Narrative Vitae of

GANG CHEN

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Gang Chen is currently Carl Richard Soderberg Professor of Power Engineering at the Department of Mechanical Engineering at Massachusetts Institute of Technology (MIT). He attended Xiangfan No. 5 High School in China from 1978-1980. He received his bachelor and master degrees from the Power Engineering Department, Huazhong Institute of Technology (now Huazhong University of Science and Technology or HUST in short), China, in 1984 and 1987, respectively. He stayed at HUST as a lecturer from 1987-1989. In 1988, he was interviewed by Professor Chang-Lin Tien as a PhD candidate to receive a fellowship from the K.C. Wong Education Foundation in Hong Kong. He joined Professor Tien's group first at UC Irvine in 1989 and then at UC Berkeley in 1990 when Professor Tien rejoined Berkeley as its Chancellor. He obtained his PhD degree from the Mechanical Engineering Department, UC Berkeley in 1993, under Tien's supervision. He was an assistant professor at Duke University from 1993 to 1997, a tenured associate professor at University of California at Los Angeles, from 1997 to 2001. He joined MIT in 2001 as a tenured associate professor, and was promoted to full professor in 2004. He was named a Warren Faculty Scholar at Duke University (1996-1997), and he was the first holder of the Warren and Towneley Rohsenow Professorship at MIT (2006-2009) before assuming the Soderberg Professorship from MIT School of Engineering in 2009. He served as the Head of the MIT Department of Mechanical Engineering from July 2013 to June 2018.

Chen's research interests center on nanoscale transport and energy conversion phenomena, and their applications in energy storage, conversion, and utilization. He has made important contributions to the understanding of heat conduction in nanostructures beyond Fourier diffusion regime via both modeling and experimental studies. He and his collaborators invented ways to extract phonon mean free path distributions in solids by exploiting ballistic phonon transport processes and advanced first principles simulation tools to compute phonon thermal conductivity. His group, working with collaborators, discovered Anderson localization in heat conduction and phonon hydrodynamics in graphite. He and his collaborators exploited the unique nanoscale heat conduction physics to advance the field of thermoelectric materials and their applications in solar thermal and waste heat recovery. He and his collaborators also discovered a few materials with thermal conductivity just below diamond, including predicting and experimentally demonstrating that boron arsenide have simultaneously high electron and hole mobility in addition to experimentally proving its predicted high thermal conductivity. His group demonstrated that polymer nanofibers can be more thermally conductive than most metals, and explained

mechanisms why additives to liquids might significantly improve their thermal conductivity. In addition to nanoscale heat conduction and thermal and thermoelectric materials, Chen's group also advanced the field of thermal radiation, including developing a method to measure radiation heat transfer between two surfaces down to tens nanometer separations and experimental demonstration that radiative heat transfer at such small spacings can exceed the prediction of the Planck blackbody radiation law by three orders of magnitude, photon trapping in solar photovoltaic cells, solar thermal and solar interfacial steam generation. In 2021, he discovered photomolecular effect: direct cleavage of large water molecular clusters from water-vapor interface by visible light. By exploring micro/nanoscale transport phenomena, Chen's group has advanced a wide range of technologies such as thermoelectric cooling and power generation, solar thermal and solar photovoltaics, desalination, and thermal interface materials. Two of Chen and his collaborators' inventions were selected by Scientific American as one of the annual top ten world changing ideas: one on directional solvent extraction technology for desalination and waste water treatment (2012) and one on using batteries to convert thermal energy into electricity (2014). He and his collaborators' work on cubic boron arsenide was selected by the Physics World as one of its top ten Breakthroughs of the Year in 2022. Chen authored a book entitled "Nanoscale Energy Transfer and Conversion: a parallel treatment of electrons, molecules, phonons, and photons" - the first textbook in the field and his lectures in videos are freely available online via the MIT Open Courseware program. He has published ~460 technical articles, 24 book chapters, and over 600 invited talks all over the world. Professor Chen has supervised ~90 MS and PhD students thesis and over 60 post-docs. More than 40 of his PhD students and post-docs are in academia. He is an inventor on ~50 granted and pending patents and co-founded two companies.

Chen has done extensive service both within and outside MIT. He served as the Head of the MIT Mechanical Engineering Department, a member of the MIT School of Engineering Dean's Council, and the director of the MIT Pappalardo Micro/Nano Engineering Laboratory. He served as the head of the Micro/Nano Engineering Area and Energy Area of the MIT Mechanical Engineering Department and a member of the Mechanical Engineering Department Council. He chaired the advisory board of the ASME Nanotechnology Institute 2005-2008 and served on the advisory board of several other organizations. He is serving (or served) on the editorial/advisory board of several journals. He led the first US Department of Defense Multidisciplinary University Research Initiative (MURI) on thermoelectric materials and directed the "Solid-State Solar-Thermal Energy Conversion Center (S3TEC)", an Energy Frontier Research Center funded by the US Department of Energy. He was also the funding MIT director of the Centers for Mechanical Engineering Research and Education at MIT and SUSTech.

Chen is a recipient of a K.C. Wong Education Foundation fellowship and a John Simon Guggenheim Foundation fellowship. He received an NSF Young Investigator Award, an R&D 100 award, a Heat Transfer Memorial Award and a Frank Kreith Energy Award from American Society of Mechanical Engineers, an Erigen Medeal from the Society of Engineering Science, a Nukiyama Memorial Award from the Japan Heat Transfer Society, a World Technology Award in Energy, and the MIT Capers and Marion McDonald Award for Excellence in Mentoring and Advising. He is a fellow of American Academy of Arts and Sciences, American Association for the Advancement of Science, American Physical Society, and American Society of Mechanical Engineers. He is an academician of Academia Sinica, a member of the US National Academy of Engineering, and a member of the US National Academy of Sciences.

In 2021, Chen was wrongfully prosecuted by the US Government under its China Initiative. MIT leadership believed in his innocence and supported his legal defense. Led by MIT Professor Yoel Fink, over 200 MIT colleagues signed up an open letter with a rallying statement "We are all Gang Chen", which was echoed throughout the world with online petitions. His arrest became a turning point that eventually led to the downfall of the misguided China Initiative. On January 21, 2022, US Government dropped all its charges against Gang Chen without prejudice. On the news of government dropping its charge against Chen, MIT passed the following resolution: "Be it resolved that the Faculty and the Administration of the Massachusetts Institute ofTechnology, at the Institute Faculty Meeting of February 16, 2022, record their profound relief and satisfaction at this news and their recognition of the great value that Professor Chen brings to the MIT community as a member of our Faculty." On Februray 23, 2022, the US Department of Justice formally ended its China Initiative. During the difficult year of 2021, Chen did not stop his research. He used this year to shift his research focus from solid-state materials to soft materials. He wrote four single-authored papers on topics that he did not work on before. In this year, he conceived the idea that photons in the visible spectrum can directly cleave-off water molecular clusters in his effort to explain the puzzling experimental data in literature as well as from his group that solar interfacial evaporation can exceed the thermodynamic limit. He subsequently guided his post-doc to verify experimentally this process, which he called the photomolecular effect in analogy to the photoelectric effect. His current research focus is on further understanding the photomolecular effect and exploring its implications for earth's water cycle and global warming modeling, and developing technologies in desalination, drying, atmospheric water harvesting, and efficient air-conditioning.

Curriculum Vitae

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Research Interests:

Experimental, theoretical, and numerical study of fundamental thermal energy conversion and transport mechanisms at micro- and nanometer scales, with applications to thermoelectrics, photovoltaics, thermophotovoltaics, microelectronics and photonics; thermal and electrochemical energy storage; nanoengineered materials with high and low thermal conductivities; thermal interface materials; ultrafast transport processes; thermal radiation and electromagnetic metamaterials; nanofabrication; phtomolecular effects; desalination and waste water treatment; atmospheric water harvesting; air-conditioning; and drying.

Education:

University of California, Berkeley, Mechanical Engineering, Ph.D. 1993
Dual Minors in Thermodynamics and Electrical Engineering.
Thesis Advisor: NEC Distinguished Professor and Chancellor: Chang-Lin Tien.
Thesis Title: "Thermal Phenomena in Optical and Optoelectronic Thin Film Devices."

Huazhong University of Science and Technology, Power Engineering, M.E., 1987
Master Thesis Advisor: Professor and Chairman S. M. Cheng. Thesis Title:
"Heat Transfer and Fluid Flow around Droplet-Shaped Cylinders."

Huazhong University of Science and Technology, Power Engineering, B.E., 1984

Professional Experience:

7/04-present	Professor, Mechanical Engineering Department, MIT.
7/13-6/2018	Head, Mecahnical Engineering Department, MIT
7/01-6/04	Associate Professor, Mechanical Engineering Department, Massachusetts Institute of Technology.
11/96-6/01	Associate Professor, Mechanical and Aerospace Engineering Department, University of California at Los Angeles.
9/93-6/97	Assistant Professor, Department of Mechanical Engineering and Materials Science, Duke University.
7/93-8/93	Research Assistant Professor, Duke University.
6/93	Visiting Postdoctoral Research Engineer, University of California, Berkeley.
6/90-5/93	Graduate Student Research Assistant, University of California, Berkeley.

10/89-5/90 Graduate Student Research Assistant, University of California, Irvine.
5/87 - 9/89 Lecturer, Huazhong University of Science and Technology, China.

Awards and Honors:

5/2023 Wouk Lecture, Caltech
5/2023 Magde Colloqium, Boston College
5/2023 Member, National Academy of Science
4/6/2023 Newman Lecture, Vassar College
1/9-20/2023 Distinguished Visiting Professorship, HKU
10/2022 Outstanding Scientist Award, CAST-USA
10/2022 Clarivate Analytics Highly Cited Researcher (physics category)
2/2022 MIT Institute Resolution to Show Appreciation for Professor Gang Chen

Mechanical Engineering Professor Gang Chen was detained at Logan Airport in January 2020 following a visit to China. Professor Chen and his family have since then endured a deeply painful, harmful, and distressing series of actions brought against him by Federal prosecutors. On January 20, 2022, the court dismissed all charges against Professor Chen, following a request by the responsible U.S. Attorney to drop the case in its entirety.

In recognition of of the high esteem in which we hold our colleague Professor Chen, we offer this resolution:

"Be it resolved that the Faculty and the Administration of the Massachusetts Institute of Technology, at the Institute Faculty Meeting of February 16, 2022, record their profound relief and satisfaction at this news and their recognition of the great value that Professor Chen brings to the MIT community as a member of our Faculty."

10/2021 Clarivate Analytics Highly Cited Researcher (physics category)
10/2020 Clarivate Analytics Highly Cited Researcher (physics category)
10/2019 Clarivate Analytics Highly Cited Researcher (physics category)
9/2019 Distinguished Lecture, University of Pittsburgh, Department of Mech Eng
6/2019 Master Distinguished Lecture, Shanghai Jiaotong University
6/2019 Luo-Yu Forum Lecture No. 297, Wuhan University
5/2019 ASME Frank Kreith Energy Award
5/2019 William Reynolds Memorial Lecture, Stanford University
1/2019 TOAF Distinguished Lecture, RISUD, Hongkong Poly University
10/2018 Clarivate Analytics Highly Cited Researcher (physics and materials categories).
10/2018 Honorary Professor, Tsinghua University
10/2018 Distinguished Lecture, SUSTech
10/2018 Aurel Stodola Medal and Lecture, ETH
9/2018 CaseWestern Distinguished Seminar
9/2018 Byron Short Lecture, UT Austin
4/2018 Fellow, American Academy of Arts and Sciences
10/2017 Toderi-Callinan Lecture, Department of Mechanical Engineering, University of Pennsylvania

9/2017	Clarivate Analytics Highly Cited Researcher (physics category).
5/2017	C2C Award (Committed to Caring), MIT ODGE
1/2017	Distinguished Seminar, Hong Kong Polytechnique University
11/2016	Distinguished Colloqium, U. Chicago, Institute of Molecular Engineering
10/2016	Eringen Medal, Society of Engineering Science Eringen Medal Symposium in Honor of Gang Chen, Society of Engineering Sicence, 53rd Annual Technical Meeting, Oct. 205, 2016
9/2016	Thomas Reuters Highly Cited Researcher (physics category).
8/2016	Distinguished Lecture, U. Virginia, Department of Mechnical Engineering
8/2016	Alwin Schaller Lecture, Department of Mechanical Engineering, UIUC
5/2016	David Goodwin Memorial Lecture, Caltech.
4/2016	Leaders in Engineering Lecture, RPI MANE.
3/2016	Distinguished Seminar, Department of Mechanical Engineering, Northeastern University
11/2015	World Technology Award in Energy
7/2015	William Mong Distinguished Lecture, University of Hong Kong.
1/2015	Institute of Advanced Studies Distinguished Seminar, Hong Kong University of Science and Technology.
12/2014	Batteries that Capture Low-Grade Waste Heat named by Scientific America Magazine as one of 10 World Changing Ideas.
7/2014	Academician, Academia Sinica, Taiwan Citation: "For pioneering contributions in understanding heat transport and energy conversion mechanisms at micro- and nanometer scales; experimental demonstration of enhanced near-field thermal radiation heat transfer beyond the Planck law by three orders of magnitude; leading to significant advances in energy related materials and technology."
7/2014	Outstanding Alumni Award, Huazhong University of Science and Technology
5/2014	Nukiyama Memorial Award, Heat Transfer Society of Japan
5/2014	Penner Lecture, Department of Mechanical Engineering, UCSD.
1/2014	Distinguished Lecture, ME8888 Seminar, Ohio State University
4/2013	75th Anniversary Medal of the ASME Heat Transfer Division, for Service to the heat transfer community and contributions to the field
3/2013	George Persall Lecture, Duke University.
11/2012	Directional Solvent Extraction Technology Named by Scientific America Magazine as one of 10 World Changing Ideas.
11/2012	Fellow, American Physical Society Citation: "For pioneering contributions to the understanding of heat transfer at nanoscale and to the development of thermoelectric energy conversion technologies."
11/2012	Hawkins Lecture, Purdue University
9/2012	Springer Professor, UC Berkeley
7/2012	Guest Professor, Tsinghua University
6/2012	Distinguished Seminar, U. Toronto Mechanical Engineering Department.
11/2011	Distinguished Lecture, CMU Mechanical Engineering Department.
6/2011	Honorary Professor, Hubei University of Arts and Science, China

5/2011	Capers and Marion McDonald Award for Excellences in Mentoring and Advising, MIT School of Engineering.
2011	Distinguished Lecture, University of Connecticut, School of Engineering.
2010	JALA Ten 2010. Top ten breakthroughs listed by Journal of Association for Laboratory Automation.
2010	Honorary Professor, Shanghai University
2010	Member, National Academy of Engineering Citation: For contributions to heat transfer at the nanoscale and to thermoelectric energy conversion technology.
2009	AAAS Fellow Citation: For advances in understanding heat transfer at the nanoscale and in developing thermal energy technology.
2009	Carl Richard Soderberg Professor of Power Engineering, MIT School of Engineering
2009	Director, Solid-State Solar-Thermal Energy Conversion Center (S^3TEC Center), Funded by the DOE Energy Frontier Research Center Program
2009	Dusinberre Distinguished Lecture, Penn State University, College Station.
2008	R&D 100 Award for High Performance Thermoelectric Materials
2008	ASME Heat Transfer Memorial Award, Science Category. Citation: For seminal and experimental contributions in the field of transport mechanisms at micro- and nanometer scales, with applications to energy conversion devices, and pioneering work on nanoengineered materials with high and low thermal conductivities.
2007	Honorary Professor, Huanan University of Science and Technology, China
2007	Guest Professor, Wuhan University of Science and Technology, China
2006	Fellow, ASME
2006-2009	Warren and Towneley Rohsenow Professorship, MIT
2006	Chair, Advisory Board, ASME Nanotechnology Institute
2005	Best Paper Award (Research Category), InterPACK'05 (the ASME/Pacific Rim Technical Conference and Exhibition on Integration and Packaging of MEMS, NEMS, and Electronic Systems, July 17-22, San Francisco).
2005-2009	Guest Professor, Xian Jiaotong University, China.
2004	NASA Space Act Tech Brief Award
2003	Organizer of the National Academy of Engineering Frontier of Engineering Symposium.
2002-2003	Guggenheim Fellowship.
1994-2001	National Science Foundation Young Investigator Award.
2000	Asia/Pacific-Who's Who, Vol. 3, p. 357.
9/00	Phi Tau Phi Member (honor society of Asian Americans).
1999-	Guest Professor, Huazhong University of Science and Technology, China.
1998	American Men and Women of Science.
1998	Marquis Who's Who in Science and Engineering, 4th Edition.
1994-1997	Outstanding Reviewer for Journal of Heat Transfer.
1996-1997	Warren Faculty Scholar, Duke University.
1995, 2002	Invited participant of the NAE First Ann. Symp. Frontiers of Engineering.
Fall, 92	Arthur Gould Tasheira Scholarship, University of California, Berkeley.

10/89-10/92 Scholarship, K.C. Wong Education Foundation, Hong Kong.
Winter, 90, Fellowship, Dept. Mechanical Engineering, University of California, Irvine.

Award Won by Students under Chen's Supervision:

2010 Zhiting Tian, 3rd Prize, ASME Society Wide Micro/Nano Forum at IMECE, Vancouver, November 2010.

2008 HP best student paper award, 1st place, for paper presented by Sheng Shen, at International Mechanical Engineering Congress.

2008 Best paper award, Julius Springer Forum on Applied Physics 2008 for poster paper presented by Sheng Shen.

2012 Winner of the Student Poster Award for Thermoelectric Symposium. B. Liao, M. Zebarjadi, K. Esfarjani and G. Chen, Cloaking core-shell nanoparticles from conducting electrons in solids, poster presentation at Material Research Society Fall Meeting 2012, Boston, MA, Nov. 25-30, 2012 (B9.14).

2012 Winner of best poster award in Micro/Nanoscale Heat Transfer. Y. Hu, K. Collins, L. Zeng, M. Luckyanova, G. Chen, "Hybrid Nanostructures for Nanoscale Heat Transfer", IMECE2012-93899, Micro Nano Forum Poster Presentation, Houston, TX, Nov. 9-15, 2012.

2013 Zhiting Tian, MIT Graduate Women of Excellence

2013 Bolin Liao, 3rd Place, MIT ME De Florez Award

2013 Maria Luckyanova, winner of students and post-doc competition at 2013 DOE EFRC PI meeting, Washington, DC.

2013 Sangyeop Lee, Keivan Esfarjani, Tengfei Luo, Gang Chen, "Resonant Bonding Leads to Low Thermal Conductivity", IMECE2013-67320, ASME International Mechanical Engineering Conference and Exposition, November 15-21, 2013, San Diego, CA (the best poster award in the heat transfer category)

2014 Yuan Yang, 2nd Prize at Society Wide Micro/Nano Forum, for poster, "A Charging-free Electrochemical System for Low-grade Heat Harvesting" Yuan Yang, Seok Woo Lee, Yi Cui, and Gang Chen, International Mechanical Engineering Conference and Exposition, Montreal, Canada, November 14-20, 2014

2015 Yuan Yang received MRS Postdoctoral Award.

2016 Bolin Liao received Kavli Postdoc Fellowship and will join Zewail group as a post-doc at Caltech.

2018 Jiawei Zhou received Wunsch Foundation Silent Hoist and Crane Award – Outstanding Thesis, Mechanical Engineering Department, MIT, 2018

2019 Jiawei Zhou received Best Poster Award-1st Place at ASME Society-Wide Micro/Nano Technology Forum (Jiawei Zhou; Ying Pan; Gang Chen, "Quantifying thermal transport in amorphous silicon using mean free path spectroscopy" in Session 17-15-1: ASME Society-Wide Micro and Nano Technology Forum, November 11-November 14, 2019, Salt Lake City, UT).

2021 Qichen Song received Harvard University Quantum Initiative Postdoctoral Fellowship.

Professional Activities:

- MIT ME Department Head Search Committee 2022-2023

- Board member, Asian American Scholar Forum, 10/2022-, Member, 2022
- Head, Area 4 (Energy), MIT ME Department, Member, ME Council, 2022-
- NAE iEPIC Committee, 2022-
- NAE Membership Policy Committee, 2021-
- Founding co-chair, International Thermal Innotherm Colloquia (MIT Innotherm), 2020
- MIT ME General Search Committee, 2020
- MIT-China discussion series member, 2020
- Advisory Board, Texas Center for Superconductivity at the University of Houston, 2019-
- Research Strategy Committee, Chair, MIT Department of Mechanical Engineering, July 2019-2020
- Space Advisory Committee, Chair, MIT Department of Mechanical Engineering, 2018-2020
- 2017-2018 MIT China Summit Advisory Group
- 2017-2018 MIT China Discussion Series Member
- Advisory Board, TEEP, Tsinghua University
- Advisory Board, Physical Science College, Shanghai University of Science and Technology, 2017
- University of Michigan Department of Mechanical Engineering External Review Committee, November, 2016.
- Stanford Department of Mechanical Engineering Visiting Committee, January, 2016
- MIT.nano Governing Board, 2015-2017
- Co-Chair, MIT Department of Nuclear Engineering Department Head Search Committee, 2015
- MIT MTL Policy Board, 2014-2020
- Committee of Membership, NAE, 2019-2021
- Peer Committee, NAE Section 10, 2015-2018
- NAE Committee of Membership, 2019-2021
- Associate Editor-in-Chief: Engineering, 2015-
- Editorial board: Technology, 2013-
- MIT ME Award Committee Chair, 2011-2013
- MIT SOE Award Committee Member, 2011-2013
- Advisory Board Member: China Southern University of Science and Technology, 2012
- Advssory Board Member: School of Engineering, Nanjing University, 2012
- Editorial Board: Nano Energy, 2011-
- Editorial Board, Frontier of Heat and Mass Transfer, 2010- for three years.
- Guest Co-Editor (G.P. Peterson, C. Li, M. Wang, and G. Chen, "Advancements in Micro/nano Transport Phenomena with Applications in Sustainable Energy and Environment," Special Issue for Advances in Mechanical Engineering, 2010.
- Advisory Board Member: Huazhong University Birdnest Program, 2012-2014.
- Director, Pappalardo Micro/Nanoengineering Laboratory, MIT, 2006-present
- Area Head, Nano Engineering, Mechanical Engineering Department, 2005-10/2009, 2011-20132
- ME Department Council Member, 2005-2009, 2011-2012
- Co Editor, Annual Review of Heat Transfer, 2003-2019.

- Member of US-Russia Presidential Bilateral Relation Commission Delegation, Nano Energy Subgroup, Moscow, February 27-March 4, 2011.
- ASME Heat Transfer Division Award Committee, 2011-2013
- Editorial Board: Frontiers of Energy and Power Engineering in China, 2008 (stopped somewhere as checked in 2018).
- Editorial Committee: Journal of Nanotechnology and Precision Engineering, 2007 (stopped somewhere as checked in 2018).
- Chair, Advisory Board, ASME Nano Institute, Nov., 2005-2008.
- Chair, Nanoscale Phenomena Committee, ASME Nano-Institute, 2003-2005
- Editor, Journal of Nanomaterials, 2005 (stopped somewhere as checked in 2018).
- Advisory Board, NSF Center of Scalable Integrated Nanomanufacturing, 2005.
- Board of Advisors, Center for Applied Science, Taiwan, 2004-2012.
- Editorial Board, Microscale Thermophysical Engineering, 2004-2022, Advisory Borad member, 2022-.
- Editorial Board, Journal of Computational and Theoretical Nanoscience, 2004.
- Associate Editor, ASME Journal of Heat Transfer, July 2002-June 2005.
- 2000, Guest Editor, Materials Science and Engineering A: Structural Materials: Properties, Microstructure and Processing, Vol. 292, No. 2.

- US National Academy of Sciences, Member, 2023
- American Academy of Arts and Sciences, Fellow, 2018
- US National Academy of Engineering, Member, 2010
- American Society of Mechanical Engineers, Fellow, 2006
- American Association for the Advancement of Science, Fellow, 2009
- American Physical Society, Fellow; 2012
- Guggenheim Foundation, Fellow, 2002-2003
- International Thermoelectrics Society, Member
- Materials Research Society, Member
- ASME K-8 and K-16, Member.

Books

1. G. Chen, Nanoscale Energy Transfer and Conversion, Oxford Press, ISBN 019515942X, 2005.
2. V. Prasad, Y. Jaluria, G. Chen, Editors, In Memory of Chang-Lin Tien, Annual Review of Heat Transfer, vol. 14, Begell House, 2005.
3. G. Chen, J. Karni, V. Prasad, and Y. Jaluria, Editors, Solar Thermal Challenges, Annual Review of Heat Transfer, Solar-Thermal Challenge, vol. 15, 2012.
4. G. Chen, V. Prasad, and Y. Jaluria, Editors, Annual Review of Heat Transfer, vol. 16, 2013.
5. G. Chen, V. Prasad, and Y. Jaluria, Editors, Multiscale Simulation of Phonon and Electron Thermal Transport, Annual Review of Heat Transfer, vol. 17, 2014.

6. E.N. Wang, G. Chen, V. Prasad, and Y. Jaluria, Editors, Thermal Management Fundamentals and Technologies, Annual Review of Heat Transfer, vol. 18, 2015.
7. G. Chen, V. Prasad, and Y. Jaluria, Editors, Annual Review of Heat Transfer, vol. 19, 2016.
8. G. Chen, V. Prasad, and Y. Jaluria, Editors, Annual Review of Heat Transfer, vol. 20, 2017.
9. G. Chen, V. Prasad, and Y. Jaluria, Patrick Phelan, Editors, Annual Review of Heat Transfer, vol. 20, 2018.

Invited Book Chapters:

IB1. G. Chen, 1996, "Heat Transfer in Micro- and Nanoscale Photonic Devices," ***Annual Review of Heat Transfer***, Ed., C.L. Tien, Vol. VII, 1-57.

IB2. G. Chen, 2001, "Phonon Heat Conduction in Low-Dimensional Structures**," Semiconductors and Semimetals, Recent Trends in Thermoelectric Materials Research III**, Vol. 71, pp. 203-259, Ed. T. Tritt, Academic press, San Diego.

IB3. G. Chen, B. Yang, and W.L. Liu, 2003, "Engineering Nanostructures for Energy Conversion," **in Heat Transfer and Fluid Flow in Microscale and Nanoscale Structures** Editors: M. Faghri and B. Sunden, pp. 45-92.

IB4. B. Yang and G. Chen, 2003, "Phonon Heat Conduction in Superlattices," in **Chemistry, Physics, and Materials Science for Thermoelectric Materials: Beyond Bismuth Telluride**, Ed. M.G. Kanatzidis, T.P. Hogan, S.D. Mahanti, pp. 147-167, Kluwer Academic/Plenum Publisher, New York.

IB5. G. Chen, D. Borca-Tasciuc, R.G. Yang, "Nanoscale Heat Transfer," **Encyclopedia of Nanoscience and Nanotechnology**, H.S. Nalwa, Ed., American Scientific Publishers, Vol. 7, pp. 429-459 (2004).

IB6. B. Yang and G. Chen, "Experimental Studies on Thermal Conductivity of Thin Films and Superlattice Materials," in **Thermal Conductivity: Theory, Properties, and Applications**, T.M. Tritt, Ed., Kluwar Press, New York, pp. 167-185 (2004).

IB7. T. Borca-Tasciuc and G. Chen, "Thin-Film Thermal Conductivity Measurement Techniques," in **Thermal Conductivity: Theory, Properties, and Applications**, T.M. Tritt, Ed., Kluwar Press, New York, pp. 205-238 (2004).

IB8. M. S. Dresselhaus, G. Dresselhaus, J. Heremans, and G. Chen. "Low Dimensional Thermoelectricity," In CRC Handbook; Molecular and Nano-electronics: Concepts, Challenges, and Designs," edited by Y. Gogotsi, CRC Press, Inc., Boca Raton, Florida, USA, 2005.

IB9. A. Narayanaswamy and G. Chen, "Direct Computation of Thermal Emission from Nanostructures," Annual Review of Heat Transfer, Vol. 14, pp. 169-196, 2005.

IB10. C. Dames and G. Chen "Thermal Conductivity of Nanostructured Thermoelectric Materials," CRC Handbook, edited by M. Rowe, pp.42-1 to 42-16, 2006, Taylor and Francis, Boca Raton.

IB11. S. Shen and G. Chen, Molecular Gas Film Lubrication, Encyclopedia of Tribology, Eds. Q.J. Wang and Y.-W. Chang, pp.2309-2313, 2013, Springer.

IB12. Q. Hao and G. Chen, "Frequency-Dependent Monte Carlo Simulations of Phonon Transport in Nanostructures," in Applications of Monte Carlo Simulations In Science and Engineering, Shaul Mordechai, Intech, Chap. 29, pp. 707-734, 2011.

IB13. Daniel Kraemer, Kenneth McEnaney, Zhifeng Ren, and Gang Chen, "Solar Thermoelectric Power Conversion," in CRC Handbook, Ed., D.M. Rowe, Taylor&Francis, Boca Raton, pp. 24-1 to 24-16, 2012.

IB14. Zhifeng Ren, Gang Chen, and Mildred S. Dresselhaus, "Nanostructured Thermoelectric Materials," in CRC Handbook, Ed., D.M. Rowe, Taylor&Francis, Boca Raton, pp. 1-1 to 1-50, 2012.

IB15. Kenneth McEnaney, Daniel Kraemer, and Gang Chen, "Direct Heat-to-Electricity Conversion of Solar Energy," Annual Review of Heat Transfer, vol. 15, pp. 179-230, 2012.

IB16. Gang Chen and Jacob Karni, "Introduction: Challenges and Opportunities in Solar Thermal Technologies," Annual Review of Heat Transfer, vol. 15, pp. 1-6, 2012.

IB17. Gang Chen, "Probing Nanoscale Heat Transfer," Annual Review of Heat Transfer, vol. 16, pp. 1-6, 2013.

IB18. Weishu Liu, Zhifeng Ren and Gang Chen, Nanostructured Thermoelectric Materials, In Thermoelectric Nanomaterials, K. Koumoto and T. Mori (eds.) *Thermoelectric Nanomaterials*, Springer Series 1 in Materials Science 182, DOI: 10.1007/978-3-642-37537-8_11, 2013.

IB19. G. Chen, "Nanostructured Thermoelectric Energy Scavenging," McGraw-Hill Year Book, 2013.

IB20. G. Chen, "Multiscale Simulation of Phonon and Electron Thermal Transport," Annual Review of Heat Transfer, Vol. 17, pp.1-8, 2014.

IB21. Zhiting Tian, Sangyeop Lee and Gang Chen, "A Comprehensive Review of Heat Transfer in Thermoelectric Materials and Devices," Annual Review of Heat Transfer, Vol. 17, pp. 425-483, 2014.

IB22. Keivan Esfarjani, Jivtesh Garg^{+} and Gang Chen "Modeling Heat Conduction from First-Principles," Annual Review of Heat Transfer, Vol. 17, pp. 9-47, 2014.

IB23. J. Tong, A. Mercedes, Gang Chen, and Svetlana V. Boriskina, "Local field topology behind light localization and metamaterial topological transitions," in Singular and Chiral Nanoplasmonics, p. 259, Ed. S.V. Boriskina, CRC Press, 2015.

IB24. Sangyeop Lee and Gang Chen, Nanostructured Thermoelectric Materials, in Innovative Thermoelectric Materials: Polymer, Nanostructure and Composite Thermoelectrics; eds. T. Poehler and H. Katz; ISBN: 978-1-78326-605-0.

Invited Conference/Workshop Presentations:

Keynotes and Plenary Lectures in Conferences

IP1. G. Chen, V. Sabastian, S. Zhou, and T. Borca-Tasciuc, 1998, "Phonon Heat Conduction in Nanostructures," Plenary lecture, Eurotherm Conference, 57: Microscale Heat Transfer, Poitier, France, July 8-10. In Microscale Heat Transfer, ed. J.B. Saulnier, D. Lemonnier, and J.-P. Bardon, pp. 59-72.

IP2. G. Chen and S. Volz, 1999, "Molecular Dynamic Simulation from Nanoscale to Macroscale," Overview talk, 117th Xiangshan Conference: Thermophysics and Heat Transfer in Extreme Cases, conference abstract.

IP3. G. Chen and T. Zeng, 2000, "Nonequilibrium Phonon and Electron Transport in Thin Films and Superlattices," Keynote address, Proceedings of the International Heat Transfer and Transport Phenomena in Microscale, pp. 1-11, Ed. G.P. Celata, Banff, Canada, October 15-20, 2000.

IP4. G. Chen, "Engineering Thermophysical Properties of Micro- and Nanostructures," Keynote lecture on France National Heat Transfer Conference, Nantes, France, May 29-31, 2001.

IP5. G. Chen, B. Yang, W.L. Liu, D. Borca-Tasciuc, D. Song, and A. Jacquot, "Energy Conversion and Transport in Nanostructures," Keynote, presented at International Symposium on Micro/Nanoscale Energy Conversion and Transport, April 14-19, 2002, Antalya, Turkey, extended abstract book, pp. 42-43.

IP6. G. Chen, A. Narayanaswamy, and C. Dames "Engineering Nanoscale Phonon and Photon Transport for Direct Energy Conversion," Keynote, presented at Eurotherm Seminar No. 75, Reims, France, July 8-12, 2003.

IP7. G. Chen, "Nanoscale Heat Transfer and Nanostructured Thermoelectrics," presented at 9th Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (ITHERM2004), Las Vegas, June 1-4, 2004, ITHERM 2004, pp.8-16, lunch speaker.

IP8. G. Chen, "Integrating Nanoscale Effects into Micro and Macrosystems," Keynote, presented at 2nd International Conference on Microchannels and Minichannels, Rochester, NY, June 17-19, 2004.

IP9. G. Chen, R.G. Yang, A. Narayanaswamy, and X.Y. Chen, "Thermally-Excited Nonequilbrium States between Electrons and Phonons for Energy Conversion," Plenary, International Symposium on Micro/Nanoscale Energy Conversion and Transport, Seoul, Korea, Extended Abstract, pp. 9-11, August 8-13, 2004.

IP10. G. Chen, "Nanostructures for Direct Thermal to Electric Energy Conversion," Plenary, Proceedings of the First International Forum on Heat Transfer, November 24-26, 2004, Kyoto, Japan, pp. 1-3.

IP11. G. Chen, "Nanostructures for Macroscale Energy Conversion," Keynote at International Conference on Micro Energy Systems, September 11-14, 2005, Sanya, China.

IP12. G. Chen, "Nanostructured Thermoelectric Materials and Devices," Plenary, 2006 Taipei International Thermal Management Forum, Taipei, July 11, 2006.

IP13. G. Chen, "Nanoscale Heat Transfer Effects Enabled Energy Technologies," Plenary, 13th International Heat Transfer Conference, Sydney, Australia, August 13-18, 2006.

IP14. G. Chen, "Energy Nanotechnology," Plenary, 2do Taller Nacional Nanotecnologia, October 5-7, 2006, Vina de Mar, Chile.

IP15. G. Chen, "Energy Technology Breakthroughs Enabled by Nanoscale Effects," Keynote, NSF Nanoscience and Engineering Grantee Conference, December 4-6, 2006, Virginia, VA.

IP16. G. Chen, "Nanostructures and Their Thermal Properties," Keynote, EuroSimE: Thermal, Mechanical and Multiphysics Simulation and Experiments in Micro-Electronics and Micro-Systems, London, April 15-18, 2007.

IP17. G. Chen, A. Narayanaswamy, Z. Chen, L. Hu, S. Sheng, and X.Y. Chen, "Radiative Heat Transfer in Nanostructures by Surface Phonon Polaritons," Keynote Lecture at IEEE-Nano2007, The 7th IEEE International Conference on Nanotechnology, August 2-5, 2007, Hongkong.

IP18. G. Chen, "Thermophysical Properties of Nanostructured Materials," Keynote, Proceedings of the 8th Aisan Thermophysical Properties Conference, pp. 39-42, August 21-24, 2007, Kyushu University, Fukuoka, Japan.

IP19. G. Chen, "Thermoelectric Energy Conversion in Nanostructures," Keynote, 1st Int. Forum on Advanced Thermoelectric Materials and Devices, Nov. 10-11, 2007, Shanghai, China.

IP20. G. Chen, "Nanoscale Heat Transfer and Energy Conversion," Keynote, Chinese Annual National Heat and Mass Transfer Conference, Nov. 12-15, 2007, Guangzhou, China.

IP21. G. Chen, "Thermoelectric Energy Conversion in Nanostructures," Keynote, Key Conference: The Future Prospects for the Compound Semiconductor Industry, March 2-4, 2008, Key West, Florida.

IP22. G. Chen, "Nanostructured Thermoelectric Materials for Solid-State Cooling," Plenary Talk, Advanced Technology Workshop on Advanced Substrates and Next-Generation Semiconductors, April 30-May 1, 2008, Linthicum Heights, Maryland.

IP23. Gang Chen, Q. Hao, A. Muto, D. Kramer, H. Lee, and A. Minnich, "Nanostructured Thermoelectric Materials, Devices, and Their Potential Applications," Keynote, Third Energy Nanotechnology International Conference, August 11-13, 2008.

IP24. G. Chen, "Keys to Success," Dinner Talk, at Chinese in America Thermal Engineering Association (CATEA), Jacksonville, Florida, August 11, 2008.

IP25. G. Chen, "Nanostructured Thermoelectrics: Materials, Devices, and Applications," Keynote, NanoThailand Symposium, 2008, November 6-8, Bangkok, Thailand.

IP26. G. Chen, "Micro/Nano Education in Mechanical Engineering," Keynote, Seminar on the Renewal of Mechanical Engineering Higher Education, Bandung, Indonesia, Nov. 8, 2008.

IP27. G. Chen, "Nanostructured Thermoelectrics: Materials, Devices, and Applications," MIT Energy Initiative Fall Energy Research Conference, MIT, November 13-14, 2008.

IP28. G. Chen, "Nanostructured Thermoelectric Materials and Applications," Keynote, SMA 10th Anniversary Symposium, January 21-22, 2009, Singapore.

IP29. G. Chen, "Challenges of Peltier Cooling to 10 K," Keynote, Workshop on Recent Advances in Peltier Cooling in the Range Including 10K, Air Force Research Laboratory, Albuquerque, New Mexico, April 22 and 23, 2009.

IP30. G. Chen, "Nanotechnology for Energy Applications," Keynote 9th Emerging Information and Technology Conference, MIT, August 6-7, 2009.

IP31. Austin Minnich, Baskaran Mudiliharan, Qing Hao, Asegun Henry, and Gang Chen, Multiscale Modeling of Electron and Phonon Transport in Nanocomposite Nanostructures for Thermoelectric Applications," Keynote, Symposium on "Multiphysics Simulations for Solids, IMECE, November 15-19, 2009, Orlando, Florida.

IP32. G. Chen, "Phonon Transport in Nanostructured Thermoelectric and Heat Transfer Materials" Keynote at ICREA Phonon Engineering Workshop, Sant Feliu de Guixols, Girona, Spain, May 24-27, 2010.

IP33. Gang Chen, Keivan Esfarjani, Junichiro Shiomi, Tengfei Luo, Zhiting Tian, "Multiscale Modeling of Phonon Transport in Nanostructures," Plenary Lecture at International Mechanical Engineering Congress and Exhibition, IMECE, Vancouver, Canada, November 14-18, 2010.

IP34. G. Chen, D. Kraemer, A. Muto, K. McEnaney, H.-P. Feng, "Thermoelectric Power Conversion," Keynote Talk (given by student Daniel Kraemer) at Energy Harvesting and Storage, Boston, November 16-17, 2010.

IP35. G. Chen, "Nanostructured Thermoelectrics: Millie's Legacy and Recent Developments," Keynote at the Symposium: 80th Birthday Celebration for Millie Dresselhaus, MIT, December 4, 2010.

IP36. A. Mavrokefalos, P. Sambegoro, S.E. Han, and G. Chen "Thermal Radiation Transport in Nanostructures," Keynote speech at Physics of Quantum Electronics, Snowbird, Utah, January 2-6, 2011.

IP37. G. Chen, "Nurturing Leaders for an Energy Revolution," Keynote at China 1000 Talent Annual Meeting, Beijing, China, January 15, 2011.

IP38. G. Chen, "Luck Favors Prepared Minds," Keynote New England Chinese Professionals New Year Gala and Community Enrichment Forum, Newton, MA, February 13, 2011.

IP39. G. Chen, "Micro/Nanotechnologies for Energy and Environment," Keynote at EITC Young Investigator Conference, Plenary Panel Discussion, Harvard University, August 18-19, 2011.

IP40. G. Chen, "Extraordinary Heat Transfer at Nanoscale" Keynote at The *2nd International Symposium* on Recent Advances in Applied Sciences, Oct. 3-4, 2011, National Dong Hwa University, Taiwan.

IP41. Jianjian Wang, Ruiting Zheng, Jinwei Gao, and Gang Chen, "Heat Conduction Mechanisms and Applications of Graphite Suspensions," Plenary at Carbon Nano Materials and Applications Workshop, Rapid City, SD, Oct. 30-Nov. 1, 2011.

IP42. G. Chen, "Nanoengineered Materials for Thermal Energy Systems," Plenary Lecture at International Mechanical Engineering Congress and Exhibition, Denver, Colorado, November 11-17, 2011.

IP43. G. Chen, "Solar Thermoelectric Energy Conversion," Keynote at 2011 NSF Nanoscale Science and Engineering Grantees Conference, December 5-7, 2011 National Science Foundation, Arlington, VA.

IP44. G. Chen, "Two Decases of Micro/Nanoscale Thermophysics and Heat Transfer," Closing remark at 7th US-Japan Seminar on Nanoscale Transport Phenomena---Science and Engineering, December 11-14, 2011, Shima, Japan.

IP45. G. Chen, "Thermoelectric Materials, Transport, and Applications," Keynote at Physics@FOM, Veldhoden, Netherland, January 17-18, 2012.

IP46. G. Chen, "Extraordinary Heat Transfer at Nanoscale," Keynote at ASME 2012 3rd Micro/Nanoscale Heat and Mass Transfer International Conference, March 3-6, 2012, Georgia, Atlanta.

IP47. G. Chen, "Nurturing Leaders for An Energy Revolution," keynote at Forum on Modern Engineering, Nanjing, China, May 21, 2012.

IP48. G. Chen, "Thermal Transport and Properties in Nanostructured Materials," Plenary lecture at 18th Symposium on Thermophysical Properties, June 24-29, 2012, Boulder, Colorado.

IP49. G. Chen, "Nanostructured Materials for Thermoelectric Energy Conversion," Keynote at International Workshop on Materials Science and Materials Chemistry for Energy. September 17-18, 2012. Beijing University, China.

IP50. G. Chen, "Heat Conduction in Crystalline Nanostructured Materials," Keynote at East Lake International Forum on Frontiers of Science and Technology for Outstanding Young Oversea Scholars, Wuhan, October 6-8, 2012.

IP51. G. Chen, "Nanostructured Materials for Thermoelectric Energy Conversion," Keynote at MIT Materials Day: Materials for Energy Harvesting, October 17, 2012.

IP52. G. Chen, "From Basic Research to Commercialization," Keynote at The 3rd China Jiangsu Conference for International Technology Transfer and Commercialization, Wuxi, China (Jointly sponsored by MIT ILP and Wuxi), November 10, 2012.

IP53. G. Chen, "Nanoscale Heat Transfer for Energy Applications," Keynote at 3rd International Forum on Heat Transfer, Nagasaki, Japan, November 11-15, 2012.

IP54. G. Chen, "Heat Transfer at Intersections," Keynote Lecture at ASME 2013 Summer Heat Transfer Conference, Menneapolis, MN, July 14-19, 2013.

IP55. G. Chen, "In Pursuit of the Sun: From Solar Thermoelectrics to Photovoltaics," Plenary Lecture at ASME 2013 7th International Conference on Energy Substainability and ASME 2013 11th Fuel Cell Science, Engineering and Technology Conference, Menneapolis, MN, July 14-19, 2013.

IP56. G. Chen, "Transition from Near-Field Thermal Radiation to Phonon Interfacial Conduction", Plenary Talk, PIERS 2013, Stockhom, August 12-15, 2013.

IP57. G. Chen, "Heat Transfer at Intersections," Plenary Lecture at the 4th International Symposium on Micro and Nano Technology (ISMNT-4), Shanghai, October 8012, 2013.

IP58. G. Chen, "MIT Innovation and Entrepreneurship Ecosystem" MIT-CHIEF Dinner Speech, November 16, 2013

IP59. G. Chen, "From Basic Research to Commercialization and Recent Progress in Renewable Energy Research," Plenary Talk at Jiansu State-Grid, Plenary Lecture, October 11, 2013.

IP60. G. Chen, "Progress and Challenges in Thermoelectric Transport, Materials, Characterization, and Systems," Plenary Talk at International Conference on Thermoelectrics, Nashville, Tennesse, July 6-10, 2014.

IP61. G. Chen, "Ballistic, Coherent, Hydrodynamics, and Quantun Heat Conduction," Plenary Talk at 8th US-Japan Joint Seminar on Nanoscale Transport Phenomena, Snata Cruz, California, July 13-July 16, 2014.

IP62. G. Chen, "Heat Transfer at Interfaces," Nukiyama Memorial Award Lecture, International Heat Transfer Conference, Kyoto, Japan, August 10-15, 2014.

IP63. G. Chen, "Probing and Simulation Phonon and Electron Transport for Thermoelectric Applications," Keynote Lecture, 5th International Congress on Ceramics, Beijing, China, August 17-21, 2014.

IP64. G. Chen, "Thermodynamics and Heat Transfer of Thermal Radiation," Keynote Lecture at OSA Incubator on Fundamental Limit of Optical Energy Conversion, Washtingon, DC, November 13-14, 2014.

IP65. G. Chen, "Innovating Thermal Materials, Devices, and Energy Conversion Systems," Plenary Lecture in Heat Transfer, IMECE, 2014, Montreal, Canada, November 14-20, 2014.

IP66. G. Chen, Dinner Speech, New England Chinese Professionals New Year Gala, Newton, MA, February 21, 2015.

IP67. G. Chen, "Connecting Conduction with Radiation: from Boltzmann to Maxwell," Symposium Progress on Laser Materials Processing, in Honor of 60th Birthday of Professor Grigoropoulos, Berkeley, California, April 11, 2015.

IP68. Gang Chen, Bolin Liao, Sangyeop Lee, and Jiawei Zhou, "First-Principles Calculations of Electron and Phonon Transport Properties in Single Crystals," Plenary Talk, Advances in Computational Heat Transfer, CHT-15, Rutgers, New Jersey, May 25-29, 2015.

IP69. Gang Chen, "Thermoelectric Energy Conversion: Materials, Devices, and Systems," Plenary Lecture at: The 15th International Conference on Micro and Nanotechnology for Power Generation and Energy Conversion Applications (PowerMEMS2015), Cambridge, MA, December 1-4, 2015.

IP70. Gang Chen, "Thermal Energy: A New Look for a Better Future," Keynote at CAST-Boston lauching event, Boston, January 31, 2016.

IP71. Gang Chen, "Education Innovation in the MIT Department of Mechanical Engineering," Keynote Lecture at First China-US Education Summit, China Education 30 Forum, MIT, April 22, 2016.

IP72. Gang Chen, "Innovations in Energy Utilization: Solar, Thermal, and Water," Keynote at 1000 Talents-Plan Competition, Harvard University, June 6, 2016.

IP73. Gang Chen, "Innovating Thermal Materials, Devices, and Energy Conversion Systems," Plenary talk at the 9th International Symposium on Heat Transfer (ISHT-9), Beijing, China, August 15-19, 2016.

IP74. Gang Chen, "Phonon Heat Conduction Beyond Fourier Diffusion: Ballistic, Coherent, Localized, Hydrodynamic, and Divergent Modes," Eringen Medal Plenary Talk, Society of Engineering Science, College Park, Maryland, October 2-5, 2016.

IP75. Gang Chen, "Materials Innovation for Efficient Solar and Thermal Energy Utilization," International Forum on Innovation and Emerging Industries Deployment, October 31-Nov. 2, Shanghai, 2016.

IP76. Gang Chen, "Introduction to MIT Mechanical Engineering" Geek Park, Beijing, January 14, 2017.

IP77. Gang Chen, "MIT Innovation Environment and Inventions," IT Summit, Shenzhen, April 1-2, 2017.

IP78. Gang Chen, "Progress and Challenges in Thermoelectric Transport, Materials, and Systems," STAR Symposium, Shanghai, June 25-26, 2017.

IP79. Gang Chen, "Use Nanostrcutrues to Tailor Solar and Thermal Radiation," 3rd International Workshop on Energy Conversion and Storage, Nanjing, June 27-28, 2017.

IP80. Gang Chen, "Anderson Localization of Heat Conduction," 9th US-Japan Joint Seminar on Nanoscale Transport Phenomena, Tokyo, Japan, July 2-5, 2017.

IP81. Gang Chen, "Phonon Heat Conduction Beyond Fourier Diffusion: Ballistic, Coherent, Localized, Hydrodynamic, and Divergent Modes" Plenary Lecture, Chinese National Heat and Mass Transfer Annual Meeting, Suzhou, October 28, 2017.

IP82. Gang Chen, "MIT Innovation and Entrepreneurship Ecosystem," MIT-CHIEF, MIT, November 18, 2017.

IP83. John Stockholm, Joseph Heremans, Oded Rabin, and Gang Chen, "Nanomaterials in Thermoelectrics" Celebrating our Millie, MIT, Nov. 26, 2017.

IP84. Gang Chen, "Nurturing Leaders in Future Science and Technology," Wuxi Innovation and Entrepreneurship Forum, August 13, 2018.

IP85. Gang Chen, "Advanced Materials for Energy and Water Nexus," MIT Wuxi ILP Conference, August 16, 2018.

IP86. Svetlana Boriskiona and Gang Chen, "Using Nanostructures to Tailor Thermal Radiation for Clean Energy and Clean Water Applications," Keynote at SPIE Conference 10759, SPIE Optical Engineering + Applications, "New Concepts in Solar and Thermal Radiation Conversion and Reliability," San Diego, August 19-23, 2018.

IP87. Gang Chen, "MIT Innovation and Entrepreneurship Environment", Plenary at 2018 Optics Valley Sino-International Entrepreurs Summit, Wuhan, October 19-20, 2018.

IP88. Gang Chen, "MIT Innovation and Entrepreneurship Environment", Plenary at 2018 ZGC Forum, Beijing, November 2, 2018.

IP89. Gang Chen, "Advanced Materials and Systems at the Energy and Water Nexus," MIT ILP Shenzhen Conference, Shenzhen, Jan. 9, 2019.

IP90. Gang Chen, "Recent Progress in First-Principles Simulation of Thermoelectric Properties," Workshop on Thermoelectric Materials and Commercialization, Shenzhen, Jan. 18-19, 2019.

IP91. Gang Chen, "Coherence and Localization in Phonon Heat Conduction," Plenary Lecture, Phononics 2019: 5th International Conference on Phononic Crystals/Metamaterials, Phonon Transport, Topological Phononics, Tucson, Arizona.

IP92. Gang Chen, "Advanced Materials and Systems for Energy and Environment" Plenary Lecture at Symposium on Frontiers of Energy and Metamaterials, Ningbo, June 20-21, 2019.

IP93. Gang Chen, "Recent Progress in Phonon Hydrodynamics, Thermal Materials, and Solar Steam Generation," Plenary Lecture at ASME 2019 MHHMT, 6th ASME International Conference of Micro/Nanoscale Heat and Mass Transfer, Dalian, China, July 8-10, 2019.

IP94. Gang Chen, "Heat Conduction Beyond Fourier Diffusion: Ballistic, Coherent, Localized, Hydrodynamics, and Divergent Modes," Keynote, Internatonal Nanoscience Student Conference, Beijing, China, July 15-18, 2019.

IP95. Gang Chen, "Nanomaterials and Structures for Efficient Solar Energy Utilization," Talk for the Frank Kreith Energy Award at the Reception Hosted by ASME Advanced Energy System Division, IMECE 2019, Salt Lake City, Utah, November 11-14, 2019.

IP96. Gang Chen, "Innovation in Materials and Devices at Energy and Water Nexus," MIT-CHIEF, MIT, November 16, 2019.

IP97. Gang Chen, "Advanced Materials and Systems at Energy and Water Nexus," MIT ILP Innovation Symposium with Wuxi, January 7, 2020.

IP98. Gang Chen, "Innovations in Thermal Materials and Systems at the Energy and Water Nexus, Keynote at Openning Ceremony of the Center of Integrated research center for energy and environment advanced technology (i-eneron), Kyushu Institute of University (via Zoom), July 9, 2020.

IP99. Gang Chen, "Exploration in Energy, Heat and Water from Nano to Macro: The Untold Stories of Explorers," ICANX Talk to over 180K people via Zoom (hosted by Zhigang Suo), July 31, 2020.

IP100. Zhiwei Ding and Gang Chen, "Second Sound at High Temperatures," Plenary Lecture at XLVIII International Summer School Conference Advanced Problems in Mechanics (APM2020), St. Petersburg, November 9-13, 2020 (online)

IP101. Zhiwei Ding and Gang Chen, "Second Sound at High Temperatures," Plenary Lecture Dynamics in Condensed Matter, November 16-20, 2020, Singapore (online).

IP102. Gang Chen, "Ultrahigh Thermal Conductivity Materials," EmTech China, MIT Technology Review, Suzhou, November 19-20, 2020 (online).

IP103. Gang Chen and Yaodong Tu, "Photomolecular Effect: Evaporating Water Using Visible Light beyond Thermal Limit," ICANx Summit, April 29, 2022 (online via Zoom).

IP104. Gang Chen and Yaodong Tu, "Photomolecular Evaporation of Water Clusters," Plenary Lecture at Micro-Flow and Interfacial Phenomena Conference, UC Irvine, June 20-23, 2022.

IP105. Gang Chen and Weishu Liu, "Power IoT Sensors with Body Heat," Keynote at International Conference on Intelligent Wearable Systems, ICIWS2022, HokgKong Poly-U RI-IWEAR, June 27-29, 2022 (via Zoom).

IP106. Gang Chen, "Super-Thermal Evaporation of Water by Visible Light – Photomolecular Effect," Plenary talk, International Conference on Physics and Its Applications, July 18-21, 2022, San Francisco.

IP107. Gang Chen, "A Year of Research Under Stress," USA-CAST 30th Annual Meeting, MIT, Oct. 28, 2022.

IP108. Gang Chen, "Origin of Super-Thermal Solar-Interfacial Evaporation," Keynote at Magic Lab Symposium, in honor of Arun Majumdar 60th Birthday, Stanford, April 15, 2023.

Invited Presentations in Conferences

IP109. G. Chen, S. G., Volz, T. Borca-Tasciuc, T. Zeng, D. Song, K.L. Wang, and M.S. Dresselhaus, 1998, "Phonon Engineering in Superlattices," Invited paper at the MRS Fall Meeting, Boston, Massachusetts, 1998, MRS Proc. Vol. 545, pp. 357-368.

IP110. G. Chen, 1998, "Heat Conduction in Low-Dimensional Structures," invited paper presented at 5th International Conference on Solid-State and Integrated-Circuit Technology, Beijing, China, October 21-23, Conference Proc., p. 860.

IP111. G. Chen, T. Zeng, T. Borca-Tasciuc, and D. Song, 1999, "Phonon Engineering in Nanostructures for Solid-State Energy Conversion," invited paper presented at International Union of Materials Research Society-International Conference on Advanced Materials, Beijing, China, June 14-18, 1999.

IP112. G. Chen, 2000, "Thermal Consideration in Design of Heterostructure Electronic and Photonic Devices," invited presentation at 2000 SPIE Terahertz and Gigahertz Electronics and Photonics Conference, San Diego, July 30-August 4, 2000.

IP113. G. Chen, B. Yang, W.L. Liu, T. Borca-Tasciuc, D. Song, D. Achimov, M.S. Dresselhaus, J.L. Liu, and K.L. Wang, "Thermoelectric Property Characterization of Low-Dimensional Structures," Invited, Proc. 20th International Conference on Thermoelectrics, ICT'01, pp. 30-34, Beijing, China, June 8-11, 2001 (IEEE Press, IEEE Cat. No. 01TH8589, Piscataway, NJ).

IP114. G. Chen, B. Yang, W.L. Liu, and T. Zeng, "Nanoscale Heat Transfer for Energy Conversion Applications," Invited, International Conference on Energy Conversion and Applications, Wuhan, China, June 17-20, 2001, Conference Proceedings: Energy Conversion and Applications, Vol. 1, pp. 287-296, ed. W. Liu.

IP115. G. Chen, "Heat Conduction in Low-Dimensional Structures," Invited, 5th Gordon Conference on Photoacoustic and Photothermal Phenomena, Queens College, Oxford, UK, August 19-24, 2001.

IP116. G. Chen, "Nano-to-Macroscale Energy Transport and Conversion---Bridging the Gaps in Length Scales and Disciplines," Invited, Proceedings of Colloqium on Micro/Nano Thermal Engineering, pp. 205-232, Ed., S.J. Song, Feb. 17-19, 2002, Seoul National University, Seoul, Korea.

IP117. G. Chen, "Micro and Nanoscale Heat Transfer---Tien's Legacy," presented at Chang-Lin Tien's retirement ceremony, Berkeley, June 21, 2002.

IP118. G. Chen and R.G. Yang, "Nano-to-Macroscale Modeling through Approximation," Invited, presented at International Mechanical Engineering Congress, 2002.

IP119. G. Chen, "Thermal Design of Photonic Devices," invited, presented at 1st Symposium on Photonics, Networking, and Computing, March 12-13, 2002, Durham, North Carolina (no paper submitted).

IP120. G. Chen, "Diffusion-Transmission Interface Condition," invited, presented at 4th US-Japan Nanotherm, Berkeley, June 22-26, 2002.

IP121. G. Chen, "Thermally Engineered Nanostructures for Energy Conversion," invited, presented at The International Conference on Micro and Nanosystems 2002, Kuming, China, August 11-14, 2002.

IP122. G. Chen, "Electron and Phonon Transport and Energy Conversion in Nanostructures," invited, Integrated Nanosystems 2002, Sponsored by ASME Nano-Institute, Berkeley, CA, September 18-20, 2002.

IP123. G. Chen and R.G. Yang, "Nano-to-Macroscale Transport Modeling Through Approximation," invited, November 17-22, 2002, Proceedings of International Mechanical Engineering Congress and Exhibitions (IMECE2002), New Orleans, LA, paper IMECE2002-32120.

IP124. G. Chen, "Exploring Nanoscale Heat Transfer Effects for Energy Conversion," invited, presented at MRS Spring Meeting, San Francisco, April 21-25, 2003.

IP125. G. Chen, "Reducing Phonon Thermal Conductivity Through Nanostructures for Thermoelectric Energy Conversion," invited, presented at Internal Conference on Thermoelectrics, Heraut, France, August 17-21, 2003.

IP126. G. Chen, C. Dames, D. Borca-Tasciuc, T. Harris, and D. Song, "Thermal Conductivity of Complex Nanostructures," invited, presented at International Conferences on Thermal Conductivity, Knoxville, Tennessee, Oct. 26-29, 2003.

IP127. G. Chen, "Nanostructure-Based Direct Thermal-to-Electric Power Generation Technologies," invited, American Filtration & Separation Society, Diesel and Gas Engine Emission Solution, Oct. 2, 2003.

IP128. G. Chen, "Basic Heat Transfer Characteristics at Nanoscale," invited, presented at Tutorial on Micro- Nanoscale Heat Transfer, IMECE 2003, Nov. 15-21, 2003.

IP129. G. Chen, "Thermal Conductivity and Heat Conduction in Nanostructures: Modeling, Experiments, and Applications," invited, Paper No. AIAA-2004-2463; presented at 37th AIAA Thermophysics Conference, Portland, Oregon, June 28-July 1, 2004.

IP130. G. Chen, "Nonequilibrium Electron-Phonon Transport Near Sharp Potential Barriers," invited, International Conference on Thermoelectrics, Adelaide, Australia, July 25-29, 2004.

IP131. G. Chen, "Nanoscale Heat Transfer and Thermal-Electric Energy Conversion," invited, presented at 13th International Conference on Photoacoustic and Photothermal Phenomena, Rio de Janeiro, Brazil, 5-8 July 2004.

IP132. G. Chen, A. Schmidt, H. Lee, and X. Y. Chen, "Exploring Nanoscale Heat Transfer Effects for Nanomanufacturing," invited, presented at 2nd International Symposium on Nanomanufacturing, KAIST, Korea, Nov. 3-5, 2004.

IP133. G. Chen, L. Hu, A. Narayanaswamy, and Z. Chen, "Nanoscale Thermal Radiation: Fundamental Issues and New Opportunities," invited, Japan-US Joint Seminar, Nanoscale Transport Phenomena, Matsushima, Japan, July 4-7, 2005.

IP134. A. Henry and G. Chen, "Extracting Phonon Properties from Molecular Dynamics Simulations," invited, Japan-US Joint Seminar, Nanoscale Transport Phenomena, Matsushima, Japan, July 4-7, 2005.

IP135. J.B. Wang and G. Chen, "Electrothermal Heat Conduction in Nanofluids," invited, Japan-US Joint Seminar, Nanoscale Transport Phenomena, Matsushima, Japan, July 4-7, 2005.

IP136. G. Chen, R.G. Yang, H. Lee, Q. Hao, M.-S. Jeng, M. Tang, M.S. Dresselhaus, B. Poudel, S. Kumar, D.Z. Wang, Z.F. Ren, P. Gogna, and J.-P. Fleurial, "Design, Modeling, and Synthesis of Nanocomposites for Solid-State Energy Conversion," invited, SPIE's International Symposia on Optics East 2005, Symposium SA119, Symposium SA 111, Nanofabrication: Technologies, Devices, and Applications II, October 23-26, Boston, MA (no paper submitted).

IP137. G. Chen, C. Dames, S. Chen, J.Y. Huang, and Z.F. Ren, "Thermal and Thermoelectric Characterization of Nanostructures," invited, SPIE's International Symposia on Optics East 2005, Symposium SA119, Nanosensing: Materials and Devices II, on October 23-26, Boston, MA (no paper submitted).

IP138. G. Chen, "Role of Nanotechnology In Energy," invited, MIT Energy Forum, May 3, 2006.

IP139. G. Chen, "Thermoelectric Energy Conversion with Nanostructured Materials," invited, MIT Energy Conference, May 13, 2006.

IP140. G. Chen, "Heat Transport in Superlattices and Nanocomposites for Thermoelectric Applications," invited, International Conferences on Materials and Technologies, Sicily, Italy, June 4-9, 2006.

IP141. C. Dames, S. Chen, C.T. Harris, J.Y. Huang, Z.F. Ren, M.S. Dresselhaus, and G. Chen, "A Modified High-Resolution TEM for Thermoelectric Property Measurements of Nanowires and Nanotubes," invited, SPIE Optics East, Oct. 2, 2006.

IP142. G. Chen, "Nanostructured Thermoelectric Materials for Power Generation," invited, MEMS@MIT Fall 2006 Meeting, October 10, 2006, MIT.

IP143. G. Chen and X.Y. Chen, "Solar to Electric Energy Conversion via Thermoelectric Devices," invited, MRS Fall Meeting, Symposium CC: Solar Energy Conversion, November 27-December 1, 2006, Boston, MA (no paper submitted).

IP144. G. Chen, A. Henry, and C. Dames, "Thermoelectric Energy Conversion in Nanostructures," invited, International Electron Devices Meeting, San Francisco, December 11-12, 2006, IEDM Technical Digest, pp. 20.1.1-20.1.4, 2006, IEEE Cat. No. 06CH37807.

IP145. G. Chen, "Thermoelectric Energy Conversion in Nanostructures," invited, 2nd Int. Conference on Nano/Micro Engineered and Molecular Systems, Bangkok, Thailand, January 16-19, 2007.

IP146. G. Chen, L. Hu, Z. Chen, A. Narayawaswamy, and X.Y. Chen, "Thermal radiative transport in nanostrctures and its application in energy technology," invited, MRS Spring Meeting, Symposium II: Nanoscale Heat Transport--From Fundamentals to Devices, April 9-13, 2007.

IP147. G. Chen, "Energy Nanotechnology," invited, The Fourth U.S.-Korea Forum on Nanotechnology: Sustainable Energy, April 26-27, 2007.

IP148. G. Chen, "Nanoscale Phonon and Phonon-Polariton Heat Transfer and Related Coherence Issues," invited, Thermal Radiation at The Nanoscale: Forces, Heat Transfer, and Coherence (TR07), Les Houches, May 21-25, 2007.

IP149. G. Chen, "Energy Technology Enabled by Nanoscale Effects," invited, NSF Workshop on Frontiers in Transport Phenomena Research and Education: Energy Systems, Biological Systems, Security, Information Technology and Nanotechnology, University of Connecticut, Storrs, May 17-18, 2007.

IP150. G. Chen, L. Hu, S. Shen, and A. Narayanaswamy, " Breakdown of Planck's Law at Nanoscale," invited, Presented at 38th Physics of Quantum Electronics, Snowbird, Utah, January 6-10, 2008.

IP151. G. Chen, A. Minnich, H. Lee, Q. Hao, and A. Henry, "Thermoelectric Transport in Nanostructrured Bulk Materials," invited, MRS, Spring Meeting, R Symposium San Francisco, March 23-27, 2008.

IP152. G. Chen, M. Chiesa, A. Muto, D. Kramer, H. Lee, Q. Hao, A. Minnich, X.Y. Chen, and H. Lu, "Potential Applications of Nanostructured Thermoelectric Materials," invited, MRS Spring Meeting, LL Symposium, San Francisco, March 23-27, 2008.

IP153. G. Chen, S. Shen, L. Hu, and A. Narayanaswamy, „"Breakdown of Planck's Blackbody Radiation Law at Nanoscale," invited, 2nd Integration and Commercialization of Micro and Nano Systems International Conference and Exihibition, June 33-5,m 2008, Clear Water Bay, Hong Kong.

IP154. G. Chen, "Solar Thermoelectrics and Thermophotovoltaics," invited, Solar Energy: New Materials and Nanostructured Devices for High Efficiency, Stanford, CA, June 24-25, 2008.

IP155. S. Shen, L. Hu, X.Y. Chen, A. Narayanaswamy, and G. Chen, "Breakdown of the Planck's blackbody radiation law at nanoscale gaps" Invited poster presented by S. Shen, Julius Springer Forum on Applied Physics 2008, Harvard, 2008. Win best poster award.

IP156. Vincent Berube, Mildred Dresselhaus, Gang Chen, Costas P. Grigoropoulos, Samuel S. Mao; "Hydrogen storage in nanostructured materials," Invited poster presented by V. Berube, Julius Springer Forum on Applied Physics 2008, Harvard, 2008.

IP157. Gang Chen, "Thermoelectric Energy Conversion," invited, US-China Clean Energy Exchange Conference, October 18, 2008, Chelmsford, MA.

IP158. G. Chen, A. Minnich, H. Lee, B. Muralidharan, M.S. Dresselhaus, X. W. Wang, G. Joshi, G. H. Zhu, Y. C. Lan, D. Z. Wang, Z.F. Ren, "SiGe Nanocomposites Thermoelectrics: The Knowns and the Unknowns," invited, APS March Meeting, Pittsburgh, March 16-20, 2009.

IP159. Gang Chen, A. Minnich, Q. Hao, A. Muto, H. Lee, D. Kramer, M. Tang, M.S. Dresselhaus, Y. Ma, Y.C. Lan, J. Yang, X. Yan, G. Joshi, G. H. Zhu, X. W. Wang, D. Wang, and Z.F. Ren, „"Nanostructured Thermoelectric Materials and Their Potential Applications," invited, SAE World Congress, Detroit, April 20-23, 2009.

IP160. Gang Chen, Austin Minnich, Kimberlee Collins, Asegun Henry, Hohyun Lee, Qing Hao, and Mildred S. Dresselhaus, Gaohua Zhu, Yucheng Lan, Xiaowei Wang, Giri Joshi, Dezhi Wang, and Zhifeng Ren, "Phonons: How Long Do They Really Travel," invited, International Conference on Thermoelectrics, Freiburg, July 27-30, 2009.

IP161. Gang Chen, "Nanocomposites Thermoelectrics: The Knowns and Unknowns," invited, Thermoelectric Transport: progress in first principles and other approaches and interplay with experiment, Lausanne, Switzerland, Meeting Dates: July 22, 2009 – July 24, 2009.

IP162. D. Kramer, A. Muto, H. Lee, Q. Hao, K. McEnaney, G. Chen, Y. Ma, Y.C. Lan, J. Yang, G. Joshi, G. H. Zhu, X. W. Wang, D. Wang, and Z.F. Ren, "Nanostructured Thermoelectric Materials and Their Potential Applications," invited, Session, Mechanics and Materials in Energy Systems, IMECE, November 15-19, 2009, Orlando, Florida.

IP163. Gang Chen, "Converting Heat into Electricity Using Solid-State Technology," invited, Ideastream 2010, April 13, 2010, Boston, MA.

IP164. Yiqun Zheng, Bhaskaran Muralidharan, Mona Zebarjadi, Zhifeng Ren, Mildred S. Dresselhaus, Gang Chen, "Theoretical Investigation of Size Effects on Electron and Phonon Thermoelectric Transport in Nanostructures," invited, International Conference on Thermoelectrics, May 30-June 3, 2010, Shanghai, China.

IP165. G. Chen, M.S. Dresselhaus, Z.F. Ren, B. Muralidharan, and Y. Q. Zhang, "Nanostructured Thermoelectric Materials and Their Potential Applications," invited, 5th Forum on New Materials, CIMTEC 2010, Montacatini Terme, Italy, June 13-18, 2010.

IP166. S. Shen, A. Mavrokefalos, P.L. Sambegoro, and G. Chen, "Near Field Heat Transfer Exceeding Planck's Blackbody Radiation Law (and Nanostructured Thermoelectrics)," invited, 2010 Villa Conference on Interaction Among Nanostructures, June 21-25, 2010, Santorini, Greece.

IP167. G. Chen, "From Basic Research to Commercialization," invited, The OVC International Optoelectronic Expo & Forum: Chang-Lin Tien International Forum, Wuhan, China, Nov. 2-5, 2010.

IP168. Austin Minnich, Junichiro Shiomi, Keivan Esfarjani, Zhiting Tian, and Gang Chen, "Experimental and Theoretical Studies on Phonon Mean Free Path in Thermoelectric Materials," Invited talk at APS March Meeting, March 21-25, 2011, Dallas, Texas.

IP169. Daniel Kraemer, Bed Poudel, Hsien-Ping Feng, J. Christopher Caylor, Giri Joshi, Bo Yu, Xiao Yan, Yi Ma, Xiaowei Wang, Dezhi Wang, Andrew Muto, Kenneth McEnaney, Matteo Chiesa, Zhifeng Ren, and Gang Chen, "Solar thermoelectric energy conversion", Invited talk at MRS Spring Meeting, April 25-29, 2011.

IP170. Gang Chen, Andrew Muto, D. Kramer, Ken McEnaney, H.-P. Feng, W. Liu, Q. Zhang, B. Yu, Zhifeng Ren, "Thermoelectric Energy Conversion Using Nanostructured Materials," Invited Talk at SPIE Defense, Security, and Sensing, Conference 8035, Energy Harvesting and Storage: Materials, Devices, and Applications II, April 25 – 29, 2011, Orlando, Florida, USA.

IP171. Sang Eon Han, Anastassios Mavrokefalos, Matthew S. Branham, and Gang Chen, Efficient Light-Trapping Nanostructures in Thin Silicon Solar Cells," Invited Talk at SPIE Defense, Security, and Sensing, Conference 8031, Micro- and Nanotechnology Sensors, Systems, and Applications III, April 25 – 29, 2011, Orlando, Florida, USA.

IP172. Gang Chen, "Highly Thermally Conductive Polymers," Invited talk at Nanotech Conference and Expo, Boston, June 13-16, 2011.

IP173. Gang Chen, "Challenges and Opportunities in Thermoelectric Energy Conversion," 220th invited, ECS Meeting and Electrochemical Energy Summit, October 9-14, 2011, Boston, MA.

IP174. A. Mavrokefals, P. Sambegoro, G. Chen, "Near-Field Radiation Transfer," invited talk AVS 58th International Symposium and Exhibition, October 30-November 4, 2011, Nashville, TN.

IP175. A. Mavrokefalos, S.E. Han, S. Yerci, M. Branham, "Efficient Light Trapping in Periodic Nanostructured Thin Crystalline Si Solar Cells," invited talk, Optical Society of America Topical Meeting on Optical Nanostructures and Advanced Materials for Photovoltaics (PV), November 2-3, 2011, Austin, Texas.

IP176. Austin Minnich, Keivan Esfarjani, Jivtesh Garg, Tengfei Luo, Kimberlee Collins, Maria Luckyanova, Zhiting Tian, Lingping Zeng, and Gang Chen, "Experimental and Theoretical Studies on Phonon Transport: From Bulk Materials to Nanostructures," invited talk, MRS Fall Meeting, Boston, W3.1, Symposium W: Phonons in Nanomaterials─Theory, Experiments, and Applications, November 26-30, 2011.

IP177. M. Zebarjadi and G. Chen, "Recent Advances in Thermoelectrics," invited talk 2011 IEEE International Electron Devices Meeting, Washington, DC, December 5 - 7, 2011.

IP178. Jianjian Wang, Ruiting Zheng, Jinwei Gao, and Gang Chen, "Heat Conduction in Nanofluids: Mechanisms and New Phenomena," invited talk, *7th* US-Japan Joint *Seminar* on Nanoscale Transport Phenomena, Shima, Japan, December 11-14, 2011.

IP179. Gang Chen, "Concentrated Solar Thermoelectric Power," invited talk, DOE Sunshot Summit, Denver, Colorado, June 13-14, 2012.

IP180. Gang Chen, "Nanostructured Materials for Thermoelectric Energy Conversion," invited talk, ACS National Meeting, Philadelphia, August 18-23, 2012.

IP181. A. Mavrokafelos, S. E. Han, S. Yerci, M. Branham, and G. Chen, "Efficient Light-Trapping in Inverted Nano-Pyramid Thin Crystalline Silicon Films", invited, European Materials Society Conference (E-MRS), Strasbourg, France, May 14-18, 2012 (delivered by Yerci).

IP182. Gang Chen, "Nanostructured Materials for Thermoelectric Energy Conversion," Invited talk, Orcas 2012, International Conference on Energy Conversion and Storage, Friday Harbor, WA, September 4-6, 2012.

IP183. Gang Chen, Svetlana V. Boriskina, Matthew Branham, and Selcuk Yerci, "Light Trapping and Thermodynamics of Photovoltaic Cells," invited talk, OSA's 96th Annual Meeting, Frontiers in Optics 2012, Laser Science XXVIII, APS/DLS 28th Annual Meeting, Rochester, New York, October 14-18, 2012.

IP184. Gang Chen, "Nanostructure Approach to Thermoelectrics: Materials, Transport, and Devices," invited talk, MRS Fall Meeting, Acta Materialia Award Forum, Boston, November 25-30, 2012.

IP185. Gang Chen, "Thermoelectric Transport in Bulk and Nanostructured Materials," invited, Gordon Research Conference on Nanomaterials for Applications in Energy Technology, Ventura, California, February 3 to 8 2013.

IP186. Gang Chen, "Thermal Transport in Soft Matters: Polymers and Nanofluids," invited, MMSD 2013 - Organic Electronics and Transport Phenomena, Max Planck Institute for Polymer Research, Mainz, Germany, June 10, 2013 to June 12, 2013.

IP187. Gang Chen, "Near-Field Radation Heat Transfer," invited talk, presented at ASME 2013 Summer Heat Transfer Conference, Menneapolis, MN, July 14-19, 2013.

IP188. Gang Chen, "Ballistic and Coherent Heat Conduction," invited, CECAM Nanophotonics, Bremen, Germany, August 19-23, 2013.

IP189. Gang Chen, Yongjie Hu, Maria Luckyannova, Jivtesh Garg, Zhiting Tian, Kimberlee Collins, and Lingping Zeng, "Phonon Heat Conduction at the Nanoscale: From Ballistic to Coherent," IMECE2013-66018, Invited Presentation at ASME 2013 International Mechanical Engineering Congress & Exposition, San Diego, CA, November 15-21, 2013.

IP190. Gang Chen, "Nonlocal and Coherent Phonon Transport in Bulk Materials and Nanostructures," Invited Presentation, MRS Fall Meeting, Symposium UU, Boston, December 1-6, 2013.

IP191. Gang Chen, "Nonlocal and Coherent Phonon Transport in Bulk Materials and Nanostructures," Invited Presentation, e-MRS Spring Meeting, Symposium D, Lille, France, May 26-30, 2014.

IP192. Gang Chen, "The Interdisciplinary Future of Mechanical Engineering," Invited talk at International Conference on Engineering Science and Technology, Sponsored by UNESCO/CAETS/CAE, June 2-3, 2014.

IP193. Gang Chen, "Probing and Simulating Phonon and Electron Transport for Thermoelectric Applications," Invited talk at Gordon Conference, Ceramics: Solid-State Studies In, Mt. Holyoke, July 20-25, 2014.

IP194. Matthew Branham, Wei-Chun Hsu, Selcuk Yerci, and Gang Chen, "Thin Film c-Si Solar Cells – Detailed Understanding from Light Trapping to Carriers Collection," Invited talk at AVS 61th International Symposium and Exhibition, Baltimore, MD, November 9-14, 2014.

IP195. Bo Qiu, Bolin Liao, Jiawei Zhou and Gang Chen, "First-Principles Calculation of Thermoelectric Properties of Silicon," Invited talk at MRS Fall Meeting, Boston, MA, November 31-December 5, 2014.

IP196. Gang Chen, Vazrik Chiloyan, Poetro L. Sambegoro, Jonathan K. Tong, Yi Huang, Wei-Chun Hsu, and Svetlana V. Boriskina, "Thermodynamics and heat transfer of thermal radiation" Invited talk at MRS Spring Meeting, Symposium M, April 5-10, 2015.

IP197. Gang Chen, "Innovations in Energy Utilization: Solar, Thermal, and Water," invited talk MIT China Conference, Wuxi, May 23, 2015.

IP198. Gang Chen, "Simulation of All Thermoelectric Properties of Single Crystalline Materials from First-Principles," invited talk at International Conference on Thermoelectrics, Dresden, Germany, June 28-July 3, 2015.

IP199. Gang Chen, Vazrik Chiloyan, Poetro L. Sambegoro, Jonathan K. Tong, Yi Huang, Wei-Chun Hsu, and Svetlana V. Boriskina, "Heat Transfer and Thermodynamics of Thermal Radiation in the Near and Far Fields" Invited talk at PIERS (Progress in Electromagnetics Research Symposium, Prague, July 6-9, 2015.

IP200. Gang Chen, "Engineering Phonon Heat Conduction in Nanostructures," Gordon Research Conference on Nano-Mechanical Interfaces, Hong Kong University of Science and Technology, July 19-20, 2015.

IP201. S. Boriskina, V. Chiloyan, P.L. Sambegoro, J. Tong, Y. Huang, and Gang Chen, "Exploring and Tailoring Near-Field Thermal Radiation at Extreme Separations," invited presentation at Meta'15, 6th International Conference on Metamaterials, Photonic Crystals and Plasmonics, New Yowrk, August 4-7, 2015.

IP202. Gang Chen, "Phonon Heat Conduction in Nanostructures: Ballistic, Coherent, Hydrodynamic, and Divergent Modes," International Symposium on Clusters and Nanostructures, Richmond, Virginia, October 26-29, 2015.

IP203. G. Chen, M. Luckyanova, L.P. Zeng, S.Y. Lee, B.L. Liao, J.W. Zhou, V. Chiloyan, and S. Humberman,, "Phonon Transport: Ballistic, Coherent, and Hydrodynamic Regimes," Phonon Transport, Interactions and Manipulations in Nanoscale Materials and Devices - Fundamentals and Applications II, 2015 MRS Fall Meeting, Boston, MA, November 29-December 4, 2015.

IP204. Gang Chen, Daniel Kraemer, Lee Weinstein, James Loomis, George Ni, Jonathan Tong, Yi Huang, and Svetlana Boriskina, "Nano-Materials Based Solar-Thermal Technology," Symposium OO, 2015 MRS Fall Meeting, Boston, MA, November 29-December 4, 2015.

IP205. Gang Chen, "Phonon Heat Conduction in Nanostructures: Ballistic, Coherent, Localized, and Hydrodynamic Modes," APS March Meeting, Baltimore, MD, March 14-18, 2016.

IP206. Wei-Chun Hsu; Matthew Branham; Jonathan Tong; Bolin Liao; Yi Huang; Svetlana V. Boriskina; Gang Chen, "Ultra-Thin Crystalline Silicon Solar Cells and Near-Field

Thermo-Radiative Cells," in Symposium NM4: Nanomaterials-Based Solar Energy Conversion, NM4.12.01, MRS Fall Meeting, Nov 27-Dec 2, 2016, Boston, MA (Invited).

IP207. Gang Chen, Thomas A. Cooper, Lee Weistein, Yanfei Xu, Jonathan K. Tong, Matthew S. Branham, Wei-Chun Hsu, Svetlana V. Boriskina, Using Nanostructures to Tailor Thermal and Solar Radiation, Nanoworld Conference, April 3-5, 2017, Boston, MA (invited).

IP208. Mingda Li and Gang Chen, "Quantized Dislocation," 54th SES Annual Meeting, Boston, July 25-28, 2017.

IP209. Gang Chen, "Innovations in Materials and Devices for Efficient Solar and Thermal Energy Utilization," MIT ILP China Conference, Shanghai, October 25&26, 2017.

IP210. Jiawei Zhou, Te-Huan Liu, Zhiwei Ding, Qichen Song, Qian Xu and Gang Chen, First-Principles Simulation of Electron and Phonon Scattering and Their Thermoelectric Transport Properties," MRS Fall Meeting, Symposium ES09: Thermal Energy – Transfer, Conversion, and Storage, ES09-05-01, Boston, November 26 – December 1, 2017.

IP211. Mingda Li and Gang Chen, "Quantized Dislocations," MRS Fall Meeting, Symposium Symposium TC07: Design, Control and Advanced Characterization of Functional Defects in Materials, TC0-09-01, Boston, November 26 – December 1, 2017.

IP212. Jiawei Zhou, Te-Huan Liu, Zhiwei Ding, Qichen Song, Qian Xu and Gang Chen, First-Principles Simulation of Electron and Phonon Scattering and Their Thermoelectric Transport Properties," MRS Fall Meeting, Symposium EN10: 1, Thermoelectric Materials, Devices, and Applications, Phoenix, AZ, April 2-6, 2018.

IP213. George Ni, Hadi Zandavi, Thoms Cooper, Svetlana Boriskina, and Gang Chen, "Solar Steam Generation for Low-Cost Desalination, Sterilization, and Cooking," EN11, Nanomaterials for Energy and Water Nexus, Phoenix, AZ, April 2-6, 2018.

IP214. Gang Chen, "Phonon Thermal Transport Through Single and Multiple Interfaces," APL Interfaces in Energy Materials, Cambridge, UK, April 10-12, 2018.

IP215. Gang Chen, "MIT Innovation and Entrepreneurship Ecosystem," MIT-CHIEF, Beijing, November 12, 2018.

IP216. G. Chen, "Millie Dresselhaus' Legacy and Recent Advances in Thermoelectrics," APS March Meeting, Session S42: Millie Dresselhaus Legacy in Nanosciences, Boston, MA, March 4-8, 2019.

IP217. Z.W. Ding, S. Huberman, R. A. Duncan, J.W. Zhou, V. Chiloyan, A. A. Maznev, K.A. Nelson, and G. Chen, "Phonon Hydrodynamics in Graphene and Graphite", APS March Meeting, Session F44: Manifestations of Phonon Hydrodynamics in Thermal Transport, Boston, MA, March 4-8, 2019.

IP218. Yanfei Xu, Jiawei Zhou, Bai Song, and Gang Chen, "Molecular Engineered Polymer with High Thermal Conductivity," MRS Spring Meeting, Pheonix, Arizona, April 22-26, 2019 (invited).

IP219. Jiawei Zhou, Te-Huan Liu, Qian Xu, Qichen Song, Zhiwei Ding, and Gang Chen, "First-Principles Simulation of Electron and Phonon Transport in Thermoelectric Materials with Alloys and Defects," MRS Spring Meeting, Pheonix, Arizona, April 22-26, 2019 (invited).

IP220. Gang Chen and Bai Song, "The 1 nm Challenge," Presentation to students attending International Nanoscience Student Conference as a challenge to solve, Beijing, China, July 15-18 (Bai Song led the following discussion), 2019.

IP221. G. Chen, "Emerging Technologies for Smart Cities," MIT Beijing Symposium, Smart Cities & Emerging Technologies, October 18, 2019.

IP222. Jiawei Zhou; Ke Chen; Te-Huan Liu; Qichen Song; Bolin Liao; Hangtian Zhu; Ran He; Jun Mao; Zihang Liu; Wuyang Ren; Doug Shin; Ryan Duncan; Alexei Maznev; Keith Nelson; David Singh; Zhifeng Ren; Gang Chen, "Understanding and probing energy transport via electron-phonon interaction" in Session 9-20-1: Fundamentals of electron and phonon nonequilibrium transport, November 11-November 14, 2019, Salt Lake City, UT.

IP223. Gang Chen, Zhiwei Ding, Qichen Song, Qian Xu, and Jiawei Zhou, "Simulation of Thermoelectric Properties of Complex Materials and Interfaces," MRS Fall Meeting, Presented at joint meeting of EN13 (Flexible and Miniaturized Thermoelectric Devices Based on Semiconductors and Hybrid Materials) and EN14 (Thermoelectric Energy Conversion – Complex Materials and Novel Theoretical Methods), December 1-6, 2019, Boston, MA.

IP224. Gang Chen, "Phonon Heat Conduction Regime Map," MRS Spring Meeting (Virtual), NM.08.06, April 17-23, 2021.

IP225. Gang Chen, Thomas Cooper, Bikram Bhatia, Lee A. Weinstein, Lin Zhao, Yi Huang, Elise M. Strobach, Kenneth McEnaney, Sungwoo Yang, Evelyn N. Wang, "Optically Transparent and Thermally Insulating Aerogel Solar Collectors," MRS Spring Meeting (Virtual), EN.04.04, April 17-23, 2021.

IP226. Gang Chen, "Thermodynamic Modeling of Hydrogels: Applications to Water Evaporation, Atmospheric Water Harvesting and Desalination, and Photomolecular Effect in Hydrogels," MRS Fall Meeting, EN03.01.03, Nov. 29-Dec. 8, 2021.

IP227. Gang Chen, "Photomolecular Effect: Super-Thermal Evaporation of Water by Visible Light," Sow-Hsin Chen Memorial Workshop, MIT, May 6, 2022.

IP228. Gang Chen, "Super-Thermal Evaporation of Water Under Visible Light: Photomolecular Effect," Recent Progress in Thermal Transport: Theory and Experiments, International Center of Theoretical Physics, May 30-June 3, 2022 (online).

IP229. G. Chen, "Photomolecular Evaporation andInterfacial Absorption from Non-absorbing Liquids," Talk at KITP Program, Emerging Regimes of Quantum and Thermal Flucuational Electrodynamics, UCSB, June 27, 2022.

IP230. G. Chen, "Absorption at Liquid-Vapor Interace: Quantum Evaporation," KITP Conference: Quantum and Thermal Electrodynamic Fluctuations in the Presence of Matter: Progress and Challenges, July 11-14, 1922, UCSB.

IP231. G. Chen, "Non-Fourier Phonon Heat Conduction: Ballistic, Coherent, Localized, Hydrodynamic, and Divergent Modes," Talk at KITP Program, Emerging Regimes of Quantum and Thermal Flucuational Electrodynamics, UCSB, July 21, 2022.

IP232. G. Chen, "Phonon Second Sound over 200K and Cubic Boron Arsenide as a Superior Semiconductor," Invited talk at APS March Meeting, B61.00001, Las Vegas, March 5-10, 2023.

Invited Panelist and Participants

IP233. G. Chen, 1996, "Thermal Issues in Semiconductor Lasers," Panel presentation at the 1996 International Mechanical Engineering Congress, Atlanta, Georgia, November 17-22.

IP234. G. Chen, 1998, "Microscale Heat Transfer in Photonic Structures and Devices," Panel Presentation at 1998 IMECE, Anaheim, CA, Nov. 14-20.

IP235. G. Chen, "Thermoelectric Micro-Coolers and Micro Power Generators," panel presentation (Thermal MEMS Panel) at 1999 National Heat Transfer Conference, Albuquerque, New Mexico, August 15-17, 1999.

IP236. G. Chen, "Thermophysical Engineering in Nanostructures," round-table discussion, Heat Transfer and Transport Phenomena in Microsystems Conference, Banff, Canada, October 15-20, 2000.

IP237. G. Chen, "Thermoelectric Micro-Power Generators," Panel on Miniature Energy, Chemical and Biological Systems (session # AES-11, J. Kapat and L. Chou), IMECE2000, at IMECE2000, Orlando, ASME HTD-Vol. 366-2, pp. 245-251.

IP238. G. Chen, "Teaching Nanoscale Transport at MIT," Panel on Micro/Nanoscale heat transfer education, IMECE'2002.

IP239. G. Chen, Panel member at MIT Materials Unlimited Seminar, Seminar Speaker Y.-M. Lin on Thermoelectric Materials. 12/16/02

IP240. G. Chen, "Micro- Nanoscale Heat Transfer Education," presented at Purdue Heat Transfer Celebration, paper in conference proceedings, April 3-5, 2003.

IP241. G. Chen, "Nanoscale Heat Transfer and Information Technology," presented at Rohsenow Symposium on the Future of Heat Transfer, paper in conference CD-ROM, May 16, 2003.

IP242. R.G. Yang and G. Chen, "Recent Development In Nanostructured Thermoelectric Materials and Devices," presented at 9th Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems (ITHERM2004), Las Vegas, June 1-4, 2004, ITHERM 2004 pp. 731-732.

IP243. G. Chen, A. Narayanaswamy, and L. Hu, "Thermal Radiation inside and outside Nanostructures," Panel on Fundamental Questions in Multiscale Thermophysics and Transport, IMECE 2004, Anaheim, November 14, 2004 (Chair: van Carey).

IP244. G. Chen, "Design and Manufacturing of Solid-State Energy Conversion Materials," Panel on Challenges and Opportunities in Electronic/Photonic Materials Manufacturing, ASME Summer Heat Transfer Conference, July 17-22, 2005, San Francisco, CA.

IP245. G. Chen, "Thermoelectric Materials: From Superlattices to Nanocomposites," Panel on Challenges and Opportunities of Solid-State Technologies for Electronic Cooling and Power, ASME InterPACK'05, July 17-22, 2005, San Francisco, CA.

IP246. G. Chen, "Nanoscale Thermal Radiation: Fundamental Issues and New Opportunities," presented at IMECE2005, Nov. 6-11, Orlando, FL (Chairs: Z.M. Zhou, P. Meguc).

IP247. G. Chen, "Engineering Nanocomposites for Thermoelectric Energy Conversion," presented at IMECE2005, Nov. 6-11, Orlando, FL (Chairs: W. Chiu and R. Mahajan).

IP248. G. Chen, Panelist, Advanced Technology Workshop on Advanced Substrates and Next-Generation Semiconductors, April 30-May 1, 2008, Linthicum Heights, Maryland.

IP249. Gang Chen, "Inconvenient Truth or Incorrect Conclusion," DOE Thermoelectrics Application Workshop, 9/29-10/1, 20009, Coronado, CA.

IP250. Gang Chen, Panel on China Energy and Environment Research, MIT student organization, February 18, 2010.

IP251. Gang Chen, Thermoelectric Energy Conversion, Energy Harvesting for Wireless Sensors, MIT Enterprise Forum, February 22, 2010.

IP252. Gang Chen, "Nanostructured Materials for Thermoelectric Energy Conversion," International Mechanical Engineering Congress and Exhibition, IMECE, Panel on NanoEngineering for Energy, Vancouver, Canada, November 14-18, 2010.

IP253. G. Chen, "Rapid Developing Energy Industry in China and Role of Low-Cost Nanotechnology," Panel Discussion at Harvard Project for Asia and International Relation Conference, Harvard University, February 13, 2011.

IP254. G. Chen, "From Basic Research to Commercialization and Thermoelectric Energy Conversion," MIT-China program, MIT, April 20, 2011.

IP255. G. Chen, "Concentrated Solar Thermoelectric Generators," DOE EFRC Summit, Panel on Energy Conservation and Efficiency, May 27, 2011.

IP256. G. Chen, Panelist, MIT CHIEF Conference, MIT, November 17 and 18, 2012.

IP257. Gang Chen, "Two Decades of Micro/Nanoscale Thermophysics and Heat Transfer," presented at ASME 2013 Summer Heat Transfer Conference, Menneapolis, MN, July 14-19, 2013.

IP258. G. Chen, Panelist on Panel "Commercializing EFRC Research", 2013 DOE EFRC PI Meeting, Washington, DC, July 18-19, 2013.

IP259. G. Chen, Panelist on Panel, "Aligning Global Development with Academic Career," IMECE, 2014, Montreal, Canada, November 14-20, 2014.

IP260. G. Chen, Panelist on Panel "Solar Thermal", talk title "Innovation Examples of Solar-Thermal Technologies," MIT Solar Day, September 10, 2015.

IP261. G. Chen, Panelist on Panel "Materials", MIT-CHIEF, November 12, 2016.

IP262. G. Chen, Panielist on Future of Science Forum, Beijing, Jan. 15, 2017.

IP263. G. Chen, Presentation at Millie Dresselhaus Memorial Session, 9th US-Japan Joint Seminar on Nanoscale Transport Phenomena, Tokyo, Japan, July 2-5, 2017.

IP264. G. Chen, Chair Panel on "World-Changing Materials", Future Science Prize, Beijing, October 29, 2017.

IP265. G. Chen, "Energy Conversion and Thermal Materials Enabled by Nanoscale Transport Physics," presented at Panel on Nanoscale Heat Transfer, 16th International Heat Transfer Conference, Beijing, August 10-15, 2018.

IP266. G. Chen, panelist on Future Smart Cities, World Forum on Scientific and Technological Innovations, Beijing, August 10-12, 2018.

IP267. G. Chen, Panel at MIT Hongkong Node to alums, Hongkong, January, 13, 2019.

IP268. G. Chen, Panel at MIT Shenzhen/Hongkong joint alum event, Shenzhen, January, 9, 2020.

IP269. G. Chen, Panelist as an expert in energy area, Enabling Transformative Advances in Materials Engineering through Development of Novel Approaches to Electron Microscopy, September 4-6, 2020 (online).

IP270. G. Chen, Panelist in energy, NSF Workshop on New Frontiers of Thermal Transport, Dec. 14-16, 2020; Jan. 4-6, 2021 (online).

IP271. G. Chen, Panelist at the Leadership Panel, Micro-Flow and Interfacial Phenomena Conference, UC Irvine, June 20-23, 2022.

IP272. G. Chen, Panelist at the "Dialogue between NIH Officals and SCBA Community: Concerns and Solutions," Society of Chinese Bioscientists in America, SCBA'2022 Boston Conference, July 28, 2022, Boston. Panel hosted by Margaret Lewis, panelists include Henry Tang (C100), Michael Lauer (NIH), with video from Congress Woman Judy Chu.

Invited Presentations in Workshops

IP273. G. Chen, 1995, "Thermal Phenomena at Micron and Nanoscale," NSF/DOE Workshop on Advanced Thermal Manufacturing and Materials Processing, Leesburg, Virginia, May 25-26.

IP274. G. Chen, 1997, K.L. Wang, and M.S. Dresselhaus, "Quantum Structures for Thermal Management of Microelectronic Devices," DARPA Workshop on Microelectronics Thermal Management, Arlington, December 11-12.

IP275. G. Chen, 1998 "Towards Phonon Engineering in Microelectronic and Microthermoelectric Devices," invited presentation at the DSRC/DARPA Study: Thermal Management for Compact Systems, Arlington, Virginia, February 5-6.

IP276. G. Chen, 1998, "Perspective of Thermoelectric Cooling for Internal Cool Electronics," invited presentation at the IEEE Workshop on Internal Cool Electronics, Marriot Hotel, Washington, DC., Oct. 15-16.

IP277. G. Chen, "Report on the 2nd Microtherm Workshop and Tutorial," presented to the DOE Council of Engineering Energy Research, Santa Monica, CA, 1999.

IP278. G. Chen, "Phonon Engineering in Nanostructures," Office of Naval Research Workshop on Thermally Engineered Materials, Dec. 10, 1999.

IP279. G. Chen, "Phonon Engineering and Heat Transfer in Nanostructures," Department of Defense Workshop on Applied Physics of Nanostructures and Nanomaterials, Dec. 16-17, 1999.

IP280. G. Chen, "Engineering Nanostructures for Energy Transport and Conversion," UC Berkeley Nanoengineering Workshop, Berkeley, August 4-5, 2000 (Sponsored by DOE CEER).

IP281. G. Chen, ARO workshop, invited participant, Nanoscience for Soldiers, Research Triangle Park, NC, Feb. 8-9, 2001.

IP282. G. Chen, "Nanoscale Engineering of Heat Transfer and Energy Conversion Processes," ONR workshop, Thermal Materials: Processing and Performance, University of Cambridge, UK, May 30-June 1, 2001.

IP283. G. Chen, "Solid-State Energy Conversion---From Physics to Systems," presented at DARPA/ONR Workshop on Direct Energy Conversion, Alexandria, Dec. 4&5, 2001 (Dr. Pazik and Browning).

IP284. B. Yang and G. Chen "Phonon Transport in Superlattices," presented at New Thermoelectric Materials Workshop: Chemistry, Physics and Materials Science of Thermoelectric Materials: Beyond Bismuth Telluride, Traverse City, Michigan, August 17-21, 2002.

IP285. G. Chen, "Nanoscale Heat Transfer for Thermoelectric Energy Conversion," presented at Department of Energy/Electric Power Research Institute (DOE/EPRI) High Efficiency Thermoelectrics Workshop, San Diego, CA, February 17-20, 2004.

IP286. G. Chen, "Nanoscale Heat Transfer: Enabling Efficient Direct Thermal-to-Electric Energy Conversion," presented at National Nanotechnology Initiative Workshop on "Nanoscience Research Needs for Energy," Arlington, VA, March 16-18, 2004.

IP287. G. Chen, "Thermal Conductivity and Heat Conduction Mechanisms in Superlattices," Presented at JST-CREST Koumoto Meeting, Fukuoka, Japan, November 26-27, 2004.

IP288. The Air Force/Army/NSF Joint Workshop on Multifunctional Structures for Energy Harvesting & Storage, Stanford University, December 1-17, 2004 (attending and discussion only).

IP289. DOE workshop on Solar Energy Utilization, Washington, DC, April 18-21, 2005 (attending and sub-pane chair on Thermal Utilization).

IP290. G. Chen, "Engineering Phonon Thermal Transport in Nanostructures," Defense Science Research Council Workshop on Nanoscopic Phonon Engineering, Arlington, May 9, 2005.

IP291. G. Chen, "Nanotechnology for Efficient Energy Utilization," MIT ILP Workshop on Energy Challenge Workshop, Cambridge, MIT, Dec. 6-7, 2005.

IP292. G. Chen, "Surface Phonon-Polariton Engineering," DARPA Nanoscopic Optical Phonon Engineering, Workshop, December 15, 2005.

IP293. G. Chen, X.Y. Chen, Z. Chen, L. Hu, A. Narayanaswamy, and R.G. Yang, "Thermally Excited Nonequilibrium States between Electrons and Phonons for Solid-State Energy Conversion," Int. Workshop on Nanoscale Energy Conversion and Information Processing Devices, September 24-26, Nice, France.

IP294. G. Chen, "Nanostructured Thermoelectric Materials for Power and Cooling," MEMS@MIT Fall 2006 Meeting, MIT, October 10, 2006.

IP295. G. Chen, "Novel Thermoelectric Materials, Devices, and Systems," DARPA/MTO Components from Thermoelectric Materials Workshop, Arlington, VA, May 16-17, 2007.

IP296. G. Chen, "Solar to Electric Energy Conversion via Thermoelectric Devices," MIT Space Power Workshop, May 13-16, 2007.

IP297. G. Chen, "Direct Energy Conversion," GCEP Workshop, MIT, November, 29-30, 2007.

IP298. Gang Chen, "Thermal Energy Conversion and Storage," NSF Workshop on Thermal and Solar Energy Conversion and Storage.

IP299. Gang Chen, "Plenty Room at the Bottom---Nanotechnology Development from the Bottom up: Energy Nanotechnology Startup," Panelist at 3rd Energy Nanotechnology International Conference, 2008.

IP300. Gang Chen, "Nanostructured Thermoelectric Materials," Workshop on Recent Advances in Peltier Cooling in the Range Including 10K, Air Force Research Laboratory, Albuquerque, New Mexico, April 22 and 23, 2009.

IP301. Gang Chen, "Extra-Ordinary Heat Transfer and Energy Conversion," DARPA ECYCLER Workshop, Arlington, April 23-24, 2009.

IP302. Gang Chen, Mildred S. Dresselhaus, and Zhifeng Ren, "Nanostructured Thermoelectrics: from Basic Physics to Potential Applications," DOE Thermoelectrics Application Workshop, 9/29-10/1, 20009, Coronado, CA.

IP303. Sheng Shen and Gang Chen, "Extraordinary Heat Transfer and Energy Conversion," DSRC Physics of High Heat Flux Devices and their Applications Workshop, 11/11-12/09, Arlington, VA.

IP304. Gang Chne, "Nano, Heat, and Energy," MITEI Press Session with ~20 reporters, March 5, 2010, MIT.

IP305. Gang Chen, Workshop on Computational Materials Science and Chemistry for Innovation, DOE Office of Science, July 26-28, 2010, Bethesda, Maryland.

IP306. Gang Chen, $1/W Workshop, EERE&ARPA-E, Washington DC, August 10-11, 2010.

IP307. Daniel Kraemer, Bed Poudel, Hsien-Ping Feng, J. Christopher Caylor, Bo Yu, Xiao Yan, Yi Ma, Xiaowei Wang, Dezhi Wang, Andrew Muto, Kenneth McEnaney, Qing Hao, Matteo Chiesa, Zhifeng Ren, and Gang Chen, "Solar Thermoelectric Generators with Flat-Panel Thermal Concentration," DOE EERE 2011 Thermoelectrics Application Workshop, San Diego, January 3-6, 2011.

IP308. G. Chen, "Nano, Heat, and Energy---Nanostructured Thermoelectric Materials," presented as a member of US-Russia Presidential Bilateral Relation Commission Delegation, Moscow, February 27-March 4, 2011.

IP309. G. Chen, "Thermoelectrics: Kang's Contributions and Recent Developments," K.L. Wang Symposium, UCLA, June 25, 2011.

IP310. G. Chen, "Progress in Thermoelectric Materials, Devices, and Applications," Advanced Thermoelectric Technology Workshop, Taipei, June 30, 2011.

IP311. G. Chen, "Phonon Transport Theories and Simulation," invited talk NSF/ONR Workshop on Micro/Nanoscale Heat Transfer, Georgia, Atlanta, March 4, 2012.

IP312. G. Chen, "Progress from EFRC: Solid-State Solar-Thermal Energy Conversion Center," presented at 3rd International Thermoelectrics Application Workshop, Baltimore, March 20-22, 2012.

IP313. G. Chen, "Opportunities for Thermoelectrics," invited talk at Emerging Ideas for High Efficiency Topping Cycle, Presentation at ARPA-E Workshop, Arlington, Virginia, March 27, 2012.

IP314. G. Chen, Kavli Prize Week, invitation by Mildred S. Dresselhaus, Oslo, Norway, 9/1-9/5, 2012.

IP315. G. Chen, "Simulating and Probing Phonon and Electron Transport for Thermoelectric Applications," Materials for Sustainable Energy Future, Workshop IV: Energy Conservation and Waste Heat Recovery, Institute for Pure and Applied Mathematics, UCLA, November 18-22, 2013.

IP316. G. Chen, "Introduction to MIT MechE," MIT, Cambridge, MIT-TIT 1st Workshop, September, 2014.

IP317. G. Chen, "Introduction to MIT MechE, Materials and Devices for Thermal Systems," Tokyo Institute of Technology, MIT-TIT 2nd Workshop, January 7, 2015.

IP318. G. Chen, "Understanding and Controlling Thermal Transport," Toyota Workshop: Thermal Management for Future Vehicles, Ann Arbor, Michigan, June 9, 2015.

IP319. Northeastern Department Head Meeting, August 14-15, 2015, RPI, Troy.

IP320. G. Chen, "Spectral and Angular Control of Thermal Emission, Absorption and Transmission," Future Directions Workshop for Power and Energy Advances from Photonic Sciences and Applications, Caltech, CA, January 19-20th 2016.

IP321. G. Chen, "System Consideration in Waste Heat Recovery," ARPA-E Workshop on Waste Heat Recovery, San Francisco, CA, December 13-14, 2016.

IP322. G. Chen, "Solid-State Solar-Thermal Energy Conversion Center," ERFC PI Meeting, Washington, DC, July 25-25, 2017.

IP323. G. Chen, "Direct Thermal Energy Conversion," HEATER Workshop, LBL, July 31-August 1, 2017.

IP324. G. Chen, "Connecting Phonon Heat Conduction to Structures," BNL-MIT Workshop, MIT, August 22-23, 2018.

IP325. Zhenghe Xu and Gang Chen, "Introduction to Centers for Mechanical Engineering Research and Education at MIT and SUSTech," Workshop at SUSTech, Jan., 10, 2019.

IP326. Weishu Liu, Weiqin Zhang, and Gang Chen, "Thermal Energy Harvesting for IoT," Workshop at SUSTech, Jan., 11, 2019.

IP327. Gang Chen, "Molecular Engineered Polymers with High Thermal Conductivity," Next Generation Dielectrics Workshop, Boston, December 4, 2019.

IP328. Gang Chen, "Innovations in Thermal Materials at Energy and Water Nexus," Center of Excellences in Energy in Egypt, University of Mansoura, University of Ain Shams, Cairo, January 15, 2020.

IP329. Gang Chen, NSF Workshop, served as domain expert in Energy, interviewed on video which is feed into discussion. Enabling Transformative Advances in Materials Engineering through Development of Novel Approaches to Electron Microscopy, September 4, 2020.

Invited Tutorials:

IP330. G. Chen, 1998, "Thermophysics of Solids and Solid-State Devices," Tutorial presented at the 2nd Microtherm Workshop and Tutorial, Albuquerque, New Mexico.

IP331. G. Chen, "Nanostructures and Their Properties," Tutorial given at ITHERM 2006, May 30 - June 2, 2006 in San Diego, CA.

IP332. G. Chen, "Hydrogen Storage," Tutorial given at ASME Energy Nanotechnology International Conference, June 26-28, MIT, 2006.

IP333. G. Chen, "Thermal Transport in Nanostructures," Tutorial given at EuroSimE: Thermal, Mechanical and Multiphysics Simulation and Experiments in Micro-Electronics and Micro-Systems, London, April 15-18, 2007.

IP334. G. Chen, "Thermoelectric Energy Conversion" Six Hour Tutorial, European School in Materials Science: Chemistry and Physics of Materials for Energetics, University of Milano-Bicocca, September 14-19, 2009.

IP335. G. Chen, "Thermal Energy Technology," September, 2013, MITEI China Program.

IP336. G. Chen, "Thermal Energy Technology," October 31, 2013, MITEI China Program.

IP337. G. Chen, "Nano-microstructural control of phonon engineering for thermoelectric energy harvesting," Webinar for MRS Bulletin, January 22, 2018 (for March Issue).

Program Reviews/Kick-off (incomplete list)

IP338. G. Chen, "Phonon Transport in Nanostructured Thermoelectric Materials for Cryogenic Cooling" Cryogenic Cooling MURI Kick-off Meeting, Albuquerque, New Mexico, September 1, 2010.

IP339. G. Chen, "Nanomanufacturing for Energy Systems," At NSF SINAM Site Visit Review, Berkeley, June 9-10, 2011.

IP340. G. Chen, "Electron and Phonon Thermoelectric Transport in FeSb2, Bi, and Bi2Te3," Cryogenic Cooling MURI Review, Santa Barbara, December 16, 2011.

IP341. G. Chen, "Overview of S3TEC Activities," EFRC S3TEC Review by DOE, Baltimore, Maryland, Jan. 9, 2012.

IP342. G. Chen, "Metallic Composites Phase Change Materials for High Temperature Thermal Energy Storage," ARPA-E HEATS Program Annual Review, Arlington, VA, October 23, 2012.

IP343. G. Chen, "Phonon and Electron Transport in Nanostructured Thermoelectric Materials for Cryogenic Cooling," AFOSR MURI Program Review, Albuquerque, NM, December 17, 2012.

IP344. G. Chen "Solid-State Solar Thermal Energy Conversion Center," presented at Physical Behavior of Materials PI Meeting, Potomac, April 14-17, 2013.

IP345. G. Chen et al., "Probing and Engineering Phonons and Electrons Transport In nanostructured thermoelectric materials," 2013 DOE EFRC PI Meeting, Washington, DC, July 18-19, 2013.

IP346. G. Chen, APRA-E Workshop on Personnal Thermal Management Systems, Nov. 12 and 13, 2013.

IP347. G. Chen, "First Principles Simulation of Phonon and Electron Thermoelectric Transport" 2013 OSU MURI Review, Albuquerque.

IP348. G. Chen, "Concentrated Solar Thermoelectric Generators," DOE EERE Program Review, Washington, DC, February 18, 2014.

IP349. G. Chen, "Continuous Processing of High Thermal Conductivity Fibers and Sheets," DOE Polymer Program Review, Washington DC, May 7, 2014.

IP350. G. Chen, "Thermal and Electrical Regulation of Heat Transfer," AFOSR Project Review, Arlington, Virginia, May 8, 2014.

IP351. G. Chen, "Concentrated Solar Thermoelectric Generators," DOE EERE Program Review at Sunshot Summit, 2014, Anaheim, May 20.

IP352. G. Chen, "Full Spectrum Stacked Solar Thermal and PV Receiver," APRA-E FOCUS Project Kickoff Meeting, Denver, June 25, 2014.

IP353. G. Chen, "Heat Transfer and Thermodynamics of Thermal Radiation," DOE Physical Behavior of Materials Principal Investigators' Meeting, Gaithersburg, MD, March 30 - April 1, 2015.

IP354. G. Chen, "Probing and Understanding Thermal Transport and Energy Conversion in Nanostructures," Energy Frontier Research Center Principal Investigators' Meeting, Washington, DC, October 26-27, 2015.

IP355. G. Chen, "ab-Initio Simulation of Thermoelectric Transport," DARPA MATRIX Program Review, Durham, NC, Decmeber 6-8, 2016.

IP356. G. Chen, "ab-Initio Simulation of Thermoelectric Transport," DARPA MATRIX Program Review, HRL, Malibu, May 2, 2017.

IP357. Yoichiro Trurimaki, Jonathan K. Tong, Wei-Chun Hsu, Yi Huang, Svetlana V. Boriskina, and Gang Chen, "Spectrally Tunnable Radiation Extratio from Micro and Nanostructures," DoE BES 2017 Physical Behavior of Materials Principal Investigators' Meeting, Gaithersburg, May 2-4, 2017.

IP358. G. Chen, Battery Theraml Management Resarch Opportunities, Energy Storage Center Workshop, MIT, March 14, 2018.

IP359. G. Chen, presentations on theory and experiments, MURI Review at Austin, Texas, April 5, 2018.

IP360. G. Chen, "Advanced Materials for Photomolecular Desalination," MIT-UM6P Annual Research Workshop, UM6P, Morocco, May, 2022.

IP361. G. Chen, "Advanced Materials for Photomolecular Desalination," MIT-UM6P Annual Research Workshop, UM6P, Morocco, May, 2023.

Invited Talks for Professional Educations

IP362. G. Chen, "(1) MIT Innovation and Entrepreneurship Ecosystems and (2) Advances in Nano, Energy, and Water Research " MIT-Tsinghua EMBA Professional Education, June 29, 2019 (MIT Sloan Professional Education Program).

IP363. G. Chen, "(1) MIT Innovation and Entrepreneurship Ecosystems and (2) Advances in Nano, Energy, and Water Research " October 4, MICI Educational Group (Sarah Ren) to NewSkin.

IP364. G. Chen, "(1) MIT Innovation and Entrepreneurship Ecosystems, (2) MIT Innovation in Education, and (3) Advances in Nano, Energy, and Water Research " MIT-Tsinghua EMBA Professional Education （五道口六班）, October 20, 2019 (MIT Sloan Professional Education Program).

IP365. G. Chen, "(1) MIT Innovation and Entrepreneurship Ecosystems, (2) MIT Innovation in Education, and (3) Advances in Nano, Energy, and Water Research " MIT-Tsinghua EMBA Professional Education （五道口五班）, October 26, 2019 (MIT Sloan Professional Education Program).

Talks and Work on Social Justice

IP366. " 'In the End, You Are Treated Like a Spy,' Says MIT Scientist" NY Times, 1/24/22.

IP367. Reflecting on Professor Gang Chen's Case and Looking Ahead to the Future of the China Initiative, hosted jointly by Asian American Scholar Forum, Asian Americans Advancing Justice, APA Justice, Breann Center for Justice, AAASE, 1/30/2022, https://aasforum.org/2022/01/24/upcoming-webinar-professor-gang-chens-case/.

IP368. "Professor Gang Chen: China Initiative Had a 'Chiling Effect' that 'Terrified the Science Community,'" WBUR Interview, https://www.wbur.org/hereandnow/2022/01/28/gang-chen-china-initiative.

IP369. "MIT Scientist 'Lived in Constant Fear' While Accused Under Trump's 'China Initiative'", Interview with NPR The Word Radio Program, 2/3/22.

IP370. Interview with MIT Technology Review, Eileen Guo, 2/1/22

IP371. Reflecting on Prof. Gang Chen's Case and the China Initiative, APA Justice Monthly Meeting, February 7, 2022, https://www.youtube.com/watch?v=UtJh7Vh5mls.

IP372. Thank you, speech at MIT Institute Faculty meeting (followed by first Institute in-person faculty reception since Covid-19 started), February 16, 2022.

IP373. MIT Professor Who Faced Charges for China Ties Speaks Out, CBS Interview, February, 22, 2022.

IP374. Speech at MIT Corporation meeting, March 4, 2022.

IP375. Promoting DEIR (Diversity, Equity, Inclusion, Respect) and Keeping USA STEM Competitive: Gang Chen's Story, March 24, 2022 (online).

IP376. When your government treat you as a spy, Committee of Concerned Scientists Annual Meeting, March 27, 2022 (online).

IP377. "We are All Gang Chen," APS DeltaPhy Webinar: In Their Own Words: The Stories of Xiaoxing Xi, Anming Hu, and Gang Chen, April 18, 2022, https://www.aps.org/programs/minorities/webinars/their-own-words.cfm.

IP378. "Gang Chen's Story and the End of China Initiative," Interview with National Committee of US-China Relations, https://www.youtube.com/watch?v=F1S1aby1dVw.

IP379. "We are All Gang Chen," Committee of Human Rights, Breakfast Meeting at National Academies, Washington DC, April 30, 2022.

IP380. "We are All Gang Chen," Center for Diversity, Department of Psychiatry, MGH, June 17, 2022 (together with Yoel Fin).

IP381. "We are All Gang Chen," Keynote Panel (with Sherry Chen, Xiaoxing Xi, Jeremy Wu, chaired by Judge Lillian Sing) 30th Annual Conference, International Society for the Study of Chinese Overseas, November 11&12, San Francisco, CA.

IP382. "We are All Gang Chen," NAE Webinar, "Researcher Experiences of Wrongful Prosecution in the US," Organized by NASEM Human Rights Committee November 15, 2022 (with Xiaoxing Xi, chaired by Laura Greene).

IP383. Interview by Times of Higher Education, leading to a report "Witch Hunt Cripples Science," March 14, 2023, Times Higher Education.

IP384. Interviewed by Nature in article "China Initiatived Shadow Looms Large on US Scientists," Nature, 2/24/2013.

IP385. "We are All Gang Chen," Vassar College, Newman Lecture, April 6, 2023.

Journal Publications

J1. S.M. Cheng, Y.X. Zhao, and G. Chen, 1988, "Experimental Study of Heat Transfer and Flow Resistance of Air Across A Droplet-Shaped Tube," Chinese *Journal of Engineering Thermophysics*, Vol. 9, pp. 359-361 (in Chinese).

J2. H.R. Zhang, G. Chen, and S.Y. Huang, 1992; "Interaction between Film Condensation on One Side of A Vertical Wall and Natural Convection on the Other with Wall Radiation Taken into Account," *Journal of Huazhong University of Science and Technology*, Vol. 20, pp. 41-47 (in Chinese).

J3. C. Peng, T. Zeng, and G. Chen, 1992, "Free Convection About Vertical Needles Embedded in a Saturated Porous Medium," *Journal of Thermophysics and Heat Transfer*, Vol. 6, pp. 558-561.

J4. P.E. Phelan, G. Chen, and C.L. Tien, 1992, "Thickness-Dependent Radiative Properties of Y-Ba-Cu-O Thin Films," *Journal of Heat Transfer*, Vol. 114, pp. 227-233.

J5. G. Chen and C.L. Tien, 1992, "Partial Coherence Theory of Thin Film Radiative Properties," *Journal of Heat Transfer*, Vol. 114, pp. 636-643.

J6. K. Richter, G. Chen, and C.L. Tien, 1993, "Partial Coherence Theory of Multilayer Thin-Film Optical Properties," *Optical Engineering*, Vol. 32, pp. 1897-1903.

J7. G. Chen and C.L. Tien, 1993, "Thermal Conductivity of Quantum Well Structures," *Journal of Thermophysics and Heat Transfer*, Vol. 7, pp. 311-318.

J8. G. Chen and C.L. Tien, 1993, "Internal Reflection Effects on Transient Photothermal Reflectance," *Journal of Applied Physics*, Vol. 73, pp. 3461-3466.

J9. G. Chen and C.L. Tien, 1993, "Facet Heating of Quantum Well Lasers," *Journal of Applied Physics*, Vol. 74, pp. 2167-2174.

J10. P.M. Norris, G. Chen, and C.L. Tien, 1994, "Size Effects on the Temperature Rise of Vertical-Cavity Surface-Emitting Lasers," *International Journal of Heat and Mass Transfer*, Vol. 37, Suppl. 1, pp. 9-17.

J11. G. Chen and C.L. Tien, 1994, "Thermally-Induced Optical Nonlinearity during Transient Heating of Thin Films," *Journal of Heat Transfer*, Vol. 116, pp. 311-316.

J12. G. Chen, C.L. Tien, X. Wu, and J.S. Smith, 1994, "Measurement of Thermal Diffusivity of GaAs/AlGaAs Thin-Film Structures," *Journal of Heat Transfer*, Vol. 116, no.2, May, pp. 325-331.

J13. C.L. Tien and G. Chen, 1994 (Invited), "Challenges in Microscale Conductive and Radiative Heat Transfer," *Journal of Heat Transfer*, Vol. 116, pp. 799-807.

J14. G. Chen, M. Hadley, and J.S. Smith, 1994, "Pulsed and Continuous Wave Thermal Characteristics of External-Cavity Surface-Emitting Laser Diodes," *Journal of Applied Physics*, Vol. 76, no.6, Sept. 14, pp. 3261-3271.

J15. G. Chen, 1995, "A Comparative Study on the Thermal Characteristics of Vertical-Cavity Surface-Emitting Lasers," *Journal of Applied Physics*, Vol. 77, no.9, May 1, pp. 4251-4258.

J16. X.Y. Yu, G. Chen, A. Verma, and J.S. Smith, 1995, "Temperature Dependence of Thermophysical Properties of GaAs/AlAs Periodic Structure," *Applied Physics Letters*, Vol. 67, no. 24, Dec. 11, pp. 3554-3556.

J17. X.Y. Yu, L. Zhang, and G. Chen, 1996, "Thermal-Wave Measurement of Thin-Film Thermal Diffusivity with Different Laser Beam Configurations," *Review of Scientific Instruments*, Vol. 67, pp. 2312-2316.

J18. G. Chen, 1996, "Nonlocal and Nonequilibrium Heat Conduction in the Vicinity of Nanoparticles," ASME *Journal of Heat Transfer*, Vol. 118, pp. 539-545.

J19. G. Chen, 1996, "Optical Effect on Thermal Emission from Semiconductors," *Applied Physics Letters*, Vol. 69, pp. 512-513.

J20. G. Chen, 1997, "Size and Interface Effects on Thermal Conductivity of Superlattices and Periodic Thin-Film Structures," ASME Journal of Heat Transfer, Vol. 119, pp. 220-229.

J21. G. Chen, T. Borca-Tasciuc, and R.B. Fair, 1997, "Photon Effect on Radiative Properties of Silicon During Rapid Thermal Processing," Journal of Applied Physics, Vol. 82, pp. 830-835.

J22. G. Chen, 1997, "Wave Effects on Radiative Transfer in Absorbing and Emitting Thin-Film Media," *Microscale Thermophysical Engineering*, Vol. 1, pp. 215-224.

J23. T. Borca-Tasciuc and G. Chen, 1997, "Temperature Measurement of Fine Wires by Photothermal Radiometry," *Review of Scientific Instruments*, Vol. 68, pp. 8040-8043.

J24. G. Chen and M. Neagu, 1997, "Thermal Conductivity and Heat Transfer in Superlattices," *Applied Physics Letters*, Vol. 71, pp. 2761-2763.

J25. T. Koga, X. Sun, S.B. Cronin, M.S. Dresselhaus, K.L. Wang, and G. Chen, 1997, "Models for Low-Dimensional Thermoelectricity," Journal of Computer-Aided Materials Design, Vol. 82, pp. 830-835.

J26. G. Chen, 1998, "Thermal Conductivity and Ballistic Phonon Transport in Cross-Plane Direction of Superlattices," *Physical Review B.,* Vol. 57, pp. 14958-14973.

J27. G. Chen and T. Borca-Tasciuc, 1998, "Applicability of Photothermal Radiometry to Temperature Measurement of Semiconductors," *International Journal of Heat and Mass Transfer*, Vol. 41, pp. 2279-2285.

J28. T. Borca-Tasciuc and G. Chen, 1998, "Thermophysical Property Characterization of Thin Films by Scanning Laser Thermoelectric Microscope," *International Journal of Thermophysics*, Vol. 19, pp. 557-567.

J29. S.G. Volz and G. Chen, 1999, "Lattice Dynamic Simulation of Silicon Thermal Conductivity," *Physica B*, Condensed Matter, Vol. 263-264, pp. 709-712.

J30. M.S. Dresselhaus, G. Dresselhaus, X. Sun, Z. Zhang, S.B. Cronin, T. Koga, J.Y. Ying, and G. Chen, 1999, "The Promise of Low-Dimensional Thermoelectric Materials," Microscale Thermophysical Engineering, Vol. 3, pp. 89-100 (1999).

J31. G. Chen, 1999, "Phonon Wave Effects on Heat Conduction in Thin Films and Superlattices," *Journal of Heat Transfer*, Vol. 121, 945-953.

J32. S.G. Volz and G. Chen, 1999, "Molecular Dynamics Simulation of Thermal Conductivity of Silicon Nanowires," *Applied Physics Letters*, Vol. 75, pp. 2056-2058.

J33. G. Chen, T. Borca-Tasciuc, B. Yang, D. Song, W.L. Liu, T. Zeng, D.-A. Achimov, 1999, "Heat Conduction Mechanisms and Phonon Engineering in Superlattice Structures," Thermal Science and Engineering, Vol. 7, pp. 43-51.

J34. S. Volz and G. Chen, 2000, "Molecular Dynamics Simulation of Thermal Conductivity of Silicon Crystals," Physical Review B, Vol. 61, pp. 2651-2656.

J35. G. Chen, 2000 (Plenary Paper at Eurotherm No. 57), 2000, "Phonon Heat Conduction in Nanostructures," International Journal of Thermal Sciences, Vol. 39, pp. 471-480.

J36. T. Zeng and G. Chen, 2000, "Energy Conversion in Heterostructures for Thermionic Cooling," Microscale Thermophysical Engineering, Vol. 4, pp.39-50.

J37. G. Chen (Short Communication upon Invitation of Editor), 2000, "Particularity of Heat Conduction in Nanostructures," Journal of Nanoparticle Research, Vol. 2, pp. 199-204.

J38. B. Yang and G. Chen (Invited Submission), 2000, "Lattice Dynamics Study of Phonon Heat Conduction in Quantum Wells," Physics of Low-Dimensional Structures Journal for a special issue on Low-Dimensional Thermoelectrics (guest editor: Alaxander Balandin), Vol. 5/6, pp. 37-48.

J39. S.G. Volz, J.B. Saulnier, G. Chen, and P. Beauchamp, P., "Molecular Dynamics Study of Heat Transfer in Si/Ge Superlattices" High Temperatures-High Pressures, Vol. 32, pp. 709-714, 2000.

J40. S.G. Volz, J.B. Saulnier, G. Chen, P., Beauchamp, 2000, "Computation of thermal conductivity of Si/Ge Superlattices by Molecular Dynamics Techniques," Microelectronics Journal, 31, pp. 815-819.

J41. T. Borca-Tasciuc, W.L. Liu, T. Zeng, D. W. Song, C.D. Moore, G. Chen, K. L. Wang, M.S. Goorsky, T. Radetic, R. Gronsky, T. Koga and M.S. Dresselhaus, 2000, "Thermal Conductivity of Symmetrically Strained Si/Ge Superlattices," Superlattices and Microstructures, Vol. 28, no.3, pp. 119-206.

J42. A. Khitun, A. Balandin, K.L. Wang, and G. Chen, 2000, "Enhancement of the thermoelectric figure of merit of $Si_{1-x}Ge_x$ quantum wires due to spatial confinement of acoustic phonons," Physica E, Vol. 8, pp. 13-18.

J43. A. Khitun, K.L. Wang, and G. Chen, 2000, "Thermoelectric Figure of Merit Enhancement in a Quantum Dot Superlattice," Nanotechnology, Vol. 11, pp. 327-331.

J44. J.L. Liu, K.L. Wang, C.D. Moore, M.S. Goorsky, T. Borca-Tasciuc, and G. Chen, 2000, "Experimental Study of a Surfactant-Assisted SiGe Graded Layer and a Symmetrically Strained Si/Ge Superlattice for Thermoelectric Applications," Thin-Solid Films, Vol.369, pp. 121-125.

J45. G. Chen, T. Zeng, T. Borca-Tasciuc, and D. Song, 2000 (Invited Paper at IUMRS), "Phonon Engineering in Nanostructures for Solid-State Energy Conversion," Materials Engineering A, A292, pp. 155-161.

J46. D. W. Song, W. L. Liu, T. Zeng, T. Borca-Tasciuc, G. Chen, C. Caylor, and T.D. Sands, 2000, "Thermal Conductivity of Skutterudite Thin Films and Superlattices," Applied Physics Letters, Vol. 77, pp. 3854-3856, 2000.

J47. T. Zeng and G. Chen, 2001, "Microscale Heat Transfer in Thin Films: Impacts of Thermal Boundary Resistance and Internal Heat Generation," *ASME Journal of Heat Transfer*, Vol. 123, pp. 340-347 (2001).

J48. B. Yang and G. Chen, 2001, "Anisotropy of Heat Conduction in Superlattices," Microscale Thermophysical Engineering, vol. 5, pp. 107-116.

J49. G. Chen and T. Zeng, 2001, "Nonequilibrium Phonon and Electron Transport in Thin Films and Superlattices," Review paper in Microscale Thermophysical Engineering, vol. 5, pp. 71-88 (Invited Keynote Paper at International Heat Transfer and Transport Phenomena in Microscale).

J50. T. Borca-Tasciuc, R. Kumar, and G. Chen, 2001, "Data Reduction in 3□ Method for Thin Film Thermal Conductivity Measurements," Review of Scientific Instruments, Vol. 72, No. 4, pp. 2139-2147.

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J446. Bruno Lorenzi, Paolo Mariani, Andrea Reale, Aldo Di Carlo, Gang Chen, Dario Narducci, "Practical development of efficient thermoelectric – photovoltaic hybrid systems based on wide-gap solar cells," Applied Energy, 300, 117343, Oct. 15, 2021.

J447. Vazrik Chiloyan, Samuel Huberman, Zhiwei Ding, Jonathan Mendoza, Alexei A. Maznev, Keith A. Nelson, Gang Chen, "Green's Functions of the Boltzmann Transport Equation with the Full Scattering Matrix for Phonon Nanoscale Transport beyond the Relaxation Time Approximation," Physical Review B, 104 (24), 245424, 2021.

J448. Zhiwei Ding, Ke Chen, Bai Song, Jungwoo Shin, Alex A. Maznev, Keith A. Nelson, and Gang Chen "Observation of Second Sound in Graphite over 200 K", Nature Communications, 13, 1-9, 2022.

J449. Gang Chen, "Perspectives on Molecular-Level Understanding of Thermophysics of Liquids and Future Directions," Journal of Heat Transfer, 144 (1), 010801 (14 pages), 2022.

J450. Q. Xu, B. Deng, L. Zhang, S. Lin, J. Li, F. Jiang, Z. Han, Q. Li, Q. Zhou, Y. Zhu, P. Zhang, W. Liu, and G. Chen, "High-performance flexible thermoelectric generator based on bulk materials" Cell Reports Physical Science, 100780, 2022.

J451. Gang Chen, "Donnan Equilibrium Revisited: Coupling between Ion Concentrations, Osmotic Pressure, and Donnan Potential" Journal of Micromechanics and Molecular Physics (JMMP), Vol. 7, 127-134, 2022.

J452. Chaitanya A. Gadre, Xingxu Yan, Qichen Song, Jie Li, Lei Gu, Toshihiro Aoki, Sheng-Wei Lee, Gang Chen, Ruqian Wu, Xiaoqing Pan, "Nanoscale Imaging of Interface Reflected Phonons by Electron Microscopy" Nature, 606, 292-297, 2022.

J453. Gang Chen, "On the Molecular Picture and Interfacial Temperature Discontinuity During Evaporation and Condensation" Int. J. Heat Mass Transfer, Vol. 191, 122845, 2022.

J454. Jiawei Zhou, Hangtian Zhu, Qichen Song, Zhiwei Ding, Jun Mao, Gerald Mahan, Zhifeng Ren, Gang Chen, "Electronegativity-guided dopant selection achieves electron cloaking for high mobility in heavily doped semiconductors," Nature Communications, 13, 1-10, 2022.

J455. Qichen Song, Jiawei Zhou, and Gang Chen, "Nonspecular electron transmission leads to drastically reduced contact resistance between dissimilar semiconductors," Physical Review B, 105, 195306, 2022.

J456. Gang Chen, "Thermodynamics of Hydrogel for Applications to Atmospheric Water Harvesting, Evaporation, and Desalination." Physical Chemistry And Chemical Physics, Vol. 24, 12329-12345, 2022.

J457. Jungwoo Shin, Geethal Amila Gamage, Zhiwei Ding, Ke Chen, Fei Tian, Xin Qian, Jiawei Zhou, Hwijong Lee, Jianshi Zhou, Li Shi, Thanh Nguyen, Fei Han, Mingda Li, David Broido, Aaron Schmidt, Zhifeng Ren, Gang Chen, "High ambipolar mobility in cubic boron arsenide", Science, 377, 437-440, 2022.

J458. Zhantao Chen, Xiaozhe Shen, Nina Andrejevic, Tongtong Liu, Duan Luo, Thanh Nguyen, Nathan C. Drucker, Michael E. Kozina, Qichen Song, Chengyun Hua, Gang Chen, Xijie Wang, Jing Kong, and Mingda Li, "Panoramic mapping of phonon transport from ultrafast electron diffraction and machine learning". Advanced Materials, 2022.

J459. Thomas A. Cooper, Isaac Metcalf, Gang Chen, "Best-form CPC-like nonimaging concentrators," Optics Express, 2022.

J460. Zhantao Chen, Xiaozhe Shen, Nina Andrejevic, Tongtong Liu, Duan Luo, Thanh Nguyen, Nathan C Drucker, Michael E Kozina, Qichen Song, Chengyun Hua, Gang Chen, Xijie Wang, Jing Kong, Mingda Li, "Panaromic Mapping of Phonon Transport from Ultrafast Electron Diffraction and Scientific Machine Learning," Advanced Materials, 36, 2206997, 2023.

Papers in Magazines (non-peer reviewed)

M1. G. Chen, S. Shen, A. Henry, and J. Tong, "Heat Conducting Polymers," Materials World, Vol. 18, pp. 23-25, June, 2010.

M2. G. Chen, S. Shen, J. Tong, and A. Henry, "Reinventing the Polymer," TCE Vol. 827, pp. 28-29, May, 2010.

M3. G. Chen, "MIT's Yoda," Letter to Editor on Millie Dresselhaus, MIT Technology Review, Vol. 116, p.3, July/August 2013.

M4. Mona Zebarjadi and Gang Chen, Preface to Special Topic: Thermoelectric Materials, APL Materials.

M5. Gang Chen, Op-ed, Boston Globe, January 21, 2022.

M6. Gang Chen, "We are all Gang Chen," Science editorial, Vol. 375, 797, February 24, 2022.

M7. Shan-Lu Liu, Lishan Su, Kunxin Luo, Kai Li, Gang Chen, Xiaodong Zhang, Bo Zhao, RuiRong Yuan, Yingzi Yang, Lee Zou, Chuan He, Jing Yang, Lin He, Yi Li, Dong Wang, Zhigang Suo, Gisela Perez Kusakawa, Yasheng Huang, "US "China Initative" Promote Racial Bias," Letter to Science, May 26, 2023, 10.1126/science.adi4909.

Invited Seminars:

S1. "Microscale Thermal Phenomena in Optical and Optoelectronic Thin Film Devices," at IBM Amalden, California, January 22, 1993.

S2. "Thermal Phenomena in Semiconductor Lasers," at University of Virginia at Charllottesville, April 6, 1995.

S3. "Thermal Issues in VCSELs," at Hewlett-Packard Laboratory, Polo Alto, California, November 15, 1995.

S4. "Heat Transfer in Nanoscale Devices," at North Carolina A&T State University, February 9, 1996.

S5. "Heat Transfer in Superlattices and Nanostructures" at UNC Chapel-Hill, May 29, 1996.

S6. "Heat Transfer in Superlattices and Nanostructrues" at Army Research Office, September 4, 1996.

S7. "Thermal Conductivity of Superlattices," at Naval Research Laboratory, Washington, October 1, 1996.

S8. "Heat Transfer in Superlattices and Nanostructures," at Leigh University, November 15, 1996.

S9. "Micro- and Nanoscale Heat Transfer: From Science to Applications" UNC-Charlotte, March 4, 1997.

S10. "Thermal Conductivity of Thin Films: Measurement and Modeling" Marlow Industries, Inc., Dallas, November 21, 1997.

S11. "Phonon Engineering in Micro- and Nanostructures," California Institute of Technology, February 10, 1998.

S12. "Microscale Heat Transfer and Its Application in Microelectronics Thermal Management," Rockwell Science Center, Thousand Oaks, August 14, 1998.

S13. "Heat Transfer and Phonon Engineering in Micro- and Nanostructures," Tsinghua University, China, October 20, 1998, Beijing.

S14. "State-of-the-Art of Thermoelectric Research" Hughes, CA, March 4, 1999.

S15. "Micro- and Nanoscale Heat Transfer and Energy Conversion," at Mechanical Engineering Department, San Diego State University, April 16, 1999.

S16. "Micro and Nanoscale Heat Transfer and Thermophysics," Huazhong University of Science and Technology, China, 1999.

S17. "State-of-the-Art of Thermoelectrics Research," Huazhong University of Science and Technology, China, June 28, 1999.

S18. "Introduction to Micro-Electro-Mechanical-Systems." Huazhong University of Science and Technology, China, June 29, 1999.

S19. "Electron-Phonon Engineering for Thermoelectrics Applications" at MITI, Electron-Technical Laboratory, Tsukuba, August 13, 1999.

S20. "Heat Transfer and Phonon Engineering in Nanostructures for Solid-State Energy Conversion," at Arizona State University, Mechanical and Aerospace Engineering Department, September 17, 1999.

S21. "Heat Transfer and Phonon Engineering in Nanostructures for Solid-State Energy Conversion" at University of Minnesota, Mechanical Engineering Dept., September 22, 1999.

S22. "Modeling and Simulation of Phonon Transport in Nanostructures," Two hour colloqium at University of Minnesota, Mechanical Engineering Dept., September 23, 1999.

S23. "Heat Transfer and Phonon Engineering in Nanostructures for Solid-State Energy Conversion," at Seagate, Minnesota, September 23, 1999.

S24. "Thermal Characterization of Thin Films and Thermal Management of Photonic Devices," at GenOA, Fremont, CA, Oct. 23, 2000.

S25. "State-of-the-Art of Thermoelectrics Research and Potential for Aerospace Applications," Lockheed Martin Skunk Works, Palmdale, Nov. 29, 2000.

S26. "State-of-the-Art of Thermoelectrics Research and Potential for Aerospace Applications," Lockheed Martin Skunk Works, Palmdale, Feb. 12, 2001.

S27. "Engineering Nanostructures for Energy Transport and Conversion," Stanford University, Feb. 14, 2001.

S28. "Thermal Issues in VCSELs," Novalux, Inc, Sunnydale, CA, Feb. 15, 2001.

S29. "Nanostructures for Solid-State Energy Conversion," UCLA Department of Materials Science and Engineering Seminar, Feb. 16, 2001.

S30. "Engineeering Nanostructures for Energy Transport and Conversion," Mechanical Engineering, Carnegie Mellon University, Feb. 28, 2001.

S31. "Nanoscale Heat Transfer and Its Applications in Energy Conversion and Photonics," Sandia National Laboratory, March 14, 2001.

S32. "Nanostructures for Solid-State Energy Conversion," Materials Science and Engineering Dept., Tsinghua University, June 11, 2001.

S33. "Nanoscale Heat Transfer and Thermoelectrics Research," University Wide Nanogroup, Huazhong University of Science and Technology, June 21, 2001.

S34. "Nano and Micro Energy Research," MEMS Lunch, MIT, September 6, 2001.

S35. "Bridging the Gaps between Nano- to Macroscale Transport," MIT IAP, 2002.

S36. "Nano-to-Macroscale Energy Transport and Conversion---Bridging the Gaps in Length Scales and Disciplines," Mechanical Engineering Department, Hong Kong University of Science and Technology, February 21, 2002.

S37. "Nanoscale Heat Transfer and Energy Conversion---Experimental Approaches," Mechanical Engineering Department, Hong Kong University of Science and Technology, February 22, 2002.

S38. "Nano-to-Macroscale Transport: Bridging the Gaps in Length Scales and Disciplines," MIT Mechanical Engineering Seminar Series, March 15, 2002.

S39. "Heat Transfer and Energy Conversion in Nanostructures," Mechanical Engineering Department Seminar, University of Connecticut, October 11, 2002.

S40. "Introduction to Nanoscale Energy Transport Research," At IBM Yorktown Heights, Oct. 31, 2002.

S41. "Nanoscale Heat Transfer for Direct Energy Conversion," at Mechanical Engineering Department, University of Pennsylvania, January 30, 2003.

S42. "Nanoscale Heat Transfer and Nanostructured Thermoelectric Materials---Their Implications for Microelectronics" Intel Corporation, Chandler, Arizona, Feb. 7, 2003.

S43. "Nanostructured Thermoelectric Materials for Energy Conversion," Johns Hopkins University, Department of Materials Science, March 26, 2003.

S44. "Heat Conduction in Nanostructures," Ecole Centrale Paris, July, 2003.

S45. "Introduction to Thermoelectricity and Thermoelectric Energy Conversion," July, 2003.

S46. "Nanotechnology Enabled Direct Energy Conversion," Ford Motor Company, Detroit, October 2, 2003.

S47. "Nanoscale Heat Transfer and Energy Conversion," Princeton University, Mechancial Engineering Department Seminar, February 21, 2004.

S48. "Nanotechnology: Enabling Efficient Direct Energy Conversion," Laboratory for Environment and Energy, MIT, February 25, 2004.

S49. "Nano, Heat, and Energy," Industrial Technology Research Institute, Energy and Resource Laboratory, July 1, 2004.

S50. "Nanotechnology-Enabled Direct Energy Conversion and Thermal Management," Chinese Academy of Science, July 30, 2004.

S51. "Nanoscale Heat Transfer and Energy Conversion," Northeastern University, Mechanical Engineering Department Seminar, September 17, 2004.

S52. "Nanoscale Heat Transfer and Energy Conversion," University of Kentucky, Nanotechnology Certificate Program, October 21, 2004.

S53. "Nanoscale Heat Transfer and Energy Conversion," University of Michigan, Mechanical Engineering Department Seminar, October 22, 2004.

S54. "Nanoscale Heat Transfer and Energy Conversion," Korea Advanced Institute of Science and Technology, November 3, 2004.

S55. "Nanotechnology Enabled Direct Energy Conversion and Thermal Management," LG Chemical, Daejon, Korea, November 4, 2004.

S56. "Nanotechnology Enabled Direct Energy Conversion and Thermal Management," Komatsu Corporation, Japan, November 22, 2004.

S57. "Nanotechnology Enabled Direct Energy Conversion and Thermal Management," Toyota Corporation, Japan, November 22, 2004.

S58. "Nanotechnology Enabled Direct Energy Conversion and Thermal Management," Denso Corporation, November 25, 2004.

S59. "Nanoscale Heat Transfer and Energy Conversion," Vanderbilt University Institute of Nanoscience and Nanotechnology, January 19, 2005.

S60. "Nanotechnology-Enabled Direct Energy Conversion," GE Globe Research Center, February 14, 2005.

S61. "Nanostructured Thermoelectrics," Institute of Physics, Chinese Academy of Sciences, March 18, 2005.

S62. "Energy, Photonics, and Nanotechnology," Huazhong University of Science and Technology, March 21, 2005.

S63. "Energy and Nanotechnology," Huazhong University of Science and Technology, School of Power Engineering, March 22, 2005.

S64. "Nanotechnology-Enabled Direct Energy Conversion," Purdue University, Mechanical Engineering Department, March 25, 2005.

S65. "Nanotechnology-Enabled Direct Energy Conversion," University of Austin, Mechanical Engineering Department, April 25, 2005.

S66. "Nanoscale Heat Transfer and Energy Converison," Worcester Polytechnique Institute, Mechanical Engineering Department, April 27, 2005.

S67. "Fundamentals of Nanoscale Heat Transfer," Xian Jiaotong University, July 11, 2005.

S68. "Heat Conduction in Nanostrucutres," Xian Jiaotong University, July 11, 2005.

S69. "Nanostructures for Thermoelectric Energy Conversion," Xian Jiaotong University, July 12, 2005.

S70. "Nanoscale Thermal Radiation and Thermophotovoltaics," Xian Jiaotong University, July 12, 2005.

S71. "Nanoscale Transport in Fluids," Xian Jiaotong University, July 13, 2005.

S72. "Nanotechnology: From Optics to Energy," New England Chinese Information and Network Association (NECINA), December 17, 2005.

S73. "Nanotechnology Enabled Direct Energy Conversion," Harvard University, Applied Mechanics Seminar Series, February 22, 2006.

S74. "So, What Does Nanotechnology Have to Do with Energy," MIT Micro/Nano Seminar Series, March 6, 2006.

S75. "Nanoscale Heat Transfer and Energy Conversion," RPI, Mechanical Engineering Department Seminar, April 14, 2006.

S76. "So, What Does Nanotechnology Have to Do with Energy," Columbia University, Mechanical Engineering Department Seminar, April 21, 2006.

S77. "Nanoscale Heat Transfer and Energy Conversion," National Cheng-Kung University, Taiwan, July 10, 2006.

S78. "Nanoscale Heat Transfer and Energy Conversion," National Tsinghua University, Taiwan, July 12, 2006.

S79. "Nano, Heat, and Energy," Taiwan Industrial Research Institute, July 13, 2006.

S80. "Nanoscale Heat Transfer Enabled Energy Technologies," CISRO, Sydney, Australia, August 14, 2006.

S81. "Energy Nanotechnology," University of New South Wales, Sydney, Australia, August 16, 2006.

S82. "Energy Nanotechnology," University of Wollogong, Australia, August 16, 2006.

S83. "Energy Nanotechnology," University of South Florida, Physics Department, September 14, 2006.

S84. "Energy Technologies Enabled by Nanoscale Heat Transfer Effects," Penn State University, Physics Department, October 24, 2006.

S85. "Energy and Nanotechnology," Wuhan University of Science and Technology, January, 6, 2007.

S86. "Energy and Nanotechnology," Huanan University of Science and Technology, China, January 15, 2007.

S87. "Nanoscale Heat Transfer and Energy Conversion," Hongkong Polytechnic, January 16, 2007.

S88. "So, What Does Nanotechnology Have to Do with Energy," CMU Joint Seminar of Nanotechnology Center and Mechanical Engineering Department, March, 2007.

S89. "Nano, Heat, and Energy," School of Energy, Zhejiang University, China, August 8, 2007.

S90. "So, What Does Nanotechnology Have to Do with Energy," School of Energy, Huazhong University of Science and Technology, China, August 13, 2007.

S91. "Nano, Heat, and Energy", Nanyang Technological University, Singapore, Nov. 7, 2007.

S92. "Nanostructured Thermoelectric Materials," Materials Program, Harvard University (M. Aziz Host), March 20, 2008.

S93. "Energy Transport and Conversion in Nanostructures," Mechanical Engineering Seminar Series, Caltech, April 15, 2008.

S94. "Engineering Nanoscale Phonon Transport for Largescale Energy Applications," Chemistry Department, MIT, April 22, 2008.

S95. "Heat Conduction and Phonon Engineering in Nanostructures," Tsinghua University, Engineering Mechanics Department, May 26, 2008.

S96. "So, What Does Energy Have to Do with Nanotechnology," Beijing University Distinguished Seminar Series, May 27, 2008.

S97. "Nanoscale Solar and Thermal Radiation --- Photon Management and Beating Planck's Blackbody Radiation Law," Tsinghua University, Engineering Mechanics Department, May 28, 2008.

S98. "What Does Energy Have to Do with Nanotechnology," Nanjing University, Physics Department, May 30, 2008.

S99. "Thermoelectrics and Thermal Management," Executive Briefing, Japan R&D Mission, ILP, August 28, 2008.

S100. "Energy Transport and Conversion in Nanostructures," Masdar Institute of Science and Technology, January 15, 2009, Abu Dhabi, UAE.

S101. "Nano, Heat, and Energy," MIT Microlunch, Feb. 24, 2009.

S102. "Nanoscale Heat Transfer for Efficient Energy Utilization," Dusinberre Distinguished Lecture, Penn State University, Mechanical Engineering Department, March 3, 2009.

S103. "Solid-State Solar-Thermal Energy Conversion Center," May 12, 2009, Presentation to DOE Secretary Dr. Steven Chu on MIT Campus.

S104. "Extraordinary Heat Transfer and Energy Conversion," Lincoln Laboratory, May 18, 2009.

S105. "Nanoscale Heat Transfer for Efficient Energy Utilization," EHT, Zurich, July 24.

S106. "Nanoscale Heat Transfer for Efficient Energy Utilization," ITRI, Sinchu, Taiwan, August 14, 2009.

S107. "Extraordinary Heat Transfer and Energy Conversion," UC Berkeley Campus Wide Nano Seminar, Aug. 28, 2009.

S108. "DOE EFRC: S^3TEC Center" to MITEI Advisory Board, Oct.9, MIT.

S109. "Nano, Heat, and Energy," Information Session for Institute of Physics, CAS, Oct. 18, Boston College, 2009.

S110. "Nanostructured Heat Transfer and Energy Conversion Materials," Huazhong University of Science and Technology, China, November 17, 2009.

S111. "My Research Experience and Current Research," Huazhong University of Science and Technology, November 18, 2009.

S112. "Nanostructured Heat Transfer and Energy Conversion Materials," China University of Geoscience, November 18, 2009.

S113. "Extraordinary Heat Transfer in Nanostructures," Mechanical Engineering Department, U. Massachusetts Lowell, February 17, 2010.

S114. "Nanostructured Thermoelectric and Thermal Management Materials and Their Applications," Schlumberger, Cambridge, March 25, 2010.

S115. "Exploring Nanoscale Effects for Energy Conversion," MIT China Energy and Environment Research Seminar Series, April 9, 2010.

S116. "Solid-State Solar-Thermal Energy Conversion Center," MIT ME Visiting Committee, April 28, 2010.

S117. "Nanostructured Heat Transfer and Energy Conversion Materials," Shanghai University, School of Materials Science and Engineering, May 29, 2010.

S118. "My Learning and Researching Experience," Huazhong University of Science and Technology, Scientific Spirit and Practice Seminar Series, June 7, 2010.

S119. "Extraordinary Heat Transfer and Energy Conversion at Nanoscale," Sandia National Laboratory, August 30, 2010.

S120. "Nanoscale Energy Transport and Conversion," UIUC Mechanical Engineering Seminar Series, September 14, 2010 (Sanjiv Sinha host)

S121. "Extraordinary Heat Transfer and Energy Conversion," U. Michigan joint Mechanical Engineering and Materials Science Seminar, September 16, 2010.

S122. "DoE S^3TEC" report to Mr. Tony Tan, former vice Premier of Singapore, September 30, 2010.

S123. "Engineering Heat Transfer and Energy Conversion in Nanostructured," U. Wisconsin, Materials Science Seminar, February 17, 2011.

S124. "Extraordinary Heat Transfer and Energy Conversion in Nanostructure," AFOSR Wright Patterson Laboratory, February 18, 2011

S125. "Extraordinary Heat Transfer and Energy Conversion in Nanostructure," University of Connecticut, School of Engineering Distinguished Seminar Series, April 10, 2011.

S126. "Extraodinary Heat Transfer and Energy Conversion at Nanoscale," Yuanze University, Fuel Cell Institute, Taiwan, 2011.

S127. "Lucky Favors Prepared Minds," Xiangfan College, July 4, 2011.

S128. "Extraordinary Heat Transfer and Energy Conversion at Nanoscale," Shanghai Jiaotong University, School of Mechanical Engineering, July 5, 2011.

S129. "Solar Thermoelectric Energy Conversion," DOE EERE, Washington DC, August 30, 2011.

S130. "Nurturing Leaders in Energy Revolution," Huazhong University of Science and Technology, China, October 7, 2011.

S131. "Solid-State Solar Thermal Energy Conversion Center," presentation to Dr. Steve Koonin, Under Secretary, DOE, Oct. 24, 2011.

S132. "Converting Solar Energy into Electricity: The Third Way," Science for the Public Lecture, Oct. 25, 2011 (www.scienceforthepublic.org)

S133. "Engineering Heat Conduction in Nanostructured Materials for Energy Systems," Distinguished Lecture, CMU Mechanical Engineering Department, Nov. 11, 2011.

S134. "Solar Thermoelectric Energy Conversion," NREL, Nov. 15, 2011.

S135. "Thermoelectric Transport, Materials and Systems", MITEI Report to UTC Visitors, Feb. 13, 2012.

S136. "Nano, Heat, and Energy," ILP Northrop Gumman Day at MIT, May 2, 2012.

S137. "Nanostructured Materials for Thermal Energy Systems," Huazhong University of Science and Technology, May 23, 2012.

S138. "Extraordinary Nanoscale Heat Transfer," Distinguished Seminar, University of Toronto, Mechanical Engineering Department, June 4, 2012.

S139. "Engineering Energy Conversion and Heat Transfer in Nanostructures," Tsinghua University, July 5, 2012.

S140. "Heat and Mass Transfer in Soft Materials," UC Berkeley, Springer Seminar Series, September 13, 2012

S141. "Thermoelectric Energy Conversion: Materials, Devices, and Systems," UC Berkeley, Springer Seminar Series, September 14, 2012.

S142. "Heat Conduction in Crystalline Nanostructured Materials," UC Berkeley, Springer Seminar Series, September 15, 2012.

S143. "Radiation Heat Transfer in Nanostructures," Beijing University, September 17, 2012.

S144. "Radiation Heat Transfer in Nanostructures," UC Berkeley, Springer Seminar Series, September 19, 2012.

S145. "Light Trapping and Thermodynamics of Photovoltaics," UC Berkeley, Springer Seminar Series, September 20, 2012.

S146. "Thermoelectric Energy Conversion: Transport, Materials, and Systems," Purdue Hawkins Lecture, November 1, 2012.

S147. "Radiation Heat Transfer in Nanostructures," Purdue Mechanical Engineering Seminar, November 2, 2012.

S148. "Thermoelectric Energy Conversion: Materials, Transport, and Devices," Electrical Engineerng Department, UCSB (John Bowers), February 8, 2013.

S149. "Thermoelectric Energy Conversion: Transport, Materials, and Applications," Pennergy Seminar, University of Pennsylvania, March 14, 2013.

S150. "Nanoengineering for Efficient Heat Transfer and Energy Conversion Materials and Systems," George Persall Lecture, Mechanical Engineering Department, Duke University, March 22, 2013.

S151. "MIT MechE: Defining Mechanical Engineering for Today and Tomorrow," MIT MechE Engineering Department," Talk to Shanghai MIT Club, Shanghai, October 10, 2013.

S152. "Nanoscale Heat Transfer and Energy Conversion," Hongkong Polytechnique University, October 14, 2013.

S153. "Nano, Heat, Energy," IHI Executive Briefing, MIT ILP, December 5, 2013.

S154. "MIT Innovation and Entrepreneurship Ecosystem," Xiangyan College, January 11, 2014.

S155. "Tailoring Solar and Thermal Radiation with Nanostructures for Energy Applications," UCSB Institute for Energy Efficiency Seminar, January 15, 2014.

S156. "Extraordinary Heat Transfer at Nanoscale," OSU Mechanical Engineering Distinguished Speaker, Seminar 8888, January 24, 2014.

S157. "Nanoengineering for Efficient Heat Transfer and Energy Conversion Materials and Systems," Penner Lecture, Department of Mechanical Engineering, May 11, UC San Diego.

S158. "Nano, Heat, Energy," ILP LG Group, 4/23/2014, ILP, MIT.

S159. "Solar and Thermal Materials, Devices, and Energy Conversion Systems", Taiwan ITRI Frontier Resear Seminar, July 2, 2014.

S160. "Nanoengineering for Efficient Heat Transfer and Energy Conversion Materials and Systems," Georgia Institute of Technology, Mechanical Engineering Department, August 22, 2014.

S161. "Introduction to MIT MechE, Materials and Devices for Thermal Systems," Honda, Tokyo, Japan, January 8, 2015.

S162. "Introduction to MIT MechE, Materials and Devices for Thermal Systems," Denso, Nagoya, Japan, January 8, 2015.

S163. "Materials and Devices for Efficient Solar and Thermal Energy Utilization," Institute of Advanced Studies Distinguished Seminar, Hong Kong University of Science and Technology, January 12, 2015.

S164. "Energy Conversion: What is New with Silicon," MIT MTL Industrial Advisory Board Meeting, January 23, 2015.

S165. "Materials and Devices for Efficient Solar and Thermal Energy Utilization," Northwestern University, ME Department Seminar Series (Distinguished), April 6, 2015.

S166. "Thermal Technology: from Basic Research to Commercialization," MITEI Training Class for CNG Group, May 13, 2015.

S167. "Innovations in Energy Utilization: Solar, Thermal, and Water" GRIMN, Beijing, May 20, 2015.

S168. "Materials and Devices for Efficient Solar and Thermal Energy Utilization," William Mong Distinguished Lecture, University of Hong Kong University of Science and Technology, July 24, 2015.

S169. "How to Succeed in Graduate School," MIT Chinese Students and Scholar Assocation, September 10, 2015.

S170. "Materials and Devices for Efficient Solar and Thermal Energy Utilization," Distinguished Seminar, Department of Mechanical Engneering, Northeastern, March 25, 2016.

S171. "Materials and Devices for Efficient Solar and Thermal Energy Utilization," Leadership in Engineering Lecture, RPI Department of Mechanical, Aerospace, and Nuclear Engneering, RPI, April 22, 2016.

S172. "Materials and Devices for Efficient Solar and Thermal Energy Utilization," Goodwin Memorial Lecture, Caltech, May 5, 2016.

S173. "MIT Department of Mechanical Engineering," Tsinghua University, TEEP (Tsinghua Excellence in Engineering Program), August 15, 2016.

S174. "MIT Department of Mechanical Engineering," presentation to Zhongguancun Development Group (CEO), August 15, 2016.

S175. "Materials and Devices for Efficient Solar and Thermal Energy Utilization," Distinguished Seminar, Department of Mechanical and Aerospace Engineering, University of Virginia, August 25, 2016.

S176. "Materials and Devices for Efficient Solar and Thermal Energy Utilization," Alwin Schaller Lecture, Department of Mechanical Engineeirng, UIUC, August 30, 2016.

S177. "Materials and Devices for Efficient Solar and Thermal Energy Utilization," Applied Physics Colloqium, Harvard University, September 2, 2016.

S178. "Phonon Heat Conduction Beyond Fourier Diffusion: Ballistic, Coherent, Localized, Hydrodynamic and Divergent Modes," Distinguished Lecture at Institute of Molecular Engineering, U. Chicago, November 3, 2016.

S179. "Introduction to Mechanical Engineering and Using Nanostructures to Tailor Thermal Radiation," Distinguished Seminar, Department of Mechanical Engineering, Hongkong Polytechnique University, January 9, 2017.

S180. "Nanostructures for Solar Applications," Insitute of Thermophysics, Chinese Academy of Sciences, January 16, 2017.

S181. "Innovations in Materials and Devices for Efficient Solar and Thermal Energy Utilization" Toderi-Callinan Lecture, Department of Mechanical Engineering, University of Pennsylvania, October 3, 2017.

S182. "MIT Innovation and Entrepreneurship Ecosystem," Wuhan Institute of New Energy, July 17, 2018.

S183. "MIT Innovation and Entrepreneurship Ecosystem, and Innovation in Materials and Devices for Efficient Solar and Thermal Energy Utilization," Huazhong University of Science and Technology, July 18, 2018.

S184. "Tailoring Photons from Sun and Thermal Sources for Energy and Water Nexus," UT Austin Byron Short Lecture, Department of Mechanical Engineering, September 14, 2018.

S185. "Tailoring Photons from Solar and Terrestrial Sources for Energy and Water Nexus," ETH, Aurel Stodola Lecture, October 9, 2018.

S186. "Tailoring Photons from Sun and Thermal Sources for Energy and Water Nexus," SUSTech, October 29, 2018.

S187. "MIT Innovation and Entrepreneurship Environment," SUSTech, School of Management lunch talk, October 29, 2018.

S188. "MIT Educational Environment and Innovations," SUSTech Distinguished Lecture, October 30, 2018

S189. "Innovations in Materials and Devices for Efficient Solar and Thermal Energy Utilization" acceptance speech for Tsinghua University Honorary Professor, November 1, 2018.

S190. "Phonon Heat Conduction Beyond Fourier Law: Ballistic, Coherent, Localized, Hydrodynamic, and Divergent Modes," SUSTech Department of Physics, November 15, 2018.

S191. "Electron Transport and Thermoelectric Energy Conversion," SUSTech Department of Materials Science, November 16, 2018.

S192. "MIT Educational Environment and Innovations," Harbin Institute of Technology, Shenzhen Campus, November 19, 2018.

S193. "Succeeding in Academia," SUSTech School of Engineering, November 19, 2018.

S194. "MIT Innovations and Entrepreneurship Ecosystem," SUSTech, Jan. 14, 2019.

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S202. "MIT Educational Environment and Innovations," Luo-Yu Forum Lecture No. 297, Wuhan University, June 19, 2019.

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S216. "MIT Innovation and Entrepreneurship Environment," HUST Alum 70's Birthday Event, online talk, 2022.

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Patents

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2. Borca-Tasciuc, Diana, "Synthesis and Thermal Characterization of Anodized Alumina," Mechanical and Aerospace Engineering Department, University of California at Los Angeles, June 2001.
3. Liao, Andrew "A Comparative Analysis of Semiconductor Diode Lasers with and without Integrated Heat Spreaders," Mechanical and Aerospace Engineering Department, University of California at Los Angeles, June 2001.

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7. Schmidt, Aaron J., "Photothermal Lithography," Department of Mechanical Engineering, MIT, June 2004.
8. Lee, Hohyun, "Thermoelectric Properties of Si-Ge Nanocomposites," Department of Mechanical Engineering, MIT January, 2005.
9. Asegun Henry, "Molecular Dynamics Analysis of Spectral Characteristics of Phonon Heat Conduction in Silicon," Department of Mechanical Engineering, MIT, May 2006.
10. Jack Ma, "Thermal Conductivity of Fluids Containing Suspension of Nanometer-Size Particles," Department of Mechanical Engineering, MIT, May 2006.
11. Shane Cunningham, "Determing Thermoelectric Properties of Polymer Fibers, Theory and Measurements," Swiss Federal Institute of Technology, Zurich (MIT visiting student), September 2006-March 2007.
12. Daniel Kramer, "Research on the Solar Application of Thermoelectric Generators," Swiss Federal Institute of Technology, Zurich (MIT visiting student), Nov. 2006-May 2007.
13. Erik Skow, "Processing and Thermal Properties of Molecular Oriented Polymers," Mechanical Engineering Department, MIT, May 2007.
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18. Kimberlee Collins, "Experimental Investigations of Solid-Solid Thermal Interface Conductance," Department of Mechanical Engineering, MIT, May 2010.
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3. Pauwels, Jerome, "Nanowire Manipulation," (Diploma Thesis) ENSMA, France April 2000 to September 2000.
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3. Yang, Bao, "Thermal and Thermoelectric Transport in Superlattices and Quantum Wells," PhD Thesis, Mechanical and Aerospace Engineering Department, University of California at Los Angeles, June 2003.
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17. Jinwei Gao, "Experimental and Theoretical Investigation of High Thermal Conductivity Micro/Nano Suspension," PhD Thesis, South China University of Technology, March, 2010 (MIT visiting student from 9/2007-12/2009).
18. Sheng Shen, "Probing Extraordinary Nanoscale Energy Transfer using Bimaterial AFM Cantilevers," PhD Thesis, Department of Mechanical Engineering, MIT, May 2010.
19. Thomas Harris, "Development of a Nanostructure Thermal Property Measurement Platform Compatible with a Transmission Electron Microscope," PhD Thesis, Department of Mechanical Engineering, MIT, May 2010.
20. Qing Hao, "Nanocomposites as Thermoelectric Materials," PhD Thesis, Department of Mechanical Engineering, MIT, May 2010.
21. Austin Minnich, "Exploring Heat Transfer at the Nanoscale in Thermoelectric Materials," PhD Thesis, Department of Mechanical Engineering, MIT, May, 2011.
22. Andrew Muto, "Thermoelectric Device Characterization and Solar Thermoelectric System Modeling," PhD Thesis, Department of Mechanical Engineering, MIT, September 2011.
23. Anurag Bajpayee, "Directional Solvent Extraction Desalination," PhD Thesis, Department of Mechanical Engineering, MIT, September, 2012.
24. Zhiting Tian, "Exploring Heat Transfer at the Atomistic Level for Thermal Energy Conversion and Management," PhD, Department of Mechanical Engineering, MIT, May 2014.
25. Kenneth McEnaney, "Thermoelectrics and Aerogels for Solar Energy Conversion Systems," PhD Thesis, Department of Mechanical Engineering, MIT, September, 2014.
26. Matthew Branham, "Ultrathin Crystalline Silicon Solar Cells Incorporating Advanced Light-Trapping Structures," PhD Thesis, Department of Mechanical Engineering, MIT, November, 2014.

27. Kimberlee Chiyoko Collins, "Studies of Non-diffusive Heat Conduction through Spatially Periodic and Time-harmonic Thermal Excitations," PhD Theis, Department of Mechanical Engineering, MIT, January, 2015.
28. Sangyeop Lee, "Transport of Phonons and Electrons in Thermoelectric Materials and Graphene," PhD Theis, Department of Mechanical Engineering, MIT, June, 2015.
29. Maria Luckyanova, "Observation and Manipulation of the Wave Nature of Phonon Thermal Transport through Superlattices," PhD Thesis, Department of Mechanical Engineering, MIT, August, 2015.
30. Jianjian Wang, "Transport Properties of Graphite-Loaded Composites in Liquid and Solid States," PhD Thesis, Department of Mechanical Engineering, MIT, December, 2015.
31. Poetro Lebdo Sambegoro, "Experimental Investigations on the Influence of Curvature and Materials on Near-field Thermal Radiation" PhD Thesis, Department of Mechanical Engineering, MIT, January 15, 2016.
32. Daniel Kramer, "Solar Thermoelectric Power Conversion: Materials Characterization to Device Demonstration" PhD Thesis, Department of Mechanical Engineering, MIT, January, 2016.
33. Bolin Liao, "Nanoscale Electron, Phonon and Spin Transport in Thermoelectric Materials," PhD Thesis, Department of Mechanical Engineering, MIT, March 30, 2016.
34. Jonathan Tong, "Photonic Engineering of Near and Far-Field Radiative Heat Transfer," PhD Thesis, Department of Mechanical Engineering, MIT, May 2016.
35. Wei-Chun Hsu, "Ultra-Thin Crystalline Silicon Solar Cells and Near-field Thermo-Radiative Cells," PhD Thesis, Department of Mechanical Engineering, MIT, May 2016.
36. Lingping Zeng, "Studying Phonon Mean Free Path Distributions At the Nanoscale: Modeling and Experiments," PhD Thesis, MIT ME Department, June 2016.
37. Jonathan M. Mendoza, "Anderson Localization of Thermal Phonons: Anomalous Heat Conduction in Disordered Superlattices," PhD Thesis, Department of Mechanical Engineering, MIT, May 2017.
38. Lee Weistein, "Improving Solar Thermal Receiver Performance via Spectral and Directional Selectivity," PhD Thesis, Department of Mechanical Engineering, MIT, September 2017.
39. George Ni, "Low-Cost High-Performance Solar Vapor Generation," PhD Thesis, Department of Mechanical Engineering, MIT, January 2018.
40. Vazrik Chiloyan, "Variational Approach to Solving the Phonon Boltzmann Transport Equation for Analyzing Nanoscale Thermal Transport Experiments," PhD Thesis, Department of Mechanical Engineering, MIT, January 2018.
41. Samuel Huberman, "Phonon Transport at the Nanoscale: From Fourier Diffusion to Phonon Hydrodynamics," PhD Thesis, Department of Mechanical Engineering, MIT, June 2018.

42. Jiawei Zhou, "Nanoscale thermal and thermoelectric energy transport in crystalline and disordered materials," PhD Thesis, Department of Mechanical Engineering, MIT, June 2019.
43. Yi Huang, "Spectral Engineering in Solar-Thermal and Thermal Radiative Systems," PhD Thesis, Department of Mechanical Engineering, MIT, February 3, 2020.
44. Zhiwei Ding, "Phonon Hydrodynamics Transport at Elevated Temperatures," PhD Thesis, Materials Science and Engineering Department, MIT, May 2021.
45. Yoichiro Tsurimaki, "Control of Radiative Heat and Momentum Transfer by Nanophotonic Engineering," PhD Thesis, Department of Mechanical Engineering, MIT, September 2021 (co-supervisor S. Boriskina).
46. Qichen Song, "Phonon and Electron Transport Through Interfaces and Disordered Structures," PhD Thesis, Department of Mechanical Engineering, MIT, February 2022.
47. Qian Xu, "Thermoelectric Energy Conversion: First-principles Simulations, Energy Harvesting and Deep Cooling Systems", PhD Thesis, Department of Mechanical Engineering, MIT, Dec. 2022.

Post-Doc/Research Scientist/Research Engineers Supervised:

1. Dr. Ravi Kumar (PhD from Univ. Florida, post-doc with me at UCLA 99-2000).
2. Dr. Sebastian G. Volz (PhD from ENSMA, post-doc with me at UCLA 97-98).
3. Dr. Taofang Zeng (PhD from MIT, post-doc with me at UCLA 97 - 2000).
4. Dr. Senquan Zhou (PhD from Tsinghua Univ., post-doc with me at UCLA 97-98).
5. Dr. Dekui Qing (post-doc with me at MIT from 2001-2003).
6. Dr. Xiaoyuan Chen (Post-doc and research scientist with me at MIT 03-09).
7. Dr. Matteo Chiesa (PhD from Norwegian University of Science and Technology, post-doc and visiting scholar with me at MIT, September 2006-September 2008).
8. Dr. Daryoosh Vashaee (PhD from UC Santa Cruiz, post-doc with me at MIT October, 2006-August 2007).
9. Dr. Aaron Schmidt (PhD from MIT with me and post-doc with me at MIT with me and Matteo Chiesa, May 2008).
10. Dr. Bhaskaran Mulidharan (PhD from Purdue, post-doc with me at MIT May 2008-December 2010).
11. Dr. Celine Hin (PhD from Institut National Polytechique Grenoble, post-doc with me and Millie Dresselhaus at MIT from April 2009 - Summer, 2011).
12. Dr. Hsieh-Ping (Tony) Feng (PhD from National Tsinghua University, post-doc with me at MIT May, 2009 to 2011).
13. Dr. Shuo Chen (PhD from BC, post-doc with me at MIT July, 2009 to 2011).
14. Dr. Nitin Shukla (PhD from Virginia Tech, post-doc with me at MIT July, 2009 - 2011).

15. Dr. Tengfei Lu (Ph.D. from Michigan State, post-doc with me at MIT Sept. 1, 2009 - 2011).
16. Dr. Yann Chalopin (PhD from Ecole Centrale Paris post-doc with me at MIT Sept. 1, 2009 - August, 2010).
17. Dr. Yang Nuo (PhD from Singapore National University, post-doc/visiting student with me at MIT 2009. – 2010).
18. Dr. Weitao Dai (PhD from Iowa State University, post-doc with me at MIT Oct. 1, 2009 - 2011).
19. Dr. Jae-Sik Jin (PhD from Seoul National University, post-doc with me at MIT Sept. 1, 2009 - 2011).
20. Dr. Keivan Esfarjani (research scientist with me at MIT Oct. 20, 2009 - August, 2012).
21. Dr. Mona Zebarjadi (PhD from UC Santa Cruz, post-doc with me at MIT Januar, 2010 - 2012.
22. Dr. Taofang Zeng (principal research scientist in my group 2010 – 2012).
23. Dr. Sang Eon Han (PhD from U. Minnesota, post-doc with me at MIT March 2009 – 2012).
24. Dr. Anastassis Mavrokefalos (PhD from UT Austin, post-doc with me at MIT January 2009 – 2012).
25. Dr. Brian Burg (PhD from ETH, post-doc with me at MIT October, 2010 - July, 2012).
26. Dr. Nagarajan Thoppey (PhD from NC State University, post-doc with me at MIT September 2012-May 2013).
27. Dr. Amy Marconnet (PhD from Stanford, post-doc with me at MIT September 2012 - Summer 2013.
28. Dr. Jivtesh Garg (PhD from MIT, post-doc with me at MIT May 2011- summer 2013).
29. Dr. Selcuk Yerci (PhD from BU, post-doc with me at MIT May 2011 – January 2014).
30. Dr. Nenad Miljkovic (PhD from MIT, post-doc with me at MIT, September 2013 - June, 2014).
31. Dr. Hadi Ghasemi (PhD from U. Toronto, post-doc with me at MIT, September 2012 - Summer 2014).
32. Dr. Yongjie Hu (PhD from Harvard, post-doc with me at MIT May 2011 - August, 2014).
33. Dr. Xiabo Li (PhD from U. Colorado, post-doc with me at MIT April, 2012 - 2014).
34. Dr. Bo Qiu (PhD from Purdue post-doc with me at MIT September, 2012 - June 2014).
35. Dr. Chang-Te Lin (Ph.D. from National Tsinghua University, post-doc with me at MIT September, 2013 – 2014).
36. Dr. John Cuffe (PhD Institute Catalana de Reserca I Estudis Avancats (ICREA), post-doc with me at MIT September 2012-August 2014).

37. Dr. Yuan Yang (PhD from Stanford, post-doc with me at MIT July, 2012 - June 2015).

38. Dr. Xiaopeng Huang (PhD from U. Iowa, post-doc with me at MIT September 2012 - June 2015).

39. Dr. James Loomis (PhD from U. Louville, post-doc with me at MIT August, 2013 -summer 2015).

40. Dr. Maria Luckyanova (PhD with me at MIT and continued as post-doc Sept. 1, 2015-February 2016).

41. Dr. Jian Jian Wang (PhD with me at MIT and continued as a post-doc Oct. 1, 2015-March 2016).

42. Dr. Jonathan Mendoza (PhD with me at MIT and continued as a research engineer June 1-Aug. 30, 2017).

43. Dr. Lee Weistein (PhD with me at MIT and continued as a research engineer September-October, 2017).

44. Dr. George Ni (PhD with me at MIT and continued as a research engineering 1/18-4/18).

45. Dr. Mingda Li (PhD from MIT, post-doc with me and Millie Dresselhaus at MIT Sept. 2015 - December 2017).

46. Dr. Yanfei Xu (PhD from Tianjin University, post-doc with me at MIT December, 2013 to April 2018).

47. Dr. Vazrik Chiloyan (PhD with me at MIT and continue as a post-doc 1/18-6/18).

48. Dr. Seyed Hadi Zandavi (PhD from U. Toronto, post-doc with me at MIT July 2016 – June 2018).

49. Dr. Thomas Cooper (PhD from ETH, post-doc with me at MIT Oct. 2015-June 2018).

50. Dr. Bai Song (PhD from U. Mich, post-doc with me at MIT July 2016 - December 2018).

51. Dr. Te-Huan Liu (PhD from Taiwan National University, post-doc with me at MIT January 2015 - January 2019).

52. Dr. Bruno Lorenzi (PhD from U. Milano Bicocca, post-doc with me at MIT September 2017-May 2019).

53. Dr. Ke Chen (PhD from Zhongshan University, post-doc with me at MIT January 2018 ~ 12/2019).

54. Dr. Marcelo Lozano (PhD from Tecnológico de Monterrey, post-doc with me at MIT January 2018 - June 2020).

55. Dr. Sveta Boriskina (post-doc and research scientist with me at MIT April, 2012 – 2021).
56. Dr. Aaron Schmidt (Research Scientist July 2018 – 2021).
57. Dr. Jungwoo Shin (PhD from UIUC, post-doc with me at MIT April 2019 – February 2022).
58. Dr. Xin Qian (PhD from U. Colorado, post-doc with me at MIT May 2019 – June 2021).
59. Dr. Jiawei Zhou (PhD with me and continued as a post-doc June 2019 - September 2020).
60. Mohammed Alshrah (PhD from U. Toronta, post-doc with me at MIT March 2020 – December 2021).
61. Shaoting Lin (PhD from MIT, post-doc with me and Xuanhe Zhao at MIT 2020-2022).

Visitors Hosted

1. Mr. Liang Zhang (1995, visiting scholar at Duke University from Chinese Academy).
2. Mr. Alexandre Jacquot (Oct., 2000 – 04/02, visiting Ph.D. student at UCLA from Laboroire de Physique des Materiaux (LPM), Ecole Nationale Superieur des Mines de Nancy).
3. Professor Koji Miyazaki (9/00-8/02, visiting scholar at UCLA and MIT from Mechanical Engineering Department, Kyushu Institute of Technology).
4. Professor Min Chen (03/02-10/02, visiting scholar at MIT from Department of Engineering Mechanics, Tsinghua University).
5. Professor Jing Liu (03/02 – 6/02, visiting scholar at MIT from Chinese Academy of Science).
6. Professor Yi Shi (8/02-11/02, visiting scholar at MIT from Nanjin University).
7. Mr. Masayuki Takashiri (03/02-9/03, visiting scientist at MIT from Komatsu Corporation).
8. Professor Jinbo Wang (04/02-6/2004, visiting scholar at MIT from Huzahong University of Science and Technology).
9. Mr. Jack Chien (11/02, visiting scholar at MIT from Industrial Technology Research Institute).
10. Dr. A. Grazov (8/04-9/04, visiting scientist at MIT from Moldova Academy of Science, Institute of Applied Physics, Moldova).
11. Dr. Ming-Shan Jeng (9/04-4/06, visiting scholar at MIT from Industrial Technology Research Institute, Taiwan).
12. Mr. Shinichiro Nakamura (8/05-8/07, visiting scientist at MIT from Denso, Japan).
13. Professor Dongsheng Zhu (5/2006-12/2006, visiting scholar at MIT from Huanan Institute of Technology, Guangzhou).

14. Professor Yong Tae Kang (8/2006-8/2007, visiting scholar at MIT from School of Mechanical and Industrial System Eng. Kyung Hee, Korea, University).
15. Professor Ruiting Zheng (9/2007-11/2009, visiting scholar at MIT from Beijing Normal University).
16. Professor Huaxin Chen (2008-2009, visiting scholar at MIT from Huazhong University of Science and Technology).
17. Mr. Yiqun Zhang (1/2009-9/2010, visitin student from Nanjin University).
18. Christine Junior (3/2009 – 12/2009, visiting student at MIT from Institut Fűr Thermodynamik, Germany).
19. Professor Junichiro Shiomi (4/2010-3/2011, visiting scholar at MIT from Tokyo University).
20. Mr. Takuma Shiga (12/2010-2/2011, visiting student at MIT from U. Tokyo).
21. Professor Amador Guzman (7/2011-12/2011, visiting scholar at MIT from Santiago University, Chile).
22. Mongyun Zhang (2/2012-5/2012, visiting student at MIT from Huazhong University of Science and Technology February).
23. Mr. Jiawei Zhou, (2012, visiting student at MIT from Tinghua University).
24. Professor Zhichun Liu (12/2011-11/2012, visiting scholar at MIT from Huazhong University of Science and Technology).
25. Dr. Kazuki Ihara (2/2012-1/2013, visiting scientist at MIT from NEC, Japan).
26. Dr. Maha Khayyat (11/2012-5/2013, visiting scholar at MIT from Umm Al-Qura University, Saudi).
27. Lei Ma (11/2011-4/2013, visiting student at MIT from Huazhong University of Science and Technology).
28. Yuan Dong (2013, visiting student at MIT from Tsinghua University).
29. Dr. Marisol Martin Gonzalez (3/2016-8/2016, visiting scholar at MIT from Microelectronics Institute Madrid).
30. Dr. Seong Don Hong (1/2018-11/2018, visiting scholar at MIT from Korea with ESEP exchange program).
31. Hongxia Zeng (3/2019-12/2019, visiting PhD student at MIT from Huazhong University of Science and Technology).
32. Xun Wang (7/2019-9/2019, visiting PhD student at MIT from Hong Kong University).