

## Laurent Pilon

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### EDUCATION

**PhD** (4.0/4.0)                    **PURDUE UNIVERSITY**                    West Lafayette, IN                    Dec. 2002  
 Mechanical Engineering  
 Dissertation: “*Interfacial and Transport Phenomena in Closed-Cell Foams*”  
 Advisors: Prof. Raymond Viskanta and Prof. Doraiswami Ramkrishna

**MS** with honors                    **GRENOBLE INSTITUTE OF TECHNOLOGY**                    Grenoble, France                    Sept. 1997  
 Applied Physics and Energy Engineering

**BS** with honors                    **GRENOBLE INSTITUTE OF TECHNOLOGY**                    Grenoble, France                    Sept. 1997  
 Major: Applied Physics, Minor: Energy and Nuclear Engineering

### PROFESSIONAL EXPERIENCE

**VETERAN ADMINISTRATION GREATER LOS ANGELES HEALTH CARE SYSTEM, CALIFORNIA - USA**  
 Research Scientist without compensation (WOC). May 2005 – present.

#### **UNIVERSITY OF CALIFORNIA, LOS ANGELES, CALIFORNIA - USA**

Professor	Institute of the Environment and Sustainability	July 2018 – present
Professor	Mechanical and Aerospace Engineering Dept.	July 2012 – present
Associate Professor	Mechanical and Aerospace Engineering Dept.	July 2008 – June 2012
Assistant Professor	Mechanical and Aerospace Engineering Dept.	July 2002 – June 2008

#### **PURDUE UNIVERSITY, SCHOOL OF MECHANICAL ENGINEERING – WEST LAFAYETTE, INDIANA - USA**

Research Assistant.                    August 1999 – August 2002.

#### **FRENCH ATOMIC ENERGY COMMISSION – THERMAL-HYDRAULICS AND PHYSICS DEPT., FRANCE**

Research Engineer.                    November 1997 – February 1999.  
 French Atomic Energy Commission Representative at Purdue University, Nuclear Engineering Dept.

#### **FRENCH ATOMIC ENERGY COMMISSION – THERMAL-HYDRAULICS AND PHYSICS DEPT., FRANCE**

Research Assistant.                    March 1997 – October 1997.

### HONORS AND AWARDS

- 2018                    Elected member - Scientific Council of the International Center for Heat and Mass Transfer
- 2015                    Elected ASME Fellow
- 2015                    Most Valued Reviewer of JQSRT<sup>†</sup>
- 2014                    Raymond Viskanta Fellowship\*, Purdue University, IN.
- 2013-2015            Research Chair for Junior Scientist, Région Pays de la Loire, France.
- 2012                    Best Paper Award (2<sup>nd</sup> Prize) - 3rd ASME Micro-Nanoscale HMT Conference, Atlanta, GA
- 2011                    Elected SPIE Senior Member
- 2011                    Henry and Susan Samuelli Teaching Award from UCLA Mechanical and Aerospace Eng. Dept.
- 2009                    JQSRT<sup>†</sup> Young Scientist Award in Radiative Transfer
- 2008                    ASME Bergles-Rohsenow Young Investigator Award in Heat Transfer<sup>‡</sup>

\* awarded to “an individual who has demonstrated abilities to perform independent and innovative research in the field of thermal sciences.”

<sup>†</sup> Journal of Quantitative Spectroscopy and Radiative Transfer

<sup>‡</sup> “For significant contributions to heat, mass and radiation transfer in foams, nanocomposite materials and biological systems.”

- 2005 National Science Foundation CAREER Award
- 2005 Northrop Grumman Award for Excellence in Teaching from UCLA School of Engineering
- 2003 UCLA Faculty Career Development Award

## BOOKS, BOOK CHAPTERS, AND TECHNICAL REPORTS

1. L. Pilon and I.M. McKinley, 2016. *Chapter 7: Pyroelectric Energy Conversion* in “Annual Review of Heat Transfer”, Vol. 19, pp. 279-334, G. Chen, Editor, Begell House, Danbury, CT. ISSN: 1049-0787.
2. J. Pruvost, J.-F. Cornet, and L. Pilon, 2016. *Chapter 3: Large Scale Production of Algal Biomass: Photobioreactors*, in “Algae Biotechnology: Products and Processes,” pp. 41-66, Y. Chisti and F. Bux, Editors, Springer, Switzerland. ISBN-13: 978-3-319-12334-9.
3. L. Pilon and R. Kandilian, 2016. *Chapter 2: Interaction Between Light and Photosynthetic Microorganisms*, Advances in Chemical Engineering. Vol. 46, pp. 107-149. Thematic Issue on Photobioreaction Engineering, J. Legrand, Editor, Elsevier, The Netherlands. ISBN: 978-0-12-800422-7
4. L. Pilon, 2014. *Chapter 25. Hydrogen Storage in Hollow Glass Microspheres* in “Handbook of Hydrogen Energy,” pp. 763-807. S.A. Sherif, D.Y. Goswami, E.K. Stefanakos, A. Steinfeld, Eds., CRC Press, Taylor and Francis, Boca Raton, FL (invited contribution). ISBN-13: 978-1420054477.
5. L. Pilon and H. Berberoğlu, 2014. *Chapter 11. Photobiological Hydrogen Production* in “Handbook of Hydrogen Energy,” pp. 369-418. S.A. Sherif, D.Y. Goswami, E.K. Stefanakos, A. Steinfeld, Editors, CRC Press, Taylor and Francis, Boca Raton, FL (invited contribution). ISBN-13: 978-1420054477.
6. L. Pilon, 2012. *Foams in Glass Manufacturing* in “Foam Engineering: Fundamentals and Applications,” Edited by P. Stevenson, Wiley-Blackwell, United Kingdom (invited contribution). ISBN: 978-0-470-66080-5.
7. D.-S. Kim, M. Portch, J. Matyas, P. R. Hrma, and L. Pilon, 2005. *Foaming of E-Glass II (Report for G Plus Project for PPG)*. PNNL-15394, Pacific Northwest National Laboratory, Richland, WA.
8. D.-S. Kim, P.R. Hrma, L. Pilon, and B.C. Dutton, 2004. *Foaming of E-Glass (Report for G Plus Project for PPG)*. PNNL-14625, Pacific Northwest National Laboratory, Richland, WA.
9. L. Pilon, 2003. *Interfacial and Transport Phenomena in Closed-Cell Foams*. UMI#3105002, UMI, Ann Arbor, MI, 2003.

## REFEREED ARTICLES IN ARCHIVAL JOURNALS

### A. Papers in Print or Accepted for Publication

1. T. Galy, D. Mu, M. Marszewski, and L. Pilon, 2018. *Computer-Generated Mesoporous Materials and Associated Structural Characterization*, Computational Material Science (accepted).
  2. A.-S. Siao, I.M. McKinley, C.-K. Chao, C.-C. Hsiao, and L. Pilon, 2018. *Pyroelectric Waste Heat Energy Harvesting Using Olsen Cycle on Pb(Zr,Ti)O<sub>3</sub>-Pb(Ni,Nb)O<sub>3</sub> Ceramics*, Journal of Applied Physics (in press).
  3. B.-A. Mei, J. Lau, T. Lin, S.H. Tolbert, B. Dunn, and L. Pilon, 2018. *Physical Interpretations of Electrochemical Impedance Spectroscopy of Redox Active Electrodes*, The Journal of Physical Chemistry C (in press).
  4. B.A. Young, A. Hall, L. Pilon, P. Gupta, and G. Sant, 2018. *Can the Compressive Strength of Concrete Be Estimated from Knowledge of the Mixture Proportions? New Insights from Statistical Analysis and Machine Learning Methods*, Cement and Concrete Research (in press).
  5. O. Munteshari, J. Lau, D. Ashby, B. Dunn, and L. Pilon, 2018. *Effects of Constituent Materials on Heat Generation in Individual EDLC Electrodes*, Journal of the Electrochemical Society, Vol. 165, No. 7, pp. A1547-A1557.
  6. M. Marszewski, D. Butts, E. Lan, Y. Yan, S. King, P. E. McNeil, T. Galy, B. Dunn, S. H. Tolbert, Y. Hu, L. Pilon, 2018. *Effect of Surface Hydroxyl Groups on Heat Capacity of Mesoporous Silica*, Applied Physics Letters, Vol.112, No. 20, 201903.
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7. K. Zhu, S. Li, and L. Pilon, 2018. *Light Transfer Through Windows With External Condensation*, Journal of Quantitative Spectroscopy and Radiative Transfer, Vol. 208, pp. 164-171.
  8. B.-A. Young, G. Falzone, G. Sant, and L. Pilon, 2018. *Reduced-Scale Experiments to Evaluate Performance of Composite Building Envelopes Containing Phase Change Materials*. Construction and Building Materials, Vol. 162, pp. 584-595 (February 2018).
  9. B.-A. Mei, O. Munteshari, J. Lau, B. Dunn, and L. Pilon, 2018. *Physical Interpretation of Nyquist Plots for EDLC Electrodes and Devices*, Journal of Physical Chemistry C, Vol. 122, No.1, pp. 194-206.
  10. Z. Wei, B. Wang, G. Falzone, Z. She, E. Callagon, N. Neithalath, L.Pilon, G. Sant, 2018. *Clinkering-Free Cementation by Fly Ash Carbonation*, Journal of CO<sub>2</sub> Utilization, Vol. 23, pp. 117-127 (January 2018).
  11. O. Munteshari, J. Lau, A. Krishnan, B. Dunn, and L. Pilon, 2018. *Isothermal Calorimeter for Measurements of Time-Dependent Heat Generation Rate in Individual Supercapacitor Electrodes*, Journal of Power Sources, Vol. 374, pp. 257–268 (January 2018).
  12. B.-A. Mei, B. Li, J. Lin, and L. Pilon, 2017. *Multidimensional Cyclic Voltammetry Simulations of Pseudocapacitive Electrodes With a Conducting Nanorod Scaffold*, Journal of the Electrochemical Society, Vol. 164, No. 13, A3237-A3252.
  13. B.-A. Mei and L. Pilon, 2017. *Simulations of Three-Dimensional EDLC electrodes Made of Ordered Carbon Spheres*, Electrochimica Acta, Vol. 255, pp. 168-178 (November 2017).
  14. K. Zhu and L. Pilon, 2017. *Transmittance of Semitransparent Windows with Absorbing Cap-Shaped Droplets Condensed on Their Backside*, Journal of Quantitative Spectroscopy and Radiative Transfer, Vol. 201, pp. 53-63 (November 2017).
  15. Z. Wei, G. Falzone, S. Das, N. Saklani, Y. Le Pape, L. Pilon, N. Neithalath, and, G. Sant, 2017. *Restrained Shrinkage Cracking of Cementitious Composites Containing Soft PCM Inclusions: A Paste (Matrix) Controlled Response*, Materials and Design, Vol. 132, pp. 367-374 (October 2017).
  16. C.-H. Lai, D. Ashby, M.K. Moz, Y. Gogotsi, L. Pilon, B.S. Dunn, 2017. *Designing Pseudocapacitance for Nb<sub>2</sub>O<sub>5</sub>/Carbide-Derived Carbon Electrodes and Hybrid Devices*, Langmuir, Vol. 33, No. 37, pp. 9407–9415 (September 2017).
  17. R. Kandilian, B. Jesus, J. Legrand, L. Pilon, J. Pruvost, 2017. *Light Transfer in Agar Immobilized Microalgae Cell Cultures*, Journal of Quantitative Spectroscopy and Radiative Transfer, Vol. 198, pp. 81-92 (September 2017).
  18. Z. Wei, G. Falzone, B. Wang, A. Thiele, G. Puerta Falla, L. Pilon, N. Neithalath, and, G. Sant, 2017. *The Durability of Cementitious Composites Containing Microencapsulated Phase Change Materials*, Cement and Concrete Composites, Vol. 81, pp. 66-76 (August 2017).
  19. B.A. Young, G. Falzone, Z. She, A.M. Thiele, Z. Wei, A. Krishan, N. Neithalath, G. Sant, and L. Pilon, 2017. *Early-Age Temperature Evolutions in Concrete Pavements Containing Microencapsulated Phase Change Materials*, Construction & Building Materials, Vol. 147, pp. 466–477 (August 2017).
  20. B.A. Young, Z. Wei, J. Rubalcava-Cruz, G. Falzone, A. Kumar, N. Neithalath, G. Sant, and L. Pilon, 2017. *A General Method for Retrieving Thermal Deformation Properties of Microencapsulated Phase Change Materials or Other Particulate Inclusions in Cementitious Composites*. Materials & Design, Vol. 126, pp. 259-267 (July 2017).
  21. A.M. Thiele, R. Liggett, G. Sant, and L. Pilon, 2017. *Simple Thermal Evaluation of Building Envelopes Containing Microencapsulated Phase Change Materials Using the Admittance Method*, Energy and Buildings, Vol. 145, pp. 238-250 (June 2017).
  22. K. Zhu, Y. Huang, J. Pruvost, J. Legrand, and L. Pilon, 2017. *Transmittance of Transparent Windows with Non-Absorbing Cap-Shaped Droplets Condensed on Their Backside*, Journal of Quantitative Spectroscopy and Radiative Transfer, Vol. 194, pp. 98-107 (June 2017).
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23. A. Ricklefs, A.M. Thiele, G. Falzone, G. Sant, and L. Pilon, 2017. *Thermal Conductivity of Cementitious Composites Containing Microencapsulated Phase Change Materials*, International Journal of Heat and Mass Transfer, Vol. 104, pp. 71-82 (January 2017).
  24. N.M.A. Krishnan, B. Wang, G. Falzone, Y. Le Pape, N. Neithalath, L. Pilon, M. Bauchy, and G. Sant, 2016. *Confined Water in Layered Silicates: The Origin of Anomalous Thermal Expansion Behavior in Calcium-Silicate-Hydrates*, ACS Applied Materials & Interfaces, Vol. 8, No. 51, pp. 35621–35627 (December 2016).
  25. A.L. d'Entremont and L. Pilon, 2016. *First-Principles Thermal Modeling of Hybrid Pseudocapacitors under Galvanostatic Cycling*. Journal of Power Sources, Vol. 335, pp. 172-188 (December 2016).
  26. H.-L. Girard, B. Dunn, and L. Pilon, 2016. *Simulations and Interpretation of Three-Electrode Cyclic Voltammograms of Pseudocapacitive Electrodes*, Electrochimica Acta, Vol. 211, pp. 420-429 (September 2016).
  27. A. Bhowmik and L. Pilon, 2016. *Can Eukaryotic Cells Be Treated as Optically Homogeneous Spheres?*, Journal of the Optical Society of America A, Vol. 33, No. 8, pp. 1495-1503 (August 2016).
  28. G. Falzone, G. Puerta Falla, Z. Wei, M. Zhao, A. Kumar, M. Bauchy, N. Neithalath, L. Pilon, and G. Sant, 2016. *The Influences of Soft and Stiff Inclusions on the Mechanical Properties of Cementitious Composites*. Cement and Concrete Composites, Vol. 71, pp. 153-165 (August 2016).
  29. R. Kandilian, A. Soulies, B. Rousseau, J. Pruvost J. Legrand, and L. Pilon, 2016. *Simple Method to Measure the Spectral Absorption Cross-Section of Microalgae*, Chemical Engineering Science, Vol. 146, No. 2, pp. 357-368 (June 2016).
  30. R. Kandilian, J. Pruvost, A. Artu, C. Lemasson, J. Legrand, and L. Pilon, 2016. *Comparison of Experimentally and Theoretically Determined Radiation Characteristics of Photosynthetic Microorganisms*, Journal of Quantitative Spectroscopy and Radiative Transfer, Vol. 175, pp.30-45 (May 2016).
  31. R.-L. Heng and L. Pilon, 2016. *Radiation Characteristics and Effective Optical Properties of Dumbbell-Shaped Cyanobacterium Synechocystis sp.*, Journal of Quantitative Spectroscopy and Radiative Transfer, Vol. 174, pp. 65-78 (May 2016).
  32. H. Liu, R. Kitamura, X. Xia, and L. Pilon, 2016. *Conductive and Radiative Properties of Soda-Lime Silicate Glassmelts with Different Iron Contents Between 1100 and 1500°C*, Journal of the American Ceramic Society, Vol. 99, No. 4, pp. 1271–1279 (April 2016).
  33. A.L. d'Entremont and L. Pilon, 2016. *Electrochemical Transport Phenomena in Hybrid Pseudocapacitors Under Galvanostatic Cycling*. Journal of the Electrochemical Society, Vol. 163, No.2, pp. A229-A243 (February 2016).
  34. A.M. Thiele, Z. Wei, G. Falzone, B.A. Young, N. Neithalath, G. Sant, and L. Pilon, 2016. *Figure of Merit for the Thermal Performance of Cementitious Composites containing Phase Change Materials*. Cement and Concrete Composites, Vol.65, pp. 214-226 (January 2016).
  35. B.A. Young, A.M.K. Fujii, A.M. Thiele, A. Kumar, G. Sant, E. Taciroğlu, and L. Pilon, 2016. *Effective Elastic Moduli of Core-Shell-Matrix Composites*, Mechanics of Materials, Vol. 92, pp. 94-106 (January 2016).
  36. H.-L. Girard, H. Wang, A.L. d'Entremont, and L. Pilon, 2015. *Enhancing Faradaic Charge Storage in Hybrid Pseudocapacitors*. Electrochimica Acta, Vol. 182, pp. 639–651 (November 2015).
  37. A.M. Thiele, A. Jamet, G. Sant, and L. Pilon, 2015. *Annual Analysis of Concrete-Microencapsulated PCM Composite Walls for Energy Efficient Buildings*. Energy Conversion and Management, Vol. 103, pp. 374-386 (October 2015).
  38. L. Pilon, A. Bhowmik, R.-L. Heng, D. Yudovsky, 2015. *Simple and Accurate Expressions for Diffuse Reflectance of Semi-Infinite and Two-Layer Absorbing and Scattering Media: Erratum*, Applied Optics, Vol. 54, No. 25, pp. 6116-6117. Virtual Journal for Biomedical Optics Vol. 10, Issue 7 (July 2015).
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39. H.-L. Girard, H. Wang, A.L. d'Entremont, and L. Pilon, 2015. *Physical Interpretation of Cyclic Voltammetry for Hybrid Pseudocapacitors*, The Journal of Physical Chemistry C, Vol. 19, No. 21, pp. 11349–11361 (May 2015).
  40. L. Pilon, H. Wang, and A.L. d'Entremont, 2015. *Recent Advances in Continuum Modeling of Interfacial and Transport Phenomena in Electric Double-Layer Capacitors*. Journal of the Electrochemical Society (invited), Vol. 162, No. 5, pp. A5158-A5178.
  41. A.M. Thiele, G. Sant, and L. Pilon, 2015. *Diurnal Thermal Analysis of Microencapsulated PCM-Concrete Composite Walls*. Energy Conversion and Management, Vol. 93, pp.215-227.
  42. R.-L. Heng, K.C. Sy, and L. Pilon, 2015. *Absorption and Scattering by Bispheres, Quadspheres, and Circular Rings of Spheres and Their Equivalent Coated Spheres*. Journal of the Optical Society of America A, Vol. 32, No. 1, pp. 46-60. Selected to appear in the Virtual Journal for Biomedical Optics, Vol. 10, No.2, March 9, 2015.
  43. R. Kandilian, R.-L. Heng, and L. Pilon, 2015. *Absorption and Scattering by Fractal Aggregates and Their Equivalent Coated Spheres*. Journal of Quantitative Spectroscopy and Radiative Transfer, Vol. 151, pp. 310-326.
  44. A.L. d'Entremont and L. Pilon, 2015. *Thermal Effects of Asymmetric Electrolytes in Electric Double Layer Capacitors*. Journal of Power Sources, Vol. 273, pp. 196-209.
  45. R. Kandilian, T.C. Tsao, and L. Pilon, 2014. *Control of Incident Irradiance on a Batch Operated Flat-Plate Photobioreactor*. Chemical Engineering Science, Vol. 119, pp. 99-108.
  46. J. Aguirre, A. Ferreira, H. Ding, S.A. Jenekhe, N. Kopidakis, M.D. Asta, L. Pilon, Y. Rubin, S.H. Tolbert, B.J. Schwartz, B. Dunn, and V. Ozolins, 2014. *Panoramic View of Electrochemical Pseudocapacitor and Organic Solar Cell Research in Molecularly Engineered Energy Materials (MEEM)*, The Journal of Physical Chemistry C, Vol. 118, No. 34, pp. 19505-19523.
  47. R.-L. Heng, E. Lee, and L. Pilon, 2014. *Time-Dependent Radiation Characteristics of Nannochloropsis Oculata During Batch Culture*. Journal of Quantitative Spectroscopy and Radiation Transfer, Vol. 144, pp. 154-163.
  48. I.M. McKinley, F.Y. Lee, and L. Pilon, 2014. *Novel Cycle for Direct Thermomechanical Energy Conversion*, Applied Energy, Vol. 126, pp.78–89.
  49. A.L. d'Entremont and L. Pilon, 2014. *Scaling Laws For Heat Generation and Temperature Oscillations in EDLCs Under Galvanostatic Cycling*. International Journal of Heat and Mass Transfer, Vol. 75, pp. 637–649.
  50. R. Kandilian, J. Pruvost, J. Legrand, and L. Pilon, 2014. *Influence of Light Absorption Rate by Nannochloropsis oculata on Triglyceride Production During Nitrogen Starvation*. Bioresource Technology, Vol. 163, pp. 308–319.
  51. A.M. Thiele, A. Kumar, G. Sant, and L. Pilon, 2014. *Effective Thermal Conductivity of Three-Component Composites Containing Spherical Capsules*. International Journal of Heat and Mass Transfer, Vol. 73, pp. 177–185.
  52. A.L. d'Entremont, and L. Pilon, 2014. *First-Order Thermal Model of Commercial EDLCs*. Applied Thermal Engineering, Vol. 67, pp. 439-446.
  53. R.-L. Heng, E. Lee, and L. Pilon, 2014. *Radiation Characteristics and Optical Properties of Filamentous Cyanobacteria Anabaena Cylindrica*. Journal of the Optical Society of America A, Vol. 31, No. 4, pp. 836-845. Selected to appear in the Virtual Journal for Biomedical Optics, Vol. 9, No.6, June 10, 2014.
  54. E. Lee, J. Pruvost, X. He, R. Ramakanth, and L. Pilon, 2014. *Design Tool and Guidelines for Outdoor Photobioreactors*. Chemical Engineering Science, Vol. 106, pp. 18-29.
  55. L. Pilon, F. Janos, and R. Kitamura, 2014. *Effective Thermal Conductivity of Soda-lime Silicate Glassmelts with Different Iron Contents between 1100 and 1500°C*. Journal of the American Ceramic Society, Vol. 97, No. 2, pp. 442–450.
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56. A.L. d'Entremont and L. Pilon, 2014. *First Principles Thermal Modeling of Electric Double Layer Capacitors Under Constant-Current Cycling*. Journal of Power Sources, Vol. 246, pp. 887- 898.
  57. I.M. McKinley, S. Goljahi, C.S. Lynch, and L. Pilon, 2013. *A Novel Thermally-Biased Mechanical Energy Conversion Cycle*. Journal of Applied Physics, Vol. 114, 224111.
  58. J.A. Attia, S. Kohli, and L. Pilon, 2013. *Scaling Laws in Steady-State Aqueous Foams Including Ostwald Ripening*, Colloids and Surfaces A: Physicochemical and Engineering Aspects, Vol. 436, pp.1000-1006.
  59. E. Lee and L. Pilon, 2013. *Absorption and Scattering by Long and Randomly Oriented Linear Chains of Spheres*. Journal of the Optical Society of America A, Vol. 30, No. 9, pp. 1892–1900. Selected to appear in Virtual Journal for Biomedical Optics, Vol.8, No. 10, Nov. 8, 2013.
  60. R. Kandilian, E. Lee, and L. Pilon, 2013. *Radiation and Optical Properties of Nannochloropsis oculata Grown Under Different Irradiances and Spectra*. Bioresource Technology, Vol.137, pp. 63-73.
  61. X. He, E. Lee, L. Wilcox, R. Munipalli, and L. Pilon, 2013. *A High-Order Accurate GPU-Based Radiative Transfer Equation Solver for Combustion and Propulsion Applications*. Numerical Heat Transfer, Part B: Fundamentals, Vol.63, no.6, pp. 457-484.
  62. F.Y. Lee, H.R. Jo, C.S. Lynch, and L. Pilon, 2013. *Pyroelectric Energy Conversion Using PLZT Ceramics and the Ferroelectric–Ergodic Relaxor Phase Transition*, Smart Materials and Structures, Vol.22, No.2, 025038.
  63. I.M. McKinley and L. Pilon, 2013. *Phase Transitions and Thermal Expansion in Pyroelectric Energy Conversion*, Applied Physics Letters, Vol. 102, 023906.
  64. E. Lee, R.-L. Heng, and L. Pilon, 2013. *Spectral Optical Properties of Selected Photosynthetic Microalgae Producing Biofuels*. Journal of Quantitative Spectroscopy and Radiation Transfer, Vol.114, pp.122-135.
  65. H. Wang and L. Pilon, 2013. *Mesoscale Modeling of Electric Double Layer Capacitors With Three-Dimensional Ordered Structures*, Journal of Power Sources, Vol. 221, pp.252-260.
  66. H. Wang, A.M. Thiele, and L. Pilon, 2013. *Simulations of Cyclic Voltammetry for Electric Double Layers in Asymmetric Electrolytes: Generalized Modified Poisson Nernst-Planck Model*. The Journal of Physical Chemistry C, Vol. 117, No. 36, pp. 18286- 18297.
  67. H. Wang, J. Fang, and L. Pilon, 2013. *Scaling Laws for Carbon-Based Electric Double Layer Capacitors*. Electrochimica Acta, Vol.109, pp.316-321.
  68. T. Chin, F.Y. Lee, I.M. McKinley, S. Goljahi, C.S. Lynch, and L. Pilon, 2012. *Direct Thermal to Electrical Energy Conversion Using 9.5/65/35 PLZT Ceramics in the Ergodic Relaxor Phase*, IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 59, no. 11, pp. 2373-2385.
  69. J.A. Attia, I.M. McKinley, D. Moreno-Magana, and L. Pilon, 2012. *Convective Heat Transfer in Foams in Under Laminar Flow in Pipes and Tube Bundles*, International Journal of Heat and Mass Transfer, Vol. 55, no. 25-26, pp. 7823-7831.
  70. J. Fang and L. Pilon, 2012. *Tuning the Thermal Conductivity of Crystalline Nanoporous Silicon by Surface Passivation: A Molecular Dynamic Study*, Applied Physics Letters, Vol. 101, 011909.
  71. J. Fang, C. Kang, Y. Huang, S.H. Tolbert, and L. Pilon, 2012. *Thermal Conductivity of Ordered Mesoporous Nanocrystalline Silicon Thin Films Made from Magnesium Reduction of Polymer-Templated Silica*, The Journal of Physical Chemistry C, Vol. 116, no. 23, pp. 12926–12933.
  72. H. Wang and L. Pilon, 2012. *Reply to Commentary On Intrinsic Limitations of Impedance Measurements in Determining Electric Double Layer Capacitances*, Electrochimica Acta, Vol. 76, pp.529-531.
  73. R.C. Moreno, B.A. James, A. Navid, and L. Pilon, 2012. *Pyroelectric Energy Converter For Harvesting Waste Heat: Simulations versus Experiments*. International Journal of Heat and Mass Transfer, Vol. 55, pp. 4301-4311.
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74. J. Fang, Y. Huang, C. Lew, Y. Yan, and L. Pilon, 2012. *Temperature Dependent Thermal Conductivity of Pure Silica MEL and MFI Zeolite Thin Films*. Journal of Applied Physics, Vol. 111, no.5, 054910.
  75. I.M. McKinley, R. Kandilian, and L. Pilon, 2012. *Waste Heat Energy Harvesting Using Olsen Cycle on 0.945 Pb(Zn<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>-0.055 PbTiO<sub>3</sub> Single Crystals*, Smart Materials and Structures, Vol. 21, no.3, 035015.
  76. F.Y. Lee, A. Navid, and L. Pilon, 2012. *Pyroelectric Waste Heat Energy Harvesting Using Heat Conduction*, Applied Thermal Engineering, Vol. 37, pp. 30-37.
  77. H. Wang and L. Pilon, 2012. *Physical Interpretation of Cyclic Voltammetry for Measuring Electric Double Layer Capacitances*, Electrochimica Acta, Vol. 64, pp.130-139.
  78. H. Wang and L. Pilon, 2012. *Intrinsic Limitations of Impedance Measurements in Determining Electric Double Layer Capacitances*, Electrochimica Acta, Vol. 63, pp. 55–63.
  79. F.Y. Lee, S. Goljahi, I.M. McKinley, C.S. Lynch, and L. Pilon, 2012. *Pyroelectric Waste Heat Energy Harvesting Using Relaxor Ferroelectric 8/65/35 PLZT and the Olsen Cycle*, Smart Materials and Structures, Vol. 21, no.2, 025021.
  80. L. Pilon, H. Berberoğlu, and R. Kandilian, 2011. *Radiation Transfer in Photobiological Carbon Dioxide Fixation and Fuel Production by Microalgae*, Journal of Quantitative Spectroscopy and Radiation Transfer, Vol. 112, no. 17, pp. 2639–2660.
  81. J. Fang and L. Pilon, 2011. *Scaling Law for Thermal Conductivity of Crystalline Nanoporous Silicon Based on Molecular Dynamic Simulations*. Journal of Applied Physics, Vol. 110, no. 6, 064305. Selected to appear in Virtual Journal of Nanoscale Science & Technology, Vol. 24, no. 14, October 3, 2011.
  82. H. Wang and L. Pilon, 2011. *Accurate Simulations of Electric Double Layer Near Ultramicroelectrodes*, The Journal of Physical Chemistry C, Vol. 115, no. 33, pp 16711–16719.
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**B. Papers Submitted for Publication**

147. A. Likitchawankum, A. Kundu, O. Munteshari, T.S. Fisher, and L. Pilon, 2018. *Heat Generation in All-Solid-State Supercapacitors with Graphene Electrodes and Gel Electrolytes*, *Electrochimica Acta* (under review).
148. X. Qian, X. Wang, Y. Zhao, Y. Alsaïd, T. Galy, M. Marszewski, H. Gopalakrishna, J. Cui, L. Pilon, H. Jiang, X. He, 2018. *Artificial Phototropism for Omnidirectional Energy Harvesting*, *Nature Materials* (under review).
149. Z. She, Z. Wei, B.A. Young, G. Falzone, N. Neithalath, G. Sant, and L. Pilon, 2018. *Examining the Effects of Microencapsulated Phase Change Materials on Early-Age Temperature Evolutions in Realistic Pavement Geometries*, *Cement and Concrete Composites* (under review).
150. Z. Wei, Y.-H. Hsiao, X. Chen, E. Callagon La Plante, I. Mehdipour, D. Simonetti, N. Neithalath, L. Pilon, M. Bauchy, J. N. Israelachvili, G. Sant, Isothermal stimulation of mineral dissolution processes by acoustic perturbation, *The Journal of Physical Chemistry C* (under review).
151. M. Yoonessi, A. Boren, M. El-Kady, H. Wang, L. Pilon, 2018. *High-Performance Low Color Hybrid PEDOT Molybdenum Oxide Supercapacitors*, *Advanced Functional Materials* (under review).

**C. Papers in Preparation (draft available upon request)**

152. O. Munteshari, J. Lau, A. Likitchawankum, B.-A. Mei, C.S. Choi, B. Dunn, and L. Pilon, 2018. *Insights Into Charging Mechanism of MoO<sub>2</sub>-rGO and MnO<sub>2</sub>-G Pseudocapacitive Electrodes by in Operando Calorimeter*.
153. D. Butts, P. McNeil, M. Marszewski, E. Lan, T. Galy, M. Li, J.S. Kang, D. Ashby, S. King, S. Tolbert, Y. Hu, L. Pilon, B. Dunn, 2018. *Controlling Optical Transmittance and Thermal Conductivity of Nanoporous Silica Aerogels through Pore Size by Ambient Drying*.
154. B.-A. Mei, O. Munteshari, J. Lin, J. Lau, B. Dunn, and L. Pilon, 2018. *Best Practice Methods to Estimate Energy and Power Densities for Electrochemical Capacitors*.
155. Y. Yan, M. Li, S. King, T. Galy, M. Marszewski, J. S. Kang, L. Pilon, Y. Hu, S. H. Tolbert, 2018. *Exploring the Effect of Porous Structure on Thermal Conductivity of Mesoporous SiO<sub>2</sub> Films*.
156. Y. Yan, M. Li, S. King, T. Galy, L. Pilon, Y. Hu, S. H. Tolbert, 2018. *Effect of Pore Size on Thermal Conductivity in Nanoparticle and Sol-gel Based mesoporous SiO<sub>2</sub> Films*.
157. E. Callagon La Plante, Y.-H. Hsiao, G. Le Saout, L. Pilon, and G. N. Sant, 2018. *Intrinsic Controls on the Kinetics of Calcium Extraction from Crystalline Slags: Applications to CO<sub>2</sub> Mineralization*
158. A. Kundu, L. Pilon, and T.S. Fisher, 2018. *Continuum Modeling of Heat Generation in Electric Double Layer Capacitors During Galvanostic Charge/Discharge*, *Electrochimica Acta*.
159. T. Galy, S. King, Y. Yan, M. Marszewski, S. Tolbert, and L. Pilon, 2018. *Simple Optical Method to Measure the Thickness, Spectral Refractive Index, and Porosity of Transparent Mesoporous Thin Films*, *Mesoporous Microporous Materials*
160. C. Zhang, J. Bray, K. Zhu, and L. Pilon, 2018. *Image Distortion Caused by Droplets on Glass Windows*, *Applied Optics*.
161. M. Marszewski, M. Li, S.H. Tolbert, B. Dunn, Y. Hu, and L. Pilon, 2018. *Optically-Clear Thermally-Insulating Porous Nanoparticle-Aggregate Slabs*, *Advanced Functional Materials*.

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1. R. Kandilian, J. Pruvost, A. Artu, C. Lemasson, J. Legrand, and L. Pilon, *Comparison of Experimentally Measured and Theoretically Predicted Radiation Characteristics of Various Photosynthetic Microorganisms*, Eurotherm Seminar 105 Computational Thermal Radiation in Participating Media V: Albi, France, April 1-3, 2015.
  2. R. Kandilian, A. Soulies, B. Rousseau, J. Pruvost, J. Legrand, and L. Pilon, *Simple Method to Measure the Spectral Absorption Cross-Section of Microalgae*, Eurotherm Seminar 105 Computational Thermal Radiation in Participating Media V: Albi, France, April 1-3, 2015.
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3. E. Lee, X. He, R. Ramakanth, and L. Pilon, 2013. *Radiation Transfer in Common Outdoor Photobioreactors*. 7<sup>th</sup> International Symposium on Radiation Transfer (RAD 13), Kuşadası, Turkey, June 2-8, 2013.
  4. R.-L. Heng, E. Lee, and L. Pilon, 2013. *Radiation Characteristics Measurements of Anabaena Cylindrica*, 7<sup>th</sup> International Symposium on Radiation Transfer (RAD 13), Kuşadası, Turkey, June 2-8, 2013.
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  16. H.T. Nguyen, A. Navid, and L. Pilon, 2010. *Improved Pyroelectric Energy Converter for Waste Heat Energy Harvesting Using Co-Polymer P(VDF-TrFE) and Olsen Cycle*, International Heat Transfer Conference (IHTC-14), Washington, DC, August 8-13, 2010, IHTC14-23412.
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  23. R. Kitamura and L. Pilon, 2009. *Modeling Hydrogen Release from Doped Borosilicate Glass by Furnace or Lamp Heating*, 2009 ASME Summer Heat Transfer Conference, San Francisco, July 19-23, 2009 HT2009-88564, pp. 393-402.
  24. H. Berberoğlu, P.S. Gomez, and L. Pilon, 2009. *Radiation Characteristics of CO<sub>2</sub> Fixing and Biofuel Producing Algae.*, 2009 ASME Summer Heat Transfer Conference, San Francisco, July 19-23, 2009, HT2009-88019, pp. 13-22.
  25. H. Berberoğlu and L. Pilon, 2009. *Symbiotic Cultures for Increasing the Solar Energy Conversion Efficiency of Outdoor Photobioreactors*, 2009 ASME Summer Heat Transfer Conference, San Francisco, July 19-23, 2009, HT2009-88249, pp. 261-270.
  26. D. Vanderpool and L. Pilon, 2007. *Optimum Design and Operation of a Prototypical Pyroelectric Energy Converter for Harvesting Waste Heat*. ASME International Mechanical Congress and Exposition, Seattle, WA, November 11-15, 2007, IMECE2007-43068, pp. 279-288.
  27. K.M. Katika and L. Pilon, 2007. *The effects of Nanoparticles on the Thermal Conductivity of Thin Films*, ASME International Mechanical Congress and Exposition, Seattle, WA, November 11-15, 2007, IMECE2007-43466, pp. 673-681.
  28. S. C. Hur and L. Pilon 2007. *Thermal Conductivity of Cubic Mesoporous Silica Thin Films*, ASME International Mechanical Congress and Exposition, Seattle, WA, November 11-15, 2007, IMECE 2007-43016, pp. 657-664.
  29. H. Berberoğlu, A. Melis, and L. Pilon, 2007. *Radiation Characteristics of Chlamydomonas reinhardtii and its Genetically Engineered Strains with Less Chlorophyll Pigments*, ASME International Mechanical Congress and Exposition, Seattle, WA, November 11-15, 2007, IMECE2007-43096, pp. 1275-1283.
  30. H. Berberoğlu, L. Pilon, and J. Jay, 2007. *Photobiological Hydrogen Production in a Flat Panel Photobioreactor Using Different Media*, ASME International Mechanical Congress and Exposition, Seattle, WA, November 11-15, 2007, IMECE2007-42986, pp. 539-548.
  31. H. Berberoğlu and L. Pilon, 2007. *Experimental Measurements of the Radiation Characteristics of Hydrogen Producing Microorganisms*, 5<sup>th</sup> International Symposium on Radiation Transfer (RAD V), Bodrum, Turkey, June 17-23, 2007.
  32. S. Hur and L. Pilon, 2007. *Optical Properties of Cubic Nanoporous Silica Thin Films*, 5<sup>th</sup> International Symposium on Radiation Transfer (RAD V), Bodrum, Turkey, June 17-23, 2007.
  33. A. Navid and L. Pilon, 2007. *Effective Optical Properties of Absorbing Nanocomposite Thin- Films for TE and TM Polarization*, 5<sup>th</sup> International Symposium on Radiation Transfer (RAD V), Bodrum, Turkey, June 17-23, 2007.
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34. A. Garahan, L. Pilon, J. Yin, and I. Saxena, 2006. *Optical Properties of Nanocomposite Thin-Films*. ASME International Mechanical Congress and Exposition, Chicago, IL, November 5-10, 2006, IMECE2006-13309, pp. 177-186.
35. H. Berberoğlu, N. Barra, L. Pilon, and J. Jay, 2006. Growth CO<sub>2</sub> Consumption, and H<sub>2</sub> Production of *Anabaena Variabilis* ATCC 29413-U Under Different Irradiances and CO<sub>2</sub> Concentrations, ASME International Mechanical Congress and Exposition, Chicago, IL, November 5-10, 2006, IMECE2006-16144, pp. 143-152.
36. K. D. Smith, K.M. Katika, and L. Pilon, 2006. *Maximum Time-Resolved Hemispherical Reflectance of Absorbing and Isotropically Scattering Media*, Eurotherm Seminar 78, Computational Thermal Radiation in Participating Media II. April 5–7, 2006, Poitiers, France (Editions Lavoisier, Paris), pp. 125-134.
37. H. Berberoğlu, J. Yin, and L. Pilon, 2006. *Light Transfer in a Bubble Sparged Photobioreactor for Simultaneous Hydrogen Fuel Production and CO<sub>2</sub> Mitigation*, Eurotherm Seminar 78, Computational Thermal Radiation in Participating Media II. April 5–7, 2006, Poitiers, France (Editions Lavoisier, Paris), pp. 297-306.
38. K. M. Katika and L. Pilon, 2005. *Modified Method of Characteristics for Solving the Transient Radiative Transfer Equation*, Invited Presentation, Eurotherm Seminar 82, Numerical Heat Transfer 2005, Vol. 2, pp. 333-342, September 13–16, 2005, Krakow, Poland, Eds.: A. Nowak, R.A. Biaolecki.
39. M. M. Braun and L. Pilon, 2005. *Effective Optical Properties of Nanoporous Silicon*. ASME Summer Heat Transfer Conference, San Francisco, CA, July 17-22, 2005. HT2005-72643, pp. 463-471.
40. H. Tseng and L. Pilon, 2004. *Flow and Heat Transfer of Microfoams in Microchannels*, ASME International Meeting and Exposition, Anaheim, November, 2004, IMECE2004-61752, pp. 677-684.
41. K. M. Katika and L. Pilon, 2004. *Ultra-Short Pulsed Laser Transport in a Multilayer Turbid Media*, ASME International Meeting and Exposition, Anaheim, November, 2004, IMECE2004-59796, pp. 379-387.
42. K. M. Katika and L. Pilon, 2004. *Backward Method of Characteristics in Radiative Transfer*, 4<sup>th</sup> International Symposium on Radiative Transfer, M. P. Menguc and N. Selçuk, Eds., Istanbul Turkey, June 18-21, 2004, pp.347-355.
43. B. Dutton, P. Hrma, D.-S. Kim, and L. Pilon, 2004. *Effect of the Atmosphere Composition on Transient Glass Foaming*. 106<sup>th</sup> American Ceramic Society Meeting, Indianapolis, April 18-21, 2004.
44. D. Baillis, F. Randrianalisoa, L. Pilon, R. Viskanta, 2003. *Identification of radiative characteristics of fused quartz containing bubbles using discrete ordinates method with Fresnel interfaces*. Computational Thermal Radiation in Participating Media - Eurotherm Seminar 73, Mons, Belgium, 15-17 April 2003, pp. 215-224.
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#### UNREFEREED CONFERENCE PROCEEDINGS & POSTER PRESENTATIONS

46. B.-A. Mei and L. Pilon, 2018. *Physical Interpretations of Impedance Spectra for Pseudocapacitive Electrodes*, 233<sup>rd</sup> Electrochemical Society Meeting, May 13-17, 2018, Seattle, WA (abstract 164).
  47. O. Munteshari, J. Lau, B. Dunn, and L. Pilon, 2018. *Effect of Electrode Composition on Heat Generation Rate in Electrical Double Layer Capacitors*, 233<sup>rd</sup> Electrochemical Society Meeting, May 13-17, 2018, Seattle, WA (abstract 163).
  48. B.-A. Mei and L. Pilon, 2017. *Interpretation of Nyquist Plot for Characterization of Electrode and Electrolyte Material Properties for Electrical Double Layer Capacitors*, 231<sup>st</sup> Electrochemical Society Meeting, May 28-June 1, 2018, New Orleans, LA (abstract 1468).
  49. K. Zhu, Y. Huang, J. Pruvost, J. Legrand, and L. Pilon, 2017. *Transmittance of Windows with Condensed Droplets on their Backside in Solar Energy Applications*, HT2017-5110, ASME Summer Heat Transfer Conference, July 9-14, 2017, Bellevue, WA, USA (oral presentation).
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50. O. Munteshari, J. Lau, B. Dunn, and L. Pilon, 2017. *Time-dependent Heat Generation Rate in Electric Double Layer Capacitors Under Constant-current Cycling*, HT2017-5111, ASME Summer Heat Transfer Conference, July 9-14, 2017, Bellevue, WA, USA (oral presentation).
  51. N.M.A. Krishnan, B. Wang, G. Falzone, Y. Le Pape, N. Neithalath, L. Pilon, M. Bauchy and G. Sant, 2017. *The Origin of Anomalous Thermal Expansion Behavior in Calcium-Silicate-Hydrates*, ICACMS 2017: 19<sup>th</sup> International Conference on Applied and Computational Mathematical Sciences, May 18-19, 2017, Paris, France (abstract and oral presentation).
  52. B.A. Young, G. Sant, and L. Pilon, 2017. *Temperature Control Schemes for Buildings with PCM-Composite Envelopes*, ASTFE2017, 2nd Thermal and Fluids Engineering Conference (TFEC) and 4th International Workshop on Heat Transfer, April 2-5, 2017, Las Vegas, NV (abstract and oral presentation).
  53. J. Rubalcava-Cruz, B.A. Young, G. Sant, and L. Pilon, 2017. *Effective Thermal Expansion Coefficient of Three-Component Core-Shell-Matrix Composites*, ASTFE2017, 2nd Thermal and Fluids Engineering Conference (TFEC) and 4th International Workshop on Heat Transfer, April 2-5, 2017, Las Vegas, NV (abstract and oral presentation).
  54. H. Liu, X. Xia, R. Kitamura, and L. Pilon, 2016. *Retrieving the Conductive and Radiative Properties of Soda-Lime Silicate Glassmelts from Temperature Measurements*, ASME Summer Heat Transfer Conference, July 10-14, 2016 Washington D.C., USA (oral presentation).
  55. A. Ricklefs, A.M. Thiele, G. Falzone, G. Sant, and L. Pilon, 2016. *Thermal Conductivity of Cementitious Composites Containing Microencapsulated Phase Change Materials*, ASME Summer Heat Transfer Conference, July 10-14, 2016 Washington D.C., USA (oral presentation).
  56. B.-A. Mei and L. Pilon, 2016. *Transport Phenomena in Electrical Double Layer Capacitors with Highly Ordered 3D Porous Carbon Electrodes*, 229<sup>th</sup> Electrochemical Society Meeting, May 29-June 2, 2016, San Diego, CA (abstract 1582).
  57. L. Pilon, B.-A. Mei, and H.L. Girard, 2016. *Interfacial and Transport Phenomena in Hybrid Pseudocapacitors Electrochemical Capacitors (invited)*, 229<sup>th</sup> Electrochemical Society Meeting, May 29-June 2, 2016, San Diego, CA (abstract 1585).
  58. R. Kandilian, J. Pruvost, J. Legrand, L. Pilon, 2014. *Optimization of triglyceride production with respect to light using *Nannochloropsis oculata* (O2.21)*. 4<sup>th</sup> International Conference on Algal Biomass, Biofuels and Bioproducts, June 15-18, 2014, Santa Fe Convention Center, New Mexico, USA (abstract and oral presentation).
  59. J.A. Attia and L. Pilon, 2013. *Stability and Temperature Profile in Aqueous Foams Exposed to Infrared Radiation*, ASME Summer Heat Transfer Conference, Minneapolis, MN, July 14-19, 2013. HT2013-17639.
  60. I.M. McKinley and L. Pilon, 2013. *Effect of Phase Transitions on Energy Density in Pyroelectric Energy Conversion*, ASME Summer Heat Transfer Conference, Minneapolis, MN, July 14-19, 2013. HT2013-17634 (abstract and oral presentation).
  61. L. Pilon, P. Janos, and R. Kitamura, 2013. *Thermal Conductivity Measurements of Clear and Colored Glassmelts at High Temperatures*, ASME Summer Heat Transfer Conference, Minneapolis, MN, July 14-19, 2013. HT2013-17574 (abstract and oral presentation).
  62. R. Kandilian, J. Pruvost, J. Legrand, and L. Pilon, 2013. *Radiation Characteristics of the Microalgae *Nannochloropsis oculata* Subjected to Progressive Nitrogen Starvation for Lipid Accumulation*, The 2nd European Congress on Applied Biotechnology ECAB2, The Hague, Netherlands, April 21-25, 2013 (abstract and poster presentation).
  63. J.W. Hernlund, K. Ohta, H. Gomi, E.S.G. Rainey, K. Hirose, S. Labrosse, R. Caracas, A. Kavner, L. Pilon, and C. Houser, 2011. *Preliminary Core-Mantle Boundary Heat Flux Map*. American Geophysical Union Fall Meeting 2011, San Francisco, CA, USA, December 5-9, 2011 (abstract).
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64. E.S.G. Rainey, A. Kavner, J. Hernlund, and L. Pilon, 2011. *Measuring Thermal Conductivity at High Pressure and Temperature in the Laser-Heated Diamond Anvil Cell*. American Geophysical Union Fall Meeting 2011, San Francisco, CA, USA, December 5-9, 2011 (abstract).
65. I. McKinley and L. Pilon, 2011. *Waste Heat Energy Harvesting Using Olsen Cycle on PZN-5.5PT Single Crystals*, 6<sup>th</sup> Annual Energy Harvesting Workshop, Roanoke, VA, August 7-11, 2011.
66. R. Kandilian and L. Pilon, 2011. *Pyroelectric Energy Conversion Using PMN-32PT Single Crystals*, 6<sup>th</sup> Annual Energy Harvesting Workshop, Roanoke, VA, August 7-11, 2011 (abstract and oral presentation).
67. D. Yudovsky, L. Pilon, A. Nouvong, and K. Schomacker. *Optical Model of Skin for Early Non-Invasive Detection of Wound Development on the Diabetic Foot*, SPIE BiOS: Biomedical Optics, Advanced Biomedical and Clinical Diagnostic Systems VIII, edited by T. Vo-Dinh, W. S. Grundfest, A. Mahadevan-Jansen, San Francisco, CA, January 23-28, 2010, Proceedings of SPIE, Vol. 7555, 755514 (abstract and oral presentation).
68. K. D. Smith, L. Pilon, and K. Dipple, 2006. *Assessing Toxicity of Nanoparticles*, Toxic Substances Research and Teaching Program. 19<sup>th</sup> Annual Research Symposium, San Diego, April 28-29, 2006.
69. K. M. Katika, L. Pilon, K. Dipple, S. Levin, J. Blackwell, and H. Berberoğlu, 2006. *In-vivo Time-Resolved Autofluorescence Measurements on Human Skin*, Biomedical Optics 2006, SPIE's Photonics West Symposium, San Jose, California USA, 21-26 January 2006, Proceedings of the SPIE, Vol. 6078, Paper Number 6078A-23 (abstract and oral presentation).
70. K. M. Katika and L. Pilon, 2006. *Numerical feasibility analysis of an epidermal glucose sensor based on time-resolved fluorescence*, Biomedical Optics 2006, SPIE's Photonics West Symposium, San Jose, California USA, 21-26 January 2006. Proceedings of the SPIE, Vol. 6084, 60940Z, March 2006 (abstract and oral presentation).
71. L. Pilon, G. Geffraye and T. Chataing, 1998. *Validation of the CATHARE film condensation model on COTURNE experiment*. 6<sup>th</sup> International Conference On Nuclear Engineering, ICONE 6 – San Diego, USA - May 10-15, 1998.

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  2. B. Dunn, E. Lan, D. Butts, P. McNeil, L. Pilon, 2018. *Low Density, Optically Transparent, Thermally Insulating Nanoporous Ambigels*. UCLA Case No. 2018-863. U.S. Provisional Patent Serial No. 62/696,420, filed July 11, 2018.
  3. M. Marszewski, L.G. Pilon, S.H. Tolbert, B. Dunn, Y. Yan, S. King, 2018. *Optically-Clear Thermally-Insulating Porous Nanoparticle-Aggregate Slabs*. UCLA Case No. 2018-869. U.S. Provisional Patent Serial No. 62/689,548, filed June 25, 2018.
  4. B.S. Dunn, C.-H. Lai, D.S. Ashby, M. Moz, L. Pilon, S.H. Tolbert, Y. Gogotsi, 2018. *Pseudocapacitance for Nb<sub>2</sub>O<sub>5</sub>/Carbide-derived Carbon Electrodes and Hybrid Devices*. UCLA Case No. 2018-672-1-LA. U.S. Provisional Application Serial No. 62/644,553, filed on March 28, 2018.
  5. G. Sant, L. Pilon, E. B. Callagon La Plante, B. Wang, S. Vallejo Castaño, 2017. *Facile, Low-Energy Routes for the Production of Hydrated Calcium and Magnesium Salts From Alkaline Industrial Wastes Via Targeted Capacitive Concentration and Optimization of Process Conditions*, U.S. Provisional Application Serial No. 62/547,451, filed on August 18, 2017.
  6. B. Wang, L. Pilon, N. Neithalath, G. Sant, 2016. *Upcycled CO<sub>2</sub>-Negative Concrete Product for Use in Construction*, U.S. Provisional Application Serial No. 62/413,375, October 26, 2016. International Application No. PCT/US2017/058357, October 25, 2017. WO2018/081308, May 3, 2018.
  7. B. Wang, L. Pilon, N. Neithalath, Z. Wei, B.A. Young, and G. Sant, 2016. *Efficient Integration of Manufacturing of Upcycled Concrete Products into Power Plants*, U.S. Provisional Application Serial
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8. I.M. McKinley and L. Pilon, 2013. *Thermomechanical Cycle for Thermal and/or Mechanical Energy Conversion Using Piezoelectric Materials*, U.S. Patent Application Serial No. 61/804,108, March 21, 2013.
  9. L. Pilon, 2011. *Direct Conversion of Nanoscale Thermal Radiation to Electrical Energy Using Pyroelectric Materials*, UCLA Case No. 2010-532, U.S. Patent Application Serial No. 13/155,288, filed June 7, 2011.
  10. L. Pilon and K. M. Katika. *Time-resolved non-invasive optometric device for medical diagnostic*, U.S. Patent No. 7,904,140 B2, March 8, 2011.

## PROFESSIONAL SERVICE AND PROFESSIONAL ORGANIZATIONS

- **Editorial Responsibilities**
    - *ASME Journal of Heat Transfer*, Associate Editor 2015-2018
    - *International Heat Transfer Conference, Beijing*, Associate Editor 2018
  - **Member of the Editorial Board**
    - *Medical Instrumentation* an open-source journal from Herbert Publications, UK, 2012-present
  - **Member of**
    - The American Ceramic Society (2002- 2005, 2013-present)
    - The American Society of Mechanical Engineers (2000- present)
    - The Optical Society of America (2004- present)
    - The International Society for Optical Engineering - SPIE (2005-present)
    - International Society of Electrochemistry (2012-present)
    - Interpores (2013-present)
    - Society of Glass Technology (2012-present)
    - The Electrochemical Society (2014- present)
  - **Member of the International Scientific Committee** of the 5<sup>th</sup> International Symposium on Radiation Transfer (RAD V), Bodrum, Turkey, June 17-23, 2007.
  - **Member of the International Scientific Committee** of the 6<sup>th</sup> International Symposium on Radiation Transfer (RAD 10), Antalya, Turkey, June 13-16, 2010.
  - **Member of the International Scientific Committee** of the Eurotherm Seminar 95 on Computational Thermal Radiation in Participating Media IV, Nancy, France, April 18-20, 2012.
  - **Member of the International Scientific Committee** of the 2<sup>nd</sup> International Conference on Mechanical Engineering and Mechatronics (ICMEM'13), Toronto, Ontario, Canada, August 8-9, 2013.
  - **Member of the International Scientific Committee** of the 2012 International Conference on Mechanical Engineering and Mechatronics (ICMEM'12), Ottawa, Canada, August 16-18, 2012.
  - **Member of the International Scientific Committee** of the 7<sup>th</sup> International Symposium on Radiation Transfer (RAD 13), Kuşadası, Turkey, June 2-8, 2013.
  - **Member of the Program Committee for the Optics for Solar Energy (SOLAR) Conference** part of the OSA Optics and Photonics Congress for Light, Energy and the Environment, Cambera, Australia, December 2-5, 2014.
  - **Member of the International Advisory Committee** of The Energy & Material Research Conference - EMR2015, Madrid, Spain, February 25-27, 2015.
  - **Member of the International Advisory Committee** of the 5<sup>th</sup> International Symposium on Micro and Nano Technology, Calgary, Canada, May 18-20, 2015.
  - **Member of the International Scientific Committee** of the Eurotherm Seminar 96 on Computational Thermal Radiation in Participating Media V, Albi, France, April 1-3, 2015.
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- **Member of the Program Committee** of the 8<sup>th</sup> International Conference on Porous Media & Annual Meeting of the International Society for Porous Media (Interpore), Cincinnati, OH, May 9-12, 2016.
  - **Member of the International Scientific Committee** of the 8<sup>th</sup> International Symposium on Radiation Transfer (RAD 16), Nevsehir, Turkey, June 6-10, 2016.
  - **Member of the International Scientific Committee** of the European Advanced Materials Congress, M/S Mariella, Viking Line, Stockholm, Sweden, August 23-25, 2016.
  - **Member of the International Advisory Committee** of The Energy & Material Research Conference - EMR2015, Lisbon, Portugal, April 5-7, 2017.
  - **Member of the International Scientific Committee** of the 6th International Conference on Computational Thermal Radiation in Participating Media (CTRPM-VI), Cascais, Portugal, April 9-11, 2018.
  - **Member of the International Program Committee** of the 5th International Conference on Bioimaging - BIOIMAGING 2018, January 19-21, 2018, Funchal, Madeira, Portugal.
  - **Member of the International Scientific Committee** of the 9<sup>th</sup> International Symposium on Radiation Transfer (RAD 19), Athens, Greece, June 3-7, 2019.
  
  - **Reviewer of manuscripts submitted for publication in 60 different archival journals**

<p><b><u>Thermal Sciences and Energy Journals</u></b></p> <ul style="list-style-type: none"> <li>▪ ASME Journal of Heat Transfer</li> <li>▪ ASME Journal of Energy Resources Technology</li> <li>▪ Heat Transfer - Asian Research</li> <li>▪ Heat Transfer Engineering</li> <li>▪ Int. J. of Heat and Mass Transfer</li> <li>▪ Int. J. of Hydrogen Energy</li> <li>▪ Int. J. of Multiscale Computational Engineering</li> <li>▪ Int. J. for Numerical Methods in Fluids</li> <li>▪ Int. J. of Thermal Sciences</li> <li>▪ Int. J. of Thermophysics</li> <li>▪ Journal of Energy</li> <li>▪ J. of Thermophysics and Heat Transfer</li> <li>▪ J. of Thermal Science &amp; Engineering Applications</li> <li>▪ Numerical Heat Transfer</li> <li>▪ Measurement Science and Technology</li> <li>▪ Energy Conversion and Management</li> <li>▪ Industrial &amp; Engineering Chemistry Research</li> </ul> <p><b><u>Materials Science Journals</u></b></p> <ul style="list-style-type: none"> <li>▪ ACS Applied Materials &amp; Interfaces</li> <li>▪ ACS Nano</li> <li>▪ Acta Materialia</li> <li>▪ Electrochimica Acta</li> <li>▪ IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</li> <li>▪ J. of Composite Materials</li> <li>▪ Ionics</li> <li>▪ J. of Manufacturing Processes</li> <li>▪ J. of Non-Crystalline Solids</li> <li>▪ J. of Reinforced Plastics and Composites</li> <li>▪ J. of the American Ceramic Society</li> <li>▪ Microporous and Mesoporous Materials</li> </ul>	<p><b><u>Applied Optics and Radiation Transfer Journals</u></b></p> <ul style="list-style-type: none"> <li>▪ Applied Optics</li> <li>▪ IR Physics and Technology</li> <li>▪ Journal of the Optical Society of America A</li> <li>▪ J. of Quant. Spectroscopy &amp; Radiative Transfer</li> <li>▪ J. of Biomedical Optics</li> <li>▪ Optics Express</li> <li>▪ Journal of European Academy of Dermatology And Venereology</li> </ul> <p><b><u>Chemical and Biochemical Engineering</u></b></p> <ul style="list-style-type: none"> <li>▪ Asia-Pacific Journal of Chemical Engineering</li> <li>▪ Bioresource Technology</li> <li>▪ Biotechnology and Bioengineering</li> <li>▪ Chemical Engineering and Processing</li> <li>▪ Chemical Engineering Journal</li> <li>▪ Chemical Engineering Science</li> <li>▪ ECS Solid State Letters</li> <li>▪ Thermochimica Acta</li> <li>▪ Journal of Applied Phycology</li> <li>▪ Photochemical &amp; Photobiological Sciences</li> <li>▪ Progress in Oceanography</li> <li>▪ Separation Science and Technology</li> <li>▪ Langmuir</li> </ul> <p><b><u>Physics, Chemistry, Surface Science Journals</u></b></p> <ul style="list-style-type: none"> <li>▪ Applied Physics Letters</li> <li>▪ Applied Surface Science</li> <li>▪ Chemistry Letters</li> <li>▪ Colloids and Surfaces A</li> <li>▪ Electrochemistry Communications</li> <li>▪ European Physical Journal Applied Physics</li> </ul>
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- Macromolecules
  - Materials Chemistry and Physics
  - Nano Energy
  - Nature Materials
  - Polymer Letters
  - Polymer International
  - Smart Materials and Structures
  - J. Intelligent Material Systems and Structures
  - Metallurgical and Materials Transactions B
  - IEEE Sensors Journal
  - Journal of Applied Physics
  - J. of Colloids and Interface Science
  - J. of the Electrochemical Society
  - J. of MEMS
  - J. of Physics D: Applied Physics
  - Physics of Fluids
  - Review of Scientific Instruments
  - Sensors and Actuators, A: Physical
  - The Journal of Physical Chemistry
- **Reviewer of manuscripts submitted for presentation to**
- ISHMT/ASME Heat and Mass Transfer Conference 2002
  - ASME, International Mechanical Engineering Congress & Exposition (IMECE), 2003, 2004, 2005, 2006, 2007, 2008.
  - 106<sup>th</sup> American Ceramic Society Meeting, Indianapolis, April 2004
  - 4<sup>th</sup> International Symposium on Radiative Transfer, Istanbul, Turkey, June 2004
  - ASME National Heat Transfer Summer Conference 2003, 2004, 2005, 2009, 2010, 2011, 2012
  - InterPack'05, San Francisco, July 2005
  - Eurotherm Seminar 78, Poitiers April 5-7, 2006.
  - ASME-JSME Thermal Engineering and Summer Heat Transfer Conference, July 8-12, 2007, Vancouver, BC, Canada.
  - 5<sup>th</sup> International Symposium on Radiative Transfer, Bodrum, Turkey, June 17-22, 2007.
  - 6<sup>th</sup> International Symposium on Radiative Transfer, Antalya, Turkey, June 13-19, 2010.
  - 14<sup>th</sup> International Heat Transfer Conference, Washington, D.C., August 8-13, 2010.
  - 8<sup>th</sup> ASME/JSME Thermal Engineering Joint Conference, Honolulu, Hawaii, USA March 13-17, 2011.
  - 2011 ASME Int. Mechanical Engineering Conference & Exposition, Denver CO, Nov. 7-11, 2011.
  - 7<sup>th</sup> International Symposium on Radiative Transfer, Kuşadası, Turkey, June 2013.
- **Chair of Technical Meetings:**
- 2005 ASME Summer Heat Transfer Conference, San Francisco, CA, July 17-22, 2005
    - Co-Chair, Track 1-4. Heat Transfer in Hydrogen Generation and Storage Systems
    - Co-Chair, Track 14-13. Tutorial on Numerical Methods in Micro- Nano-Scale Thermal Transport
  - 2006 ASME Int. Mechanical Engineering Conference and Exposition, Chicago, IL, Nov. 5-10, 2006
    - Chair, HT-1B. Radiative Heat Transfer in Energy Systems
    - Co-Chair, HT-5C Electron, phonon, and photon interactions
  - 2007 ASME Int. Mechanical Engineering Conference & Exposition, Seattle, WA Nov. 11-15, 2007
    - Co-Chair, Track 8-27 Radiation Transfer in Energy Systems
  - 3<sup>rd</sup> ASME Energy Nanotechnology International Conference, Jacksonville, Florida, Aug. 10-14, 2008
    - Member of the Technical Program Committee
    - Co-Chair, Track 4 Fundamental Issues of Nanoscale Energy Carrier Transport and Conversion
  - 2009 ASME Summer Heat Transfer Conference, San Francisco, CA, July 19-23, 2009
    - Co-Chair, Track 1-7 Heat and Mass Transfer in Fuel Cells and Solar Energy Systems
  - 14<sup>th</sup> International Heat Transfer Conference (IHTC-14), Washington, DC, August 8-13, 2010
    - Co-Chair, Track 18-2 Phonon Transport and Thermal Conductivity
    - Co-Chair, Track 29-1 Thermodynamic Fundamentals and Systems
  - ASME-JSME 8<sup>th</sup> Thermal Engineering Joint Conference, Honolulu, Hawaii, March 13-17, 2011
    - Co-Chair, Track 1-2-13, Computational Heat and Mass Transfer (Heat Conduction & Diffusion)
  - 2011 ASME Int. Mechanical Engineering Conference & Exposition, Denver CO, Nov. 14-11, 2011
    - Co-Chair, Track 1-10-2 Thermophysical Properties of Materials
-

- Co-Chair, Track 2-10-4 Transport Phenomena in Energy Systems
- 2012 ASME 3rd Micro/Nanoscale Heat & Mass Transfer Int. Conf., Atlanta, GA March 3-6, 2012
  - Co-Chair, Track 2-4 Heat and Mass Transfer in Nanofluids
- 2012 ASME Summer Heat Transfer Conference, Puerto Rico, July 8-12, 2012
  - Track Chair for Track 1 Heat Transfer in Energy Systems
- 2013 ASME Summer Heat Transfer Conference, Minneapolis, MN, July 14-19, 2013
  - Session Chair for 1-3-1 Waste Heat Harvesting I
  - Session Chair for 1-3-2 Waste Heat Harvesting II
  - Session Chair for 1-7-1 Great Experiments in Heat Transfer
- 2016 ASME Summer Heat Transfer Conference, Washington, DC, July 10-14, 2016
  - Topic Co-organizer, Track 1-2-1 – Heat Transfer in Energy System-Fundamentals I
  - Topic Co-organizer, Track 1-2-2 – Heat Transfer in Energy System-Fundamentals II
  - Topic Co-organizer, Track 1-2-3 – Heat Transfer in Energy System-Fundamentals III
- 2016 229<sup>th</sup> Electrochemical Society (ECS) Meeting, San Diego, May 29 - June 2, 2016
  - Co-Chair, I05 – Track: Heterogeneous Functional Materials for Energy Conversion and Storage, Session: Electrochemical Capacitors 1
- 2017 ASME Summer Heat Transfer Conference, Bellevue, July 9-12, 2017
  - Session Co-Chair. Fundamentals of Nanomaterials and Nanostructures for Energy Applications
  - Session Co-Chair: Mini-symposium on Solar Energy Science and Technology in Honor of Prof. Yogi Goswami
- 2017 MRS Fall Meeting & Exhibit, Boston, November 26-December 1, 2017
  - Session Co-Chair of Session 11 in Symposium ES09: Thermal Energy—Transfer, Conversion and Storage
- **Mentor in Summer Programs for Undergraduate & Graduate Research**
  - 2003 UC LEADS<sup>§</sup>: James Washington
  - 2006 UC LEADS: Gbenga Elehinafe
  - 2006 UCLA RISE-UP<sup>+</sup>: Owolabi Olaleke
  - 2007 UCLA RISE-UP: Gbenga Elehinafe
  - 2007 UCLA RISE-UP: Neal Hutchinson
  - 2007 UCLA SPUR<sup>\*</sup>: Pedro Gomez
  - 2008 UCLA RISE-UP: Neal Hutchinson
  - 2008 UCLA RISE-UP: Abubakar Bah
  - 2009 UCLA SPUR: David E. Moreno-Magaña
  - 2009 UCLA SPUR: Shuk H. Chan
  - 2010-2011 UCLA RISE-UP: Gabriel Garcia
  - 2011-2012 UCLA RISE-UP: Broc Chavez
  - 2015-2016 UCLA CARE: Christopher Perez
  - 2015-2016 UC LEADS: Jose Rubalcava-Cruz
  - 2017-2019 UC LEADS: Aisha Kermiche

<sup>§</sup> UC Leadership Excellence through Advanced Degrees

<sup>+</sup> RISE-UP: Research Intensive Series in Engineering for Under-Represented Populations

<sup>\*</sup> SPUR: Summer Programs for Undergraduate Research

## CONSULTING

- **Corporation**
  - Asahi Glass Corporation, Yokohama, Japan, 2011-2013
  - Alticor, parent company of Amway and Access Business Group, Grand Rapid, MI, 2008-2009
  - Seoul Viosys, Seoul, South Korea, 2014-2017

**■ Publishers**

- M.F. Modest and S. Mazumder, 2018. *Radiative Heat Transfer, 4<sup>th</sup> Edition*, Elsevier. Review of book proposal.
- M.J. Moran, H.N. Shapiro, D.D. Boettner, M.B. Bailey, 2015. *Fundamentals of Engineering Thermodynamics 7<sup>th</sup> Edition*, ISBN-13: 978-0470917688. Review of WileyPLUS Learning Space
- P. Stevenson and J. Wadhawan, 2015. *Thermodynamics for Chemical Engineering: A Process Approach*, CRC Press/Taylor & Francis Group. Review of book proposal.
- Johannes M. Nitsche and Ludwig C. Nitsche, 2013. *Problems in Chemical Engineering: Transport Phenomena*, book proposal to Springer, New York, NY, U.S.A.
- M. J. Moran and H. N. Shapiro, 2013. *Fundamentals of Engineering Thermodynamics*, Review the proposed development of digital resources for Wiley & Sons.
- Li-Zhi Zhang, 2012. *Conjugated Heat and Mass Transfer in Ducts of Heat and Mass Exchangers*, book proposal to Academic Press / Elsevier.
- M. Modest, 2010. *Radiative Heat Transfer, 3<sup>rd</sup> Edition*, Academic Press, San Diego, CA, USA.
- M. J. Moran and H. N. Shapiro, 2006. *Fundamentals of Engineering Thermodynamics, 6<sup>th</sup> Edition*, Wiley & Sons (Chapter 1 to 3).
- Y. A. Cengel and M. A. Boles, 2005. *Thermodynamics – An Engineering Approach, 6<sup>th</sup> Edition*, Mc. Graw Hill.

**■ Academic Institutions**

- University of Texas, Austin – NRT-INFEWS proposal preparation - January 2018

**REFEREE****■ Technical reviewer for proposals submitted to**

- Agence National de la Recherche (French National Science Foundation), Paris France, 2018
  - U.S. Department of Energy, Energy Efficiency and Renewable Energy (EERE), Solar Energy Technology Office (SETO), 2018
  - UCLA Sustainable LA Grand Challenge, 2016
  - UCLA Sustainable LA Grand Challenge, 2015
  - King Fahd University of Petroleum and Minerals, May 2014
  - The U.S. National Science Foundation, December 2013
  - The National Center of Science and Technology Evaluation of Kazakhstan, February 2013
  - Région Rhône-Alpes, Lyon, France, February 2012
  - The Estonian Science Foundation (ETF), October 2011
  - Nebraska Center for Energy Sciences Research, October 2011
  - The U.S. Department of Energy, ARPA-E, HEATS Program, August 2011
  - The National Science Foundation, Arlington, VA – December 2010
  - Public Service Electric and Gas, Energy Technology Demonstration Grant Program, NJ – Aug. 2010
  - The National Science Foundation, Arlington, VA – August 2010
  - The American Diabetes Association - September 2007
  - The University of California Energy Institute, Berkeley, CA – June 2007
  - The National Science Foundation, Arlington, VA – August 2007
  - The University of California Energy Institute, CA – March 2007
  - The National Science Foundation, Arlington, VA – June 2006
  - The National Science Foundation, Arlington, VA – February 2006
  - The National Science Foundation, Arlington, VA – October 2005
  - The National Science Foundation, Arlington, VA – April 2005
  - The Kentucky Science & Engineering Foundation R&D Excellence Program – 2004
-

**TEACHING EXPERIENCE****PURDUE UNIVERSITY, DEPT. OF FOREIGN LANGUAGES – WEST LAFAYETTE, INDIANA - USA**

Instructor. Department of Foreign Languages. August 1998 – May 1999

- Led recitations for classes of undergraduate students (total of 75 students in two semesters).
- Designed, conducted, and evaluated written examinations for the classes.

**PURDUE UNIVERSITY, SCHOOL OF NUCLEAR ENGINEERING – WEST LAFAYETTE, INDIANA - USA**

- Conducted workshop for users of the thermal-hydraulics nuclear safety code CATHARE.

**PURDUE UNIVERSITY, CENTER FOR INSTRUCTIONAL EXCELLENCE COLLEGE TEACHING**

- Attended Workshop: *Can a professor be entertaining and effective?* February 2001.

**UNIVERSITY OF CALIFORNIA, DEPT. OF MECHANICAL & AEROSPACE ENGINEERING – LOS ANGELES, CA**

- 2005 – Developed the new graduate course *MAE 285 Interfacial Phenomena*
- 2013 – Developed engineering school-wide Technical Breath Area (TBA) in *Energy and the Environment*
  - All UCLA undergraduate engineering students are required to satisfy a TBA requirement
  - TBA in *Energy and the Environment* requires students to take 3 out of 6 selected courses
  - Approved by the UCLA Undergraduate Council in Spring 2013.
- 2014 – Developed a new undergraduate course *MAE 136 Energy and the Environment*

**UNIVERSITY OF CALIFORNIA, DEPT. OF MECHANICAL & AEROSPACE ENGINEERING – LOS ANGELES, CA**

	Course	Title	Quarter (# students)	My rating	Average Dept.
UNIVERSITY OF CALIFORNIA, DEPT. OF MECHANICAL & AEROSPACE ENGINEERING – LOS ANGELES, CA	MAE 105A	Introduction to Engineering Thermodynamics	S' 03 (72)	7.98/9.00	7.24/9.00
	MAE 105A	Introduction to Engineering Thermodynamics	F' 03 (56)	8.00/9.00	7.42/9.00
	MAE 105A	Introduction to Engineering Thermodynamics	F' 05 (100)	7.86/9.00	7.42/9.00
	MAE 105A	Introduction to Engineering Thermodynamics	F' 07 (89)	7.81/9.00	7.42 /9.00
	MAE 105A	Introduction to Engineering Thermodynamics	F' 08 (86)	7.95/9.00	7.42 /9.00
	MAE 105A	Introduction to Engineering Thermodynamics	W' 13 (109)	7.96/9.00	7.42 /9.00
	MAE 105A	Introduction to Engineering Thermodynamics	F' 14 (91)	8.23/9.00	7.42 /9.00
	MAE 105A	Introduction to Engineering Thermodynamics	W' 17 (105)	8.32/9.00	7.42 /9.00
	MAE 105A	Introduction to Engineering Thermodynamics	W' 18 (106)	8.71/9.00	7.42 /9.00
	MAE 105D	Transport Phenomena	S' 04 (38)	8.23/9.00	7.54/9.00
	MAE 105D	Transport Phenomena	S' 09 (75)	8.10/9.00	7.54/9.00
	MAE 131A	Intermediate Heat Transfer	W' 03 (38)	8.13/9.00	7.34/9.00
	MAE 131A	Intermediate Heat Transfer	W' 04 (73)	7.98/9.00	7.01/9.00
	MAE 131A	Intermediate Heat Transfer	W' 05 (61)	8.15/9.00	7.16/9.00
	MAE 131A	Intermediate Heat Transfer	W' 06 (47)	8.29/9.00	7.26/9.00
	MAE 131A	Intermediate Heat Transfer	F' 09 (58)	8.48/9.00	7.26/9.00
	MAE 131A	Intermediate Heat Transfer	W' 11 (74)	8.70/9.00	7.26/9.00
	MAE 131A	Intermediate Heat Transfer	W' 12 (43)	8.22/9.00	7.26/9.00
	MAE 131A	Intermediate Heat Transfer	F' 13 (16)	8.80/9.00	7.26/9.00
	MAE 136	Energy and the Environment	W' 15 (61)	7.97/9.00	/9.00
MAE 136	Energy and the Environment	S' 17 (66)	8.06/9.00		
MAE 157	Basic Mechanical Engineering Lab.	S' 07 (24)	8.20/9.00	7.17/9.00	
GRADUATE	MAE 231B	Radiation Heat Transfer (with Prof. R. Viskanta)	W' 06 (11)	7.46/9.00	7.26/9.00
	MAE 231B	Radiation Heat Transfer	W' 07 (18)	6.94/9.00	7.54/9.00
	MAE 231B	Radiation Heat Transfer	W' 08 (16)	7.67/9.00	7.54/9.00
	MAE 231B	Radiation Heat Transfer	W' 09 (22)	7.62/9.00	7.54/9.00
	MAE 231B	Radiation Heat Transfer	S' 10 (18)	7.75/9.00	7.54/9.00
	MAE 231B	Radiation Heat Transfer	F' 10 (24)	8.24/9.00	7.54/9.00

T E	<b>MAE 231B</b>	Radiation Heat Transfer	F' 11 (19)	8.47/9.00	7.93/9.00
	<b>MAE 231B</b>	Radiation Heat Transfer	S' 13 (30)	8.40/9.00	7.77/9.00
	<b>MAE 231B</b>	Radiation Heat Transfer	S' 14 (15)	8.54/9.00	7.77/9.00
	<b>MAE 231B</b>	Radiation Heat Transfer	S' 15 (9)	8.67/9.00	7.77/9.00
	<b>MAE 231B</b>	Radiation Heat Transfer	S' 16 (19)	8.62/9.00	7.77/9.00
	<b>MAE 231B</b>	Radiation Heat Transfer	S' 17 (23)	6.58/9.00	7.77/9.00
	<b>MAE 231B</b>	Radiation Heat Transfer	S' 18 (23)	8.50/9.00	7.77/9.00
	<b>MAE 281</b>	Microsciences (with Prof. C.J. Kim)	F' 03 (42)	6.82/9.00	7.42/9.00
	<b>MAE 285</b>	Interfacial Phenomena	S' 05 (9)	6.75/9.00	7.54/9.00
	<b>MAE 285</b>	Interfacial Phenomena	S' 08 (24)	8.23/9.00	7.54/9.00
<b>MAE 285</b>	Interfacial Phenomena	S' 12 (25)	8.52/9.00	7.66/9.00	
<b>MAE 298</b>	Advanced Transport Phenomena	F' 04 (8)	8.14/9.00	7.11/9.00	
<b>MAE 298</b>	Advanced Clean Energy	S' 11 (32)	7.00/9.00		

## OUTREACH ACTIVITIES AND COMMUNICATION

1. **Member of the Board of Directors of the Alliance Française of Los Angeles, CA.** January 1, 2013- June 30, 2015. Also in charge of organizing a quarterly scientific event for the general public called “Café des Sciences”.
2. **Instructor. Orthopaedic Hospital Medical Magnet High School, Los Angeles, CA.** January 14, 2013. *Microalgae: Sustainable Biofuel of the Future?*
3. **Instructor. UCLA Anderson School of Management, Leaders in Sustainability Program. Nuclear Energy: Good, bad, or an acceptable alternative?** Los Angeles, CA, January 24<sup>th</sup>, 2013. Host: Prof. Magalie Delmas.
4. **Instructor. UCLA Anderson School of Management, Leaders in Sustainability Program. Nuclear Energy: Good, bad, or an acceptable alternative?** Los Angeles, CA, March 6<sup>th</sup>, 2012. Host: Prof. Charles Corbett.
5. **Seminar:** Café des Sciences organized by the French Office for Science and Technology, Los Angeles, CA. October 4, 2012. *Microalgae For Sustainable Biofuel Production (in French)*.
6. **Interview:** *PortTechLA Asking An Expert About Biofuels: A Discussion with UCLA Professor Laurent Pilon*, April 3, 2012. <http://porttechla.org/component/content/article/18-technology-focus/54-ask-an-expert-biofuels>
7. **Seminar:** Bloomberg Cars & Fuels Briefing, Hammer Museum, Los Angeles, CA December 1<sup>st</sup>, 2009. *Photobiological Hydrogen and Biodiesel Production*.
8. **Seminar:** UCLA Professor in The Union, February 27<sup>th</sup>, 2007. *Energy for Tomorrow – Powering the 21<sup>st</sup> Century*.
9. **Seminar:** California State University, Chico, July 21<sup>st</sup>, 2006. Research Experience for Undergraduates Program, Mathematic Department. *Mathematical Modeling in Biomedical Optics*.
10. **Seminar:** UCLA Professor in The Union, February 1<sup>st</sup>, 2005. *Energy for Tomorrow – Powering the 21<sup>st</sup> Century*.
11. **Member of the panel of discussion** on “*Mastering the Academic Interview - Science & Engineering*” organized by the UCLA career center on Wednesday, November 13, 2002.

## INVITED PRESENTATIONS AT INTERNATIONAL CONFERENCES

1. 2019 MRS Spring Meeting & Exhibit, Phoenix, April 22-26, 2019. Symposium ES09: Thermal Energy— Transfer, Conversion, and Storage. **Invited Speaker.** *Transparent and Thermally Insulating Mesoporous Silica Slabs for Energy Applications*.
2. 2017 International Symposium on Porous Materials for Energy and Environment (PM4EE2017), Qingdao, China, December 17-19, 2017. **Invited Speaker.** *Modeling Interfacial and Transport Phenomena in Hybrid Pseudocapacitors*.

3. 2017 MRS Fall Meeting & Exhibit, Boston, November 26-December 1, 2017. Symposium ES09: Thermal Energy—Transfer, Conversion, and Storage. **Invited Speaker**. *Pyroelectric Energy Conversion*.
4. L. Pilon, J. Pruvost, R. Kandilian, 2017. 6<sup>th</sup> Congress of the International Society of Applied Phycology (ISAP 2017), June 18-23, 2017, Nantes, France. **Invited Speaker**. *The importance of light transfer for microalgae growth kinetics and metabolite production*.
5. 229<sup>th</sup> Electrochemical Society ECS Meeting, San Diego May 29 – June 3, 2016. **Invited Speaker**. *Interfacial and Transport Phenomena in Hybrid Pseudocapacitors*.
6. 7th International Conference on Porous Media & Annual Meeting of the International Society for Porous Media, InterPore, Padova, Italy, May 18-21, 2015. **Invited Speaker**. *Interfacial and Transport Phenomena in Electrochemical Capacitors*.
7. 226<sup>th</sup> Meeting of the Electrochemistry Society, Cancun, Mexico, 5-10 October 2014. **Invited Speaker**. *Continuum Modeling of Interfacial and Transport Phenomena in Electrochemical Capacitors*.
8. Asia-Pacific Conference on Electrochemical Energy Storage & Conversion (APEnergy2014), Brisbane Convention & Exhibition Centre, Brisbane, Australia, 5-8 February 2014. **Invited Keynote Speaker**. *Continuum Modeling of Interfacial and Transport Phenomena in Electric Double Layer Capacitors*.
9. International Heat Transfer Conference (IHTC-14), Washington, DC, August 8-13, 2010. **Invited Speaker**. *Radiation Transfer in Photobiological Fuel Production*. Forum 1: Radiative Transfer and Properties for Renewable Energy Applications organized by Q. Zhu and Z. Zhang.
10. IEEE Winter Topical Meeting on Advanced Imaging in Bio-Photonics, 2010. Palma de Mallorca, Spain, January 11-13, 2010. *Evaluation of Diabetic Foot Ulcer Development Using Hyperspectral Imaging* (invited presentation).
11. K. M. Katika and L. Pilon, 2005. *Modified Method of Characteristics for Solving the Transient Radiative Transfer Equation*, **Invited Speaker**, Eurotherm Seminar 82, Numerical Heat Transfer 2005, Vol. 2, pp. 333-342, September 13–16, 2005, Krakow, Poland, Eds.: A. Nowak, R.A. Biaolecki.

#### INVITED PRESENTATIONS AT UNIVERSITIES AND CORPORATIONS

12. California State University Northridge, CA. November 18, 2017. *UCLA Innovates at the Nexus of Food, Energy, and Water Systems*, California Renewable Energy and Storage Technology (CREST 2017) conference.
  13. ETH Zurich, Switzerland. August 25, 2017. *Microencapsulated Phase Change Materials for Energy Efficient Buildings*.
  14. Arizona State University, Tempe, AZ. September 9, 2016. *Microencapsulated Phase Change Materials for Energy Efficient Buildings*.
  15. University of California, Riverside. October 23, 2015. *Light Transfer in Photobioreactors for CO<sub>2</sub> Capture and Biofuel Production*.
  16. Vanderbilt University, Nashville, TN, September 14, 2015. *Continuum Modeling of Interfacial and Transport Phenomena in Electric Double Layer Capacitors*.
  17. University of Nantes, France, Institut des Matériaux Jean Rouxel, 16 July 2014. *Continuum Modeling of Interfacial and Transport Phenomena in Electric Double Layer Capacitors*.
  18. Purdue University, West Lafayette, IN, April 21, 2014. *A Technology Portfolio for a Renewable Energy Future*. *Kenninger Renewable Energy and Power Systems Seminar*.
  19. Purdue University, West Lafayette, IN, March 26, 2014. *Continuum Modeling of Interfacial and Transport Phenomena in Electric Double Layer Capacitors*. *Raymond Viskanta Lecture*.
  20. University of California, San Diego, Mechanical and Aerospace Engineering Department, October 21, 2013. *Transport Phenomena and Scaling Laws in Aqueous Foams*.
  21. University of Nantes, Process Engineering for Environment and Food Laboratory (GEPEA), France, July 4, 2013. *Characterization and Control of Light Transfer in Photobioreactors*.
  22. Swiss Federal Institute of Technology Zurich, Institute of Energy Technology, December 14, 2012. *Highly Ordered Mesoporous Materials for Energy Applications*.
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23. Workshop on Development of Microalgae Industrial Biotechnology: From Animal Food to Bioenergy. Organized by French Bio Beach Association, UCSD Campus, La Jolla, CA, November 12, 2012. *Light Transfer in Photobiofuel Production Using Microalgae*.
  24. University of California, Merced, Mechanical Engineering Department, November 9, 2012. *Radiation Transfer in Photobiological Fuel Production Using Microalgae*.
  25. Clemson University, Mechanical Engineering Department, October 12, 2012. *Transport Phenomena in Supercapacitors*.
  26. University of California Los Angeles, Electrical Engineering Department, February 2, 2012. *Light Transfer in Carbon Dioxide Fixation and Biofuel Production*.
  27. University of California Los Angeles, Material Science and Engineering Department, October 7, 2011. *Highly Ordered Mesoporous Materials for Energy Applications*.
  28. University of Minnesota, Saint Paul, MN, September 15, 2010. *Highly Ordered Mesoporous Materials for Energy Applications*.
  29. Columbia University, New York, NY, February 17, 2010. *Highly Ordered Mesoporous Materials for Energy Applications*.
  30. University of Texas at Dallas, October 8<sup>th</sup>, 2009. *Optical and Thermal Properties of Highly Ordered Mesoporous Thin Films*.
  31. University of Science and Technology, Beijing, People's Republic of China, August 20, 2009. *Optical and Thermal Properties of Highly Ordered Mesoporous Thin Films*.
  32. Dalian University of Technology, Dalian, People's Republic of China, August 19, 2009. *Photobiological CO<sub>2</sub> Capture and H<sub>2</sub> Production*.
  33. Tsinghua University, Beijing, People's Republic of China, August 16, 2009. *Overview of Renewable Energy Research in Pilon's Lab at UCLA*.
  34. Pekin University, Beijing, People's Republic of China, August 16-21, 2009. IUTAM Summer School on Mechanics in Microfluidics. *Interfacial Phenomena and Microfluidics in Foams*.
  35. California State University, Chico, July 17<sup>th</sup>, 2009. Research Experience for Undergraduates Program, Mathematic Department. *Mathematical Modeling in Biomedical Applications*.
  36. University of California, Riverside, CA, May 29<sup>th</sup>, 2009. *Optical and Thermal Properties of Highly Ordered Mesoporous Thin Films*.
  37. Columbia University, New York, NY, April 17<sup>th</sup>, 2009. *Photobiological Hydrogen Production*.
  38. ASME International Conference on Micro/Nanoscale Heat Transfer, MNHT 2008, Tainan, Taiwan. January 6-9, 2008. *Effective Optical Properties of Nanocomposite Thin Films* (invited speaker).
  39. Nagoya University, Nagoya, Japan, March 26<sup>rd</sup>, 2007. *Temporal Nanoscale Radiation Transfer for Non-Invasive Sensing of Biological Tissues*. 1<sup>st</sup> Nagoya University-UCLA Symposium on Micro-Nano Mechatronics for Future Biomedecine.
  40. Asahi Glass Corporation Research Center, Yokohama, Japan, March 23<sup>rd</sup>, 2007.
  41. University of Kentucky, April 27<sup>th</sup>, 2006. William Maxwell Reed Seminar, Mechanical Engineering Department. *Tuning the Optical and Radiation Properties of Material Using Nanobubbles*.
  42. University of New Mexico, October 18<sup>th</sup>, 2005. Nuclear and Chemical Engineering Department. *Time-Resolved Photometry For Sensing Biological Tissues*.
  43. University of Southern California, April 6<sup>th</sup>, 2005. Mechanical and Aerospace Engineering Department. *Time-Resolved Photometry For Sensing Biological Tissues*.
  44. Brigham Young University, Thermal Science Seminar, Mechanical Engineering Department, September 16<sup>th</sup>, 2004. *Interfacial and transport phenomena in liquid/gas foams*.
  45. Soft Matter Seminar, Physics Department, UCLA, March 19<sup>th</sup>, 2004. *Formation and stability of liquid foams*.
  46. Center for Thermal Science of Lyon (CETHIL), Lyon, France, Dec. 17<sup>th</sup>, 2003. *Backward method of characteristics for nanoscale and radiative heat transfer*.
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47. Universitat Politècnica de Catalunya, Barcelona, Spain, Sept. 16-17<sup>th</sup>, 2002. *Talk #1: Interfacial and Transport Phenomena in Closed-Cell Foams. Talk #2: Modified Method of Characteristics for Solving the Population Balance Equation.*
48. Saint-Gobain Recherche, Aubervilliers, France, Sept. 6<sup>th</sup>, 2002. *Phénomènes de Transport dans les Fours à Verre: Bulles, Mousses, et Tapis de Composition.*
49. Massachusetts Institute of Technology, Department of Mechanical Engineering, Feb. 25<sup>th</sup>, 2002. *Interfacial and Transport Phenomena in Closed-Cell Foams.*
50. University of Connecticut, Department of Mechanical Engineering, Jan. 30<sup>th</sup>, 2002. *Interfacial and Transport Phenomena in Closed-Cell Foams.*
51. French Atomic Energy Commission, Grenoble, France, Sept. 6<sup>th</sup>, 2001. *Bulles, Formation des Mousses, Phénomènes de Transport dans les Fours à Verre.*
52. Technical University of Eindhoven, Glass Technology Group, Eindhoven, the Netherlands, Sept. 2001. *Foams: formation and Transport Phenomena.*
53. Swiss Federal Institute of Technology (ETH), Laboratory for Thermodynamics in Emerging Technologies, Zurich, Switzerland, Sept. 2001. *Foams: formation and Transport Phenomena.*
54. Purdue University School of Nuclear Engineering Seminar, Mar. 1998. *The French Nuclear Safety Code CATHARE.*

## GRADUATE THESES AND PROJECTS SUPERVISED

### ▪ Ph.D Students

1. Kamal M. Katika, PhD Thesis, September 2007.  
*Transient Radiation Transport in Biological Tissues & Applications to Autofluorescence of Human Skin.*
  2. Halil Berberoğlu. PhD Thesis, July 2008.  
*Photobiological Hydrogen Production and Carbon Dioxide Mitigation*
  3. Ashcon Navid, PhD Thesis, August 2010.  
*Pyroelectric Energy Conversion for Waste Heat Harvesting*
  4. Dmitry Yudovsky, PhD Thesis, December 2010.  
*Spectroscopy of Multilayered Biological Tissues for Diabetes Care*
  5. Thomas Coquil, PhD Thesis, August 2011.  
*Thermal and Optical Properties of Highly Ordered Mesoporous Materials for Energy Applications*
  6. Jin Fang, PhD Thesis, June 2012.  
*Thermal Transport in Nanoporous Materials for Energy Applications*
  7. Euntaek Lee, PhD Thesis, March 2013.  
*Light Transfer Simulation Tools in Photobiological Fuel Production*
  8. Hainan Wang, PhD Thesis, Spring 2014.  
*Modeling and Simulation of Electrical Energy Storage In Electrochemical Capacitors*
  9. Ian McKinley, PhD Thesis, December 2013.  
*Thermomechanical Energy Conversion Using Ferroelectric Materials*
  10. Razmig Kandilian, PhD Thesis, September 2014.  
*Optimization and Control of Light Transfer in Photobioreactors for Biofuel Production*
  11. Yitong Zhao, PhD Thesis, June 2014 (co-chair with Prof. Chih-Ming Ho) – Bioengineering Department  
*Optimizing Biofuel Production of a Cell-Free System by Feedback System Control Scheme*
  12. Ri-Liang Heng, PhD Thesis, December 2014.  
*Radiation Characteristics of Biofuel-Producing Photosynthetic Microorganisms*
  13. Anna D'Entremont, PhD Thesis, December 2015.  
*Thermal Modeling of Electrochemical Capacitors*
-

14. Alexander Thiele, PhD Thesis, June 2016.  
Chair: Laurent Pilon, Co-Chair: Gaurav Sant  
*Microencapsulated Phase Change Composite Materials for Energy Efficient Buildings*
  15. Joseph Attia, PhD Thesis, June 2016.  
Chair: Laurent Pilon  
*Transport Phenomena in Liquid Foams and Liquid Marbles Colloids*
  16. Zhenhua Wei, PhD Thesis, June 2016.  
Chair: Gaurav Sant, Co-Chair: Laurent Pilon  
*Durability of Cementitious Composites Containing Phase Change Materials (PCMs)*
  17. Bing-Ang Mei, PhD Thesis, June 2018.  
*Continuum Modeling of Three-Dimensional Porous Electrodes of Electrochemical Capacitors*
  18. Obaidallah Munteshari, PhD student, started Fall 2015, ATC in Fall 2017.  
*Experimental Thermal Characterization of Electrochemical Capacitors*
  19. Tiphaine Galy, PhD student, started Fall 2016, ATC in Fall 2017.  
Structure and Radiation Characteristics of Transparent and Selective Mesoporous Coatings
  20. Ampol Likitchawankum, PhD student, started Fall 2016, Passed HMT prelims in June 2017.  
*Heat generation and Degradation Mechanisms in Electrochemical Capacitors*
  21. Eylyl Simsek, PhD student, started Fall 2016, Passed HMT prelims in June 2017.  
*Population Balance Theory for Optimizing Solar Receivers and Reactors*
  22. Sara Vallejo Castaña, PhD student. Passed HMT prelims in June 2018.  
*Clinkered-Free Route for Calcium Hydroxide Production and CO<sub>2</sub> Capture in Cementitious Materials*
  23. Matevž Frajnkovič (co-advised with Prof. Catton), PhD student. Passed HMT prelims in June 2018.  
*Thermal Transport and Heat Generation on Nanoporous Carbon-Based Supercapacitors*
  24. Jack Hoeniges, PhD student, started Fall 2018  
*Light Transfer Control and Optimization in Outdoor Photobioreactors*
- **Master of Science with Thesis**
1. Kamal M. Katika. M.S. Thesis, August 2004.  
*Modified Method of Characteristics in Radiative Transfer*
  2. Matthew M. Braun, M.S. Thesis, December 2004.  
*Effective Optical Properties of Nanoporous Thin-Films*
  3. Damien Vanderpool, M.S. Thesis, July 2008.  
*Numerical and Experimental Study of a Pyroelectric Energy Converter for Harvesting Waste Heat*
  4. Hiep Nguyen, M.S. Thesis, December 2009.  
*Pyroelectric Energy Converter Using Co-Polymer P(VDF-TrFE) and Olsen Cycle for Waste Heat Energy Harvesting*
  5. Raylene Moreno, M.S. Thesis, September 2011.  
*Pyroelectric Energy Converter: Numerical Simulations vs. Experimental Results*
  6. David Wirth, M.S. Thesis, June 2012.  
*Experimental Study on the Aerospace Applications of Photoreactive Nanomaterials*
  7. Felix Lee, M.S. Thesis, December 2012.  
*Experimental and Analytical Studies on Pyroelectric Waste Heat Energy Conversion*
  8. Amanda Fujii, M.S. Thesis, December 2014.  
*Effect of Nanoporosity on the Thermal Conductivity of Amorphous Carbon*
  9. Henri-Louis Girard, M.S. Thesis, June 2015.  
*Modeling and Physical Interpretation of Pseudocapacitors under Cyclic Voltammetry*
-

10. Alexander Ricklefs, M.S. Thesis, Fall 2015.  
*Thermal Conductivity of Cementitious Materials Containing Microencapsulated Phase Change Materials*
  11. Louis Z. Linden, M.S. Thesis, Spring 2017.  
*Energy Analysis for Producing Low-Carbon Footprint Cementitious Building Materials*
  12. Benjamin A. Young, MS student, Fall 2017  
Chair: Laurent Pilon, Co-Chair: Gaurav Sant  
*Cementitious Materials with Embedded Microencapsulated PCM for Sustainable Infrastructure*
  13. Zhenyu She, MS student, Spring 2018  
Chair: Laurent Pilon, Co-Chair: Gaurav Sant  
*Early-Age Temperature Development in Concrete Pavements Containing Microencapsulated Phase Change Materials*
- **Master of Science with Project**
14. Howard Tseng, M.S., Sept. 2004.  
*Rheology and Convective Heat Transfer in Colloidal Gas Aphrons*
  15. Kyle D. Smith, M.S., July 2006.  
*Maximum Time-Resolved Hemispherical Reflectance for Estimating the Scattering and Absorption Coefficients of Turbid Media*
  16. Ashcon Navid, M.S., June 2007.  
*Effect of Polarization on Effective Optical Properties of Nanocomposite Thin Films*
  17. Soojung C. Hur, M.S., July 2007.  
*Synthesis and Characterization of Mesoporous Thin-Films*
  18. Jennifer Blackwell, M.S., June 2007.  
*In-vivo Time-Resolved Autofluorescence Measurements on Human Skin*
  19. Brian James, M.S., June 2010.  
*Comparison of Numerical Simulations Against Experimental Data of a Pyroelectric Energy Converter Using the Olsen Cycle*
  20. Herman Wong, M.S., June 2010.  
*Effect of the Working Fluid on the Performances of Pyroelectric Waste Heat Energy Harvester Using Co-Polymer P(VDF-TrFE) and Olsen Cycle*
  21. Pedro Gomez, M.S., September 2010.  
*Radiation Characteristics of Botryococcus braunii, Chlorococcum littorale, and Chlorella sp. Used For CO<sub>2</sub> Fixation and Biofuel Production.*
  22. Vincent Partusch, August 2016.  
*Radiation Characteristics of Volvox*

## GRADUATE STUDENTS AND POSTDOCTORAL SCHOLARS

### *Post-Doctoral Scholars*

1. Dr. Michal Marszewski, Nov. 2016-Dec. 2018
2. Dr. Arka Bhowmik April 2015-January 2016                      National Institute of Technology (NIT), Calicut, India
3. Dr. Julian Varghese. Sept. 2009- April 2011                      Software Engineer, DS Spatial Corp., Bloomfield, CO
4. Dr. Juan Yin. June 2005 - June 2006                                      Solar Turbines, San Diego, CA

### *Graduate students*

1. Bing-Ang Mei, PhD, Spring 2018                                      Assistant Professor, Beijing Institute of Technology, China
2. Zhenhua Wei, PhD, June 2016                                      Postdoctoral Scholar, Columbia University, New York, NY
3. Joseph Attia, PhD, Spring 2016                                      Propulsion Reliability Engineer, SpaceX, Hawthorne, CA

4. Alexander M. Thiele, PhD, Spring 2016 Associate, Exponent, Los Angeles, CA
5. Anna d'Entremont, PhD, Fall 2015 Post-Doc, Savannah River National Laboratory, SC
6. Ri-Liang Heng, PhD, Spring 2015 Managing Director, Wholly Green, Pte Ltd., Singapore
7. Yitong Zhao, PhD, Spring 2014 Assistant Professor, Cal Poly Pomona, CA
8. Razmig Kandilian, PhD, Spring 2014 Post-Doctoral Scholar, University of Nantes, France
9. Ian McKinley, PhD, Fall 2013 Scientist, Jet Propulsion Laboratory, Pasadena, CA
10. Hainan Wang, PhD, Fall 2013 Principal Software Engineer, Cadence, San Jose, CA
11. Euntaek Lee, PhD, Winter 2013 Asst. Prof., Kumoh National Institute of Technology, Gumi, Korea
12. Jin Fang, Ph.D., Spring 2012 Sr. Development Engineer, Seagate, Minneapolis, MN
13. Ashcon Navid, Ph.D., 2010 Research Engineer, Intel Corporation, Portland, OR
14. Dmitry Yudovsky, Ph.D., 2010 Founder and CEO AlgoLIFT, Los Angeles, CA
15. Thomas Coquil, Ph.D., 2010 Founder and CEO, Solaire Box, Paris, France
16. Halil Berberoğlu, Ph.D., 2008 Apple, Cupertino, CA
17. Kamal M. Katika, Ph.D., 2007 Field Street Capital Management, LLC, New York, NY
18. Benjamin A. Young, M.S.M.E. (thesis), 2017 Lead Data Scientist, AlgoLIFT, CA
19. Alexander Ricklefs, M.S.M.E. (thesis), 2016 Project Manager, The Energy Coalition, CA
20. Louis Z. Linden, M.S.M.E. (thesis), Dec. 2016 Analyst, Southern California Edison, CA
21. Henri-Louis Girard, M.S.M.E. (thesis), 2015 PhD student, Massachusetts Institute of Technology, MA
22. Amanda Fuji, M.S.M.E. (thesis), 2012 Rotation Engineer, Pacific Gas and Electric Co., Bay Area, CA
23. Felix Lee, M.S.M.E. (thesis), 2012 Junior Engineer, Mea Forensic, Laguna Hills, CA
24. David Wirth, M.S.A.E. (thesis), 2012 2<sup>nd</sup> Lieutenant, United States Air Force, TX
25. Raylene Moreno, M.S.M.E. (thesis), 2011 Engineer, Parsons Brinckerhoff, Sacramento, CA
26. Hiep Nguyen, M.S.M.E. (thesis), 2009 UltraCell Corporation, Livermore, CA.
27. Damien Vanderpool, M.S.M.E. (thesis), 2008 ATA Engineering, Inc., El Segundo, CA.
28. Matthew M. Braun, M.S.M.E. (thesis), Dec. 2004 Raytheon Corp., El Segundo, CA.
29. Kamal M. Katika, M.S.M.E. (thesis), 2004 UCLA Mechanical & Aerospace Eng., PhD Student
30. Herman J. Wong, M.S.M.E. (project), 2010 Black & Decker HHI, Foothill Ranch, CA
31. Pedro Gomez, M.S.M.E. (project), 2010 Advanced Process Engineer, 3M, Minneapolis, MN
32. Brian A. James, M.S.M.E. (project), 2010 Southern California Edison, Irwindale, CA
33. Tzu-Ying Tseng, M.S.M.E. (project), 2010 Touchdown Technologies, Los Angeles, CA
34. Soojung C. Hur, M.S.M.E. (project), 2006 John Hopkins University, Assistant Prof.
35. Jennifer Blackwell, M.S.M.E. (project), June 2007 DexCom, Inc., San Diego, CA
36. Kyle D. Smith, M.S.M.E. (project), July 2006 ATA Engineering, Inc. San Diego, CA
37. Howard Tseng, M.S.M.E. (project), Sept. 2004 MathWorks, Boston, MA

## STUDENT ACHIEVEMENTS

### Bing-Ang Mei (PhD 2018)

- 2018 Sandra Williamson Scholarship – UCLA Mechanical and Aerospace Engineering Dept.

### Aisha Kermich (BSChemE 2018)

- 2017-19 University of California Leadership Excellence through Advanced DegreeS (UC LEADS) Scholar
- 2017 Outstanding Poster Presentation - the Annual Biomedical Research Conference for Minority Students

### Christopher Perez (BSME 2017)

- 2017 Outstanding Bachelor of Science Degree in Mechanical Engineering Award.
  - Summer 2015 RISE-UP Scholar
  - 2015-2016 University of California CARE Scholar
  - 2016-2017 Maximum Student Development Scholar
-

**Alexander Thiele (PhD 2016)**

- 2016 Finalist UCLA Grad Slam

**Anna d'Entremont (PhD 2015)**

- 2011 National Science Foundation Graduate Fellowship.
- 2015 Dimitris N. Chorafas Research Award.
- 2015-2016 UCLA Outstanding Ph.D in Mechanical Engineering Award.

**Razmig Kandilian (PhD 2014)**

- 2009-2010 UCLA Outstanding Bachelor of Science Degree in Mechanical Engineering Award.
- 2012-2013 Chateaubriand Fellowship from the French Embassy in the United States.

**Amanda Fujii (MSME 2013)**

- 2011-2012 UCLA Outstanding Bachelor of Science in Mechanical Engineering Award.

**Ian McKinley (PhD 2013)**

- Best Paper Award (2<sup>nd</sup> Prize) at the ASME 2012 3rd Micro/Nanoscale Heat & Mass Transfer International Conference, Atlanta March 3-6, 2012 (out of 140 papers).

**Hainan Wang (PhD 2013)**

- 2013 Chinese Government Award for Outstanding Self-Financed Students Studying Abroad.

**Felix Lee (MSME 2012)**

- Best Paper Award (2<sup>nd</sup> Prize) at the ASME 2012 3rd Micro/Nanoscale Heat & Mass Transfer International Conference, Atlanta March 3-6, 2012 (out of 140 papers).

**David Wirth (MSAE 2012)**

- 2010 ROTC Scholarship from the Armed Forces Communications and Electronics Association Educational Foundation.

**Jin Fang (PhD 2012)**

- 2011-2012 UCLA Outstanding PhD in Mechanical Engineering Award.
- 3<sup>rd</sup> place in poster competition at ASME Society-Wide Micro and Nano Technology Forum at ASME IMECE 2011, Denver, CO, November 11-17, 2011.

**Gabriel Garcia (BSME 2012)**

- 3<sup>rd</sup> Place in the 2010 UCLA RISE-UP poster competition.

**Raylene Moreno (MSME 2011)**

- 2010-2011 UCLA Graduate Opportunities Fellowship.
- 2010 UCLA Engineering Achievement Award for Student Welfare.

**Dmitry Yudovsky (PhD 2010)**

- 1<sup>st</sup> Place in the Biophysics Track at the 10<sup>th</sup> Annual Systemwide Bioengineering Institute of California Symposium, Merced, June 19-21, 2009.
- 3<sup>rd</sup> Place in the poster competition at the 2009 Veteran Administration Greater Los Angeles Healthcare System/UCLA 16th Annual Physical Medicine and Rehabilitation Service Residency Research Day for Physicians and Rehabilitation Professionals. Title: “*Evaluation of Diabetic Foot Ulcer Development with Hyperspectral Imaging of Oxyhemoglobin and Deoxyhemoglobin*” by D. Yudovsky, MS; T. Shiao DPM; A. Herrick DPM; L. Pilon, PhD; J. Thompson DPM; D. Aungst, DPM; A. Nouvong, DPM.

**Brian James (MS 2010)**

- 2012 - 2013 ASME Early Career Leadership Intern Program to Serve Engineering (ECLIPSE).
-

**Neal Hutchinson (BSME 2009)**

- 2<sup>nd</sup> Place in the 2008 UCLA RISE-UP poster competition.
- 2009 Harry M. Showman Prize\* from UCLA School of Engineering and Applied Science.

**Abubbakar Bah (BSME 2009)**

- 1<sup>st</sup> Place in the 2008 UCLA RISE-UP poster competition.

**Damien Vanderpool, MSME Thesis, July 2008.**

- 2008 UCLA Outstanding Master of Science Degree in Mechanical Engineering Award.

**Kancy Lee, BSME, June 2007.**

- 2007 Harry M. Showman Prize\* from UCLA School of Engineering and Applied Science.

**Kamal M. Katika. MS Thesis, Aug. 2004.**

- 2004 UCLA Outstanding Master of Science Degree in Mechanical Engineering Award.

\*The Harry M. Showman Prize is awarded to students who most effectively communicate the achievements, research, results or social significance of any aspect of Engineering to a student audience, the engineering professions, or the general public.

**CURRENT GRADUATE STUDENTS**

1. Bingang Mei	PhD student	Expected graduation: June 2019
2. Obaidallah Munteshari	NOT ATC PhD	started Fall 2015
3. Zhenyu She	NOT ATC PhD	started Fall 2015
4. Tiphaine Galy	ATC PhD	started Fall 2016
5. Elyyl Simsek	NOT ATC PhD	started Fall 2016
6. Ampol Likitchatchawankum	NOT ATC PhD	started Fall 2016
7. Sara Vallejo Castaña	NOT ATC PhD	started Fall 2017
8. Matevž Frajnkovič	NOT ATC PhD	started Fall 2017

**POST-DOCTORAL RESEARCHERS AND SCHOLARS DIRECTED**

1. An-Shen Siao, National Taiwan University of Science and Technology, Taipei	Apr. 2017-Jan. 2018
2. Sara Vallejo-Castano, Universidad Nacional de Colombia, Medellin, Colombia	Jan. 2017-August 2017
3. Du Mu*, Xi'an Jiaotong University, Xi'an 710049, P.R.China	Jan. 2017-Jan. 2018
4. Prof. Keyong Zhu*, Beihang University, Beijing, China	Feb. 2016-Feb. 2017
5. Leonel Peña- Angeles (PhD student), Instituto Tecnológico de Monterey, Mexico	Aug. 2015-May 2016
6. Shogo Okishio (MS student), Nagoya University, Japan	Aug. 2015-Jan. 2016
7. Yucheng Jiao, Xi'an Jiaotong University, China	July 2015-Sept. 2015
8. Hua Li*, Harbin Institute of Technology, China	Oct. 2014-Sept. 2015
9. Astrid Jamet, Ecole Nationale de Travaux Public de l'Etat, France	April 2014- Aug. 2014
10. Bingang Mei, Zhejiang University, UCLA CSST	July. 2013- Sept. 2013
11. Luo Qi, Xi'an Jiaotong University, UCLA CSST	July. 2012- Sept. 2012
12. Dr. Hong Qi*, Harbin Institute of Technology (Visiting Professor CSC)	Sept. 2011- Sept. 2012
13. Dr. Julian Varghese, Texas A&M, College Station, TX (Post-doc)	Sept. 2009- Apr. 2011
14. Xin Cui*, University of Science and Technology, China	Oct. 2009- Aug. 2010
15. Allen Lin, Zhejiang University, China	July. 2010- Sept. 2010
16. Ian McKinley, Columbia University, New York, NY	June 2009- Aug. 2009
17. Jiafei Zhao*, Zhejiang University, PR China	Sept. 2007- Sept. 2008
18. Hugo Frederich, Grenoble Institute of Technology, France	June 2008-Aug. 2008
19. Fabien Gregoris, Grenoble Institute of Technology, France	June 2007-Aug. 2007
20. Sophie Larmignat, Grenoble Institute of Technology, France	June 2007-Aug. 2007
21. Dr. Bo Zhang*, Dalian University of Technology, PR China	Jan. 2007-July 2007
22. Dan Bai*, Shanghai Jiao Tong University	Jan. 2007-July 2007

- |   |                         |
|---|-------------------------|
| 23. Gauderic Lerouge, Institut Catholique des Arts et Metiers, Toulouse, France | Sept. 2006 – Jan. 2007  |
| 24. Rei Kitamura, Asahi Glass Corporation, Japan                                | Sept. 2005 - Sept. 2007 |
| 25. Dr. Juan Yin, University of California, Los Angeles                         | Nov. 2004- Nov. 2005    |
| 26. Samuel Prim, Grenoble Institute of Technology, France                       | March 2004-Sept. 2004   |
| 27. Helene Ruckenbusch, Grenoble Institute of Technology, France                | June 2003-Sept. 2003    |

\* supported by the China Scholarship Council

### INTERNATIONAL PHD DISSERTATION COMMITTEE MEMBER

1. Lindsey Dat Kay Yue, *Transport Phenomena in Particulate-Based Carbonate Systems Undergoing Chemical Looping*, Australian National University, Canberra, Australia, June 2018.
2. Michael Welte, *Solar Particle-Transport Reactor Technology for the Thermal Reduction of Ceria* ETH Zurich, Switzerland, August 26, 2017.
3. Jérémie Dauchet, *Analyse Radiative des Photobioréacteurs* – Certifying Referee (Rapporteur). University Blaise Pascal - Clermont Ferrand II, France, December 7, 2012.
4. Razmig Kandilian, *Etude du Couplage entre Limitation Azotée et Transfert de Lumière pour la Production de Lipides par Microalgues en Photobioréacteur* – Member of the PhD Committee (Membre du Jury). Université de Nantes, France, July 23, 2015.
5. Simon Guévelou, *Caractérisation des Propriétés Thermo-Radiatives de Mousses à Structure Numériquement Contrôlée :Vers le Design d'Absorbeurs Solaires* – Certifying Referee (Rapporteur). Université de Nantes, France, December 11, 2015.

### INTERNATIONAL EVALUATION OF RESEARCHERS

1. Dr. Philippe Ben Abdallah, Habilitation à Diriger des Recherches (HDR) Université de Nantes, France - July 23, 2015.
2. Dr. Domingos de Sousa Meneses, Habilitation à Diriger des Recherches (HDR) *Ordre, Désordre, et Changement de Phase à la Lumière de la Spectroscopie Infrarouge* Université de Orléans, France - July 23, 2015

### DEPARTMENTAL, SCHOOL, CAMPUS, AND UNIVERSITY COMMITTEES

- |  |              |
|--|--------------|
| ▪ Advisory Committee for the UCLA Leaders in Sustainability graduate certificate       | 2015-present |
| ▪ Faculty Advisor for Bruin Home Solutions   | 2017-present |
| ▪ MAE Department Strategic Planning Committee, Chair                                   | 2018-2019    |
| ▪ MAE Department Strategic Planning Committee  | 2016-2018    |
| ▪ Heat and Mass Transfer Major Field Committee (Chair)                                 | 2016-present |
| ▪ Henry Samueli School of Engineering and Applied Science Strategic Planning Committee | 2016-2017    |
| ▪ Ad Hoc Recruitment Committee for Prof. Timothy S. Fisher (Chair)                     | 2016-2017    |
| ▪ Faculty Advisor for UCLA Renewable Energy Association                                | 2015-present |
| ▪ Recruitment Committee in Aerospace (Member)  | 2014-2015    |
| ▪ 2015-16 Faculty Career Development Award Selection Committee                         | 2014-2015    |
| ▪ Ad Hoc Committee on Mathematics for Undergraduate (Chair)                            | 2013-2015    |
| ▪ Recruitment Committee in Heat and Mass Transfer (Member)                             | 2013-2014    |
| ▪ Merit Increase Committee (member)  | 2013-2014    |
| ▪ Faculty Advisory Committee of the UC Education Abroad Program (UCEAP) (Member)       | 2012-2018    |
| ▪ MAE ABET Accreditation Committee (Member)  | 2012-2014    |
| ▪ Ad Hoc Committee on Opportunity Hire for Energy Research (Member)                    | 2012-2013    |
| ▪ MAE Dept. Thermal Science Faculty Position Recruitment Committee (Chair)             | 2012-2013    |
| ▪ MAE Courses and Curriculum Committee (Member)  | 2011-2013    |
| ▪ Faculty Advisor for the ASME Student Section   | 2010-2015    |
| ▪ Dean's Selection Committee for Student Awards  | 2010-2011    |



- 2010 Northrup Grumman Award for Excellence in Teaching (Chair) 2010-2011
- 2009 Northrup Grumman Award for Excellence in Teaching (Member) 2009-2010
- Heat and Mass Transfer Major Field Committee (Chair) 2009-2013
- Energy Recruiting Committee (Member) 2007-2008
- UCLA Legislative Assembly (Member) 2006-2009
- Seminar Committee (Chair) 2006-2007
- Library Liaison 2005-2006
- Strategic Planning Committee (Member) 2003-2005
- Seminar Committee (member) 2002-2005
- Merit Increase Committee (observer) 2002-2003
- MEMS Major Field Committee (member) 2002-present
- Heat and Mass Transfer Major Field Committee (Member) 2002-present

## GRANTS

- **US Department of Energy, Basic Energy Science (DE-FG02-09ER46580) \$475,000**  
Project Title: *Energy Frontier Research Center – Center for Synthetic Control Across Length-scales for Advancing Rechargeables (SCALAR)*  
Performance date: Aug. 1, 2018 – July 31, 2022  
Role: Co-Investigator with Prof. S.Tolbert, Principal Investigator (\$9,750,000 total)
- **National Science Foundation (Award No. DGE- 1735325) \$3,000,000**  
Project Title: NRT-INFEWS: Integrated Urban Solutions for Food, Energy, and Water Management  
Performance date: Sept. 1, 2017 – August 31, 2022  
Role: Principal Investigator and Program Director
- **French National Center for Scientific Research (CNRS) 21,000 €**  
Project Title: Projet International de Coopération Scientifique (PICS) : AlgaeRad  
Performance date: October 1, 2017 – September 30, 2020  
Role: Co-Principal Investigator with PI Prof. J. Pruvost (University of Nantes, France)
- **U.S. Department of Energy – National Energy Technology Laboratory (Award No. DE- FE 0029825) \$ 999,999**  
Project Title: Upcycled 'CO<sub>2</sub>-Negative' Concrete for Construction Functions  
Performance date: April 1, 2017 – March 30, 2020  
Role: Co-Principal Investigator with PI G. Sant (\$750,000 UCLA portion)
- **Advanced Research Projects Agency-Energy (ARPA-E) SHIELD Program (Award No. DE-AR0000738) \$ 1,278,011**  
Project Title: Thermally Insulating Transparent Barrier (THINNER) Coatings for Single-Pane Windows  
Performance date: January 1, 2017 – December 31, 2018  
Role: Principal Investigator with co-PI Bruce Dunn, Sarah Tolbert, and Yongjie Hu
- **European Union (7th RTD Framework Programme, Award No.20145521) 1,350,000 €**  
Project Title: ECLIPS: Enhancing Concrete Life in Infrastructure Through Phase Change Systems. Infravation  
Performance date: July 1, 2015 – November 30, 2017  
Role: PI: N. Neithalath (ASU), co-PI: G. Sant and L. Pilon (UCLA) (\$329,000 UCLA portion)
- **UCLA CCLE Innovation and Development Program \$ 11,545**  
Project Title: Assessing and Improving Engineering Students' Math Skills  
Performance date: June 30, 2015 – June 30, 2016  
Role: Principal Investigator with Orachat Chieu

- **UCLA Instructional Improvement Development Program** **\$ 23,076**  
Project Title: Improving Engineering Students' Math Skills  
Performance date: January 1, 2015 – June 30, 2016  
Role: Principal Investigator
  - **UC-Mexus – CONACYT Collaborative Grant (Award No: 20143752)** **\$ 25,000**  
Project Title: Photobiological CO<sub>2</sub> Capture and Fuel Production for the Cement Industry  
Performance date: Sept. 1, 2014 – December 31, 2015  
Role: Principal Investigator with Prof. R. Parra-Saldívar (Instituto Tecnológico de Monterrey, Mexico)
  - **Seoul Viosys a subsidiary of Seoul Semiconductors, Seoul, South Korea** **\$ 200,000**  
Project Title: Multispectral Imaging Device for Personalized Skin Care – Phase 1  
Performance date: June 1 2014 - June 2015  
Role: Principal Investigator
  - **California Energy Commission – PIERS Program (Award No: PIR-12-032)** **\$ 319,780**  
Project Title: *Tools and Materials for Zero Net Energy California Buildings*  
Performance date: July 2013-March 2017  
Role: Co-Principal Investigator with M. Milne (P.I.), R. Ligett, G. Sant (total: \$1,335,074)
  - **ERC Incorporated, California Operation, Edwards Air Force Base, CA** **\$ 30,000**  
Project Title: *Photo-Ignition of Encapsulated Carbon Nanotubes for Propulsion Applications*  
Performance date: March 2012-December 2012  
Role: Principal Investigator
  - **US Air Force – Defense University Research Instrumentation Program (DURIP)** **\$ 40,000**  
Project Title: *Advanced Rocket Propulsion Systems*  
Performance date: March 2012-December 2012  
Role: Co-Principal Investigator with Dr. Ann Karagozian, Principal Investigator (total: \$390,000)
  - **UCLA Council on Research - Faculty Research Grant** **\$10,000**  
Project Title: *Hyperspectral Imaging for Predicting Diabetic Foot Ulcer Development Risk*  
Performance date: July 2010 - June 2011  
Role: Principal Investigator with Dr. Aksone Nouvong, Co-Principal Investigator
  - **CSEDI: National Science Foundation (Award No. 0969033)** **\$346,012**  
Project Title: *Thermal Conductivity of Lower Mantle Minerals and Heat Flow Across the Core/Mantle Boundary*  
Performance date: June 1, 2010 – May 30, 2013  
Role: Co-Principal Investigator with Prof. A. Kavner, Principal Investigator
  - **US Air Force – SBIR Phase II (Award No. 90149) HyperComp, Inc., Thousand Oaks, CA** **\$150,000**  
Project Title: *Efficient Multi-Scale Radiation Transport Modeling – Phase II*  
Performance date: February 1, 2009 – January 31, 2011  
Role: UCLA Principal Investigator with lead PI Dr. R. Manupali Hypercomp (total: \$1,000,000)
  - **National Science Foundation, Award DGE-0903720** **\$599,112**  
Project Title: *IGERT: Clean Energy for Green Industry at UCLA*  
Performance date: July 1, 2009 – June 30, 2014  
Role: Co-Director with Prof. D. Huffaker, Director (total: \$2,995,563)
  - **US Department of Energy, Basic Energy Science (DE-FG02-09ER46580)** **\$795,000**
-

Project Title: *Energy Frontier Research Center - Molecularly Assembled Material Architectures for Solar Energy Production, Storage and Carbon Capture*

Performance date: Aug. 1, 2009 – July 31, 2014

Role: Co-Principal Investigator with Prof. V. Ozolin, Principal Investigator (\$11,500,000 total)

- **US Air Force – SBIR Phase I (Award No. 90149) with HyperComp, Inc., Thousand Oaks, CA \$30,000**  
Project Title: *Efficient Multi-Scale Radiation Transport Modeling – Phase II*  
Performance date: Sept. 1, 2008 – May. 31, 2009  
Role: Co-Principal Investigator with Prof. A.R. Karagozian, Principal Investigator
  
- **University of California Energy Institute \$35,000**  
Project Title: *Waste Heat Harvesting From Power Generation and Transportation Systems*  
Performance date: Sept. 30, 2008 – Aug. 31, 2009  
Role: Principal Investigator
  
- **HyperMed, Inc., Burlington, MA \$34,696**  
Project Title: *Pattern Classification and Data Mining on Hyperspectral Imaging of the Diabetic Foot for Prediction of Ulcer Formation and Healing*  
Performance date: Sept. 30, 2008–Dec. 31, 2008  
Role: Principal Investigator
  
- **Alticor - Access Business Group \$25,000**  
Project Title: *Fluorescence of Human Skin to Assess Advanced Glycated End-Products Breaker*  
Performance date: July 1<sup>st</sup>, 2008 – June 30, 2009  
Role: Principal Investigator
  
- **U.S Office of Naval Research (Award N000140710671) \$300,000**  
Project Title: *Nanoporous Pyroelectric Materials for Direct Energy Conversion of Waste Heat Into Electricity*  
Performance date: June 1, 2007 – May 31, 2010  
Role: Principal Investigator
  
- **Diabetes Action Research and Education Foundation \$15,000**  
Project Title: *Time-Resolved Photometric Device for Detecting and Monitoring Diabetes*  
Performance date: August 1, 2006-July 31, 2007  
Role: Principal Investigator
  
- **The American Chemical Society - Petroleum Research Fund (PRF# 43166-G9) \$35,000**  
Project Title: *Morphology of Colloidal Gas Aphrons: Is There an Aqueous Shell?*  
Performance date: July 1, 2005- June 30, 2007  
Role: Principal Investigator
  
- **University of California, Toxic Substance Research and Teaching Program \$50,000**  
Project Title: *New Photometric Device for Assessing Toxicity of Nanoparticles*  
Performance date: July 1, 2005 - June 30, 2007  
Role: Advisor of Graduate Student Fellowship for PhD Student Kyle Smith
  
- **UCLA Council on Research - Faculty Research Grant \$6,000**  
Project Title: *Non-Invasive Detection of Type 2 Diabetes Mellitus*  
Performance date: July 2005 - June 2006  
Role: Co-Principal Investigator with Prof. K. Dipple, Principal Investigator
  
- **Asahi Glass Corporation Research Center, Yokohama, Japan \$60,000**  
Project Title: *Research on Glass*

Performance date: September 2005-September 2007

Role: Principal Investigator

- **National Science Foundation CAREER Award (NSF CTS0449429)** **\$400,132**  
Project Title: *Synthesis, Characterization, and Modeling of Closed-Cell Nanoporous Media*  
Performance date: July 1, 2005-June 30, 2010  
Role: Principal Investigator
  
- **Firer-Fighter, LLC – Pomona, CA** **\$6,500**  
Project Title: *Feasibility Study of a Deployable Fire Safety System for Home and Residential Building*  
Performance date: January 2005- June 2005  
Role: Principal Investigator
  
- **California Energy Commission - Energy Innovative Small Grant (EISG 53723A/03-29)** **\$74,498**  
Project Title: *Biosolar Conversion of Carbon Dioxide into Hydrogen via Bacteria Embedded in Colloidal Gas Aphrons*  
Performance date: November 2004-November 2005  
Role: Principal Investigator
  
- **UCLA Lab2Market Fund** **\$25,000**  
Project Title: *Non-invasive time-resolved photometric device for detecting diabetes*  
Performance date: August 2004-December 2005  
Role: Principal Investigator
  
- **U.S. Department of Education** **\$581,940**  
Project Title: *Graduate Assistance in Areas in National Need (GAANN) in Mechanical Engineering*  
Performance date: August 2004 - August 2007  
Role: Co-Principal Investigator with Prof. H.T. Hahn, Principal Investigator
  
- **University of California Energy Institute** **\$35,200**  
Project Title: *Aluminum microfoams to increase fuel efficiency and reduce pollutant emission of transportation systems*  
Performance date: July 2003 – December 2005  
Role: Principal Investigator
  
- **Glass Manufacturing Industrial Consortium G-Plus Project** **\$25,000**  
Project Title: *Foaming of E-glass*  
Performance date: June 2003 – September 2003  
Role: Co-Principal Investigator with D.-S. Kim (Pacific Northwest National Lab), Principal Investigator
  
- **UCLA Faculty Grant Program** **\$5,000**  
Project Title: *Effect of gases and atmosphere conditions on liquid foam formation and stability*  
Role: Principal Investigator
  
- **NSF-sponsored Faculty Career Development Workshop** **\$600**

## LANGUAGES

- French: native
- English: fluent
- Spanish: conversational

## REFERENCES

- Available upon request