, CU-Boulder
2010 ASME Bergles-Rohsenow Young Investigator Award in Heat Transfer
2010 Dean's Award for the Outstanding Junior Faculty Member, CU-Boulder

2010 Biography featured as a technology developer with outstanding potential that could reverse the decline in the book “The Rise and Fall of American Technology” by Dr. Lynn G. Gref.

2009 National Science Foundation (NSF) CAREER Award

2009 15th U.S. Frontiers of Engineering Symposium, National Academy of Engineering.

2008 Technology Review’s TR35 Award (one of the 35 young scientists and technologists in world who are under the age of 35, but their work--spanning medicine, computing, communications, electronics, nanotechnology, energy, and more--is changing our world.)

2008 DARPA Young Faculty Award (one of the 39 rising stars in university microsystems research)

2008-2012 Sanders Faculty Fellow, College of Engineering and Applied Science, CU-Boulder.

2008 Outstanding Research Award, Department of Mechanical Engineering, CU-Boulder

2005 Best Paper Award – Research, InterPACK 2005, 1 out of 500+ papers.

2005 Goldsmid Award, International Thermoelectrics Society.

2004 NASA Certificate of Recognition for a Technical Innovation (Space Act Tech Brief Award), NASA.

Service Leadership:

07/2015 – 06/2017, Chair, K-9 Technical Committee on Nanoscale Thermal Transport, ASME Heat Transfer Division.

12/2014 – 12/2016, Chair, Nanoengineering for Energy and Sustainability (NEES) Steering Committee, ASME Nanoengineering Council.

2016- present, Associate Editor, Journal of Heat Transfer, published by ASME.

2016- present, Associate Editor, Heat Transfer Research, published by Begell House.

2014- present, Editorial Board Member, Scientific Reports, published by Nature Publishing Group.

2014- 2016, Guest Editor for Invited Topical Reviews, Journal of Electronic Packaging.

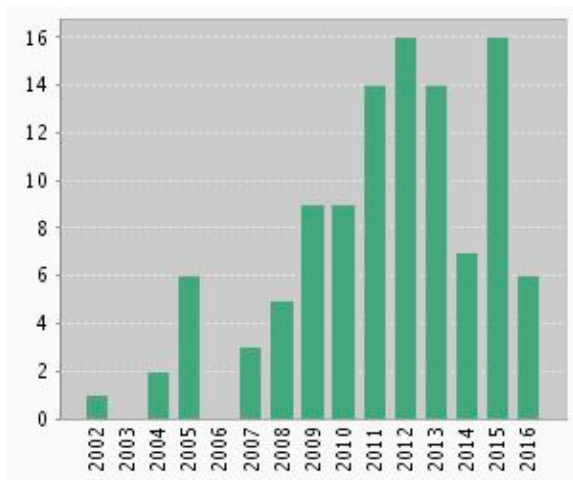
2012 – 06/2015, Founding Vice Chair, K-9 Technical Committee on Nanoscale Thermal Transport, ASME Heat Transfer Division.

2012 – 06/2014, Vice Chair, Nanoengineering for Energy and Sustainability (NEES) Steering Committee Member, ASME Nanoengineering Council.

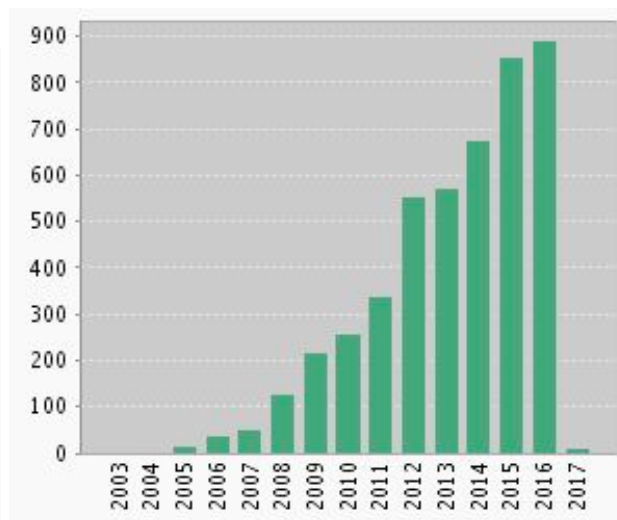
RESEARCH AND CREATIVE WORK

(Annual Citation >800 in 2015, H-Index: 30 and Total Journal Paper Citations > 4500 as of December 30, 2016, according to ISI Web of Science (SCI).

Annual Citation ~1200 in 2015, H-Index: 37 and Total Citations > 7000 as of December 10, 2016 according to Google Scholar.)



(Annual Journal Publications

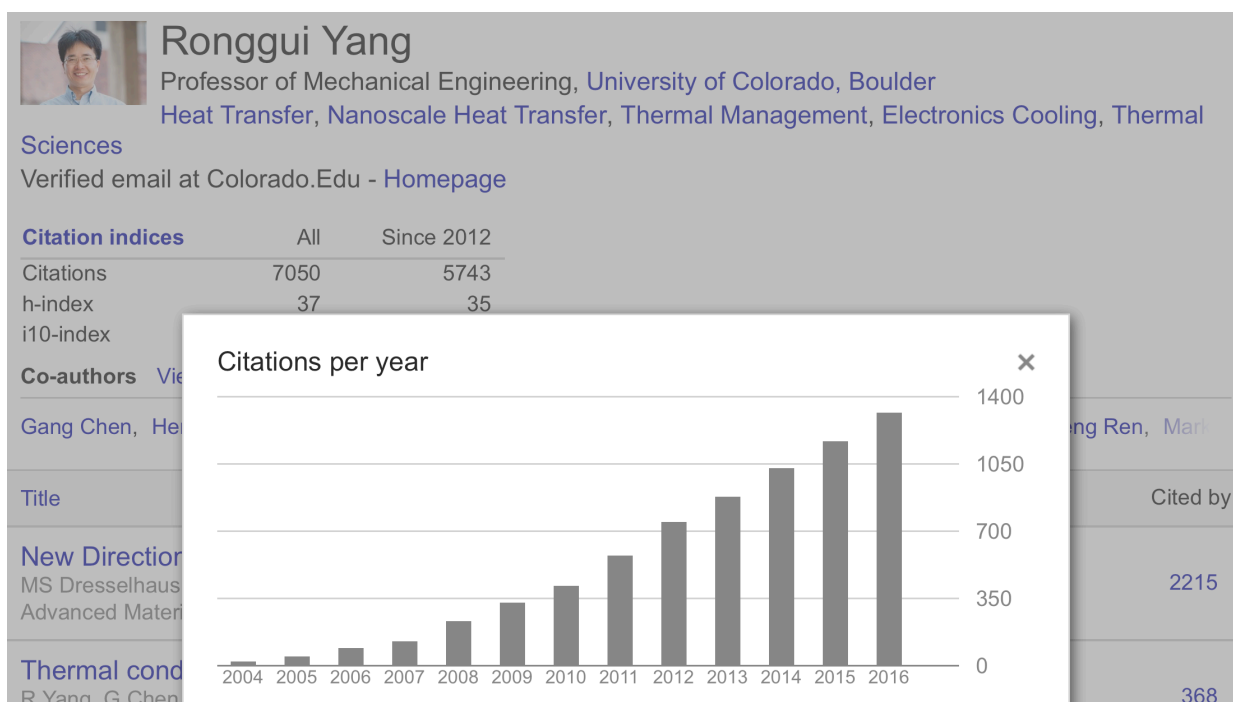


Annual Citations to Journal Papers)



Citation in

<https://scholar.google.com/citations?user=rLiK2VIAAAAJ&hl=en>



a). Book Chapters

- BC1. Xiaokun Gu and Ronggui Yang, Phonon Transport and Thermal Conductivity in Layered Two-Dimensional Materials (**Invited Review**), Annual Review of Heat Transfer, Volume 19, pp. ***, 2016, [Web Link](#) for access to the manuscript on arxiv.org.
- BC2. K. Koumoto, R. M. Tian, R. G. Yang, and C. L. Wan, “Chapter 18. Inorganic/Organic Hybrid Superlattice Materials”, [Material Aspects of Thermoelectricity](#), edited by C. Uher, CRC Press, pp. 501-518, 2016.
- BC3. Jose Ordóñez-Miranda, Ronggui Yang, and Juan Jose Alvarado-Gil, “Thermal Conductivity of Particulate Composites,” Chapter 3 in “Nanoscale Thermoelectrics” in the Springer Series “[Lecture Notes on Nanoscale Science and Technology](#)”, edited by Zhimin Wang, Vol. 16, pp. 93-139, 2014 [PDF](#).
- BC4. Pilhwa Lee, Kurt Maute and Ronggui Yang, “An Extended Finite Element Method for the Analysis of Submicron Heat Transfer Phenomena,” book chapter in "Multiscale Methods in Computational Mechanics" in the Springer series “[Lecture Notes in Applied and Computational Mechanics](#)”, Vol. 55, pp. 195-212, 2011, [PDF](#).
- BC5. Suraj J. Thiagarajan, Wei Wang, and Ronggui Yang, “Nanocomposites as High Efficiency Thermoelectric Materials,” in Annual Review of Nano Research, Volume 3, edited by G.Z. Cao, Q.F. Zhang, and C.J. Brinker, World Scientific Publisher Co., Singapore, p. 447-492, 2009. [PDF](#)
- BC6. G. Chen, D. Borca-Tascuic and R.G. Yang, “Nanoscale Heat Transfer,” in “Encyclopedia of Nanoscience and Nanotechnology”, edited by H.S. Nalwa, Vol. 7, pp. 429-459, American Scientific Publishers, 2004. [PDF](#)

b). Published & Accepted Journal Papers:

2017

123. Rongfu Wen, Qian Li, Jiafeng Wu, Gengsheng Wu, Wei Wang, Miao Tian, Yunfei Chen, Xuehu Ma, and Ronggui Yang, Hydrophobic copper nanowires for enhancing condensation heat transfer, Nano Energy, in Press.
122. Zhenqian Pang, Xiaokun Gu, Yujie Wei, Ronggui Yang, Mildred S. Dresselhaus, Stable carbon honeycomb with high specific strength and thermal conductivity, Nano Letters, published online, [Web Link](#).
121. Bo Sun, Xiaokun Gu, Qingsheng Zeng, Xi Huang, Yuexiang Yan, Zheng Liu, Ronggui Yang, and Yee Kan Koh, Temperature dependence of anisotropic thermal conductivity tensor of bulk black phosphorus, Advanced Materials, published online, [Web Link](#).
120. A. Tessema, D. Zhao, J. Moll, S. Xu, R. Yang, C. Li, SK. Kumar, A. Kidane, Effect of filler loading, geometry, dispersion and temperature on thermal conductivity of polymer nanocomposites, Polymer Testing, Vol. 57, pp. 101-106, 2017, [Web Link](#).
119. Li-Anne Liew, Ching-Yi Lin, Ryan Lewis, Susan Song, Qian Li, Ronggui Yang, Y.C. Lee, Flexible Thermal Ground Planes Fabricated with Printed Circuit Board Technology, ASME Journal of Electronic Packaging, Vol. 139, Art # 011003, 2017, [Web Link](#).

2016

118. Xin Qian, Xiaokun Gu, Mildred S. Dresselhaus, Ronggui Yang, Anisotropic Tuning on Graphite Thermal Conductivity by Lithium Intercalation, Journal of Physical Chemistry Letters, Vol. 7, pp4744-4750, 2016, [Web Link](#).

117. Alexander S. Yersak, Ryan J. Lewis, Li-Anne Liew, Rongfu Wen, Ronggui Yang, and Yung-Chung Lee, Atomic Layer Deposited Coatings on Nanowires for High Temperature Water Protection, ACS Applied Materials and Interfaces, Vol. 8, pp. 32616-32623, 2016, [Web Link](#).
116. Zhenqian Pang, Xin Qian, Ronggui Yang, and Yujie Wei, Super-stretchable Borophene, European Physics Letters (EPL), Vol. 116, Art #36001, 2016, [Web Link](#).
115. Arto J. Groehn, Allan Lewandowski, Ronggui Yang and Alan W. Weimer, Hybrid Radiation Modeling Approach for Multi-phase Solar-thermal Reactor Systems Operated at High-temperature, Solar Energy, Vol. 140, pp. 130-140, 2016, [Web Link](#).
114. Xiaokun Gu and Ronggui Yang, Phonon transport in two-dimensional $\text{Mo}_{1-x}\text{W}_x\text{S}_2$ alloy embedded with nanodomains, Physical Review B, Vol. 94, Art # 075308, 2016, [Web Link](#).
113. Dongliang Zhao, Saad Jajja, and Ronggui Yang, Measurement Techniques for Thermal Conductivity and Conductance of Bulk and Thin Film Materials (Invited Review), ASME Journal of Electronic Packaging, Vol. 138, Art. 040802 (19 pages), 2016. [Web Link](#).
112. Shanshan Xu, Ryan John Lewis, Li-Anne Liew, Yung-Cheng Lee, Ronggui Yang, Development of Ultra-Thin Thermal Ground Planes by Using Stainless-Steel Mesh as Wicking Structure, IEEE/ASME Journal of Micro-Electro-Mechanical Systems, Vol. 25, pp. 842-844, 2016, [Web Link](#).
111. Jie Zhu, Haechan Park, Jun-Yang Chen, Xiaokun Gu, Hu Zhang, Sreejith Karthikeyan, Nathaniel Wendel, Stephen A. Campbell, Matthew Dawber, Xu Du, Mo Li, Jian-Ping Wang, Ronggui Yang and Xiaojia Wang, Revealing the Anisotropic Thermal Conductivity of Black Phosphorus using the Time-Resolved Magneto-Optical Kerr Effect, Advanced Electronic Materials, Vol. 2, Art No. 201600040, 2016, [Web Link](#).
110. Xiaokun Gu, Baowen Li and Ronggui Yang, Layer thickness-dependent phonon transport and thermal conductivity in MoS_2 , Journal of Applied Physics, Vol. 119, Art No. 085106, March 2016, [Web Link](#).
109. Xin Qian, Xiaokun Gu, and Ronggui Yang, Lattice Thermal Conductivity of Organic-Inorganic Hybrid Perovskite $\text{CH}_3\text{NH}_3\text{PbI}_3$, Applied Physics Letters, Vol. 108, Art No. 063902, 2016, [Web Link](#).
108. Tingyu Lu, Jun Zhou, Tsuneyoshi Nakayama, Ronggui Yang, Baowen Li, Interfacial thermal conductance across metal-insulator/semiconductor interfaces due to surface states, Physical Review B, Vol. 93, Art No. 085433, 2016, [Web Link](#).
107. Daniela Molina Piper, Tyler Evans, Shanshan Xu, Seul Cham Kim, Sang Sub Han, Ken Liang Liu, Kyu Hwan Oh, Ronggui Yang and Se-Hee Lee, Optimized Silicon Electrode Architecture, Interface, and Microgeometry for Next-generation Lithium-ion Batteries, Advanced Materials, Vol. 28, pp. 188-193, 2016, [Web Link](#).

2015

106. Xin Qian, Xiaokun Gu, and Ronggui Yang, Anisotropic thermal transport in organic-inorganic hybrid crystal $\beta\text{-ZnTe}(\text{en})_{0.5}$, Journal of Physical Chemistry C, Vol. 119, pp. 28300-28308, 2015, [Web Link](#)
105. Chunlei Wan, Yumi Kodama, Mami Kondou, Ryo Sasai, Xin Qian, Xiaokun Gu, Kenji Koga, Kazuhisa Yabuki, Ronggui Yang, and Kunihiro Koumoto, Dielectric mismatch mediates carrier mobility in organic-intercalated two-dimensional transition metal dichalcogenide TiS_2 , Nano Letters, Vol. 15, pp. 6302-6308, 2015, [Web Link](#).

104. Ryan Lewis, Shanshan Xu, Li-Anne Liew, Collin Coolidge, Ronggui Yang, Y.C. Lee, Thin Flexible Thermal Ground Planes: Fabrication and Scaling Characterization, IEEE/ASME Journal of Micro-Electro-Mechanical Systems, Vol. 24, pp.2040-2048, 2015, [Web Link](#).
103. Zheng Zhang, Ronggui Yang, Gene C. Hilton, and Yifu Ding, Capillary rupture of suspended polymer concentric rings, Soft Matter, Vol. 11, pp. 7264-7269, 2015, [Web Link](#).
102. J. Ordonez-Miranda, and Ronggui Yang, Sebastian Volz and J.J. Alvarado-Gil, Steady-State and Modulated Temperature Profiles in Layered Systems Predicted by the Phonon Boltzmann Transport Equation, Journal of Applied Physics, Vol. 118, Art #075108, 2015, [Web Link](#).
101. Suraj Thiagarajan, Ronggui Yang, and Sreekant Narumanchi, Bubble Dynamics and Nucleate Pool Boiling Heat Transfer on Microporous Copper Surfaces, International Journal of Heat and Mass Transfer, Vol. 89, pp. 1297-1315, 2015; [Web Link](#).
100. Robert M. Ireland, Yu Liu, Xin Guo, Yu-Ting Cheng, Srinivas Kola, Wei Wang, Ronggui Yang, Michael L. Falk, Toinetta Jones, and Howard E. Katz, $ZT > 0.1$ Electron Carrying Polymer Thermoelectric Composites with in-situ SnCl_2 Microstructure Growth, Advanced Science, (6 pages with supporting info), Vol. 2, Art #1500015, 2015; [Web Link](#).
99. Xiaokun Gu, Xiaobo Li and Ronggui Yang, Phonon transmission across $\text{Mg}_2\text{Si}/\text{Mg}_2\text{Si}_{1-x}\text{Sn}_x$ interface: a first-principles-based atomistic Green's function study, Physical Review B, Vol. 91, Art #205313, 2015; [Web Link](#).
98. Jun Zhou, Nianbei Li, and Ronggui Yang, An Electrohydrodynamic Model for Non-equilibrium Electron and Phonon Transport in Metal Films after Ultra-short Pulse Laser Heating, European Physics Journal B, Vol. 88, pp. 156, 2015; [Web Link](#).
97. Staci A. Van Norman, Joseph W. Tringe, John D. Sain, Ronggui Yang, John L. Falconer, Alan W. Weimer, Using atomic layer deposited tungsten (ALD-W) to increase thermal conductivity of a packed bed, Applied Physics Letters, Vol. 106, Art #153102 (5 pages), [Web Link](#).
96. Chunlei Wan, Xiaokun Gu, Feng Dang, Tomohiro Itoh, Yifeng Wang, Hitoshi Sasaki, Mami. Kondou, Kenji Koga, Kazuhisa Yabuki, G. Jeffrey Snyder, Ronggui Yang, and Kunihiro Koumoto, "Flexible N-type thermoelectric materials by organic intercalation of layered transition metal dichalcogenide TiS_2 ", Nature Materials, Vol. 14, pp. 622-627, 2015 [Web Link](#).
95. Kathleen M. Hoogeboom-Pot, Jorge N. Hernandez-Charpak, Travers D. Frazer, Xiaokun Gu, Erik H. Anderson, Weilun Chao, Roger W. Falcone, Ronggui Yang, Margaret M. Murnane, Henry C. Kapteyn and Damiano Nardi, A New Regime of Nanoscale Thermal Transport: Collective Diffusion Counteracts Dissipation Inefficiency, PNAS - Proceedings of the National Academy of Sciences of the United States of America, Vol. 112, pp.4846-4851, 2015 [Web Link](#).
94. Ryan Lewis, Li-Anne Liew, Shanshan Xu, Yung-Cheng Lee, and Ronggui Yang, Microfabricated Ultra-Thin All-Polymer Thermal Ground Planes, (invited submission for the re-launch of the journal), Science Bulletin, Vol. 60, pp. 701-706, [Web Link](#), [Author's copy](#) for those who has no subscriptions, please cite appropriately.
93. J. Ordonez-Miranda, and Ronggui Yang, Effect of Metallic Coatings on the Thermal Conductivity of Carbon Fiber Polymer Composites, Composite Science and Technology, Vol. 109, pp. 18-24, 2015, [Web Link](#).
92. Xiaokun Gu, and Ronggui Yang, First-Principles Prediction of Phononic Thermal Conductivity of Silicene: A Comparison with Graphene, Journal of Applied Physics, Vol.

- 117, Art #025102, 2015, [Web Link](#). The Force Constants for Silicene can be downloaded [here as a zip file](#).
91. Miao Tian, Wei Wang, Yang Liu, Katherine L. Jungjohann, C. Thomas Harris, Yung-Cheng Lee, and Ronggui Yang, A Three-Dimensional Carbon Nano-Network for High Performance Lithium Ion Batteries, *Nano Energy*, Vol. 11, pp. 500-509, 2015. [Web Link](#)

2014

90. Tingyu Lu, Jun Zhou, Nianbei Li, Ronggui Yang, and Baowen Li, Inhomogeneous Thermal Conductivity Enhances Thermoelectric Cooling, *AIP Advances*, Vol. 4, Art # 124501 (8 pages), 2014, [Web Link](#).
89. Xianming Dai, Fanghao Yang, Ronggui Yang, Xinyu Huang, William A. Rigdon, Xiaodong Li, and Chen Li, Hydrophobic-Hydrophilic Hybrid Nanoporous Surfaces with Exceptional Drag Reduction and Capillary Evaporation Enhancement, *Applied Physics Letters*, Vol. 105, Art #191611 (5 pages), 2014, [Web Link](#)
88. Xiaokun Gu, and Ronggui Yang, Phonon Transport in Single-Layer Transition Metal Dichalcogenides: a First-Principles Study, *Applied Physics Letters*, Vol. 105, Art #131903 (5 pages), 2014, [Web Link](#)
87. Biao Wang, Jun Zhou, Ronggui Yang, and Baowen Li, Ballistic Thermoelectric Transport in Structured Nanowires, *New Journal of Physics*, Vol. 16, Art #065018 (16 pages), 2014, [Web Link](#).
86. Jun Liu, Shenghong Ju, Yifu Ding, and Ronggui Yang, Size Effect on the Thermal Conductivity of Ultrathin Polymers, *Applied Physics Letters*, Vol. 104, Art #153110 (4 pages), 2014 [Web Link](#).
85. Baolin Wang, Jiangtao Wu, Xiaokun Gu, Hanqing Yin, Yujie Wei, Ronggui Yang, and Mildred Dresselhaus, Stable planar single-layer hexagonal silicene under tensile strain and its anomalous Poisson's ratio, *Applied Physics Letters*, Vol. 104, Art #081902 (5 pages), 2014 [Web Link](#).
84. Suraj Thiagarajan, Sreekant Narumanchi, and Ronggui Yang, Effect of Flow Rate and Subcooling on Spray Boiling Heat Transfer on Microporous Copper Surfaces, *International Journal of Heat and Mass Transfer*, Vol. 69, pp. 493-505, 2014, [Web Link](#).

2013

83. Jun Liu, Byunghoon Yoon, Eli Kuhlmann, Miao Tian, Xiaokun Gu, Steven M. George, Yung-Cheng Lee, and Ronggui Yang, Ultra-Low Thermal Conductivity of Atomic/Molecular Layer Deposited (ALD/MLD) Hybrid Organic-Inorganic Thin Films, *Nano Letters*, Vol. 13, pp. 5594-5599, 2013, [Web Link](#).
82. Xiao Zhang, Mehdi Hejazi, Suraj J. Thiagarajan, William R. Woerner, Debasis Banerjee, Thomas J. Emge, Wenqian Xu, Simon J. Teat, Qihan Gong, Ahmad Safari, Ronggui Yang, John B. Parise, and Jing Li, From 1D Chain to 3D Network: A New Family of Inorganic-Organic Hybrid Semiconductors $\text{MO}_3(\text{L})_x$ ($\text{M} = \text{Mo}, \text{W}$; $\text{L} = \text{Organic Linker}$) Built on Perovskite-Like Structure Modules, *Journal of American Chemical Society*, Vol. 135, pp. 17401-17407, 2013, [Web Link](#).
81. Yuanyuan Wang, Jun Liu, Jun Zhou, and Ronggui Yang, Thermoelectric Transport across Polymer-Semiconductor-Polymer Nanoscale Junctions, *Journal of Physical Chemistry C*, Vol. 117, pp. 24716-24725, 2013, [Web Link](#).

80. Xianming Dai, Mehdi Famouri, Aziz I. Abdulagatov, Ronggui Yang, Yung-Cheng Lee, Li-Anne Liew, Steven M. George, and Chen Li, Enhanced Capillary Evaporation on Micromembrane-enhanced Microchannel Wicks with Atomic Layer Deposited Silica, *Applied Physics Letters*, Vol. **103**, Art # 151602 (5 pages), 2013. [Web Link](#).
79. Tuhin Shuvra Basu, Ronggui Yang, Suraj Joottu Thiagarajan, Siddhartha Ghosh, Stanislaw Gierlotka, and Mallar Ray, Remarkable Thermal Conductivity Reduction in Metal-Semiconductor Nanocomposites, *Applied Physics Letters*, Vol. 103, Art #083115 (5 pages), 2013, [Web Link](#).
78. Ordóñez-Miranda, J. J. Alvarado-Gil and Ronggui Yang, Effective Thermal Conductivity of Particulate Composite at Non-Dilute Limit, *Journal of Applied Physics*, Vol. 114, Art #064306, 2013, [Web Link](#).
77. Jiangtao Wu, Baolin Wang, Yujie Wei, Ronggui Yang, Mildred Dresselhaus, Mechanics and Mechanically Tunable Bandgap in Single-Layer Hexagonal Boron-Nitride, *Materials Research Letters*, Vol. 1, n4, pp. 200-206, 2013, [Web Link](#).
76. Xianming Dai, Fanghao Yang, Ronggui Yang, Yung-Cheng Lee, and Chen Li, Membrane-Enhanced Capillary Evaporation, *International Journal of Heat and Mass Transfer*, Vol. 64, pp. 1101-1108, 2013, [Web Link](#).
75. Jun Liu, Jie Zhu, Miao Tian, Xiaokun Gu, Aaron Schmidt, and Ronggui Yang, Simultaneous Measurement of Thermal Conductivity and Heat Capacity of Bulk and Thin Film Materials using Frequency-Dependent Transient Thermoreflectance Method, *Review of Scientific Instruments*, Vol. 84, Art # 034902, 2013, [Web Link](#).
74. Wei Wang, Miao Tian, Yujie Wei, Sehee Lee, Yung-Chen Lee, and Ronggui Yang, Binder-Free Three Dimensional Silicon-Carbon Nanowire Networks for High Performance Lithium Ion Battery Anodes, *Nano Energy*, Vol. 2, pp. 943–950, 2013, [Web Link](#).
73. Xiaobo Li, and Ronggui Yang, Equilibrium Molecular Dynamics Simulations for the Lattice Thermal Conductivity of Si/Ge Nanocomposites, *Journal of Applied Physics*, Vol. 113, Art #104306, 2013, [Web Link](#).
72. Yujie Wei, Baoling Wang, Jiangtao Wu, Ronggui Yang, and Martin L. Dunn, Bending Rigidity and Gaussian Bending Stiffness of Single-Layered Graphene, *Nano Letters*, Vol. 13, pp. 26-30, 2013, [Web Link](#).
71. J. Ordóñez-Miranda, J. J. Alvarado-Gil, and Ronggui Yang, Effect of the Electron–Phonon Coupling on the Effective Thermal Conductivity of Metallic Bilayers, *International Journal of Thermophysics*, Vol. 34, pp. 1817-1827, 2013, [Web Link](#).
70. Christopher Oshman, Qian Li, Li-Anne Liew, Ronggui Yang, Victor Bright, and Y.C. Lee, Flat Flexible Polymer Heat Pipes, *Journal of Micromechanics and Microengineering*, Vol. 23, Art # 015001 (7 pages), 2013. [Web Link](#).

2012

69. Yujie Wei, Jiangtao Wu, Hanqing Yin, Xinghua Shi, Ronggui Yang, Mildred S. Dresselhaus, The Nature of Strength Enhancement and Weakening by Pentagon-Heptagon Defects in Graphene, *Nature Materials*, Vol. 11, pp. 759–763, 2012, [Web Link](#).
68. Dan Li, Gensheng Wu, Wei Wang, Yunda Wang, Dong Liu, Dacheng Zhang, Yunfei Chen, G.P. Peterson, and Ronggui Yang, Enhancing Flow Boiling Heat Transfer in Microchannels for Thermal Management with Monolithically-Integrated Silicon Nanowires, *Nano Letters*, Vol. 12, pp 3385–3390, 2012, [Web Link](#).

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66. Xiaobo Li, and Ronggui Yang, Effect of Lattice Mismatch on Phonon Transmission and Interface Thermal Conductance across Dissimilar Material Interfaces, *Physical Review B*, Vol. 86, Art #054305 (13 pages), 2012. [Web Link](#).
65. Qing Li, Kathleen Hooeboom-Pot, Damiano Nardi, Margaret M. Murnane, and Henry C. Kapteyn, Mark E. Siemens, Erik H. Anderson, Olav Hellwig and Bruce Gurney, Ronggui Yang, and Keith A. Nelson, Generation and Control of Ultrashort-Wavelength 2D Surface Acoustic Waves at Nano-interfaces, *Physical Review B*, Vol. 85, Art #195431 (8 pages), 2012, [Web Link](#).
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63. David Makhija, Georg Pinggen, Ronggui Yang, and Kurt Maute, Topology Optimization of Multi-component flows by Multi-relaxation Time Lattice Boltzmann Method, *Computers and Fluids*, Vol. 67, pp. 104–114, 2012, [Web Link](#).
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c). Journal Papers in Review or In Preparation:

- Yao Zhai, Yaoguang Ma, Sabrina N. David, Dongliang Zhao, Runnan Lou, Ronggui Yang, Xiaobo Yin, Randomized Glass-Polymer Hybrid Metamaterial for Day-time Radiative Cooling, Science, submitted.
- Xiaokun Gu, Zhenqian Pang, Yujie Wei, and Ronggui Yang, On the influence of junction structure on the mechanical and thermal properties of carbon honeycombs, Carbon, submitted.
- Xiaokun Gu, Ronggui Yang, Xiaobo Yin, Yujie Wei, and Baowen Li, Thermal Properties of 2-D Materials (Invited Review), Review of Modern Physics.
- Rongfu Wen, Qian Li, Wei Wang, Benoit Latour, C.H. Li, Chen Li, Yung-Cheng Lee, G.P. Peterson, and Ronggui Yang, Enhanced Bubble Nucleation and Continuous Liquid Rewetting for Highly Efficient Boiling Heat Transfer on Hierarchical Copper Nanowires, Nano Letters.
- Rongfu Wen, Zhong Lan, Benli Peng, Wei Xu, Ronggui Yang, Xuehu Ma, Wetting Transition of Condensed Droplets on Nanostructured Superhydrophobic Surface: Coordination of Surface Property and Condensing Condition.
- Dongliang Zhao, Christine Elizabeth Martini, Siyu Jiang, Yaoguang Ma, Yao Zhai, Xiaobo Yin², Gang Tan, Ronggui Yang Feasibility Study of a Single-Phase Thermosiphon for Radiative Cooling Cold Collection and Storage.

d). Funded Research Projects

49. DOE/ARPA-E: Advancing Insulation Retrofits from Flexible Inexpensive Lucid Materials (AIR FILMs) for Single-Pane Windiows, PI: Ivan Smalyukh, Co-PI: Ronggui Yang, total: \$1.80M + \$150K (CU Matching), Yang's share: \$0.60M, 11/15/2016-02/14/2019
48. Texas Instruments Inc.: Phase Change Cooling using Flexible Thermal Ground Planes for High-Power Applications, PI: Yung-Cheng Lee, Co-PI: Ronggui Yang and Ryan Lewis, \$150K, 09/01/2015-08/31/2018.
47. DOD/FlexTech Alliance: Flexible Hybrid Electronics-Manufacturing Innovation Institute (FOA-RQKM-2015-0014). PI for CU Team: Ronggui Yang, et al, total request of federal funding for CU: \$2.0M, along with \$2.0M Cost-Share from CU, 09/01/2015-08/30/2020.
46. NSF: Collaborative Research: Ultrafast Phonon Lifetime Spectroscopy on 2-D Transitional Metal Dichalcogenides, PI: Ronggui Yang with Mark Siemens (collaborative PI at the University of Denver), \$140,000, 09/01/2015-08/31/2018.

45. DOE/ARPA-E: Radiative Cooled-Cold Storage Modules (RadiCold), PI: Ronggui Yang, Co-PI: Xiaobo Yin, with subcontract to Gang Tan (University of Wyoming), total: \$3.00M + \$158K (CU Matching), Yang's share: \$1.30M, 07/31/2015-07/30/2018.
44. DOE/ARPA-E: Thermoregulatory Clothing System for Building Energy Saving, Subcontract to Cornell University (PI: Jintu Fan, Total: \$3.0M), Yang's share: \$540K+\$27K (CU Matching), 04/27/2015-04/26/2018.
43. DOD/DARPA: Mean Free Path Distribution of Phonons in GaN, GaN-on-SiC, and GaN-on-Diamond Devices, PI: Ronggui Yang, \$494K, 05/13/2015-05/12/2017.
42. DOE/ARPA-E: Carbothermal Reduction Process for Producing Magnesium Metal Using a Reduced Pressure Hybrid Solar/Electric Reactor, Co-PI with Professor Al Weimer (PI) and David Clough, Department of Energy (ARPA-E), Total: \$3.6M (+ \$400K University Matching), Yang's Share: ~15%, 01/01/2014-12/31/2016.
41. Colorado AIA, Flexible thermal ground planes for smartphones and tablets, \$150,000, Co-PI with Professor Yung-Cheng Lee (PI) and Li-Anne Liew (Co-PI) and Ryan Lewis (Co-PI), Advanced Industry Accelerator Program by Colorado Office of Economic Development and International Trade (OEDIT), Total: \$150K + \$50K (CU matching), 07/01/2014-2/29/2016, [completed](#).
40. Google Little Box Challenges: Ultra-High Power Density Inverter with Extreme Efficiency, PI: K. Afridi, Co-PIs: D. Maksimovic, R. Erickson, and R.G. Yang, \$30,000, 12/01/2014-08/30/2015, [completed](#).
39. DOD/AFOSR STTR AF13-AT07 Phase I: A High Repetition Rate and High Voltage Nanosecond Pulser with Variable Pulse Width Control, Subcontract to Eagle Harbor Technologies (Dr. Tim Ziemba) for AFOSR STTR program, PI: Ronggui Yang, \$75K out of \$150K total, 01/01/2014 – 09/30/2014 [completed](#).
38. NSF: Student Poster Symposium at the ASME International Mechanical Engineering Congress and Exposition (ASME-IMECE); San Diego California; November 15-21, 2013; National Science Foundation, PI: Chris Hanson and Ronggui Yang, \$45,992, 08/15/2013-07/31/2014, [completed](#).
37. DOD/SBIR MDA13-022 Phase I: Thermal Ground Planes for High Power Solid State Lasers, Subcontract to i2C Solutions (Dr. Mike Hulse) for DoD MDA SBIR Phase I Program (MDA13-022), CU Budget: \$35K out of \$150K total, 01/01/2014-09/30/2014 (Phase II awarded), [completed](#).
36. DOD/AFOSR SBIR AF131-013 Phase I: Conformable Thermal Ground Plane for Fiber Laser Amplifiers, Subcontract to i2C Solutions (Dr. Mike Hulse) for DoD AFOSR SBIR Phase I Program (AF131-013), CU Budget: \$15K out of \$150K total, 10/01/2013-3/31/2014 (Phase II awarded), [completed](#).
35. DOD/AFOSR STTR AF10-BT26 Phase II: Quantum Dot Nanocomposite-Based Novel Thermoelectric Materials, PI: Ronggui Yang, Subcontract to ADA Technologies (Dr. Sayan Naha) for AFOSR STTR Phase II Program (AF09-BT22), CU budget: \$225K out of \$750K total, 10/01/2012-09/31/2014, [completed](#).
34. Gift Fund: Thermal Management Technologies for High Power Electronics, PI: Ronggui Yang, \$20K, LSI International, 12/01/2012-.
33. DOD/AFOSR/STTR AF09-BT22 Phase II: Thermoelectric material-coated carbon nanotubes as high conductivity thermal interface materials, PI: Ronggui Yang, subcontract to ADA Technologies (Dr. Sayan Naha), CU budget: \$225K out of \$750K total, 04/01/2012-03/31/2014, [completed](#).

32. DOE/NREL: Experiments and modeling of nucleate boiling in pool and spray impingement boiling with and without enhanced surfaces, DOE/National Renewable Energy Lab, PI: Ronggui Yang, \$225K with reduced overhead, 11/01/2011-11/15/2014, [completed](#).
31. DOD/AFOSR: Modeling and Characterization of Phonon Transmission and Generation across Engineered and Strained Interfaces for Developing Structure-Property Relations of Functional Nanostructures, PI: Ronggui Yang, \$465K, AFOSR, Duration: 06/15/2011-12/14/2014, [\(including 6-month No-Cost Extension\)](#), [completed](#).
30. NSF: CAREER: An integrated research and education program on nanoscale thermal transport: developing a high spatiotemporal resolution photo-thermal microscope, National Science Foundation, PI: Ronggui Yang, \$400K (+ \$60K university enhancement award), 02/01/2009-01/31/2015 [\(including one year No-Cost Extension\)](#), [completed](#).
29. DOD/SBIR DTRA 122-002 Phase I: Conformal Thermal Ground Planes, CU PIs: Y.C. Lee and Ronggui Yang, subcontract to i2C Solutions Inc, \$100K total award with \$50K subcontract to CU, 04/01/2013-12/31/2013, [completed](#).
28. Investigation of Thermal Characteristics of C-Textiles for Heating & Cooling Garments, PI: Ronggui Yang, \$30,000, QinetiQ to DARPA iMINT Center, Duration: 02/01/2011-05/01/2011, [completed](#).
27. DOD/AFOSR STTR AF10-BT26 Phase I: Quantum Dot Based Novel Thermoelectric Materials, PI: Ronggui Yang, subcontract to ADA Technologies, CU budget: \$35K, Duration: 06/15/2011-3/15/2012, (Phase II awarded, see #35), [completed](#).
26. Equipment Fund for Enhancing Research Capability and Competence, University of Colorado, PI: Ronggui Yang, \$100,000, 10/01/2010 -. [completed](#).
25. NSF MRI: Development of a Coherent and Incoherent X-Ray Facility at JILA: Ultrafast X-Ray Science and Technology at the Nanoscale, NSF, PI: Margaret Murnane, Co-PIs: Ronggui Yang, Ralph Jimenez, and Henry Kapteyn, NSF \$1.28M, CU/NIST Matching: \$550K, 09/01/2010-08/31/2013. [completed](#).
24. DOD/DARPA: Molecular Layer Deposition-Enabled NanoThermal Interfaces (M-NTI), DARPA BAA09-25 (MTO Office-wide Seedling), PI: Ronggui Yang, Co-PIs: Steven M. George, Y.C. Lee, and Victor M. Bright, \$400K, Yang: \$160K, July 1, 2010 to June 30, 2011, 1 summer month, [completed](#).
23. DOD/DARPA: Modeling and Characterization of Quantum Dot Thermoelectric Nanocomposites, CU PI: Ronggui Yang, sub-contract to Marlow Industries for proposal “High Performance Thermoelectric Quantum Dot Microcoolers (Marlow PI: Jeff Sharp, total ~\$3.9M)” to DARPA BAA 09-44 (Active Cooling Modules), CU Share: \$306K, 07/01/2010-06/30/2012. [completed](#).
22. DOD/AFOSR STTR AF09-BT22 Phase I: Thermoelectric material-coated carbon nanotubes as high conductivity thermal interface materials, PI: Ronggui Yang, subcontract to ADA Technologies, CU budget: \$30K, 07/01/2010-03/30/2011, (Phase II awarded, see #33), [completed](#).
21. DOD/DARPA Center on Nanoscale Science and Technology for Integrated Micro/Nano-Electromechanical Transducers (iMINT Center), Co-PI with Y. C. Lee (PI) and 10 other Co-PIs, submitted to DARPA RA 09-42 (N/MEMS Fundamentals), total: \$5.0M from DARPA, Ronggui Yang: \$70K per year, 07/01/2010-06/30/2013. [completed](#).
20. Novel Silicon/Ni_xSn_{1-x} Core-Shell Nanowires for Superior High Capacity and Long Lifetime Lithium-Ion Batteries, PI: Ronggui Yang, University of Colorado Innovative Seed Grant, Total: \$41,200, 07/01/2009-06/30/2010, [completed](#).

19. A micro-scale hybrid wick heat pipe cooling system for high concentration photovoltaic cell, University of Colorado Technology Transfer Office Energy Initiative Proof of Concept Grant, PI: Chen Li, Co-PIs: Victor M. Bright, Ronggui Yang, Y.C. Lee, Total: \$50K, 04/01/2009-03/31/2010, [completed](#).
18. DOE/NREL: Modeling and experiments in the nucleate boiling regime in the context of power electronics cooling, DOE/National Renewable Energy Lab, PI: Ronggui Yang, \$175K, 10/01/2008-09/30/2011, [completed](#).
17. DOD/DARPA: Surface Plasmon Enabled High Efficiency Thermoelectric Devices, DARPA MTO Young Faculty Award, PI: Ronggui Yang, \$150K, 06/01/2008-11/30/2009, [completed](#).
16. DOD/AFOSR: A Design tool for nanostructures with tunable thermal properties, AFOSR (BAA 2007-08 Discovery Challenge Thrusts), PI: Ronggui Yang, Co-PIs: Kurt Maute and Martin Dunn, \$600K, 03/01/2008-11/30/2010, [completed](#).
15. DOD/DARPA: Flexible thermal ground plane with micro/nano wicking structures, DARPA (BAA 07-36 Thermal Ground Plane), PI: Y.C. Lee, Co-PI: Ronggui Yang, Chen Li, Victor Bright, G.P. "Bud" Peterson, and Suraj Rawal, \$4.0M, Yang: \$1.0M, 03/01/2008-11/30/2011. [Completed](#).
14. Nanowire-based metamaterials for miniaturized antennas, DARPA iMINT Center Seed Grant, PI: Won park, Co-PIs: Ronggui Yang, Y.C. Lee, and Pavel Kabos, T. Mitch Wallis, Jim Booth, Total: \$50K, Yang: \$0, 04/01/2008-03/31/2009. [completed](#)
13. NSF MRI-Consortium: Acquisition of a Supercomputer by the Front Range Computing Consortium, National Science Foundation (Award #0821794), one of ~50 CU Faculty Participants with PI Henry Tufo, \$4.0M, Yang: \$0, 8/1/2008 - 7/31/2012. [completed](#)
12. Nanocomposite thermoelectric materials development and characterization, Lockheed Martin Corporation, PI: Ronggui Yang, \$50K, 10/25/2007-11/15/2008. [completed](#)
11. NSF: A design-centered approach to nano-engineering, National Science Foundation, PI: Kurt Maute, Co-PIs: Martin Dunn and Ronggui Yang, \$329,957, 09/01/2007-08/31/2011, [completed](#).
10. Understand the building with your eyes: building and environment science and technology visualization Lab. CU-Engineering Excellence Fund, co-PI with John Zhai. \$26,695, 05/01/2007-04/01/2008. [completed](#)
9. Unrestricted gift fund, \$6,000, 10/15/2007 ~.
8. DOD/AFOSR: Energy harvesting and storage systems and their integration into AF aero vehicles, Air Force Office of Scientific Research - Multidisciplinary University Research Initiative (AFOSR-MURI); PI: Minoru Taya, Co-PI with 8 other co-PIs, total: \$6M, CU: \$1.50M, Yang: \$500K, 05/01/2006-04/30/2011. [completed](#)
7. NSF: Measurement of thermal transport in nanostructures using EUV pump-probe systems, National Science Foundation; PI: Ronggui Yang (Funded through the NSF Engineering Research Center for Extreme Ultraviolet Science and Technology - NSF EUV ERC), \$50-70K annually, 05/01/2006-09/30/2013. [completed](#)
6. DOD/DARPA iMINT Center Core Research: ALD-enabled packaging for integrated MEMS/NEMS, DARPA Focus Center on Nanoscale Science and Technology for Integrated Micro/Nano-Electromechanical Transducers (iMINT), PI: Y.C. Lee, co-PI: Ronggui Yang, \$100K annually, 09/01/2006-08/31/2009, [completed](#).
5. NSF: Constructing a femtosecond nanometer resolution photo-thermal imaging system using extreme ultraviolet (EUV) to study nanoscale thermal transport, National Science

- Foundation; PI: Ronggui Yang, Co-PI: Margaret Murnane, \$94,919, 09/01/2006-08/31/2007. [completed](#)
4. Photonic crystal fiber based micro capillary pumped loops, CU Technology Transfer Office Proof of Concept Grant (POCg); PI: Ronggui Yang, \$12,500, 12/01/2006-05/31/2007. [completed](#)
 3. Photonic crystal fiber based micro heat pipe arrays and capillary pumped loops, CU Engineering Dean's Seed Fund for Novel Ideas; PI: Ronggui Yang, Co-PIs: Y.C. Lee and Victor M. Bright, \$10,000, 06/10/2006-12/31/2006. [completed](#)
 2. Unrestricted gift fund, \$15,000, 08/15/2006 ~, [completed](#).
 1. University of Colorado Start-up Funds: Equipments + Discretionary, PI: Ronggui Yang, \$410K + student support, 01/2006 – 01/2009, [completed](#).

e). Patent Applications and Invention Disclosures

1. Gang Chen, Ronggui Yang, and Arvind Narayanaswamy, Surface-Plasmon Enabled Nonequilibrium Thermoelectric Devices, US Provisional 60/567,987, May 4, 2004, Full US Patent Application 11/007,557, December 8, 2004. International Application WO 2005/112139 submitted in May 2005. US 7508110, awarded on March 24, 2009. [Access through Google Patents](#).
2. Gang Chen, Xiaoyuan Chen, and Ronggui Yang, Multistage Thick Film Thermoelectric Devices, Disclosed to MIT Technology License Office in March 2005 (MIT Case No. 11653), Full US Patent Application, 11/668,765, January 30, 2007. International Application WO 2008/094903 submitted in August 2008. US9391255 B2, awarded on July 12, 2016. [Access through Google Patents](#)
3. Ronggui Yang, Weixue Tian, and Y.C. Lee, Photonic Crystal Fiber Based Capillary Pumped Loops, Disclosed to University of Colorado Technology Transfer Office, March 2006, US Provisional No. 60/911,228, April 11, 2007.
4. Ronggui Yang, Yung-Cheng Lee, Victor M. Bright, Chen Li, Christopher Oshman, Bo Shi, Jen-Hau Cheng, George P. Peterson, Flexible Thermal Ground Plane and Manufacturing Thereof, Disclosed to University of Colorado Technology Transfer Office, July 2007, US Provisional Patent No. 61/158,086, US Full Patent Application US 12/719,775, March 8, 2010. US 9163883, awarded on October 20, 2015. [Access through Google Patents](#). Exclusively licensed to [Kelvin Thermal Technologies Inc.](#)
5. Ronggui Yang, Yung-Cheng Lee, Victor M. Bright, Chen Li, Christopher Oshman, Bo Shi, Jen-Hau Cheng, George P. Peterson, Flexible Thermal Ground Plane and Manufacturing Thereof, US Full Patent Application 14/681,624, filed on April 8, 2015, (as a Continuation of US Full Patent Application 12/719,775 on March 8, 2010). [Access through Google Patents](#). Exclusively licensed to [Kelvin Thermal Technologies Inc.](#)
6. Ronggui Yang, Yung-Cheng Lee, Victor M. Bright, Chen Li, Christopher Oshman, Bo Shi, Jen-Hau Cheng, George P. Peterson, Flexible Thermal Ground Plane and Manufacturing Thereof, US Full Patent Application US14/861,708, filed on September 22, 2015, (as a Continuation of U.S. Patent Application Ser. No. 12/719,775, filed on March 8, 2010 and Ser. No. 14/681,624, filed on April 8, 2015.). Exclusively licensed to [Kelvin Thermal Technologies Inc.](#)
7. Ronggui Yang, Victor Bright, Zhifeng Ren, Joseph J. Brown, H. Jerry Qi, and Lucy Y. Pao, Programmable Thermal Point-Source Based Nanofabrication (PTBN), Disclosed to University of Colorado Technology Transfer Office (CU1989B), December 2007.

8. Ronggui Yang and Wei Wang, On-chip integration of silicon nanowire-enabled high efficiency solar cells with high capacity 3-dimensional lithium ion batteries and intrinsic thermal management, disclosed to University of Colorado Technology Transfer Office (CU2331B), April 2009.
9. Yung-Cheng Lee, Shanshan Xu, Ronggui Yang, Collin Jennings Coolidge, Ryan John Lewis, Li-Anne Liew, and Ching-Yi Lin, Vacuum-Enhanced Heat Spreaders, Disclosed to University of Colorado Technology Transfer Office (CU3621B), April 2014, US Provisional Patent Application in September 2014. US Full Patent Application #14/853833 (September 14, 2015). International Application WO PCT/US15/50031. Exclusively licensed to [Kelvin Thermal Technologies Inc.](#)
10. Ryan John Lewis, Li-Anne Liew, Ching-Yi Lin, Collin Jennings Coolidge, Shanshan Xu, Ronggui Yang, and Yung-Cheng Lee, Micropillar-Enabled Thermal Ground Planes, Disclosed to University of Colorado Technology Transfer Office (CU3535B & CU3334B), April 2014, US Provisional Patent Application 62/051,761 on September 17, 2014. US Full Patent Application 14/857567 (September 17, 2015), International Application WO PCT/US15/50771. [Access through Google Patents](#), Exclusively licensed to [Kelvin Thermal Technologies Inc.](#)
11. Ronggui Yang, Xiaobo Yin, Gang Tan, Dongliang Zhao, Yaoguang Ma and Yao Zhai, Radiative Cooling Structures and Systems, Disclosed to University of Colorado Technology Transfer Office (CU3811B) on February 16, 2015, US Full Patent Application 15/056680 on February 29, 2016.
12. Ryan John Lewis, Ronggui Yang, and Yung-Cheng Lee, Methods for Spreading High Heat Fluxes in Thermal Ground Planes, US Provisional Patent Application. Exclusively licensed to [Kelvin Thermal Technologies Inc.](#)
13. Yung-Cheng Lee, Ryan John Lewis, and Ronggui Yang, Optimization of Vapor Transport in a Thermal Ground Plane Using Void Space in Mobile Systems, US Provisional Patent Application. Exclusively licensed to [Kelvin Thermal Technologies Inc.](#)

f). Popular Press & Press Release (Selected)

- A Press Release in May 2016 by University of Colorado reporting an ARPA-E funded \$1.8M project, led by Professor Ivan Smalyukh and Professor Ronggui Yang on developing transformational windows using liquid crystalline nanorod aerogels:
<http://www.colorado.edu/news/releases/2016/05/25/cu-boulder-researchers-develop-energy-saving-window-film>
- ARPA-E Announcement of its selection for the SHIELD (Single-Pane Highly Insulating Efficient Lucid Design) program (May 2016) where our technology is highlighted:
<http://www.energy.gov/articles/departments-energy-announces-14-new-projects-window-efficiency-technologies>
- Professor Ronggui Yang is the lead Principle Investigator for the University of Colorado Boulder participation of the \$171M Flexible Hybrid Electronics – Nanomanufacturing Innovation Institute (FHE-MII) led by Flex Tech Alliance.
The White House Press Release on the selection (August 28) can be found here:
<https://www.whitehouse.gov/the-press-office/2015/08/28/fact-sheet-obama-administration-announces-new-flexible-hybrid>
US Department of Defense Press Release on the selection:

<http://www.defense.gov/News/News-Releases/News-Release-View/Article/615132/dod-announces-award-of-new-flexible-hybrid-electronics-manufacturing-innovation>

The organization of FHE-MII can be found here: <http://www.fhemii.com/about-us/>

The University of Colorado Boulder will have a budget of \$4M (\$2M federal and \$2M cost-sharing) over the coming 5 years to strengthen its efforts on flexible hybrid electronics, including packaging (barrier, power, and thermal management), innovative materials, and flexible bio-sensors.

- A Press Release in August 2015 by University of Colorado reporting an ARPA-E funded \$3M collaborative project between University of Colorado and University of Wyoming, led by Professor Ronggui Yang on developing transformational radiative cooling technologies for thermoelectric power plants:
<http://www.colorado.edu/news/releases/2015/08/25/cu-boulder-awarded-3-million-transformational-power-plant-cooling-technology>
Daily Camera: http://www.dailycamera.com/cu-news/ci_28699868/cu-boulder-receives-3m-grant-study-power-plant
- An article in Yellow Scene on Boulder Fashion highlighting Professor Yang's research (July 2015) <http://yellowscene.com/2015/06/26/boulder-a-fashion-hub/>
- ARPA-E Announcement of its selection for the ARID (Advanced Research in Dry Cooling) program (May 2015) where our technology is highlighted:
<http://arpa-e.energy.gov/?q=news-item/departments-energy-announces-23-new-projects-improve-efficiency-and-create-new-technology>
- A Press Release in February 2015 by University of Colorado on licensing Flexible Thermal Ground Planes to Kelvin Thermal Technologies, a new start-up Professor Y.C. Lee and Professor Ronggui Yang co-founded in June 2014:
<http://www.colorado.edu/news/releases/2015/02/17/cu-boulder-technology-thinner-electronics-commercialized-kelvin-thermal>
Daily Camera: http://www.dailycamera.com/cu-news/ci_27585407/cu-boulder-professors-team-pushes-ultra-thin-smartphones
Electronics Cooling: <http://www.electronics-cooling.com/2015/02/ultra-thin-flexible-thermal-management-device-commercialized/>
- A Press Release in January 2015 by Cornell University reporting an ARPA-E funded \$3M collaborative project between Cornell University and University of Colorado, which incorporates CU's thermal management technologies for advanced clothes:
<http://www.news.cornell.edu/stories/2015/01/doe-awards-3m-air-conditioned-clothing>
ARPA-E Announcement of its selection for the DELTA (Delivering Efficient Local Thermal Amenities) program: <http://arpa-e.energy.gov/?q=news-item/departments-energy-announces-22-new-projects-enable-emissions-reductions-and-improve-energy>
- Yang's lab is part of University of Colorado team, one of the 10 teams selected by Google from > 100 proposals, for the Little Box Challenge award program designed to help support academics pursuing groundbreaking research in the area of increasing the power density for DC-to-AC power conversion. A Press Release by Google in December 2014:
<http://googleresearch.blogspot.com/2014/12/little-box-challenge-academic-awards.html>
CU Boulder Electrical Engineering News about this award:
<http://ecee.colorado.edu/featured-story/ECEE-LittleBox-Afridi-0115.html>

- ASME News about the ASME-Wide Micro and Nano Forum that is co-organized by Ronggui Yang during IMECE 2013 “Students Win Prizes, Refine Presentation Skills at the Society-Wide Micro and Nano Technology Forum”:
<https://www.asme.org/about-asme/news/asme-news/students-win-prizes-refine-presentation-skills>
- A Press Release in September 2013 titled “CU awarded \$3.6 million for new way to produce magnesium for auto” about a ARPA-E funded project:
<http://www.colorado.edu/news/releases/2013/09/19/cu-awarded-36-million-new-way-produce-magnesium-auto-parts>
ARPA-E Announcement of its selection for the METALS (Modern Electro/Thermochemical Advancements for Light-metal Systems) program:
<http://arpa-e.energy.gov/?q=arpa-e-news-item/remote-and-metals-project-selections>
- ASME Emerging Nano Newsletter summer 2013 inaugural issue highlights “Emerging Researcher: Ronggui Yang Explores Nanoscale Transport Phenomena”
<https://www.asme.org/about-asme/news/newsletters/emerging-nano-newsletter/emerging-researcher-ronggui-yang-explores>
- A Press Release in October 2012 titled “UH collaborates to solve device overheating issues” by University of Houston highlighting a paper published in Nano Letters (Vol. 12, pp 3385–3390, 2012) led by me:
<http://thedailycougar.com/2012/10/10/uh-collaborates-to-solve-device-overheating-issues/>
“Professor Uses Nanowires to Cool Electronics”
<http://www.egr.uh.edu/news/201209/professor-uses-nanowires-cool-electronics>
A follow-up news “Nanostructures May Solve Cooling Issues of Tiny Future Electronics” by Electronics-Cooling.com
<http://www.electronics-cooling.com/2012/10/nanostructures-may-solve-cooling-issues-of-tiny-future-electronics/>
- A Press Release in August 2012 titled “Grain boundary defects affect graphene's strength” by Nanotechweb.org on our work published in Nature Materials:
<http://nanotechweb.org/cws/article/tech/50491#>
- JILA Report on Nature Materials paper:
<http://jila.colorado.edu/content/ballistic-evidence>
- August 18, 2010, ASME Press Release for the ASME Bergles-Rohsenow Young Investigator Award in Heat Transfer, “Ronggui Yang Honored for Contributions in the Heat Transfer Field”.
http://www.asme.org/Governance/Honors/Releases/Ronggui_Yang_Honored.cfm
- Press Release by National Academy of Engineering for being selected to the NAE'S 2009 U.S. Frontiers of Engineering Symposium.
<http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=06252009b>
- AFOSR Press Release for MIT Technology Review's TR35 Award (September 08, 2008) “Engineer's energy research could cut costs, increase efficiency”
<http://www.afmc.af.mil/news/story.asp?id=123114201>
- CU Press Release for MIT Technology Review's TR35 Award (August 19, 2008): “CU-Boulder Engineering Professor Named One of World's Top 35 Young Innovators”
<http://www.colorado.edu/news/r/9b0ff83bab043e1d1c4b6ff5fbfa353.html>
Speaker for Technology Review's EmTech 2008 Conference:
<http://www.technologyreview.com/emtech/08/speakers.aspx>

Selected Media Reports:

<http://www.dailycamera.com/news/2008/aug/19/cu-prof-named-top-young-innovator/>
<http://www.coloradodaily.com/news/2008/aug/19/cu-prof-named-top-young-innovator/?printer=1>

- Graduate student Mark Siemens' work on "Soft X-Ray Probe for Nanoscale Heat Transfer" was highlighted in the Physics Update of the monthly American Physical Society member magazine Physics Today in July 2008 issue, p.17 (July 2008)
http://ptonline.aip.org/journals/doc/PHTOAD-ft/vol_61/iss_7/16_1.shtml
- CU Press Release for DARPA Thermal Ground Plane Project (May 7th, 2008)
<http://www.colorado.edu/news/r/48198905b2ed67272af5d67343ad3078.html>
also appear at: http://www.nanotech-now.com/news.cgi?story_id=29236
- CU Press Release for DARPA Young Faculty Award, (April 15, 2008)
<http://www.colorado.edu/news/r/a39f3714c24d3b66a94fafd9ba05b04f.html>
<http://www.sae.org/automag/material/10-2006/1-114-10-38.Web Link>
- MIT News on the InterPack2005 Best Paper Award and Goldsmid Award
<http://web.mit.edu/newsoffice/2005/aandh-aug16.html>

g). Invited and Keynote Conference Presentations (after January 1, 2006)

2015

1. **Invited:** Tingyu Lu, Jun Zhou, Ronggui Yang, and Baowen Li, Thermal Boundary Conductance across Metal-nonmetal Interfaces Contributed from Direct Electron-phonon Coupling, The 3rd International Conference on Phononic Crystals/Metamaterials, Phonon Transport and Phonon Coupling, Paris, France, May 31-June 5, 2015
2. **Invited:** K. Koumoto, C. L. Wan, R. Tian, and R. G. Yang, Nano-Length-Scale Inorganic/Organic Hybridization for Thermoelectric Materials (Invited talk), 228th ECS Meeting, Phoenix, AZ, Oct 11-15, 2015.

2014

1. **Invited:** Howard E. Katz, Robert M. Ireland, Wei Wang, and Ronggui Yang, Pyromellitic Polymer-Inorganic Microstructure Thermoelectric Composites (BB5.04), MRS Fall Meeting, Boston, MA, December 1-5, 2014.
2. **Invited:** Ronggui Yang, Phase-Change Heat Transfer at Micro/Nanoscale: From Fundamentals to Manufacturable Devices, the 11th International Conference on Frontiers of Design and Manufacturing, Nanjing, China, May 23-25, 2014.
3. **Invited:** Ronggui Yang, Ultrafast Laser Meets Quantum Mechanics at the Nanoscale Wonderland, the 2nd International Conference on Phononics and Thermal Energy Science, Tongji University, Shanghai, China, May 26-31, 2014.
4. **Invited:** Ronggui Yang, Understanding Phonon Transport for High Efficiency Thermoelectrics, the International Conference on Thermoelectrics, Nashville, TN, July 6-10, 2014.
5. **Invited:** Ronggui Yang, Thermal Conductivity of Nanostructured Polymers, The 8th US-Japan Joint Seminar on Nanoscale Transport Phenomena, Santa Cruz, CA, July 14-16, 2014.

6. **Invited:** Xiaokun Gu and Ronggui Yang, Thermal Conductivity of Two-Dimensional Transition Metal Dichalcogenides (Invited), The 8th US-Japan Joint Seminar on Nanoscale Transport Phenomena, Santa Cruz, CA, July 14-16, 2014.
7. **Invited:** Ronggui Yang, Ultrafast Laser-based Thermal Characterization of Electronic Materials, Advancement in Thermal Management, Denver, CO, August 6-7, 2014.

2013

1. **Invited:** Ronggui Yang, Jun Liu, Xiaokun Gu, Jie Zhu, Miao Tian, and Shenghong Ju, Recent Progress on Thermal Property Characterization using Transient Thermoreflectance Method, the 4th ASME Micro/Nanoscale Heat & Mass Transfer International Conference (MNHMT-13), December 11-14, 2013, The University of Hong Kong, Hong Kong, China.
2. **Invited:** Ronggui Yang, Ultrafast Laser-Based Characterization of Nanoscale Thermal Transport, Workshop QMNTIA 2013 - Quantitative Micro and Nano Thermal Imaging and Analysis, July 10-12, 2013, Reims, France
3. **Invited:** Ronggui Yang, Micro/Nano-Structured Phase-Change Heat Transfer Devices, Workshop on Micro and Nano Structures for Phase Change Heat Transfer, April 22-23, 2013, MIT, Cambridge, MA
4. **Invited Poster:** Ronggui Yang, et al, Three-Dimensional Nanowire Networks for Lithium Ion Battery Electrodes, Gordon Research Conference on Nanomaterials for Applications in Energy Technology, February 03-08, 2013, Ventura, CA

2012

1. **Invited:** Ronggui Yang, Manufacturable 3-Dimensional Micro/Nanostructures for Phase-Change Heat Transfer, Georgia Tech Heat Transfer Conference (Bud Peterson's 60th Birthday Symposium), August 30, 2012, Atlanta, GA.
2. **Invited:** C. Oshman, Q. Li, W. Wang, C.-Y. Lin, L.-A. Liew, A. Abdulagatov, M. Kong, S. Song, X. Dai, R.G. Yang, C. Li, S. George, V.M. Bright, S.P. Rawal, R.J. Monson, and Y.C. Lee, Flexible and conformal thermal ground planes, Proc. 37th Annual Government Microcircuit Applications and Critical Technology Conference (GOMACTech), March 19-22, 2012, Las Vegas, NV. Presented by Y.C. Lee.
3. **Invited:** Kurt Maute, Martin Dunn, Ronggui Yang, David Makhija, and Chris Deluca, Computational Strategies for the Design of Nano-Structured Materials, International Workshop on Computational Mechanics of Materials IWCMM 22, September 24-26, 2012, Baltimore, Maryland, Presented by Kurt Maute.

2011

1. **Invited:** Kurt Maute, Sebastian Kreissl, David Makhija, and Ronggui Yang, Topology Optimization of Heat Conduction in Nano-Composites, 9th World Congress on Structural and Multidisciplinary Optimization, Shizuoka, Japan, June 13-17, 2011, presented by Kurt Maute.
2. **Invited:** Ronggui Yang, Exploring Quantum and Ballistic Thermoelectricity for Energy Conversion and Sensor Applications, the 2011 US-Korea Workshop on Nanostructured Materials, Nanoelectronics, and Nano-Biotechnology, Gyeongju, Korea, June 1-3, 2011.
3. **Invited:** Ronggui Yang, Enhancing Phase-Change Heat Transfer using Hybrid Micro/Nano-Structured Surfaces. the 7th US-Japan Joint Seminar on Nanoscale Thermal Transport, December 11-14, 2011.

4. **Invited:** Mark Siemens, Qing Li, Margaret Murnane, Henry Kapteyn, Ronggui Yang, Probing Nanoscale Thermal Transport using Extreme Ultraviolet (EUV), SPIE Photonics West '11 Conference, San Francisco, California, January 22-27, 2011, presented by Mark Siemens.
5. **Research Update:** Yan Xie, Joong-Won Shin, Erik Hosler, Qing Li, Chan La-O-Vorakiat, Mark Siemens, F. Dong, S. Heinbuch, Robynne Lock, Tory Carr, CriagHogle, Luis Miaja-Avila, Chengyuan Ding, Stefan Mathias, Wen Li, Xibin Zhou, Predrag Ranitovic, Etienne Gagnon, Allison Pymmer, Josh Vura-Weis, Chang-Ming Jiang, Adrian Pffiefer, Scott Sayres, Elliot Bernstein, Jorge Rocca, Erik Anderson, Steve Leone, Henry Kapteyn, Margaret Murnane, Andreas Becker, Agnieszka Becker, Ronggui Yang, Tom Silva, Martin Aeschlimann, Michael Bauer, Albert Stolow, Serguei Patchkovskii, Robin Santra, Lew Cocke, Keith Nelson, Justin Shaw, Hans Nembach, Roman Adam, Claus M. Schneider, Arvinder Sandhu, "Nanoscale Materials Metrology using Coherent EUV Beams," Eighth Annual Site Visit, NSF Engineering Research Center for Extreme Ultraviolet Science and Technology, Berkeley, CA May 2011. Presented by Henry Kapteyn.
6. **Research Update:** Qing Li, Kathleen Hoozeboom-Pot, Damiano Nardi, Mark Siemens, Margaret Murnane, Henry Kapteyn, Ronggui Yang, Erik Anderson, Olav Hellwig, Bruce Gurney and Keith Nelson, "Generation and Detection of Very Short-Wavelength Surface Acoustic Waves at Nanoscale Interfaces," Eighth Annual Site Visit, NSF Engineering Research Center for Extreme Ultraviolet Science and Technology, Berkeley, CA May 2011. Presented by Qing Li.

2010

1. **Invited:** Ronggui Yang, Scaling Up Nanoscale Effects in Thermal Transport for Thermoelectricity and Thermal Management, Inter-Agency Power Group Meeting (Air Force, Army, Navy, Department of Energy, and NASA), Golden, CO, May 3-7, 2010.

2009

1. **Invited:** Ronggui Yang, Micro/Nano-enabled High Heat Flux Devices, DARPA/DSRC Physics of High Heat Flux Devices and their Applications Workshop, Arlington, VA, November 11-12, 2009
2. **Invited:** Mark Siemens, Qing Li, Margaret Murnane, Henry Kapteyn, Ronggui Yang, Erik Anderson, and Keith Nelson "Extreme Ultraviolet light in the lab: applications to surface science", Optical Society of America Laser Science Annual Meeting, San Jose, CA, October 2009, Presented by Mark Siemens.
3. **Invited:** Ronggui Yang, "Energy Transport at Nanoscale: Modeling, Characterization and Applications." Thin Air Philosophical Society (TAPS) Symposium on "Current Challenges in Mechanics and Materials" Boulder, CO, August 3-6, 2010.
4. **Invited:** Ronggui Yang, "Nano-Enabled Energy Harvesting and Storage Systems for Aerospace Environment Integration", AFOSR Workshop on Energy Harvesting and Storage, Arlington VA, April 17, 2009.
5. **Invited:** Kurt Maute, Pilhwa Lee, Georg Pinggen, and Ronggui Yang, Design Optimization of Transport Phenomena at Micro and Submicron Scale via Kinetic Theory Approaches, Conference on Multi-scale Modeling in Computational Mechanics, Rolduc, The Netherlands, March 11-13 2009, Presented by Kurt Maute.

2008

1. **Invited Panelist:** Ronggui Yang, Thermoelectric Nanocomposites: A Cheaper Nanotech Solution to Cleaner and Quieter Global Energy, EmTech 2008 organized by MIT Technology Review, September 23-25, MIT campus, MA.
2. **Invited:** Ronggui Yang, et al, Probing Nanoscale Thermal Transport using Extreme Ultraviolet (EUV) Light, 6th Japan- US Joint Seminar on Nanoscale Transport Phenomena - Science and Engineering,” July 13-16, 2008, Radisson Hotel, Boston, MA.
3. **Invited Poster:** Xiaochun Wang, Ronggui Yang, Yong Zhang, Jean-Pierre Fleurial, Andrew F. May, and G. Jeffrey Snyder, First Principles Study on Thermoelectric Properties of Lanthanum Chalcogenides, 6th Japan- US Joint Seminar on Nanoscale Transport Phenomena - Science and Engineering,” July 13-16, 2008, Radisson Hotel, Boston, MA.
4. **Invited:** Ronggui Yang, et al, Defect Decoration and Visualization for Atomic Layer Deposited Coatings, the 2nd Integration & Commercialization of Micro & Nanosystems International Conference & Exhibition, June 2008, Hongkong.
5. **Invited Tutorial:** Margaret M. Murnane, Jorge Rocca, John Miao, Ronggui Yang, Keith Nelson, Eric Anderson, Martin Aeschlimann, Carmen Menoni, Mario Marconi, and Henry C. Kapteyn, “Harnessing Attosecond Science for Visualizing the Nanoworld,” Paper QMF1 OSA Conference on Lasers and Electro-optics/ Quantum Electronics and Laser Science (CLEO/QELS), San Jose, CA, May 2008. Presented by Margaret Murnane.
6. **Invited:** Mark Siemens, Qing Li, Margaret Murnane, Henry Kapteyn, Ronggui Yang, Keith Nelson, Nanoscale Heat Transport Probed with Soft-X-Rays, Paper CWA6, OSA Conference on Lasers and Electro-Optics and the Quantum Electronics and Laser Science Conference (CLEO/QELS), May 2008, San Jose, CA, presented by Mark Siemens.
7. **Invited:** Mark Siemens, Qing Li, Ra’anan Tobey, Oren Cohen, Margaret Murnane, Henry Kapteyn, Ronggui Yang, and Keith Nelson, Ultrasensitive, Ultrafast Holographic Detection of Thermal Transients with Extreme Ultraviolet Radiation, The Gordon Research Conference on Photoacoustic and Photothermal Phenomena 2008, Los Angeles, Feb 8-14, 2008.

2007

1. Ronggui Yang, Introduction to Nanoscale and Ultrafast Thermal Sciences and Applications Lab, DARPA Young Faculty Award Workshop, November 2007, Arlington VA, (invited poster presentation).
2. Ronggui Yang, Surface-Plasmon Enabled High Efficiency Thermoelectric Devices, DARPA Young Faculty Award Workshop, November 2007, Arlington VA (invited seeding presentation).
3. **Invited:** Ronggui Yang, Thermoelectric Transport in Nanocomposites, Session on Thermoelectrics, 7th Pacific Rim Conference on Ceramic and Glass Technology, November 11-14, 2007, Shanghai, China
4. **Invited Workshop Talk:** Henry Kapteyn, Margaret Murnane , Keith Nelson, John Miao, Martin Aeschlimann, Ronggui Yang, “Ultrafast Probes of Materials using Table-top Coherent EUV Beams,” Division of Materials Sciences and Engineering Council Workshop on Ultrafast Materials Science, Santa Fe, NM, October 2007, Presented by Henry Kapteyn.
5. **Research Update:** Mark Siemens, Luis Avila, Xibin Zhou, Wen Li, Nick Wagner, Robynne Hooper, Qing Li, Jing Yin, Etienne Gagnon, Arvinder Sandhu, Ronggui Yang, Henry Kapteyn, Margaret Murnane, Erik Anderson, Keith Nelson, Martin Aeschlimann,

“Ultrafast Probes of Molecules and Materials using Table-top Coherent EUV Beams,” 2007 Retreat of the NSF Engineering Research Center in Extreme Ultraviolet Science and Technology, Estes Park, CO, October 2007. Presented by Henry Kapteyn.

2006

1. **Keynote:** Ronggui Yang, Thermoelectric Transport in Nanocomposites, International Conference on Innovative Solutions for the Advancement of the Transport Industry, Oct 4-6, 2006.
2. **Invited:** Ronggui Yang, Thermoelectric Transport in Nanocomposites, Fourth International Workshop On Polymer Routes to Multifunctional Ceramics for Advanced Energy and Propulsion Applications, July 30-August 05, 2006, Boulder, CO.
3. **Keynote Talk:** Z. F. Ren, D. Z. Wang, B. Poudel, Yi Ma, Wenzhong Wang, Xiao Yan, Lili Chen, Bo Yu, Gang Chen, M. S. Dresselhaus, H. Lee, Q. Hao, R. G. Yang, M. Y. Tang, J. P. Fleurial, and P. Gogna, “Nanocomposite approach to high figure-of-merit thermoelectric materials”, ASME 1st Energy Nanotechnology International Conference (ENIC2006, Keynote), June 25 - 28, 2006, MIT, presented by Z.F. Ren.
4. **Invited:** Ronggui Yang, Gang Chen, M.S. Dresselhaus, J.P. Fleurial, and P. Gogna, Nanocomposite Engineering for High Efficiency Thermoelectric Materials, the 5th Joint Meeting of Overseas Chinese Physicists Worldwide - International Conference on Physics education and Frontier Physics (OCPA06), June 25-30, 2006, Taipei, Taiwan.
5. **Research Update,** Henry Kapteyn, Elliot Bernstein, Steve Leone, Dan Dessau, John Gland, Chris Greene, Tamar Seideman, Martin Aeschlimann, Ronggui Yang, Keith Nelson, Ivan Christov, Barry Walker, Tom Silva, and Rich Mirin, “Novel linear and nonlinear spectroscopies using small-scale EUV light sources,” NSF Engineering Research Center for Extreme Ultraviolet Science and Technology Annual Site Visit, May 2006. Presented by H. Kapteyn.
6. **Invited Tutorial:** M.S. Dresselhaus, G. Chen, J. Heremans, R.G. Yang, and G. Dresselhaus, Low Dimensional Thermoelectricity, Tutorial at 2006 APS March Meeting, March 12, 2006, Baltimore, MD, presented by M.S. Dresselhaus.

h). Contributed Conference Presentations and Papers (Denoted in the list if there is a [\[Referred Paper\]](#) along with the presentation.)

2015

1. Kathleen Hoogeboom-Pot, Jorge Hernandez-Charpak, Travis Frazer, Xiaokun Gu, Emrah Turgut, Erik Anderson, Weilun Chao, Justin Shaw, Ronggui Yang, Margaret Murnane, Henry Kapteyn, Damiano Nardi, Mechanical and thermal properties of nanomaterials at sub-50nm dimensions characterized using coherent EUV beams (winner of Karel Urbanek Best Student Paper Award), SPIE Advanced Lithography Proc. of SPIE Vol. 9424, Art # 942417, February 2015.
2. Xiaokun Gu, Xiaobo Li and Ronggui Yang, Phonon transmission across Mg₂Si/Mg₂Si_xSn_{1-x} interface, 2015 MRS Spring Meeting & Exhibition, San Francisco, CA, April 2015.
3. Xiaokun Gu and Ronggui Yang, Anisotropic phonon transport and thermal conductivity in black phosphorus, 19th Symposium on Thermophysical Properties, Boulder, CO, June 2015.

4. Xin Qian, Xiaokun Gu and Ronggui Yang, Thermal conductivity modeling for hybrid crystals: from density functional theory to molecular dynamics, 19th Symposium on Thermophysical Properties, Boulder, CO, June 2015.
5. Wei Wang, Jun Liu, Saad jajja, and Ronggui Yang, In-plane thermal conductivities of transitional metal dichalcogenides, 19th Symposium on Thermophysical Properties, Boulder, CO, June 2015.
6. Shanshan Xu, Ryan J. Lewis, Li-Anne Liew, YC Lee and Ronggui Yang, Design, Fabrication and Characterization for Ultra-Thin Thermal Ground Planes, International Technical Conference and Exhibition on Packaging and Integration of Electronic and Photonic Microsystems (InterPACK), San Francisco, CA, July, 2015.
7. Arto J. Groehn, Allan Lewandowski, Ronggui Yang and Alan W. Weimer, Efficiency and Design of High-Temperature Solar-Thermal Reactors (422882), Salt Lake City, UT, November 9-13, 2015.
8. Xiaokun Gu and Ronggui Yang, Phonon transport in MoS₂/WS₂ heterostructure, International Mechanical Engineering Conference and Exhibition (IMECE2015), Houston, TX, November 13-19, 2015.
9. Xin Qian, Xiaokun Gu and Ronggui Yang, Thermal conductivity modeling for hybrid crystals, International Mechanical Engineering Conference and Exhibition (IMECE2015), Houston, TX, November 13-19, 2015.
10. Shanshan Xu, Ryan J. Lewis, Li-Anne Liew, Nicolas Pinkowski, YC Lee, Ronggui Yang, Influences of screen mesh wicking structure on the performance of ultra-thin thermal ground planes, International Mechanical Engineering Conference and Exhibition (IMECE2015), Houston, TX, November 13-19, 2015.

2014

1. Tingyu Lu, Jun Zhou, Baowen Li and Ronggui Yang, Enhancing Thermoelectric Performance with Inhomogeneous Thermal Conductivity, the 2nd International Conference on Phononics and Thermal Energy Science, Tongji University, Shanghai, China, May 26-31, 2014.
2. Kathleen Hooeboom-Pot, Jorge N. Hernandez-Charpak, Erik Anderson, Xiaokun Gu, Ronggui Yang, Henry Kapteyn, Margaret Murnane, Damiano Nardi, A New Regime of Nanoscale Thermal Transport: Collective Diffusion Counteracts Dissipation Inefficiency, Proceedings of the 19th International Conference on Ultrafast Phenomena, Okinawa Convention Center, Okinawa, Japan, July 7-11, 2014.
3. A. Van Norman, Jeni Sorli, Ronggui Yang, Joseph W. Tringe, John D. Sain, John L. Falconer and Alan W. Weimer, Effective Thermal Conductivity of Packed Beds and Benefit of in-Situ W ALD: Original Sample Preparation Technique, in Particle Technology Forum of 2014 AIChE annual meeting, Atlanta, GA, November 16-21, 2014.

2013

1. Qian Li, Jiafeng Wu, Gensheng Wu, Miao Tian, Yunfei Chen, Ronggui Yang, Supherhydrophobic Nanowired Surfaces for Enhancement of Dropwise Condensation Heat Transfer, ASME International Mechanical Engineering Conference and Exhibition (IMECE2013), San Diego, CA, November 15-21, 2013.

2. Qian Li, Wei Wang, Benoit Latour, Yung-Cheng Lee, George P. Peterson, Ronggui Yang, Hierarchical Micro/Nano-Structured Surfaces with Improved Water Spreading for Efficient Boiling Heat Transfer, ASME International Mechanical Engineering Conference and Exhibition (IMECE2013), San Diego, CA, November 15-21, 2013.
3. Jun Liu, Xiaokun Gu, Dae-Up Ahn, Yifu Ding, Shenghong Ju, Jie Zhu, Xingang Liang, and Ronggui Yang, Interfacial thermal transport between ultrathin polymer films and inorganic materials, ASME International Mechanical Engineering Conference and Exhibition (IMECE2013), San Diego, CA, November 15-21, 2013.
4. Miao Tian, Wei Wang, and Ronggui Yang, Three-Dimensional Nanoporous Carbon Network for Lithium Ion Batteries, ASME International Mechanical Engineering Conference and Exhibition (IMECE2013), San Diego, CA, November 15-21, 2013.
5. Xiaokun Gu, Yujie Wei, and Ronggui Yang, Thermal Conductivity of Novel 2-Dimensional Materials (Graphene and Beyond) under Different Strains, ASME International Mechanical Engineering Conference and Exhibition (IMECE2013), San Diego, CA, November 15-21, 2013.
6. Yujie Wei, Jiangtao Wu, Hanqing Yin, Xinghua Shi, Ronggui Yang, Mildred S. Dresselhaus, The Nature of Strength Enhancement and Weakening by Pentagon-Heptagon Defects in Graphene, SES 50th Annual Technical Meeting and ASME AMD Annual Summer Meeting, July 28-31, 2013, Brown University, Rhode Island.
7. Jun Liu, Xiaokun Gu, Miao Tian, and Ronggui Yang, Measurement of Anisotropic Thermal Conductivity of Bulk and Thin Film Materials using Transient Thermorefectance Method, Summer Heat Transfer Conference, July 14-19, 2013, Minneapolis, MN.
8. Qian Li, Wei Wang, Miao Tian, John Goblirsch, and Ronggui Yang, High heat flux thermal ground planes with patterned copper nanowired wicking structures, Summer Heat Transfer Conference, July 14-19, 2013, Minneapolis, MN.
9. Xianming Dai, Fanghao Yan, Ronggui Yang, Yung-Cheng Lee, and Chen Li, Intrinsically Superhydrophilic Interfaces for Enhanced Boiling and Evaporation Using Atomic Layer Deposition, International Workshop on Micro and Nano Structures for Phase Change Heat Transfer (Poster Sessions), MIT, April 22-23, 2013
10. Miao Tian, Wei Wang, and Ronggui Yang, Three-Dimensional Nanoporous Carbon/TiO₂ Network for Lithium Ion Batteries, MRS Spring Meeting, April 1-5, 2013, San Francisco, CA

2012

1. Xiaokun Gu, Xiaobo Li and Ronggui Yang, Phonon transmission across Mg₂Si/Mg₂Ge interface: a first-principles study, ASME International Mechanical Engineering Conference and Exhibition (IMECE2012), Houston, TX, November 9-15, 2012. ([This work also won the Second Prize for NSF CMMI/CBET Student Poster Competition](#))
2. Jun Liu, Jie Zhu, Aaron Schmidt, and Ronggui Yang, Simultaneous Measurement of Thermal Conductivity and Heat Capacity of Bulk and Thin Film Materials using Transient Thermorefectance Method, ASME International Mechanical Engineering Conference and Exhibition (IMECE2012), Houston, TX, November 9-15, 2012. ([This work also won the First Prize for NSF CMMI/CBET Student Poster Competition](#))
3. Wei Wang, Miao Tian, Yujie Wei, Yung-Cheng Lee, and Ronggui Yang, Binder-free Si/C Nanowire Networks for High-Capacity Lithium-Ion Battery Anodes, ASME International

Mechanical Engineering Conference and Exhibition (IMECE2012), Houston, TX, November 9-15, 2012.

4. Jun Liu, Byunghoon Yoon, Miao Tian, Eli Kuhlmann, Steven M. George, Yung-Cheng Lee, and Ronggui Yang, Thermal Conductivity of Molecular Layer Deposited (MLD) Polymer Thin Films, ASME International Mechanical Engineering Conference and Exhibition (IMECE2012), Houston, TX, November 9-15, 2012.
5. Kathleen Hooeboom-Pot, Damiano Nardi, Qing Li, Xiaobo Li, Ronggui Yang, Erik H. Anderson, Margaret M. Murnane, and Henry C. Kapteyn, "Observation of ballistic thermal phonon transport across 2D nanoscale interfaces," XIV International Conference on Phonon Scattering in Condensed Matter (Phonons 2012), Ann Arbor, MI July 2012. Presented by Kathleen Hooeboom-Pot. Kathleen Hooeboom-Pot, Qing Li, Damiano Nardi, Margaret Murnane, Henry Kapteyn, Xiaobo Li, Ronggui Yang and Erik Anderson, "Observation of Ballistic Thermal Transport Across 2D Nanoscale Interfaces," Eighteenth Symposium on Thermophysical Properties, Boulder, CO June 2012. Presented by Kathleen Hooeboom-Pot.
6. Xiaobo Li and Ronggui Yang, Phonon Transmission across Lattice-Mismatched Dissimilar Material Interfaces, 18th Thermophysical Properties Symposium, Topic: Thermal Properties of Nanostructured Materials, Boulder, CO, June 25-29.
7. Jun Liu, Byunghoon Yoon, Eli Kuhlmann, Steven M. George, Yung-Cheng Lee, and Ronggui Yang, Thermal Conductivity Measurement of Molecular Layer Deposited (MLD) Polymer Thin Films using Transient Thermoreflectance Method, 18th Thermophysical Properties Symposium, Topic: Thermal Properties of Nanostructured Materials, Boulder, CO, June 25-29.
8. Jun Liu and Ronggui Yang, Thermal Properties of Aligned Polymer Chains, 18th Thermophysical Properties Symposium, Topic: Thermal Properties of Nanostructured Materials, Boulder, CO, June 25-29.
9. Margaret Murnane, Ronggui Yang, Henry Kapteyn, Erik Anderson, Mark Siemens, "Nanometrology using Coherent 1 – 30nm Light," Proposers' Conference for the SRC/DARPA Focus Center Research Program (FCRP), Dallas Texas, May 2012. Presented by Margaret Murnane.
10. Xianming Dai, Ronggui Yang, Yung-Cheng Li, and Chen Li, A Biporous Structure for Enhanced Evaporation Heat Transfer, 3rd ASME Micro/Nanoscale Heat & Mass Transfer International Conference (MNHMT2012-75140), Atlanta, GA, March 3-6, 2012.

2011

1. Wei Wang, Aziz I. Abdulagatov, Miao Tian, Steven M. George, and Ronggui Yang, Three-Dimensional Ni Nanowire Network as Electrodes for Lithium Ion Batteries, Proc. International Mechanical Engineering Conference and Exhibition (IMECE2011), Denver, CO, November 11-17, 2011.
2. Miao Tian, Wei Wang, and Ronggui Yang, Templated Fabrication of 3-Dimensional Nanowire Network Electrodes, Proc. International Mechanical Engineering Conference and Exhibition (IMECE2011), Denver, CO, November 11-17, 2011.
3. Qian Li, Wei Wang, Chris Oshman, Benoit Latour, Chen Li, Victor M. Bright, Yung-Cheng Lee and Ronggui Yang, Boiling Heat Transfer on Hybrid Micro/Nano-Structured Surfaces, Proc. International Mechanical Engineering Conference and Exhibition (IMECE2011), Denver, CO, November 11-17, 2011.

4. [\[Extended Abstract\]](#) Dan Li, Genshen Wu, Wei Wang, Yunda Wang, and Ronggui Yang, Monolithic Silicon Nanowire-Coated Microchannels for Flow Boiling Heat Transfer, Proc. International Mechanical Engineering Conference and Exhibition (IMECE2011), Denver, CO, November 11-17, 2011.
5. [\[Referred Paper\]](#) Christopher Oshman, Ronggui Yang, Yung-Cheng Lee, and Victor Bright, Electroformed High Aspect Ratio Copper Pillars for Application in Flat Polymer-based Micro Heat Pipes, Proc. International Mechanical Engineering Conference and Exhibition (IMECE2011), Denver, CO, November 11-17, 2011.
6. Xiaobo Li and Ronggui Yang, Phonon Transmission across Interfaces of Lattice-Mismatched Dissimilar Materials, Proc. International Mechanical Engineering Conference and Exhibition (IMECE2011), Denver, CO, November 11-17, 2011.
7. [\[Referred Paper\]](#) Jun Liu, Mohamed Alhashme, and Ronggui Yang, Thermal Transport through Carbon Nanotubes Connected by Molecular Linkers, Proc. International Mechanical Engineering Conference and Exhibition (IMECE2011), Denver, CO, November 11-17, 2011.
8. [\[Referred Paper\]](#) Jun Zhou and Ronggui Yang, Thermoelectric Transport in Sb₂Te₃/Bi₂Te₃ Quantum Dot Nanocomposites, Proc. International Mechanical Engineering Conference and Exhibition (IMECE2011), Denver, CO, November 11-17, 2011.
9. Yuanyuan Wang, Jun Zhou and Ronggui Yang, Thermoelectric Properties of Quasi-One-Dimensional Molecular Nanowires, Proc. International Mechanical Engineering Conference and Exhibition (IMECE2011), Denver, CO, November 11-17, 2011.
10. [\[Referred Paper\]](#) J. Ordonez-Miranda, J. J. Alvarado-Gil and Ronggui Yang, Effective Thermal Conductivity of Metal-Nonmetal Composites at the non-Dilute Limit, the 16th International Conference on Photoacoustic and Photothermal Phenomena, Merida, Yucatan, Mexico, Nov. 27-Dec. 1, 2011.
11. Xiaobo Li, and Ronggui Yang, Size Effects on Phonon Transmission across Material Interfaces by Nonequilibrium Green's Function Method, MRS Spring Meeting, April 25-29, 2011, San Francisco, CA.
12. [\[Referred Paper\]](#) Xianming Dai, Levey T. Tran, Fanghao Yang, Bo Shi, Ronggui Yang, Y.C. Lee, and Chen Li, Characterization of Hybrid-Wicked Copper Acetone Heat pipes, the ASME/JSME 2011 8th Thermal Engineering Joint Conference (AJTEC2011-44088), Honolulu, Hawaii, march 13-17, 2011
13. Q. Li, K. Hoogetboom-Pot, M. Siemens, M. M. Murnane, H. C. Kapteyn, R.G. Yang, E. H. Anderson, O. Hellwig, B. Gurney, K. A. Nelson, "Generation and Detection of Very Short-Wavelength Surface Acoustic Waves at Nano-interfaces," Conference on Lasers and Electrooptics (CLEO), Baltimore, MD, May 2011. Paper QTuN4. Presented by Qing Li.

2010

1. Jun Zhou and Ronggui Yang, Thermoelectric Transport in Quantum Dot Nanocomposites, MRS Fall Meeting, November 30-December 3, 2010, Boston, MA.
2. Miao Tian, Wei Wang, and Ronggui Yang, Porous Anodic Alumina (PAA) Templated Fabrication of Ni-Sn Nanowire Arrays for Li-ion Batteries, MRS Fall Meeting, November 30-December 3, 2010, Boston, MA.
3. Wei Wang, Miao Tian, Kristopher W Holub, and Ronggui Yang, Wafer-scale Silicon Nanowire Arrays with Controllable Dimensions: Facile Fabrication and Optical Property Characterization, MRS Fall Meeting, November 30-December 3, 2010, Boston, MA.

4. [\[Referred Paper\]](#) Sreekant Narumanchi, Suraj Thiagarajan, Kenneth Kelly, Charles King and Ronggui Yang, Heat Transfer Performance of Enhanced Surfaces for Power Electronics Cooling Applications (IHTC14-23284), International Heat Transfer Conference, Washington DC, August 8-13, 2010.
5. [\[Referred Paper\]](#) Jie Zhu, Dawei Tang, and Ronggui Yang, Frequency-Domain Pump-and-Probe Thermorefectance Technique for Measuring Thermal Conductivity and Interface Thermal Conductance of Thin Films (IHTC14-22522), International Heat Transfer Conference, Washington DC, August 8-13, 2010.
6. [\[Referred Paper\]](#) Xiaobo Li, Jun Liu, and Ronggui Yang, Tuning the Thermal Conductivity using Mechanical Strains (IHTC14-23334), International Heat Transfer Conference, Washington DC, August 8-13, 2010.
7. [\[Referred Paper\]](#) Jen-Hau Cheng, John Schlager, Kris Bertness, Norman Sanford, Dragos Seghete, Steven George, Ronggui Yang and Y.C. Lee, "Thermal Management of Vertical Gallium Nitride Nanowire Array Devices: Cooling Design and Tip Temperature Measurement," IEEE/MEMS Conference, Hongkong, January 25-29, 2010.
8. [\[Referred Paper\]](#) Chingyi Lin, Yadong Zhang, Aziz Abdulagatov, Ronggui Yang, Martin Dunn, Victor Bright, Steven George, Y.C. Lee, "ALD Hermetic Sealing for Polymer-Based Wafer Level Packaging of MEMS," IEEE/MEMS Conference, Hongkong, January 25-29, 2010.
9. [\[Referred Paper\]](#) C. Oshman, B. Shi, C. Li, R.G. Yang, Y.C. Lee, and V.M. Bright, Fabrication and Testing of a Flat Polymer Micro Heat Pipe, 15th International Heat Pipe Conference, Clemson, USA, April 25-30, 2010.
10. [\[Referred Paper\]](#) Yadong Zhang, Shih-Hui Jen, Ronggui Yang, Steven M. George, and Y. C. Lee, Real-Time Inspection of a Moisture Barrier Film Buried by a Protective Layer for Flexible Displays, the 2010 International Symposium, Seminar, and Exhibition, Seattle, WA, May 23-28, 2010.
11. Qing Li, Mark E. Siemens, Ronggui Yang, Margaret M. Murnane, Henry C. Kapteyn, Erik H. Anderson, Keith A. Nelson, "Observation of Quasi-Ballistic Heat Transport at Nano-Interfaces Using Coherent Soft X-Ray Beams", The Conference on Lasers and Electro-Optics (CLEO) and The International Quantum Electronics Conference (IQEC), May 16-21, 2010, San Jose, CA.

2009

1. Mark Siemens, Qing Li, Keith A. Nelson, Eric Anderson, Margaret Murnane, and Henry Kapteyn, Ronggui Yang, Quasi-ballistic thermal transport from nanoscale interfaces observed using ultrafast coherent soft X-ray beams, Poster Presentation for 2009 ASME Society-Wide Micro/Nano Technology Forum (ASME/IMECE 2009) Orlando, FL, November 13-19, 2009
2. Xiaobo Li, Jun Liu, and Ronggui Yang, Tuning the Thermal Conductivity using Mechanical Strains, Poster Presentation for 2009 ASME Society-Wide Micro/Nano Technology Forum (ASME/IMECE 2009) Orlando, FL, November 13-19, 2009
3. Qing Li, Mark Siemens, Ronggui Yang, Keith Nelson, Erik Anderson, Margaret Murnane, Henry Kapteyn, Quasi-ballistic thermal transport from a nanoscale hotspot observed using ultrafast coherent extreme ultraviolet beams, Fall 2009 Meeting of the Four Corners Section of the APS, Golden, CO, October 23-24, 2009. ([Best Presentation Award](#))

4. Mark Siemens , Qing Li , Keith Nelson , Ronggui Yang , Erik Anderson , Margaret Murnane, Henry Kapteyn, High-Frequency Surface Acoustic Wave Propagation in Nanostructures Characterized by Coherent Extreme Ultraviolet Beams, Fall 2009 Meeting of the Four Corners Section of the APS, Golden, CO, October 23-24, 2009.
5. Mark Siemens, Qing Li, Margaret Murnane, Henry Kapteyn, Ronggui Yang, and Keith Nelson, Time-resolved measurement of quasi-ballistic heat transport across nanoscale interfaces, 2009 Summer Heat Transfer Conference, July 19-23, 2009, San Francisco, CA
6. Pilhwa Lee, Kurt Maute, and Ronggui Yang, "An extended finite element method (XFEM) for nano-scale heat transfer," Proceedings of 2009 NSF Engineering Research and Innovation Conference, Honolulu, Hawaii, June 22-25, 2009.
7. Pilhwa Lee, Kurt Maute, and Ronggui Yang, An extended finite element method (XFEM) based topology optimization for nano-scale heat transfer, the U.S. National Congress on Computational Mechanics (USNCCM X), July 16-19, 2009, Columbus, OH.
8. Xiaobo Li and Ronggui Yang, Stain Effects on the Thermal Conductivity of Nanostructures, 17th Symposium on Thermophysical Properties, June 21-26, 2009, Boulder, CO
9. Mark Siemens, Qing Li, Margaret Murnane, Henry Kapteyn, Ronggui Yang, Erik Anderson, and Keith Nelson, Time-Resolved Quasi-Ballistic Heat Transport at Nano-Interfaces, 17th Symposium on Thermophysical Properties, June 21-26, 2009, Boulder, CO.
10. Pilhwa Lee, Kurt Maute, and Ronggui Yang, An extended finite element method (XFEM) based topology optimization for nano-scale heat transfer, 17th Symposium on Thermophysical Properties, June 21-26, 2009, Boulder, CO.
11. Mark Siemens, Qing Li, Margaret Murnane, Henry Kapteyn, Ronggui Yang, Erik Anderson, and Keith Nelson, EUV Detection of High-Frequency Surface Acoustic Waves, The Conference on Lasers and Electro-Optics (CLEO) and The International Quantum Electronics Conference (IQEC), May 31-June 5, 2009, Baltimore, MD
12. [\[Referred Paper\]](#) C. Oshman, B. Shi, C. Li, R.G. Yang, Y.C. Lee, and V.M. Bright, Fabrication and Testing of a Flat Polymer Micro Heat Pipe, The 15th International Conference on Solid-State Sensors, Actuators and Microsystems (Transducers 2009), June 21 - 25, 2009, Denver, CO.
13. Yadong Zhang, Yu-Zhong Zhang, David C. Miller, Jacob A. Bertrand, Shih-Hui Jen, Ronggui Yang, Martin L. Dunn, Steven M. George, and Y. C. Lee, Defect Inspection of ALD/MLD-Based Barrier Coatings, IMAPS/ACerS 5th International Conference and Exhibition on Ceramic Interconnect and Ceramic Microsystems Technologies (CICMT 2009), April 20-23, 2009, Denver, CO.
14. Ching-Yi Lin, Ronggui Yang, Y. C. Lee, Aziz Abdulagatov, and Steven M. George, Flexible Thermal Ground Plane Enabled by ALD/MLD-Based Barrier Coatings, IMAPS/ACerS 5th International Conference and Exhibition on Ceramic Interconnect and Ceramic Microsystems Technologies (CICMT 2009), April 20-23, 2009, Denver, CO.
15. David C. Miller, Ross R. Foster, Yadong Zhang, Shih-Hui Jen, Jacob A. Bertrand, Zhixing Lu, Dragos Seghete, Jennifer L. O'Patchen, Ronggui Yang, Yung-Cheng Lee, Steven M. George, and Martin L. Dunn, Mechanical Robustness of ALD/MLD-Based Barrier Coatings, IMAPS/ACerS 5th International Conference and Exhibition on Ceramic Interconnect and Ceramic Microsystems Technologies (CICMT 2009), April 20-23, 2009, Denver, CO.

16. Bo Shi, Christopher Oshman, Aziz Abdulagatov, Myongjai Lee, Virginia Yong, Dae Up Ahn, Ching-Yi Lin, Wei Wang, Jen-Hau Cheng, Chen Li, Ronggui Yang, Victor Bright, Steven George, G.P. “Bud” Peterson, Y.C. Lee, Development of Micro/Nano-Enabled Flexible Thermal Ground Plane, Workshop on MEMS & Associated Microsystems, International Conference and Exhibition on Device Packaging, March 9 - 12, 2009, Scottsdale/Fountain Hills, Arizona

2008

1. David C. Miller, Ross R. Foster, Yadong Zhang, Shih-Hui Jen, Jacob A. Bertrand, Zhixing Lu, Dragos Seghete, Jennifer L. O’Patchen, Ronggui Yang, Yung-Cheng Lee, Steven M. George, and Martin L. Dunn, “Mechanical Robustness of Atomic Layer Deposited and Molecular Layer Deposited Coatings for Microsystems and Flexible Electronics Applications,” Symposium I: Reliability and Properties of Electronic Devices on Flexible Substrates, Material Research Society (MRS) Symposium, Fall 2008, Boston, MA
2. [\[Referred Paper\]](#) Nicholas Allec, Ziad Hassan, Li Shang, Robert P. Dick and Ronggui Yang, “ThermalScope: Multi-scale Thermal Analysis for Nanometer-scale Integrated Circuits,” International Conference on Computer-Aided Design (ICCAD), San Jose, November 10-13, 2008.
3. Mark Siemens, Qing Li, Margaret Murnane, Henry Kapteyn, Ronggui Yang, and Keith Nelson, “Probing Quasi-Ballistic Heat Transport using Coherent EUV Beams,” Directed Energy Professional Society Ultrashort Pulse Laser Workshop, Boulder, CO, September 2008.
4. [\[Referred Paper\]](#) Liang-Chun Liu, Mei-Jiau Huang, and Ronggui Yang, Curvature Effect on the Thermal Conductivity of Nanowires, 2008 Summer Heat Transfer Conference, August 10-14, 2008 Jacksonville, FL.
5. Mark Siemens, Qing Li, Margaret Murnane, Henry Kapteyn, Ronggui Yang, and Keith Nelson, Nanoscale Heat Transport Probed with Soft X-Rays, XVI International Conference on Ultrafast Phenomena, June 9-13 2008, Italy (referred paper).
6. Anton Evgrafov, Kurt Maute, Ronggui Yang and Martin Dunn, “Topology Optimization for Nano-Scale Heat Transfer,” 8th. World Congress on Computational Mechanics (WCCM8) and the 5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), 30 June - 4 July 2008, the Lido Island, Venice, Italy.
7. [\[Referred Paper\]](#) Yadong Zhang, Yu-Zhong Zhang, David C. Miller, Jacob A. Bertrand, Ronggui Yang, Martin L. Dunn, Steven M. George and Y. C. Lee, Fluorescent Tag-Based Inspection of Barrier Coatings for OLEDs and Polymer Packages, NSTI Nanotech 2008, Boston, MA, June 1-5, 2008 (referred paper).
8. [\[Referred Paper\]](#) Yadong Zhang, David C. Miller, Jacob A. Bertrand, Yu-Zhong Zhang, Ronggui Yang, Martin L. Dunn, Steven M. George and Y. C. Lee, Fluorescent Tag-Based Inspection of Barrier Coatings for OLEDs and Polymer Packages, Society for Information Display, 2008 International Symposium, Seminar and Exhibition May 18-23, 2008, Los Angeles, CA .
9. Kurt Maute, Anton Evgrafov, Ronggui Yang, Martin Dunn, Topology Optimization of Nano- and Submicro-scale Heat Transfer, Proceedings of 2008 NSF Engineering Research and Innovation Conference, January 2008, Knoxville, TN (un-referred paper).

10. [\[Referred Paper\]](#) Ronggui Yang, Jen-Hau Cheng, Weixue Tian, Ming-Shan Jeng, and Gang Chen, Thermal Conductivity of Nanocomposites, ASME Micro/Nanoscale Heat Transfer International Conference (MNHT08), January 2008, Tainan, Taiwan.

2007

1. Mark E. Siemens, Qing Li, Oren Cohen, Henry Kapteyn, Margaret Murnane, and Ronggui Yang, "Probing Quasi-ballistic heat transport using coherent EUV beams", Directed Energy Professional Society 2007, Ultrashort Pulse Laser Workshop, October 2007.
2. Qing Li, Mark E. Siemens, Oren Cohen, Henry Kapteyn, Margaret Murnane, Ronggui Yang, Probing Quasi-Ballistic Phonon Thermal Transport using Extreme Ultraviolet (EUV), Ultrafast Optics 2007, High Field Short Wavelength, September 2007.
3. [\[Referred Paper\]](#) Weixue Tian and Ronggui Yang, Thermal Conductivity of Randomly Stacked Nanoparticle Composites, ASME-JSME Heat Transfer Conferences, Vancouver, Canada, August 2007.
4. Ronggui Yang, Thermal Conductivity Modeling and Characterization of Nanocomposites and Nano-ceramics, AFOSR focused workshop on Ultra-High Temperature Ceramic (UHTC) Materials Menlo Park, CA, July 23-25, 2007.
5. Y. Zhang, R. Yang, S.M. George and Y.C. Lee, Atomic Layer Deposition for Hermetic Polymer Packages, (abstract #1637), NSTI Nanotechnology Conference and Trade Show, May 20-24, 2007, Santa Clara, California (Un-Referred Paper)
6. Ronggui Yang, G.P. "Bud" Peterson, Chen Li, Victor Bright, Y.C. Lee, Martin Dunn, Steven M. George, Kurt Maute, Margaret M. Murnane, and Henry Kapteyn, Thermal Challenges and Innovations in Emerging Micro/Nano Systems, DARPA Microsystems Technology Symposium, March 3-5, 2007, San Jose, CA.
7. Weixue Tian and Ronggui Yang, Monte Carlo simulation of thermal conductivity in randomly distributed nanowire composites (A43.00009), American Physical Society March Meeting, Denver CO, 2007.
8. Ming Tang , Hohyun Lee , Asegun Henry , Ronggui Yang , Dezhi Wang , Jean-Pierre Fleurial , Pawan Gogna , Gang Chen , Zhifeng Ren , Mildred Dresselhaus, Thermoelectric properties of Si-Ge nanoparticle composites (N43.00009), American Physical Society March Meeting, Denver CO, 2007.

2006

1. [\[Referred Paper\]](#) Ming Y. Tang, Mildred S Dresselhaus, Gang Chen, and Ronggui Yang, Thermoelectric Modeling of Si Nanoparticle Composites, December 1, 2006 Fall MRS Meeting at Boston.
2. Ronggui Yang, "Some Ideas on Variable Thermal Resistors", DARPA Workshop on Variable Thermal Resistors, Boulder, CO, October 2006, (invited 45 minutes individual presentation to Program Manager Dr. Tom Kenny).
3. Ronggui Yang, Thermoelectric Transport in Nanocomposites, Multifunctional NANocomposites 2006 International Conference, ASME Nano-Institute, Honolulu, Hawaii, Sept. 20-22, 2006.
4. Gang Chen, X.Y. Chen, Z. Chen, L. Hu, A. Narayanaswamy, and R.G. Yang, Thermally-Excited Nonequilibrium between Electrons and Phonons for Energy Conversion, Nanoscale Energy Conversion and Information Processing Devices, Nice, France, September 24-26, 2006, (invited oral presentation).

5. Ronggui Yang, Thermoelectric Transport in Nanocomposites, 16th Symposium on Thermophysical Properties, Boulder, CO, July 30-Aug. 04, 2006.
6. Ronggui Yang, and Gang Chen, Thermoelectric Transport in Nanocomposites, SAE 2006 World Congress, Detroit, MI, April 3-5, 2006.
7. G. Chen, R. Yang, M.S. Dresselhaus, et al, The Nanocomposite Approach to Enhanced Thermoelectric Performance (B35.00003), 2006 APS March Meeting, Baltimore, MD, March 13–17, 2006.

Before 2005

1. [\[Referred Paper\]](#) M.S. Dresselhaus, G. Chen, M.Y. Tang, Ronggui Yang, D.Z. Wang, Z.F. Ren, J.P. Fleurial, and P. Gogna, New Directions for Nanoscale Thermoelectric Materials Research (invited), Proc. MRS Fall Meeting, paper # F1.1, Boston, MA, 2005.
2. [\[Referred Paper\]](#) Ming Y. Tang, M. S. Dresselhaus, Ronggui Yang, and Gang Chen, Thermoelectric Modeling of Si-Si_{1-x}Ge_x Ordered Nanowire Composites, Proc. MRS Fall Meeting, Boston, MA, 2005.
3. G. Chen, R.G. Yang, et al, Design, Modeling, and Synthesis of Nanocomposites for Solid-State Energy Conversion, SPIE Optic East - Nanofabrication: Technologies, Devices, and Applications, Boston, October 23-26, 2005 (invited oral presentation).
4. Ronggui Yang, Xiaoyuan Chen, Aaron Schmidt, and Gang Chen, Pump-Probe Experimental Study of Phonon Reflectivity at an Interface and Phonon Relaxation Time (Nano2005-87064), ASME 4th Integrated Nanosystems – Design, Synthesis, & Applications, UC-Berkeley, September 14-16, 2005, (extended abstract).
5. Ronggui Yang, and Gang Chen, Non-local Formulation of Rarefied Poiseuille Flow (Nano2005-87072), ASME 4th Integrated Nanosystems – Design, Synthesis, & Applications, UC-Berkeley, September 14-16, 2005, (extended abstract).
6. [\[Referred Paper\]](#) G. Chen, R.G. Yang, et al, Engineering Phonon and Electron Transport in Nanocomposites for Solid-State Energy Conversion (invited), Proceedings of the 5th International Workshop on Structural Health Monitoring, Ed. Fu-Kuo Chang, pp. 1443-1450, Stanford, September 12-14, 2005.
7. G. Chen, A. Narayanaswamy, Z. Chen, R.G. Yang, and L. Hu, Nanoscale Thermal Radiation: Fundamental Issues and New Opportunities, US-Japan Seminar on Nanoscale Heat Transfer, July 2005, (invited oral presentation)
8. [\[Referred Paper\]](#) Ronggui Yang, Gang Chen and Mildred S. Dresselhaus, Thermal Conductivity of Core-Shell Nanostructures: from Nanowires to Nanocomposites (HT 2005-72198), ASME Heat Transfer Conference, San Francisco, July 2005.
9. [\[Referred Paper\]](#) Ming-Shan Jeng, Ronggui Yang, and Gang Chen, Monte Carlo Simulation of Phonon Transport and Thermal Conductivity in Nanocomposites (IPACK 2005-73494), The ASME/Pacific Rim Technical Conference and Exhibition on Integration and Packaging of MEMS, NEMS, and Electronic Systems (InterPACK'05), San Francisco, July 2005.
10. [\[Referred Paper\]](#) Ming-Shan Jeng, Ronggui Yang, and Gang Chen, Monte Carlo Simulation of Thermoelectric Properties in Nanocomposites, the 24th International Conference on Thermoelectrics (IEEE), Clemson University, Clemson SC, June 19-23, 2005.
11. [\[Referred Paper\]](#) Hohyun Lee, Dezhi Wang, Wenzhong Wang, Zhifeng Ren, B. Klotz, Ming Y. Tang, Ronggui Yang, Pawan Gogna, Jean-Pierre Fleurial, Mildred S. Dresselhaus, and Gang Chen, Thermoelectric Properties of Si/Ge Nano-composite, the 24th International

- Conference on Thermoelectrics (IEEE), Clemson University, Clemson SC, June 19-23, 2005.
12. K. Miyazaki, H. Tsukamoto, R.G. Yang, and G. Chen, Thermal Conductivity of Nanostructured Material, Fifth International Conference on Enhanced, Compact and Ultra-Compact Heat Exchangers: Science, Engineering and Technology, Whistler, BC, Canada, Sep 11-15, 2005.
 13. Gang Chen, Ronggui Yang, Arvind Narayanaswamy, and Xiaoyuan Chen, Thermally-Excited Nonequilibrium States between Electrons and Phonons for Energy Conversion, the Second International Symposium on Micro/Nanoscale Energy Conversion and Transport (MECT-04), Seoul, Korea, August 8-13, 2004 (invited oral presentation).
 14. [\[Referred Paper\]](#) Ronggui Yang and Gang Chen, Thermal Conductivity Prediction of Periodic Nanocomposites using Phonon Boltzman Equation (HT-FED2004-5646), Proc. 2004 ASME Heat Transfer/Fluids Engineering Summer Conference (HTFED2004), pp. 449-456, Charlotte, North Carolina, July 11-15, 2004.
 15. [\[Referred Paper\]](#) Ronggui Yang, Arvind Narayanaswamy and Gang Chen, Nonequilibrium Electron-Phonon Thermoelectric Devices using Surface Plasmon, Proc. the Sixth International Symposium of Heat Transfer (ISHT6), Beijing, China, June 15-19, 2004.
 16. [\[Referred Paper\]](#) Ronggui Yang and Gang Chen, Recent Developments in Nanostructured Thermoelectric Materials and Devices, Panel on "Challenges in Chip/Processor Level Thermal Engineering" at 9th IEEE/ASME Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (ITHERM2004), pp.731-732, Las Vegas, NV, June 1-4, 2004.
 17. [\[Referred Paper\]](#) Ronggui Yang and Gang Chen, Theoretical Thermal Conductivity of Nano-composites, in *Thermoelectric Materials 2003, Research and Applications*, vol 793, pp. 121-126, eds. G. S. Nolas and J. Yang and T. P. Hogan and D. C. Johnson. From the Materials Research Society Fall 2003 Meeting, Symposium S, Paper S5.2.
 18. [\[Referred Paper\]](#) G. Chen, C. Dames, T. Harris, D. Borca-Tasiuc, R.G. Yang, B. Yang, W.L. Liu, D. Song, and M. Takashiri, Thermal Conductivity Reduction Mechanisms in Superlattices (invited), Proc. International Thermoelectric Conference 2003 (IEEE), La Grande Motte, France, August 2003.
 19. [\[Referred Paper\]](#) Jianping Fu, Ronggui Yang, Gang Chen, G. Jeffrey Snyder, and Jean-Pierre Fleurial, Integrated Electroplated Heat Spreaders for High Power Quantum Well Lasers (TED-AJ03-332), Proc. 7th ASME/JSME Joint Thermal Engineering Conference (AJTE 2003), Hawaii, March 2003.
 20. [\[Referred Paper\]](#) Gang Chen and Ronggui Yang, Nano-to-Macroscale Transport Modeling through Approximations (IMECE2002-32120, invited), Proc. International Mechanical Engineering Conference and Exhibition (IMECE2002), pp. 61-68, New Orleans, Nov. 2002
 21. [\[Referred Paper\]](#) Ronggui Yang, Gang Chen, and Yuan Taur, Ballistic-Diffusive Equations for Multidimensional Nanoscale Heat Conduction, Proc. International Heat Transfer Conference (IHTC 2002), Grenoble, France, August 2002.
 22. [\[Referred Paper\]](#) R.G. Yang and G. Chen, Energy Conversion and Transport Near a Solid-Solid Interface, International Thermoelectric Conference 2002 (IEEE), Long Beach, CA, August 2002.
 23. Ronggui Yang, Diana Borca-Tasuica and Gang Chen, Heat Conduction and Energy Conversion in Nanoscale, Proc. The 20th Symposium on Energy Engineering Sciences, Argonne, IL, May 20-21, 2002.

24. [\[Referred Paper\]](#) R.G. Yang, G. Chen, G.J. Snyder and J.-P. Fleurial, Design of two-stage Thick film Thermoelectric Micro Coolers for Mid-IR Lasers Thermal Management, Proc. 8th IEEE/ASME Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (ITHERM 2002), pp. 323-329, San Diego, CA, May 2002.
25. [\[Referred Paper\]](#) Ronggui Yang and Gang Chen, Two Dimensional Nanoscale Heat Conduction Using Ballistic-Diffusive Equations, Proc. International Mechanical Engineering Conference and Exhibition, Vol. 1: pp.363-366, New York, Nov. 2001.
26. [\[Referred Paper\]](#) R.G. Yang, G. Chen, G.J. Snyder and J.-P. Fleurial, Geometric Effects On the Transient Cooling of Thermoelectric Coolers, Proc. Material Research Society Fall 2001 Meeting, pp. 281-286, Boston, MA, Nov. 2001.
27. [\[Referred Paper\]](#) A. Ravi Kumar, R.G. Yang, G. Chen, and J. P. Fleurial, Transient Thermoelectric Cooling for Thin Film Devices, Proc. IEEE International Symposium on Circuits and Systems, v 4, 2001, p Z1141-Z1146 (MRS Spring 2000 meeting).
28. [\[Referred Paper\]](#) Ronggui Yang, Shuye Lei and Jianhua Du, Heat and Mass transfer in Low Moisture-content Saturated Porous Media During Sudden Heating: I. Fundamentals, Proceedings of 5th ASME/JSME Joint Thermal Engineering Conference (AJTE1999), San Diego, California, March 1999.
29. [\[Referred Paper\]](#) Ronggui Yang, Jianhua Du and Shuye Lei, Heat and Mass Transfer in Low Moisture- content Saturated Porous Media during Sudden Heating: II. Numerical Simulation, Proceedings of 5th ASME/JSME Joint Thermal Engineering Conference (AJTE 1999), San Diego, California, March 1999.
30. [\[Referred Paper\]](#) Shuye Lei, Chunmei Xia, Ronggui Yang and Yong Cao, Numerical Simulation and Analysis of Process in Unsaturated Porous media for Measuring Thermal Conductivity with Transient Heat Probe, 5th Asian Thermal Property Conference, Sep. 1998, Seoul Korea.
31. [\[Referred Paper\]](#) Ronggui Yang, Jianhua Du and Shuye Lei, Seepage Model on Simultaneous Transport of Heat-Water-Air-Solute in Porous Media, 12th Hydrodynamics Conference (in Chinese), August 1998.
32. [\[Referred Paper\]](#) Shuye Lei, Ronggui Yang and Jianhua Du, Transport Theory in Unsaturated Porous Media, Annual Heat and Mass Transfer Conference of Chinese Engineering Thermophysics Society (in Chinese), 1998.
33. [\[Referred Paper\]](#) Ronggui Yang, Jianhua Du and Shuye Lei, Numerical Simulation of the Transport Phenomena in Porous Media, Annual Heat and Transfer Conference of Chinese Engineering Thermophysics Society (in Chinese), 1998.
34. [\[Referred Paper\]](#) Ronggui Yang, Jianhua Du and Shuye Lei, Solute Effect on Heat and Moisture Transfer in Unsaturated Porous Media, Annual Heat and Transfer Conference of Chinese Engineering Thermophysics Society (in Chinese), 1998.
35. [\[Referred Paper\]](#) Shuye Lei, Guanyu Zheng, Buxuan Wang, Ronggui Yang and Chunmei Xia, Numerical Simulation of the Transport Phenomena Due to Sudden Heating in Porous Media, ASME 31st National Heat Transfer Conference (NHTC 1997), Baltimore, Maryland, August 1997.
36. [\[Referred Paper\]](#) Shuye Lei, Chunmei Xia, Ronggui Yang and Yong Cao, Analysis of Unsaturated Porous Media Thermal Conductivity Measurement, Annual Heat and Transfer Conference of Chinese Engineering Thermophysics Society (in Chinese), Oct. 1997.

i). Invited Seminars

1. October 23, 2015, Nanoscale Heat Transfer: Progresses and Opportunities, Boise State University.
2. July 4, 2015, Nanoscale Heat Transfer: Progresses and Opportunities, Jimei University, Xiamen China.
3. June 19, 2015, Nanoscale Heat Transfer: Progresses and Opportunities, Tongji University.
4. June 17, 2015, Thermal Conductivity of Polymer and Hybrid Organic-Inorganic Materials, Xi'an Jiaotong University.
5. June 12, 2015, Nanoscale Heat Transfer: Progresses and Opportunities, Institute of Mechanics, Chinese Academy of Science.
6. October 31, 2014, Thermal Conductivity of Polymer and Hybrid Organic-Inorganic Materials, Arizona State University.
7. September 3, 2014, Thermal Conductivity of Polymer and Hybrid Organic-Inorganic Materials, Massachusetts Institute of Technology.
8. May 30, 2014, Ultrafast Characterization of Phonon Transport and Nanoscale Thermal Conduction, School of Civil and Environmental Engineering, Shanghai Second Polytech University.
9. May 28, 2014, Phase-Change Heat Transfer at Micro/Nanoscale: From Fundamentals to Manufacturable Devices, School of Mechanical and Power Engineering, Shanghai Xiaotong University.
10. May 26, 2014, Nanoscale Heat Conduction: Multiscale Simulations and Ultrafast Laser-Based Characterization, Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Science.
11. May 23, 2014, Nanoscale Heat Conduction: Multiscale Simulations and Ultrafast Laser-Based Characterization, Southeast University.
12. December 24, 2013, Phase-Change Heat Transfer at Micro/Nanoscale: From Fundamentals to Manufacturable Devices, Department of Thermal Engineering.
13. December 23, 2013, Multiscale Simulation and Ultrafast Characterization for Nanoscale Heat Conduction, School of Aerospace, Tsinghua University.
14. September 25, 2013, ALD Coatings on Structured Surfaces for Wettability Control and Phase-Change Heat Transfer Enhancement, Department of Mechanical Engineering, University of Maryland.
15. April 26, 2013, Nanoscale Heat Conduction, Department of Mechanical Control and Engineering, Tokyo Institute of Technology.
16. April 26, 2013, Understanding Phonon Transport for Nanoscale Thermoelectricity, Department of Materials Science and Engineering, Tokai University.
17. April 24, 2013, Nanoscale Heat Conduction: Ultrafast Laser-Based Characterization and Multiscale Simulation, Department of Mechanical Engineering, Tokyo University.
18. April 24, 2013, Ultrafast Laser-Based Characterization for Nanoscale Heat Conduction, Institute of Industrial Science, Tokyo University (Host: Masahiro Nomura).
19. April 23, 2013, Nanoscale Heat Conduction: Ultrafast Laser Based Characterization and Multiscale Simulation, Department of System Design Engineering, Keio University.
20. April 19, 2013, Hybrid Micro/Nano-Structured Surfaces for Phase-Change Heat Transfer, Department of Mechanical Engineering, Osaka University, Japan.
21. April 18, 2013, Nanoscale Heat Conduction: Ultrafast Laser Based Characterization and Multiscale Simulation, Department of Mechanical Engineering, Kyoto University.

22. April 17, 2013, Understanding Phonon Transport for Nanoscale Thermoelectricity, AIST-Nagoya, Japan.
23. April 16, 2013, Understanding Phonon Transport for Nanoscale Thermoelectricity, Department of Chemistry, Nagoya University, Japan.
24. April 15, 2013, Nanoscale Heat Conduction: Ultrafast Laser Based Characterization and Multiscale Simulation, Department of Mechanical Engineering, Kyushu Institute of Technology, Japan.
25. April 10, 2013, Phase-Change Heat Transfer at Micro/Nano-Scale: From Fundamentals to Innovative Devices, Department of Mechanical Engineering, Kyushu Institute of Technology, Japan.
26. November 29, 2012, Manufacturable Three-Dimensional Nanostructures for Thermal Management and Energy Storage, Department of Mechanical Engineering, MIT.
27. October 25, 2012, Manufacturable Three-Dimensional Nanostructures for Thermal Management and Energy Storage, Department of Mechanical Engineering, University of Colorado at Boulder, CO.
28. October 10, 2012, Manufacturable Three-Dimensional Nanostructures for Thermal Management and Energy Storage, PRISM/PCCM Seminar Series, Princeton University, NJ.
29. June 15, 2012, Manufacturable Three-Dimensional Nanostructures for Thermal Management and Energy Storage, Xi'an Jiaotong University, Xi'an, China.
30. June 14, 2012, Multiscale Modeling and Ultrafast Laser-based Characterization of Nanoscale Heat Transfer, Xi'an Jiaotong University, Xi'an, China.
31. June 21, 2011, Nanoscale Heat Conduction, Tsinghua University, Beijing, China.
32. June 21, 2011, Manufacturable Micro/Nanotechnologies for Thermal Management and Energy Storage, Peking University, Beijing, China.
33. June 20, 2011, Nanoscale Heat Conduction, Institute of Mechanics, Chinese Academy of Science, Beijing, China.
34. June 20, 2011, Nanoscale Heat Transfer, Beijing Jiaotong University, Beijing, China.
35. June 17, 2011, Nanoscale Heat Transfer, Institute of Engineering Thermophysics, Chinese Academy of Science, Beijing, China.
36. June 16, 2011, Nanoscale Heat Transfer, University of Science and Technology in Beijing, Beijing, China.
37. June 15, 2011, Thermal and Thermoelectric Transport in Nanocomposites, Nanjing University, Nanjing, China.
38. June 14, 2011, Nanoscale Heat Conduction, Southeast University, Nanjing, China.
39. June 13, 2011, Nanoscale Heat Transfer, Nanjing University of Science and Technology, Nanjing, China.
40. March 23, 2011, Thermal Science and Engineering for Thermoelectric Energy Conversion, Department of Mechanical, Aerospace, and Nuclear Engineering, Rensselaer Polytechnic Institute, NY.
41. February 16, 2011, Thermal Science and Engineering for Thermoelectric Energy Conversion, Department of Mechanical Engineering, University of California, Berkeley, CA.
42. February 8, 2011, Thermal Science and Engineering for Thermoelectric Energy Conversion, Department of Mechanical Science and Engineering, University of Illinois, Urbana-Champaign, IL.
43. November 18, 2010, Scalable Thermal Management Technologies: from Atoms to Systems, Department of Mechanical Engineering, University of Colorado, Boulder, CO.

44. March 24, 2010, Nano-Enabled Energy Conversion and Thermal Management: from Fundamental Sciences to Manufacturable Systems, Department of Mechanical and Aerospace Engineering, Rutgers University, New Brunswick, NJ.
45. March 22, 2010, Nano-structured Thermal Interfaces for Sustainable Energy technologies, Department of Mechanical and Nuclear Engineering, Pennsylvania State University, University Park, PA.
46. February 25, 2010, Nano-structured Thermal Interfaces for Sustainable Energy technologies, Mechanical Engineering, California Institute of Technology, Pasadena, CA.
47. February 24, 2010, Nano-structured Thermal Interfaces for Sustainable Energy technologies, Department of Mechanical Engineering and Materials Sciences, Duke University, NC.
48. November 23, 2009, Nano-Enabled Energy Conversion and Thermal Management: from Fundamental Sciences to Manufacturable Systems, Department of Mechanical and Aerospace Engineering, Case Western Reserve University, Cleveland OH.
49. August 27, 2009, Nanoscale Thermal Transport, Department of Mechanical Engineering, University of Colorado, Boulder, CO.
50. June 2, 2009, Challenges and Opportunities in Nanoscale Heat Transfer, Department of Physics, Xiamen University.
51. June 1, 2009, Challenges and Opportunities in Nanoscale Heat Transfer, Department of Electrical and Information Engineering, Putian University.
52. June 26, 2008, Nanoscale Heat Transfer: Challenges and Opportunities, National Renewable Energy Lab, Golden, CO.
53. June 4, 2008, Challenges and Opportunities in Nanoscale Heat Transfer, Department of Mechanical Engineering, Hongkong University of Science and Technology.
54. March 28, 2008, Challenges and Opportunities in Nanoscale Heat Transfer, Department of Mechanical Engineering, University of Toledo.
55. May 2007, Nanotechnological Innovations in Thermoelectric Energy Conversion and Thermal Management, Beijing University, Tsinghua University, Zhongshan University, sponsored by National Natural Science Foundation of China [Host: Prof. Xiaofeng Peng at Tsinghua University].
56. March 22, 2007, Nanotechnological Innovations in Thermoelectric Energy Conversion and Thermal Management, CU Building Systems Seminar Series, University of Colorado at Boulder.
57. May 17, 2006, Nanoscale and Ultrafast Thermal Sciences and Applications, National Renewable Energy Lab (Golden, CO).
58. April 12, 2006, Nanoscale Heat Transfer and Energy Conversion, CU Energy and Environment Seminar Series, University of Colorado at Boulder.
59. March 16, 2006, Nanoscale and Ultrafast Thermal Sciences and Applications, Department of Chemistry, University of Colorado at Boulder.
60. Feb. 13, 2006, Nanoscale and Ultrafast Thermal Sciences and Applications, Materials Reliability Division, National Institute of Standards and Technology (NIST-Boulder).
61. Feb. 03, 2006, Nanoscale and Ultrafast Thermal Sciences and Applications, JILA/Physics Department, University of Colorado at Boulder.
62. Dec. 02, 2005, Nanoscale Heat Transfer with Applications in Nanoelectronics, Department of Electrical and Computer Engineering, Tufts University.
63. May 13, 2005, Nanoscale Heat Transfer with Applications in Nanoelectronics and Thermoelectrics, Intel Corporation – Assembly Technology Development, Arizona

64. April 4, 2005, Nanoscale Heat Transfer with Applications in Nanoelectronics and Thermoelectrics, University of Notre Dame.
65. March 31, 2005, Nanoscale Heat Transfer with Applications in Nanoelectronics and Thermoelectrics, University of Colorado – Boulder.
66. March 22, 2005, Nanoscale Heat Transfer with Applications in Nanoelectronics and Thermoelectrics, University of Houston.
67. March 17, 2005, Nanoscale Heat Transfer with Applications in Nanoelectronics and Thermoelectrics, University of Illinois – Urbana Champaign.
68. March 01, 2005, Nanoscale Heat Transfer with Applications in Nanoelectronics and Thermoelectrics, University of Wisconsin.
69. Feb. 24, 2005, Nanoscale Heat Transfer with Applications in Nanoelectronics and Thermoelectrics, the City College of New York.
70. Feb. 17, 2005, Nanoscale Heat Transfer with Applications in Nanoelectronics and Thermoelectrics, SUNY-Stony Brook.
71. Dec. 20, 2004, Nanoscale Heat Transfer with Applications in Nanoelectronics and Thermoelectrics, Columbia University.

TEACHING AND MENTORING

a). Course Taught

MCEN 3022 Heat Transfer (Spring 2010, Spring 2011, Fall 2014, Spring 2015, Spring 2016, **Fall 2017**)

MCEN 5042 Heat Transfer (Spring 2007, Spring 2008, Spring 2009, Fall 2010, Fall 2011, Fall 2013, Fall 2014, **Spring 2017**)

MCEN 4228/5228 Microscale Heat Transfer (Fall 2006, Fall 2007, Fall 2009, Fall 2013, Fall 2015, **Fall 2017**)

MCEN 5228-012 Heat Transfer in Practice (Spring 2014, **Spring 2018**)

b). Mentoring Activities

1) Current Advisees:

Post-Doctoral Research Associates: Dongliang Zhao; Rongfu Wen; Puqing Jiang; Arto J. Groehn (co-advised with Alan Weimer in ChemE).

PhD Students: Ms. Shanshan Xu, Mr. Xin Qian, Mr. Tianzhu Fan, Mr. Xinpeng Zhao.

Undergraduate Students: Siyu Jiang, Cobb Ethan, Dillon Kidd, Mathew Ballinger

Visiting Professor: Xu Ji (Yunnan Normal University, China), Congliang Huang (China University of Mining and Technology),

Visiting PhD Students:

Biao Wang (Ph.D student in Physics, Tongji University)

Xing Lu (Ph.D student in Power and Energy Engineering, Xi'an Jiaotong University)

S. Manikandan (Ph.D student in Indian Institute of Technology – Delhi, India)

2). Alumni

Ph.D Graduates:

Name (time at CU)	Role	First Job after leaving NEXT	Current Position
Xiaokun Gu (08/11-10/16)	Ph.D student	Assistant Professor, Shanghai Jiaotong University	Assistant Professor, Shanghai Jiaotong University
Suraj J. Thiagarajan (08/08-05/15)	Ph.D Student	Senior researcher, Aqwest Inc.	Senior researcher, Aqwest Inc.
Qian Li (08/09-08/14)	MS/Ph.D Student		Software Engineer
Miao Tian (08/09-04/14)	MS/Ph.D Student	Associate Professor, Southeast University	Associate Professor, Southeast University
Jun Liu (08/08-09/13)	MS/Ph.D Student	Post-Doc at UIUC with David Cahill	Assistant Professor of Mechanical Engineering, North Carolina State University
David Makhija (08/08-09/13)	MS/Ph.D Student	Altair	Altair Inc
Xiaobo Li (08/07-04/12)	Ph.D Student	Post-Doc at MIT With Gang Chen	Associate Professor, Huangzhong University of Science and

			Technology
Yadong Zhang (08/06- 04/11)	Ph.D student	Intel	Intel
Jen-Hau Cheng (08/06-09/10)	Ph.D student	Bell Labs	Bell Labs

M.Sc Graduates:

Name (time at CU)	Role	First Job after leaving NEXT	Current Position
Shanshan Xu	MS/Ph.D student	Ph.D Student	Ph.D Student
Saad Jajja (08/14-05/16)	MS. Student	Ph.D student in Oregon State Univ	
Qian Li (08/09-08/14)	MS/Ph.D Student	Ph.D Student	Ph.D Student
Miao Tian (08/09-04/14)	MS/Ph.D student	Ph.D Student	Ph.D Student
Jun Liu (08/08-09/13)	MS/Ph.D student		Assistant Professor of Mechanical Engineering, North Carolina State University
David Makhija (08/08-09/13)	MS/Ph.D Student		Altair
Suresh Ramanan (01/07-12/09)	Master's student	Schlumberger	Schlumberger

Post-doctor Research Associates and Visiting Ph.D Students:

Name (time at CU)	Role	First Job after leaving NEXT	Current Position
Weixue Tian (01/06-09/07)	Post-Doc	Caterpillar Inc	Senior Scientist, Caterpillar, Inc
Bin Li (01/07-12/07)	Post-Doc	Professor of Physics, University of Science and Technology in China	Professor of Physics, University of Science and Technology in China
Xiaochun Wang (09/07-09/08)	Post-Doc	Research Scientist, Tsinghua University	Associate Professor, Institute of Atomic and Molecular Physics, Jilin University, Changchun, China
Dae Up Ahn (01/08-06/09)	Post-Doc	Post-Doc at CU-Boulder, with another professor	Nexans Research Center (Korea)
Jun Zhou (04/09-04/12)	Post-Doc	Professor of Physics, Tongji University	Professor of Physics, Tongji University
Yuanyuan Wang (10/10-04/12)	Post-Doc	Associate Professor, Shanghai Second	Associate Professor, Shanghai Second Polytechnic University

		Polytechnic University	
Wei Wang (08/08-07/12)	Post-Doc	Associate Professor, Ninbo Materials Institute, Chinese Academy of Sciences	Associate Professor, Ninbo Materials Institute, Chinese Academy of Sciences
Jiafeng Wu (03/11-12/12)	Post-Doc	Associate Professor of Thermal and Power Engineering, Southeast University	Associate Professor of Thermal and Power Engineering, Southeast University
Jianming Chen (09/13-07/14)	Post-Doc		Research Scientist, Institute of Chemistry, Chinese Academy of Sciences
David Geb (10/13-09/14)	Post-Doc	Senior Engineer ANSYS Inc.	Senior Engineer ANSYS Inc.
Liang-Chun Liu (09/07-09/08)	Visiting Ph.D student	Ph.D student at National Taiwan University	Applied Materials Inc.
Jie Zhu (02/09-09/10)	Visiting Ph.D student	Ph.D Student at the Chinese Academy of Science.	Research Scientist at the Institute of Engineering Thermophysics, Chinese Academy of Science.
Jose Ordonez (06/10-06/11)	Visiting Ph.D student	Post-Doc at Ecole Central Paris	Research Scientist at Ecole Central Paris
Dan Li (09/09-09/11)	Visiting Ph.D student	Ph.D Student at Peking University	Ph.D Student at Stanford University
Gensheng Wu (09/10-09/12)	Visiting Ph.D student	Ph.D student at Southeast University	Associate Professor, Southeast University

Visiting Professors

Name (time at CU)	Role	Job before joining NEXT	Current Position
Jianhong Gong (04/2015-03/2016)	Visiting Professor	Associate Professor, Shangdong University- Weihai	Associate Professor, Shangdong University- Weihai
Yangbo Deng (09/2014-09/2015)	Visiting Professor	Professor, Dalian Maritime University	Professor, Dalian Maritime University
Yujie Wei (09/2011-05/2012)	Visiting Professor	Professor, Institute of Mechanics, Chinese Academy of Sciences	Professor, Institute of Mechanics, Chinese Academy of Sciences
Xiaofeng Peng (07/2009-08/2009)	Visiting Professor	Professor, Thermal Engineering, Tsinghua University	Professor (deceased), Thermal Engineering, Tsinghua University

Undergraduate Students and Visiting MS/BS Students:

- Miss. Christini Martini, August 2015-December 2016, Department of Mechanical Engineering, University of Colorado, Boulder, Project: Development of Single Phase Thermosiphons.
- Mr. Carlos Arau Lopez de Sagredo, February-July 2016, Balsells International Mobility Program, Universitat Politècnica de Catalunya, Spain, Project: Thermal conductivity measurement.
- Mrs. Itza Beltran, June-August 2015, SMART Fellow, Department of Mechanical Engineering, University of Central Florida, Project: The effect of water charging amount on the performance of thermal ground planes.
- Mr. Nicolas Pinkowski, August 2014-May 2015, DLC Apprentice, Department of Mechanical Engineering, University of Colorado, Boulder, CO, Project: Vacuum-enhanced heat spreaders.
- Mr. Arthur Zhong, June 2012-June 2014, Cornell University / University of Colorado,
- Mr. Kent Kurashima, June-August 2014, SMART Fellow, Department of Mechanical Engineering, San Diego State University, Project: Liquid charging system for thermal ground planes.
- Mr. Fufan Yang, February-May 2014, International Internship, School of Aerospace, Tsinghua University, Project: Reaction Heat Absorption Heat Pump
- Mr. Yizhan Chai, February-May 2014, International Internship, School of Aerospace, Tsinghua University, Project: Contact Angle Measurement for Nanostructured Surfaces
- Mr. Sichang Liu, June-August 2013, International Internship, School of Materials Science and Engineering, Tsinghua University, Project: Fabrication of Nanostructured Surfaces.
- Mr. John Goblirsch, <http://www.linkedin.com/in/johngoblirsch>, March 2010 – May 2013, MS/BS (2013/2011) in Mechanical Engineering and BS in Applied Math, University of Colorado at Boulder, Research Area: Functionalized Micro/Nano-Structures for Pool Boiling Heat Transfer.
- Mr. Benoit Latour, Current Position: Ph.D Student with Professor Sebastian Volz at Ecole Central Paris, (February 2011-August 2011, MS/BS Student 2006-2012, Ecole Central Paris, France, Research Area: Functionalized Micro/Nano-Structures for Pool Boiling Heat Transfer)
- Mr. Eli Kuhlmann, <http://www.linkedin.com/pub/eli-kuhlmann/26/4a2/984>, Current Position: HGST, a Western Digital Company (May 2011 – May 2012, Research Area: Optical Characterization of Nanoscale Heat Transport)
- Mr. Jeffrey Pilkman, August 2011-May 2012, DLC Apprentice, Department of Mechanical Engineering, University of Colorado, Boulder, CO, Project: Micro/Nano-Structured Surface for Thermal Management of High Power Electronics.
- Kristopher W. Holub, August 2010-May 2011, DLC Apprentice, Department of Mechanical Engineering, University of Colorado, Boulder, CO, Project: Micro/Nano-Structured Surface for Thermal Management of High Power Electronics.
- Scott R. Johnson, BS/MS student, Summer Research and Fall UROP 2006.
- Charles Oclassen, BS/MS student, Summer REU project for NSF EUV ERC, Summer 2006.

- Brian Rhode, Summer Research Student, Summer 2006

3). Student Awards

1. Tingyu Lu (advisee of Jun Zhou), Second Prize of Best Poster Awards, International Conference on Phononics and Thermal Energy Systems, May 2016, Xi'an, China.
2. Ms. Shanshan Xu, Best Poster Award, ASME-wide Micro/Nano Forum, ASME/IMECE 2015 in Houston, TX.
3. Mr. Nicolas Pinkowski, Best Poster Award in Mechanical Engineering Systems category for Engineer College's Discovery Learning Symposium, April 2015.
4. Mr. Xiaokun Gu, Teets Family Endowed Fellowship (two years from May 2015), from College of Engineering and Applied Physics, University of Colorado, Boulder, April 2015.
5. Qian Li, Mechanical Engineering Graduate Student of the Month, June 2014, CU-Boulder.
6. Tingyu Lu (advisee of Jun Zhou), Third Prize of Best Poster Awards, International Conference on Phononics and Thermal Energy Systems, May 2014, Shanghai, China.
7. Jun Liu, Best Dissertation Award from College of Engineering and Applied Physics in 2013-2014 (One out of 80 PhD Graduates), University of Colorado, Boulder.
8. Jun Liu, the Third Place Prize of NSF student poster competition in ASME/IMECE 2013 in San Diego, CA.
9. Jun Liu, NSF Travel Award for attending ASME/IMECE 2013 in San Diego, CA.
10. Xiaokun Gu, NSF Travel Award for attending ASME/IMECE 2013 in San Diego, CA.
11. Qian Li, NSF Travel Award for attending ASME/IMECE 2013 in San Diego, CA.
12. Miao Tian, NSF Travel Award for attending ASME/IMECE 2013 in San Diego, CA.
13. Jose Ordonez, [IPPA Junior Prize 2013](#), the International Photoacoustic and Photothermal Association (IPPA).
14. Jun Liu, Best Presentation of The Day Award for Graduate Engineering Annual Research & Recruitment Symposium (GEAR²S), University of Colorado at Boulder, 2013.
15. Qian Li, Best presentation of Fluid/Thermal/MEMS section in Graduate Engineering Annual Research & Recruitment Symposium (GEAR²S), University of Colorado at Boulder, 2013
16. Jose Ordonez, National Prize for Best Dissertation in Natural Sciences, Mexico, 2012.
17. Jun Liu, the First Place Prize of NSF CBET/CMMI student poster competition in ASME/IMECE 2012.
18. Xiaokun Gu, the Second Place Prize of NSF CBET/CMMI student poster competition in ASME/IMECE 2012.
19. Xiaokun Gu, NSF Travel Award for attending ASME/IMECE 2012 in Houston, TX.
20. Jun Liu, NSF Travel Award for attending ASME/IMECE 2012 in Houston, TX.
21. Miao Tian, May 2012, Mechanical Engineering Graduate Student of the Month, CU-Boulder.
22. Jun Liu, March 2012, "Most Excited Molecules" for his presentation at 12th GEAR²S Conference, Mechanical Engineering, CU-Boulder.
23. Christopher Oshman, Qian Li, Li-Anne Liew, Ronggui Yang, Yung-Cheng Lee, Victor M. Bright "Development of Flexible Thermal Ground Planes," DARPA/iMINT Center Best Poster Award (1 out of 3 from a total of 30), November 2011.
24. Yadong Zhang, May 2011, Outstanding Ph.D Dissertation Award in Mechanical Engineering, CU-Boulder.

25. Xiaobo Li, September 2010, Mechanical Engineering Graduate Student of the Month, CU-Boulder.
26. Jun Liu, February 2010, Mechanical Engineering Graduate Student of the Month, CU-Boulder.
27. Qing Li , Mark Siemens , Ronggui Yang , Keith Nelson, Erik Anderson , Margaret Murnane , Henry Kapteyn, Quasi-ballistic thermal transport from a nanoscale hotspot observed using ultrafast coherent extreme ultraviolet beams, Fall 2009 Meeting of the Four Corners Section of the APS, Best Presentation Award, Golden, CO, October 23-24, 2009.
28. Mark Siemens, 2009 National Research Council Postdoctoral Fellowship.
29. Yadong Zhang, October 2009, Mechanical Engineering Graduate Student of the Month, CU-Boulder.
30. Jen-Hau Cheng, August 2009, Mechanical Engineering Graduate Student of the Month, CU-Boulder.
31. Wei Wang, Dae Up Ahn, Chen Li, Victor Bright, Y. C. Lee and Ronggui Yang, Fabrications of Nanowire Arrays for Emerging Energy Application, DARPA/iMINT Center First Prize Best Poster Award (1 out of 2 from a total of 30), March 2009.
32. Chris Oshman, Bo Shi, Chen Li, Ronggui Yang, Y. C. Lee and Victor Bright, A New Direction in Cooling Photovoltaics, DARPA/iMINT Center Second Prize Best Poster Award (1 out of 3 from a total of 30), March 2009.
33. Jun Liu, Best Graduate Teaching Assistant (TA) award of 2008-2009 academic year, Department of Mechanical Engineering.
34. Dave Makhija, Best Presentation of the First Year Graduate Students, 9th GEARS Conference, Department of Mechanical Engineering.
35. Suraj Joottu Thiagarajan, Engineering Dean's Research Assistantship (RA paid by the Dean for a semester, 1 out of 7 total awarded in 2008 in the college.), 2008.
36. Dave Makhija, Engineering Dean's Research Assistantship (RA paid by the Dean for a semester, 1 out of 7 total awarded in 2008 in the college.), 2008.
37. Yadong Zhang, Travel Fellowship for attending the 2008 SID Display Seminar and Exhibition, Society for Information Display, May 2008.
38. Yadong Zhang, David miller, J. Bertrand, Ronggui Yang, Martin L. Dunn, Steven M. George, and Y.C. Lee, et al, "Visualization of Defects and Cracks in Atomic Layer Deposition-base Barrier Coatings," DARPA/iMINT Center Best Poster Award (1 out of 3 from a total of 30), March 2008.
39. Bo Shi, Victor M. Bright, Ronggui Yang, G.P. Peterson, Keith Peterson, and Chen Li, "Thermal Modeling and Design of Flexible Thermal Ground Plane," DARPA/iMINT Center Best Poster Award (1 out of 3 from a total of 30), March 2008.
40. Weixue Tian, Jen-Hau.Cheng, Scott R. Johnson, Y.C. Lee, Victor Bright, and Ronggui Yang, "Photonic Crystal enabled Micro Heat Pipe Arrays and Micro Capillary Pumped Loops," DARPA/iMINT Center Best Poster Award (1 out of 3 from a total of 25), March 2007.

4). Member of Ph.D Thesis Committee for

Ms. Kathleen Hoogeboom-Pot (Professor Margaret Murnane's Group in JILA/Physics)
 Ms. Staci Van Norman (Professor Al Weimer's Group of ChemE)
 Mr. Darwin Arifin (Professor Al Weimer's Group of ChemE)
 Mr. Zheng Zhang (Professor Yifu Ding's Group)

Mr. Liang Wang (Professor Yifu Ding's Group)
Mr. Collin Coolidge (Professor YC Lee's group)
Ms. Daniela M. Piper (Professor Sehee Lee's Group)
Mr. Jaeha Woo (Professor Sehee Lee's Group)
Ms. Qing Li (Professor Margaret Murnane's Group in JILA/Physics)
Mr. Mike Simons (Professor Victor Bright's Group)
Mr. Christopher Oshman (Professor Victor Bright's Group)
Mr. Ryan Lewis (Professor YC Lee's Group)
Mr. Mark Siemens (Professor Margaret Murnane's Group in JILA/Physics)
Mr. Mu-Hong "Martin" Lin (Professor YC Lee's Group)
Mr. Ric Chuang (Professor Victor Bright's Group)
Mr. Alexander Laws (Professor YC Lee's Group)
Mr. Thomas Yersak (Professor Sehee Lee's group)
Mr. Boris Chubukov (Professor Al Weimer's group of Chemical Engineering)
Mr. Alexander S. Yersak (Professor YC Lee's group)

PROFESSIONAL SERVICES

a). Technical Committees

- 07/2015 – 06/2017, Chair, K-9 Technical Committee on Nanoscale Thermal Transport, ASME Heat Transfer Division.
- 12/2014 – 12/2016, Chair, Nanoengineering for Energy and Sustainability (NEES) Steering Committee, ASME Nanoengineering Council (also known as ASME Nanotechnology Institute).
- 2013 - present, Committee Member, ASME K-7 & AIChE Joint Technical Committee on Thermophysical Properties, ASME Heat Transfer Division & AIChE.
- 2012 – 06/2015, Founding Vice Chair, K-9 Technical Committee on Nanoscale Thermal Transport, ASME Heat Transfer Division.
- 2012 – 06/2014, Vice Chair, Nanoengineering for Energy and Sustainability (NEES) Steering Committee Member, ASME Nanoengineering Council.
- 2009 - 2013, Committee Member, K-8 Technical Committee on Fundamentals and Theory of Heat Transfer, ASME Heat Transfer Division.
- 2009 – 2012, Committee Member, Nanoengineering for Energy and Sustainability Steering Committee (NEES), ASME Nanoengineering Council.
- 2006 – 2009, Committee Member, Nanoscale Transport Phenomena, ASME Nanotechnology Institute.
- 2006 - 2009, Committee Member, K-15 Technical Committee on Thermal Transport in Manufacturing, ASME Heat Transfer Division.

b). Journal Editor

- 2016- present, Associate Editor, Journal of Heat Transfer, published by ASME.
- 2016- present Associate Editor, Heat Transfer Research, published by Begell House.
- 2014- 2016, Guest Editor (in charge of Invited Topical Reviews), ASME Journal of Electronic Packaging.
- 2014- present, Editorial Board Member, Scientific Reports, published by Nature Publishing Group.
- 2006-2008, Co-Guest Editor for a special issue on “Nanoscale Heat Transfer” in Journal of Computational and Theoretical Nanoscience, Published in February 2008, American Scientific Publishers.

c). Conference Recently Organized/Co-Organized

- Track Organizer for “Nanoscale Thermal Transport”, ASME Summer Heat Transfer Conference, Washington DC, July 2016. (responsible for reviewing and sorting about 80 abstracts submitted to this track and recruit session chairs)
- Topic Co-Organizers, Topic 13-13 NEES Panel on Nanoengineering for Sustainability and Water, ASME International Mechanical Engineering Conference and Exhibitions (ASME IMECE), Houston, TX, Nov. 13-19, 2015.
- Topic Co-Organizers, Topic 10-9 Fundamentals of Boiling and Phase Change Heat Transfer including Nanoscale Effects, ASME International Mechanical Engineering Conference and Exhibitions (ASME IMECE), Houston, TX, Nov. 13-19, 2015. (responsible for reviewing and sorting about 15 abstracts submitted to this topic and recruit session chairs)

- Topic Co-Organizers, Topic 10-13 Nanoscale Heat Conduction, ASME International Mechanical Engineering Conference and Exhibitions (ASME IMECE), Houston, TX, Nov. 13-19, 2015. (responsible for reviewing and sorting about 60 abstracts submitted to this track and recruit session chairs).
- Session Organizer, Energy Conversion (3 sessions), First Thermal and Fluids Engineering Conference, American Society of Thermal and Fluids Engineers, The Roosevelt Hotel in New York, August 9-12, 2015
- Topic Co-Organizer, Five sessions on Thermal Properties of Nanostructured Materials, the 19th ASME/AICHE/NIST Symposium on Thermophysical Properties, Boulder, CO, June 21-26, 2015. (responsible for reviewing and sorting about 25 abstracts submitted to this topic and recruit session chairs)
- Conference Co-Chair, The 9th International Conference on Boiling and Condensation Heat Transfer, Boulder, CO, USA, April 26-30, 2015.
- Chair, ASME-Wide Micro and Nano Forum, ASME International Mechanical Engineering Conference and Exhibitions (ASME IMECE), Montreal, Canada, Nov. 14-20, 2014,
- Co-Organizer, ASME Workshop on Scalable Nanomanufacturing: Benchmarks, Standards, and Metrics, Buffalo-Niagara Convention Center, Buffalo, NY, USA, August 17, 2014.
- Chair, Best Poster Award Committee, the 2nd International Conference on Phononics and Thermal Energy Science, Tongji University, Shanghai, China, May 26-31, 2014.
- Session Chair, the 2nd International Conference on Phononics and Thermal Energy Science, Tongji University, Shanghai, China, May 26-31, 2014.
- Track Co-Chair, Track #9 Thermal Metrology at Micro/Nanoscales, The 4th ASME Micro/Nanoscale Heat & Mass Transfer International Conference (MNHMT-13), The University of Hongkong, Hongkong, China, December 11 – 14, 2013
- Co-Chair, ASME-Wide Micro and Nano Forum, ASME International Mechanical Engineering Conference and Exhibitions (ASME IMECE), San Diego, CA, Nov. 2013.
- Topic Co-Organizers, Nanoengineering for Energy and Sustainability, ASME International Mechanical Engineering Conference and Exhibitions (ASME IMECE), San Diego, CA, Nov. 2013.
- Topic Organizer, Nanoscale Thermal Transport (15 Technical Sessions), ASME IMECE, San Diego, CA, Nov. 2013.
- Topic Co-Organizers, Nanoengineering for Energy and Sustainability, (Session Chair or Co-Chair of 6 technical sessions in this topic under 10-4, managed the review for 28 abstracts), ASME IMECE, Houston, TX, Nov 11-15, 2012.
- Topic Organizer with two Co-Organizers, Fundamentals of Nanoscale Heat Transport, (Session Chair or Co-Chair of 7 technical sessions in this topic under 7-3, managed the review for 40 abstracts and 25 full papers), ASME IMECE, Houston, TX, Nov 11-15, 2012.
- Topic Organizer with two Co-Organizers, Fundamentals of Phase-Change Heat Transport, (Session Chair or Co-Chair of 7 technical sessions in this topic under 7-3, managed the review for 40 abstracts and 20 full papers), ASME IMECE, Houston, TX, Nov 11-15, 2012.
- Topic Co-Organizer (managed the review for 42 abstracts, chaired 2 out of 7 technical sessions organized), Thermal Properties of Nanostructured Materials, the 18th ASME/AICHE/NIST Symposium on Thermophysical Properties, Boulder, CO, June 24-29, 2012.

- Track Co-Organizer, Track #4 Nanoengineering for Energy and Sustainability (6 technical sessions), ASME IMECE, Denver, CO, November 2011.
- Topic Co-Organizer, Fundamentals of Nanoscale Heat Transport (12 technical sessions), ASME IMECE, Denver, CO, November 2011.
- Topic Organizer, Fundamentals and Applications of Phase-Change Heat Transport (7 technical sessions), ASME IMECE, Denver, CO, November 2011.
- Track Co-Organizer, Track #6 Nanoengineering for Energy, ASME International Mechanical Engineering Conference and Exhibitions, 2010.
- Topic Co-Organizer, Topic #25 Thermal Properties of Nanostructured Materials (8 technical sessions), the 17th ASME/AICHE/NIST Symposium on Thermophysical Properties, Boulder, CO, June 21-26, 2009.
- Topic Organizer, Topic 9-1 Transport Phenomena in Materials Processing and Manufacturing 2008 ASME Summer Heat Transfer Conference, Jacksonville, Florida, August 10-14, 2008.
- Program Committee Member, the 2nd ASME Integration & Commercialization of Micro & Nanosystems International Conference & Exhibition, June 2008, Hong Kong.
- Track Organizer, Track #5 Nano/Micro-scale Thermal Transport and Integrated System Applications, the 2nd ASME Integration & Commercialization of Micro & Nanosystems International Conference & Exhibition, Hongkong, June 2008,
- Session Chair, Session 5-3 Nano/Micro-Enabled Energy Systems, the 2nd Integration & Commercialization of Micro & Nanosystems International Conference & Exhibition, ASME Nano-Institute, Hongkong, June 2008,.
- Session Chair, Session 8 Solid-Liquid Interface, the 6th US-Japan Joint Seminar on Nanoscale Transport Phenomena - Science and Engineering, Radisson Hotel, Boston, MA, July 13-16, 2008.
- Session Chair, Micro/Nanoscale Energy Transport Poster Session, International Conference on Integration and Commercialization of Micro- and Nanosystems, Sanya, Hainan, China, January 10 - 13, 2007
- Session Chair, Properties at the Nanoscale 2 – Thermal Properties of Nanoscale Materials, 16th Symposium on Thermophysical Properties, Boulder, CO, July 30-Aug. 04, 2006
- Session Chair, Nanomaterials Poster Session, Energy Nanotechnology International Conference, ASME Nano-Institute, MIT, MA, June 25-28, 2006.
- Session Chair, Session 1-1 and 1-2, Design and Modeling of Nanocomposites, Multifunctional NANOcomposites 2006 International Conference, ASME Nano-Institute, Honolulu, Hawaii, Sept. 20-22, 2006.
- Local Organizer, 15th U.S. National Congress on Theoretical and Applied Mechanics, Boulder, CO, June 25-30, 2006.

d). Proposal Review Panelist/Reviewer for Federal and Private Funding Agencies

- Review Panelist, NSF/CBET Thermal Transport Program, Arlington, VA, 2006-present.
- Review Panelist, NSF/CMMI Nanomanufacturing Program, Arlington, VA, 2008-present
- Review Panelist, NSF/ECCS Energy, Power, Control and Network, Arlington, VA, 2010-present
- Review Panelist, NSF/Sandia National Laboratories Program, Albuquerque, NM, June 29, 2006.

- Review Panelist, NSF – NIRT Proposals, Arlington, VA, March 1-2, 2006.
- Proposal Review, NSF/DOE Vehicle Thermoelectric Program, Summer 2010.
- Proposal Reviewer, NSF, February 2006 ~
- Proposal Reviewer, Department of Energy, March 2007 ~
- Proposal Reviewer, Air Force Office of Scientific Research, August 2008-
- Proposal Reviewer, Army Research Office, October 2010-
- Proposal Reviewer, U.S. Civilian Research and Development Foundation, 2007~
- Proposal Reviewer, American Chemical Society Petroleum Research Fund, March 2006 ~
- Proposal Reviewer, Kentucky Science and Engineering Foundation, November 2006
- Proposal Reviewer, Research Award Program, City University of New York, 2008-
- Proposal Reviewer, Global Climate and Energy Project (GCEP), Stanford University, 2008-
- Proposal Referee, European Research Council, 2009-2013 (appointed by ERC President Fotis C. Kafatos)

e). Referee for Journal Manuscripts (Partial List)

Interdisciplinary and Nanotechnology Journals:

Science (2006~); Nature (2007~); Nature Nanotechnology (2009~); Nature Materials (2006~); Nature Communications (2012~); Physical Review Letters (2005~); Physical Review B (2005~); Nano Letters (2005~); ACS Nano (2010~); Applied Physics Letters (2004~); Journal of Applied Physics (2005~); Physics Letters A (2005~); Journal of Physics D: Applied Physics (2006~); Nanotechnology (2006~); IEEE Transactions on Electronic Devices (2006~); Superlattices and Microstructures (2003~); Journal of Computational and Theoretical Nanoscience (2006 ~); Journal of Electronic Materials (2007~); Computational Physics Communications (2007~); Journal of Microengine and Micromechanics (2007~); Journal of Physics and Chemistry of Solids (2008~); Review of Scientific Instruments (2008~); IEEE Transactions on Very Large Scale Integration Systems (2008~), IEEE Transactions on Electronic Devices (2007-), IEEE/ASME Journal of MicroElectroMechanical Systems (2008~), Nano Research Letters (2008~), Journal of Solid-State Chemistry (2009~), Measurement Science and Technology (2009~), Computer Modeling in Engineering and Sciences (2009~), Nanoscale (2012~) ACS Nano (2010~), Journal of Physical Chemistry (2010~); Carbon (2010~); AIP Advances (2011~); Composite Science and Technology (2012~); Chemistry of Materials (2013~); Materials Research Express (2014~)

Heat Transfer and Energy Journals:

ASME Journal of Heat Transfer (2002~); International Journal of Heat and Mass Transfer (2005~); Nanoscale/Microscale Thermophysical Engineering (2004~); AIAA Journal of Thermophysics and Heat Transfer (2006 ~); International Journal of Thermophysics (2006~); International Journal of Thermal Sciences (2009~); Energy Conversion and Management (2004~); Applied Thermal Engineering (2005~); Microfluidics and Nanofluidics (2007~); IEEE Transactions on Components and Packaging Technologies (2006~); HVAC&R Research Journal (2008~); Heat Transfer Engineering Journal (2007~)

Book Proposal Reviewer for John Wiley & Sons, UK.

f). Conference Manuscript Reviewer:

ASME/JSME Joint Thermal Engineering Conference, 2003, 2011 (AJTE 2003/2011).
ASME International Mechanical Engineering Conference and Exhibitions (IMECE 2002, 2004, 2006-2015).
ASME Summer Heat Transfer Conference (2005, 2006, 2007, 2008, 2009, 2012, 2013, 2014).
The ASME/Pacific Rim Technical Conference and Exhibition on Integration and Packaging of MEMS, NEMS, and Electronic Systems (InterPACK 2005, 2007, 2009, 2011, 2013).
ASME Multifunctional NANOcomposites International Conference (MN06, MN 07)
The 15th International Heat Transfer Conference (IHTC-15), Kyoto, Japan, 2014.
The 14th International Heat Transfer Conference (IHTC-14), Washington, DC, 2010.
The 13th International Heat Transfer Conference (IHTC-13), Sydney, Australia, 2006.
The 36th SAE International Conference on Environmental Systems (ICES), 2006.
Proceedings of MRS Fall Meetings and Spring Meetings, 2003-2014
ASME Energy Nanotechnology International Conference(ENIC06), 2006, 2008
ASME International Conference on Integration and Commercialization of Micro- and Nanosystems (MicroNano 2007, 2008)
ASME Micro/Nanoscale Heat Transfer Int. Conference (MNHT08), Taiwan, January 2008.

g). Outreach Activities (PreK-12 Schools, Program, and Organization):

2013-2015, School Principle, Bohua Chinese School (offering Chinese classes taught in English and in Chinese, and extracurricular culture classes, for about 300 K-9 grade students).
2012-2013, School Council Member (in Charge of Faculty Recruitment and Training, of ~20 Chinese Teachers), Bohua Chinese School.
2012-2015, Judge and Volunteer Counselor, Science Fair, Summit Middle School, BVSD.
2009-2013, Judge, Science Fair, High Peaks Elementary School, BVSD.
2011-2012, Volunteer Teacher, Math Olympiad, High Peaks Elementary School, BVSD.

UNIVERSITY SERVICES

Reverse Chronical List of my Services to the Department of Mechanical Engineering

- Graduate Committee, Department of Mechanical Engineering, Fall 2016 – Spring 2017
- Faculty Search Committee, Department of Mechanical Engineering, Fall 2015 – Spring 2016.
- Faculty Search Committee, Department of Mechanical Engineering, Fall 2014 – Spring 2015.
- Executive Committee, Department of Mechanical Engineering, Fall 2014.
- Strategic Planning Committee, Department of Mechanical Engineering, Fall 2014.
- Personnel Committee, Department of Mechanical Engineering, Fall 2013 - Summer 2014
- Faculty Search Committee, Department of Mechanical Engineering, Fall 2011 - Spring 2012
- Undergraduate Committee, Department of Mechanical Engineering, Fall 2011 – Spring 2012
- Undergraduate Committee, Department of Mechanical Engineering, Fall 2010 – Spring 2011
- Graduate Committee, Department of Mechanical Engineering, Fall 2009 – Spring 2010
- Graduate Committee, Department of Mechanical Engineering, Fall 2008 – Spring 2009
- Graduate Committee, Department of Mechanical Engineering, Fall 2007 – Spring 2008
- Graduate Committee, Department of Mechanical Engineering, Fall 2006 – Spring 2007
- Chair of Departmental Seminars, Department of Mechanical Engineering, Fall 2007 – Spring 2009

Reverse Chronical List of my Services to the College of Engineering and Applied Sciences and the University

- Member, Faculty Research Committee, College of Engineering (led by Associate Dean for Research, Professor Scott Palo), Fall 2015 – present.
- Member, College-wide Committee for Colorado Nanofabrication Labs (CNL), Fall 2015 - present.
- Faculty Fellow, Materials Science and Engineering Program, Fall 2012 – present.
- Faculty Affiliate, CU/NREL Renewable and Sustainable Energy Institute (RASEI) Fall 2009 – present
- Member, Task Force for Campus Materials Initiative, Fall 2010-Spring 2012
- Dean's Blue Ribbon Committee-Major Proposals, Summer 2012
- APPM Review Subcommittee, College of Engineering and Applied Sciences, Fall 2010 – Spring 2011
- Reviewer for Undergraduate Research Opportunities Program (UROP) Proposals.
- Reviewer for CU Innovation Seed Grant program.