

# Anastassios Mavrokefalos

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## (i) Professional Preparation

University of Texas at Austin, Austin, TX	Mechanical Engineering	B. Sc. 2002
University of Texas at Austin, Austin, TX	Mechanical Engineering	M. Sc. 2005
University of Texas at Austin, Austin, TX	Mechanical Engineering	Ph. D 2008
Mass. Inst. of Tech., Cambridge, MA	Mechanical Engineering, Postdoctoral Ass.	2009-2012

## (ii) Appointments

Assistant Professor	Mechanical Engineering	University of Houston	2012- present
Postdoctoral Associate	Mechanical Engineering	MIT	2009-2012

## (iii) Products

1. M. Yarali, J. Hao, M. Khodadadi, S. Chen, V. Hadjiev, Y. J. Jung and A. Mavrokefalos, "The Effect of Physisorbed vs Chemisorbed Oxygen to the Thermoelectric Properties of Highly Organized Single Wall Carbon Nanotube Nanofilms", in review.
2. S. H. Kim, S. Sing, S. K. Oh, D. K. Lee, K. H. Lee, S. Shervin, M. Asadirad, V. Venkateswaran, K. Olenick, J. A. Olenick, S. N. Lee, J. S. Kwak, A. Mavrokefalos, J. H. Ryou, "Visible Flip-Chip Light-Emitting Diodes on Flexible Ceramic Substrate with Improved Thermal Management", IEEE Electron Device Letters, 37, 5, 615-617 (2016).
3. H. Brahmī, G. Katwal, M. Khodadadi, S. Chen, M. Paulose, O. K. Varghese, A. Mavrokefalos, "Thermal-Structural Relationship of Individual Titania Nanotubes", Nanoscale, 2015, DOI: 10.1039/C5NR05072C.
4. A. Mavrokefalos, S. E. Han, S. Yerci, M. S. Branham, G. Chen, "Efficient light-trapping in Inverted Nano-Pyramid Thin Crystalline Silicon Membranes for Solar Cell Applications", Nano Letters 12 (6), 2792 (2012).
5. S. Shen, A. Mavrokefalos, P. Sambegoro, G. Chen, "Nanoscale Thermal Radiation Between two Metallic Surfaces", Applied Physics Letters 100, 233114 (2012).
6. N. T. Nguyen, P. A. Berseth, Q. Lin, C. Chiritescu, D. G. Cahill, A. Mavrokefalos, L. Shi, P. Zchack, M. D. Anderson, I. M. Anderson, D. C. Johnson, "Synthesis and Properties of Turbostratically Disordered, Ultrathin WSe<sub>2</sub> Films", Chemistry of Materials 22, 2750 (2010). A. Mavrokefalos, Q. Lin, M. Beekman, J. H. Seol, Y. J. Lee, H. Kong, M. T. Pettes, D. C. Johnson, L. Shi, "In-Plane Thermal and Thermoelectric Properties of Misfit-Layered [(PbSe)<sub>0.99</sub>]<sub>x</sub>(WSe<sub>2</sub>)<sub>x</sub> Superlattice Thin Films", Applied Physics Letters 96, 181908, (2010).
7. A. Mavrokefalos, A. L. Moore, M. T. Pettes, L. Shi, "Thermoelectric and Structural Characterizations of Individual Electrodeposited Bismuth Telluride Nanowires", Journal of Applied Physics 105, 104318 (2009).
8. C. A. Aguilar, R. Haight, A. Mavrokefalos, B. A. Korgel, S. C. Chen, "Probing Electronic Properties of Molecular Engineered Zinc Oxide Nanowires with Photoelectron Spectroscopy", ACS NANO 3, 3057 (2009).
9. A. Mavrokefalos, N. T. Nguyen, M. T. Pettes, D. C. Johnson, L. Shi, "In-Plane Thermal Conductivity of Disordered Layered WSe<sub>2</sub> and (W)<sub>x</sub>(WSe<sub>2</sub>)<sub>y</sub> Superlattice Films", Applied Physics Letters 91, 17912 (2007).

**(iv) Synergistic Activities**

1. Community service: Topic co-organizer and technical session chair at annual ASME International Mechanical Engineering Congress and Exposition, Houston, TX.
2. Community service: Judge for the 54<sup>th</sup> Science Engineering Fair of Houston.
3. Community Service: Reviewer for a range of thermal science and nanoscience journals including, Nano Letters, Applied Physics Letters, Journal of MEMS, Chemical Physics Letters, Materials Chemistry and Physics, Physica Status Solidi, Scientific Reports, IEEE Journal of Microelectromechanical Systems, Optics Express, Journal of Heat Transfer, Nanoscale and Microscale Thermophysical Engineering.
4. Awards: Cullen College of Engineering Teaching Excellence Award (2014); Larry Witte Junior Faculty Scholarship; Post-doctoral fellowship in the Cyprus Institute Program for Energy Environment and Water Resources (CEEW) at the MIT Laboratory for Energy and the Environment (LFEE) (2009); David Bruton, Jr. Graduate Fellowship (2004); Cyprus-American Scholarship Program (2003);
5. Teaching: MECE 4364: Heat Transfer; MECE 7397: Nano-Micro Scale Energy Transport; MECE 4317: Thermal Fluids Laboratory; MECE 6333: Conduction and Radiation

**(v) Collaborators & Other Affiliations**

**(a) Collaborators and Co-editors (Total: 11)**

Dr. Shuo Chen (University of Houston)  
Dr. Celine Hin (Virginia Polytechnic Institute and State University)  
Dr. Yung Joon Jung (Northeastern University)  
Dr. Jae-Hyun Ryou (University of Houston)  
Dr. Venkat Selvamanickam (University of Houston)  
Dr. Oliver Schmidt (IFW Dresden)  
Dr. Gangbing Song (University of Houston)  
Dr. Oommen Varghese (University of Houston)  
Dr. Kai Xiao (Oak Ridge National Laboratory)  
Dr. Yan Yao (University of Houston)

**(b) Graduate Advisors and Postdoctoral Sponsors (Total: 2)**

Dr. Gang Chen (Post-doctoral advisor, Massachusetts Institute of Technology)  
Dr. Li Shi (Ph. D. advisor, University of Texas at Austin)

**(c) Thesis Advisor and Postgraduate-Scholar Sponsor (Total: 3 Ph. D. students, 1 Post-Doctoral scholar)**

- Hatem Brahmi (University of Houston)
- Milad Yarali (University of Houston)
- Shivkant Singh (University of Houston)
- Srikanth Ravipati (University of Louisville)