PETER Y. WONG

Mechanical Engineering Department, Tufts University
Medford, Massachusetts 02155

E-mail: peter.wong@tufts.edu
Phone: (617) 627-5162

University Relations Department, Museum of Science
Boston, MA 02114-1099

E-mail: pwong@mos.org
Phone: (617) 589-0220

EDUCATION

Doctor of Philosophy in Mechanical Engineering
TUFTS UNIVERSITY, Medford, Massachusetts 5/95

Bachelor of Science and Master of Science in Mechanical Engineering (5 Year Program)
TUFTS UNIVERSITY, Medford, Massachusetts 11/91

High School Diploma
BOSTON LATIN SCHOOL, Boston, Massachusetts 6/86

WORK EXPERIENCE

Director of University Relations, Museum of Science, Boston, MA 2004-present
Develop partnerships with universities through strategic projects aligned with Museum's goals.
Projects: public understanding of research, preK-12 educational outreach, teacher professional development, joint courses, specialized exhibits and programs.
Develop middle school curricula for National Center for Technological Literacy.

Research Associate Professor - Mechanical Engineering Dept., Tufts University 2001-Present
Conduct fundamental and applied research in areas of thermal processing and manufacturing.
Teach courses, write proposals, collaborate with industry, and oversee student research projects.

Director - Thermal Analysis of Materials Processing Laboratory (TAMPL) 1995-Present
Mechanical Engineering Department, Tufts University
TAMPL: interdisciplinary laboratory that bridges gaps among thermal/fluid science, materials science, and manufacturing. Projects explore fundamental phenomena and are relevant to industry.
Coordinate research and education activities among core faculty members of laboratory.
Develop new programs and strategies for the laboratory through collaborative efforts.

Director -Special Initiatives for the School of Engineering, Tufts University 1997-2003
Develop and implement special programs designed to meet the school's goals.
Projects: ABET, K-12 Outreach, Women in Engineering Outreach, Distance Education, Museum-University Relationships, and Undergraduate Professional Skill Development.

Research Assistant Professor - Mechanical Engineering Dept., Tufts University 1995-2001

TEACHING EXPERIENCE

Introductory Engineering: Gourmet Engineering, Life in Moving Fluids, and Presentation Skills.
Undergraduate: Introduction to Thermodynamics (using collaborative learning), Comparative Biomechanics Laboratory Course.
Graduate: co-taught MEMS course for mechanical engineers .
K-12 outreach: conduct science, engineering, and math workshops using hands-on activities and gender-inclusive approaches; co-design course for museum staff and online courses for teachers.

START-UP EXPERIENCE

Founded an engineering and science enrichment program in Newton, MA for young children
www.k2enrichment.com, 2005

RESEARCH INTERESTS

Thermal analysis of materials processing and manufacturing, Nano-Micro-Systems, Comparative biomechanics, Microscale rapid prototyping, Biomedical devices, and Clean energy. Technology transfer of research into Biomedical industry.

PERSONAL INTERESTS

Foodie: cooking, restaurants, and gadgets.
Sports fan: Boston Red Sox, Boston Celtics, and N.E. Patriots.
Other: Real estate investing; collecting pocket knives; and science fiction and martial arts movies.

PROFESSIONAL ACTIVITIES

Member of ASME, ASEE, MRS, OSA, SPIE, ITEA, and WEPAN
Reviewer for J. of Appl. Physics, ASME, National Science Foundation, Mass Dept of Education – Technology/Engineering Frameworks and Teacher Preparation Program, and Prentice-Hall Science Explorer Middle School Books
Board member of Massachusetts State Science and Engineering Fair (2006-present)

CONSULTING ACTIVITIES

Perkin Elmer (Peabody, MA), Kopin Corporation (Taunton, MA), Avery-Dennison (MA)

FUNDED PROJECTS

"Industrial Safety of Nanoheaters," NSF CMMI-0738253, 2007-2009, $589,776
"Image-Guidance Research in Colonoscopy to Improve Diagnosis of IBD," Broad Foundation, IBD-0196R, 2007-2009, $217,832
"IPY: Collaborative Research: Live from the Poles; A Multimedia Educational Experience**,"** NSF ESI-0632064. 2007-2008, $97,202
"GSE/RES: A Social-Ecological Study of Gender, Relationships, and High School STEM," NSF HRD-0624507, 2006-2008, $337,561
"Building a Network Between Civil Engineers and Science Museums," NSF ESI-0529213, 2005-2007, $232,655
"MRI: Acquisition of Equipment for Thermal and Thermo-Mechanical Analysis of Soft Materials," NSF DMR-0520655, 2005-2008, $447,618
"Biomedical Research Experiences for Engineering Majors," NIH NIH-1R25 GM073177-01, 2005-2009, $367,200
"SGER: High performance MEMS metals developed by solidification processing of composite coatings and embedded layers," NSF DMI-0342735, 2003-2004, $91,994
"Virtual Markets in Wireless Communications and Computational GRIDS," NSF EHR-0227879, 2003-2006, $600,000 + $120,000 supplemental with Syracuse University
"4 Schools for Women in Engineering," NSF EHR-0217110, 2002-2006, $899,768
"Integrating Algebra and Engineering into the Classroom," GE Foundation, 2002-2008, $360,870
"Tufts K-12: Distance Learning Program," Lockheed Martin Corporation and Lockheed Martin Foundation, 2002-2006, $500,000
"Miniaturized Solar Energy Systems Using Advanced Microfabrication Technologies," Link Foundation, 2002-2003, $50,000
"Ultrasonic Rapid Manufacturing of Meso/Microscale Functional and Active Structures," NSF DMII-0114309, 2001-2006, $418,641 + $12,000 REU supplement 2002
"Composite Coatings from Layered Precursors: Materials Structure Modeling and Thermal Control," NSF DMII-9802790, 1999-2002, transferred from PI Doumanidis 2001-2002, $253,777
"Thermal Analysis of Multi-Gas Sensor," PerkinElmer Optoelectronics, 2001, $50,000
"Girls Get SET for Life: Science, Engineering, and Technology," Lucent Technology Foundation, 2000-2002, $150,000
"The GE Fund "Women in Engineering" Web Site and Electronic Community," 2001, $80,000
"REU Site: Thermal Analysis of Materials Processing & Manufact.," NSF EEC-9732073 1998-2001, $254,640
"Tufts Rensselaer Thermal Manufacturing Research-Curriculum Development Program," NSF ENG-9700731 1997-2001, $370,732
"Microscale Reflectance Spectrometry of Biological Thin Films," NSF DBI-9605833 1997-1999, $87,468
"Investigation of Microscale Radiation Phenomena Affecting Thermal Processing of Patterned Wafers," NSF DMI-9612058 1996-1999, $307,660
"MPWG: Girls in Engineering: Hands-On Museum Exhibit Development," NSF MPWG-9632175, 1997, $99,762
"Fluid Dynamics of Polishing Slurry in Chemical Mechanical Planarization," Intel Corp. and Cabot Corp., 1996-1997, $50,000
"Women in Science and Technology Initiative, the 1996 NYNEX Scholars," NYNEX Foundation, 1996, $25,000

PATENT APPLICATIONS

"Systems, Devices, and Methods Employing Fiber Optic Shape Tracking," submitted by Tufts University on 10/11/07

"Vibratory Powder Consolidation," submitted by Northeastern University on 1/25/2006

"Method for Polymer Synthesis Using Microfluidic Enzymatic Cascade," submitted by Tufts University on 2/28/2006

"Bio-LOM: Manufacturing of Tissue Scaffolds Using Micromolding, Lamination, and in-situ Bio-product Growth," submitted by Tufts University on 9/24/2004, Tufts Case Number T001327

"Functionalizing Microfluidic Devices by In Situ Formation of Membranes," submitted by Tufts University on 12/2/2003, Tufts Case Number T001275 (resubmitted 12/20/7)

PUBLICATIONS

Summary (accepted+submitted): 27 Journal Publications, 51 Conference Proceedings, 3 Thesis

PRESENTATIONS

Summary (presented+future): 16 invited and 58 contributed

OUTREACH PRODUCTS

Participate in development of distance education tools for technological literacy nationwide connected with products with Museum of Science NCTL and Tufts CEEO

Co-develop middle school units, Building Math, that integrate algebra and engineering (published by Walch Publishing, 10/2007)

- Everest Trek, aimed for 6th grade
- Stranded!, aimed for 7th grade
- Amazon Mission, aimed for 8th grade

Co-develop manual for development of outreach teams to middle schools
Growing a Stem Team: How to Create a Gender-Equitable Engineering Program for Middle School Students, Edited by Suzanne Sontgerath and Erica Thrall (ISBN 1-4116-4604-5), published by Peter Wong on Lulu.com, 2005.

RESEARCH STUDENTS

Advisor for Ph.D. Graduate: Jin Zou (Tufts ME)

Advisor for PhD. Candidate: Haruna Tada (Tufts ME - currently withdrawn)

Advisor for Master Graduates: Armin Huseinovic (Tufts ME), Teju Aurangabadkar (Tufts ME), Kosta Tsioris (Tufts ME), Rajarshi Chowdhury (Tufts ME), Wei-Han Wu (Tufts ME), Emily Shattuck (Tufts ME), Brian Gravel (Tufts ME), George Papanikolau (Tufts ME), Seth Mann (Tufts ME), Haruna Tada (Tufts ME), and Alexis Abramson (Tufts ME).

Advisor for Master Candidates:, Brendan O'Brien (Tufts ME)

Advisor for dozens of undergraduate students on research at Tufts University and advisor for Tufts Summer Scholar, Andrew Beattie, 2003

Advisor for NSF Research Experience for Teachers 2003: Charles Low and Antoinette Marsinelli

Thesis Committee Member for Graduates: Leonardo Angelone (Tufts PhD-BME), Rajesh Ranganathan (NEU PhD-ME), Selis Onel Evren (NEU PhD-ME), Yuanwei Song (NEU PhD-ME), Meredith Dill (Tufts MS-ME), Emre Gundez (NEU PhD-ME), Kevin Hsu (Tufts MS-Biomed), Olga Vayena (Tufts PhD-ME), Eleni Skordeli (Tufts MS-ME), Ravid Durvasli (Tufts PhD-ME),

Thesis Committee Member for Candidates: Robb Gavalis (Tufts MS-ME), David Colanto (NEU PhD-ME), Sudesna Roy (NEU PhD-ME), Laura Xu (NEU PhD-ME), and Hiroki Fukuda (NEU PhD-ME)

WEBSITE DEVELOPMENTS

www.WIEO.org – the Women in Engineering Organization Website – a national clearinghouse of programs for girls and women - funded by GE Fund with Tufts, SWE, and WEpan

www.BuildingMath.org – Building Math: Integrating Algebra and Engineering into Middle School Classrooms – curricula dissemination site– funded by GE Foundation with Museum of Science

www.GirlsGetSET.org – Girls get SET for Life: Science, Engineering, and Technology – dissemination to museums and colleges to have girls design exhibits– funded by Lucent Fnd.

www.STEMteams.org - Science, Technology, Engineering, and Mathematics teams – dissemination to college, industry, and middle schools to use gender-inclusive approaches – funded by NSF

www.PreK-12Engineering.org – educator resource with engineering activities for Prek-12 classes - funded by Tufts, Verizon, Mass DOE, Pinnacle, Lockheed Martin, and private donors

Founding Webmaster for several sites: School of Engineering, Mechanical Engineering Department, Comparative Biomechanics Lab, and Thermal Analysis of Materials Processing Laboratory.

SCIENCE EXHIBITS/ PROGRAMS

Direct program to have middle school girls to design and build exhibits at The Discovery Museum (Acton, MA), 1997-2002.

Co-direct undergraduate students to design and build "Sea Lion Quiz Machine" for New England Aquarium (Boston, MA), 2000

Co-develop proposals and direct activities associated with university relations at Museum of Science:

- Middle school biomedical engineering unit (Genzyme, 2007-2008)
- IPY: Live from the Poles with Woods Hole Oceanographic Institute (NSF DRL 2007-08)
- Partnership of university, museums, and cultural institutions in Boston (NSF ISE 2005-06)
- Middle school tech/engineering curricula strategy to meet MA standards (NIST 2005-06)
- Network of science centers and civil engineers (NSF ISE 2005-07)
- Distance education programs for k-5 teachers with Salem State College (MA DOE 2005-07)
- Graduate credit through Salem State College for Engineering the Future course (2007-2008)

HONORS & AWARDS

• Mechanical Engineering Practice Award, Tufts University	2007
• Allan Cormack Award for Collaborative Research, Tufts University	1995
• Full Scholarship for Doctoral Degree Program, Tufts University	1992
• Victor Prather Award for Outstanding Scientific Research, Tufts University	1990
• Lloyd M. Trefethen Undergraduate Research Award, Tufts University	1990
• Full Scholarship for Master Degree Program, Tufts University	1990
• Member of Tau Beta Pi, Engineering Honors Society	1989 - present
• Consolidated Chinese Benevolence Association Scholarship	1986, 1989

PUBLICATIONS AND PRESENTATIONS
not including outreach products (above)

I. PUBLICATIONS

A. REFEREED PUBLICATIONS IN JOURNALS

27. I. E. Gundez, T. Ando, E. Shattuck, P. Y. Wong, C. C. Doumanidis, "Enhanced Diffusion and Phase Transformations During Ultrasonic Welding of Zinc and Aluminum," **Scripta Materialia**, Vol. 52, No. 9, pp. 939-943, 2005

26. B. E. Gravel, P. Y. Wong, P. T. Starks, J. A. Pechenik, "The use of artificial shells for exploring shell preference in the marine hermit crab *Pagurus longicarpus* (Say). **Annales Zoologici Fennici**, Vol. 41, pp.477-485, 2004

25. S. Mann, I. N. Miaoulis, and P. Y. Wong, "Spectral Imaging, Reflectivity Measurements, and Modeling of Iridescent Butterfly Scale Structures," **Optical Engineering**,Vol. 40, No. 10, pp. 2061-2068, 2001

24. J. A. Pechenick, J. Hsieh, S. Owara*, P. Y. Wong, S. Untersee, D. Marshall, and W. Li, "Factors Selecting For Avodiance of Drilled Shells By the Hermit Crab,*Pagurus longicartus*" **Journal of Experimental and Marine Biology and Ecology**, Vol. 262, pp.75-89, 2001

23. H. Tada, A. E. Kumpel*, R. E. Lathrop*, P. Nieva, P. Zavracky, I. N. Miaoulis, and P. Y. Wong, "Thermal Expansion Coefficient of Polycrystalline Silicon and Silion Dioxide Thin Films at High Temperatures," **Journal of Applied Physics**, Vol. 87, No. 9, pp. 4189-4193, 2000

22. H. Tada, A. R. Abramson, S. E. Mann, I. N. Miaoulis, and P. Y. Wong, "Limiting the Effects of Thin Film Patterns on the Temperature Distribution of Silicon Wafers During Radiant Processing," **Optical Engineering**, Vol. 39, No. 8, pp. 2296-2304, 2000

21. H. Tada, A. E. Kumpel*, R. E. Lathrop*, I. N. Miaoulis, and P. Y. Wong, "Novel Imaging System for Measuring Microscale Curvatures at High Temperatures," **Review of Scientific Instruments**, Vol. 71, No. 1, pp.161-167, 2000

20. A. R. Abramson, P. Nieva, H. Tada, P. Zavracky, I.N. Miaoulis, and P. Y. Wong, "Effect of Doping Level During Rapid Thermal Processing of Multi-Layer Structures," **Journal of Materials Research**, Vol.14, No. 6, pp. 2402-2410, 1999

19. S. D. Bluestein*, E. K. Chan*, I. N. Miaoulis, and P. Y. Wong, "In-Situ Measurement of Thermo-Mechanical Effects and Properties in Thin Film-Polymer," **IEEE Transactions on Components, Packaging, and Manufacturing Technology**, Vol. 22, No. 3, pp. 421-425, 1999

18. H. Tada, S. E. Mann, I. N. Miaoulis, and P. Y. Wong, "The Effects of Butterfly Scale Microstructure on the Iridescent Color Observed at Different Angles," **Applied Optics**, Vol. 37, No. 9, pp. 1579-1584, 1998

17. C. G. Madras, P. Y. Wong, I. N. Miaoulis, L. Goldman, and R. Korenstein, "Relaxation of Extrinsic and Intrinsic Stresses in Germanium Substrates with Silicon Films," **Thin Solid Films**, Vol. 320, No. 2, pp.260-263, 1998

16. S. E. Rosenberg, C. G. Madras, P. Y. Wong, and I. N. Miaoulis, "The Viscosity of Germanium During Substrate Relaxation Upon Thermal Anneal," **Journal of Materials Research**, Vol. 12, pp. 1706-1710, 1997

15. C. G. Madras, P. Y. Wong, and I. N. Miaoulis, "Prediction of Elastic Strains in Adhesively Bonded Diamond Optical Disks," **Glass Technology**, Vol. 38, pp. 65-70, 1997

14. C. G. Madras, P. Y. Wong, and I. N. Miaoulis, "Viscoelastic Deformation During Thermal Cycling of Adhesively Bonded Optical Coatings," **Materials Letters**, Vol. 28, pp. 21-26, 1996

13. C. G. Madras, P. Y. Wong, and I. N. Miaoulis, "Inelastic Effects in a Thermoplastic Adhesive Used for Bonding a Diamond Disk," **Optical Engineering**, Vol. 35, No. 8, pp. 2227-2233, 1996

12. S. E. Rosenberg, P. Y. Wong, and I. N. Miaoulis, "Rapid Thermal Annealing of High-Melting-Point Films on Low-Melting-Point Substrates," **IEEE Transactions of Semiconductor Manufacturing**, Vol. 9, pp. 249-256, 1996

11. S. E. Rosenberg, P. Y. Wong, and I. N. Miaoulis, "A Theoretical Study of the Effect of Thermal Annealing on Curvature Changes in Multilayered Structures," **Thin Solid Films**, Vol. 269, pp. 64-68, 1995

10. S. E. Rosenberg, P. Y. Wong, and I. N. Miaoulis, "Analysis of Deposition Stress During Thin-Film Growth on a Relaxing Substrate," **Journal of Applied Physics**, Vol. 77, No. 12, pp. 6273-6277, 1995

9. P. Y. Wong, C. K. Hess, and I. N. Miaoulis, "Coherent Thermal Radiation Effects on Temperature-Dependent Emissivity of Thin-Film Structures on Optically Thick Substrates," **Optical Engineering**, Vol. 34, No. 6, pp. 1776-1781, 1995

8. R. D. Robinson, P. Y. Wong, and I. N. Miaoulis, "Thermal Evaluation of Zone-Melting Recrystallization of Thin-Film Structures Over a Wide Range of Melting Points," **Journal of Materials Research**, Vol. 10, No. 4, pp. 877-884, 1995

7. B. D. Heilman, M. A. Marston, P. Y. Wong, and I. N. Miaoulis, "The Effects of Natural Convection and Conduction in a Zone-Melting Recrystallization Chamber," **Journal of Materials Research**, Vol. 8, No. 3, pp. 551-557, 1993

6. P. Y. Wong, C. K. Hess, and I. N. Miaoulis, "Thermal Radiation Modeling in Multilayer Thin-Film Structures," **International Journal of Heat and Mass Transfer**, Vol. 35, No. 12, pp. 3313-3321, 1992

5. P. Y. Wong, L. M. Trefethen, and I. N. Miaoulis, "Cross Correlation of Optical Properties of Thin Films Under Thermal Radiation." **Journal of Applied Physics**, Vol. 72, No. 10, pp. 4884-4887, 1992

4. I. N. Miaoulis, P. Y. Wong, S. M. Yoon, R. D. Robinson, and C. K. Hess, "Thermal Analysis of Zone-Melting Recrystallization of Silicon-on-Insulator Structures with an Infrared Heat Source: An Overview," **Journal of Electrochemical Society**, Vol. 139, No. 9, pp. 2687-2696, 1992

3. P. Y. Wong and I. N. Miaoulis, "Optical Effects of Multilayer Thin Film Structures during Zone-Melting Recrystallization with an Infrared Heat Source," **Journal of Applied Physics**, Vol. 70, No. 12, pp. 7594-7601, 1991

2. I. N. Miaoulis, P. Y. Wong, J. D. Lipman, and J. S. Im, "Thermal Modeling of Zone-Melting-Recrystallization Processing of Silicon-On-Insulator Film Structures," **Journal of Applied Physics**, Vol. 69, No. 10, pp. 7273-7282, 1991

1. I. N. Miaoulis, J. Lipman, D. A. Flodman*, P. Y. Wong*, M. W. Wolfson*, J. Barrett III, and A. Nelson, "Zone-Melting Processing of Thick High-T_c Superconducting Films," **Journal of Physics D: Applied Physics**, Vol. 22, pp. 864-867, 1989

* - refers to undergraduate student

B. REFEREED PUBLICATIONS IN CONFERENCE PROCEEDINGS

51. D. Colanto, D. Erdeniz, G. Gulsoy, I. Gunduz, T. Ando, P. Y. Wong, H. Doumanidis, "Ultrasonic Consolidation of Pure Al and Composite Al-Ni Compacts ," **Materials Science & Technology 2008 Conference and Exhibit**, Pittsburgh, PA, October 2008

50 C. Rebholz, K. Fadenberger, I.E. Gunduz, M. Kokonou, C. Doumanidis, K. P. Giannakopoulos, T. Ando, J. Chen, Z. Gu, P. Wong, "Nanoheater Reactive Heterostructures as Sources for Thermal Nanomanufacturing," submitted to **1st Int. Conf. from Nanoparticles & Nanomaterials to Nanodevices & Nanosystems**, Halkidki Greece, June 2008

49. R. Gavalis, H. Xing, P. Wong, L. Lilge, and C. Cao, "Design of a Navigational Aid for Colonoscopy," accepted to **3rd Frontiers in Biomedical Devices Conference**, Irvine, CA, June 2008

48. R. Gavalis, H. Xing, P. Wong, L. Lilge, and C. Cao, "Endoscope Shape-Tracker Based on Embedded Fluorescent Dyes in an Optical Fiber," accepted to **ASME 2008 Summer Bioengineering Conference**, Marco Island, FL, June 2008

47. H. Jogdand, G. Gulsoy, T. Ando, J. Chen, C. C. Doumanidis, Z. Gu, C. Rebholz, and P. Wong, "Fabrication and Characterization of Nanoscale Heating Sources ("Nanoheaters") for Nanomanufacturing," accepted for **Nanotech 2008**, Boston, MA, June 2008

46. R. Gavalis, C. Cao, P. Wong, L. Lilge, H. Xing "Design of an Endoscope Shape Tracker to Guide Navigation in Colonoscopy," **Design of Medical Devices Conference**, University of Minnesota, in cooperation with ASME, Minneapolis, MN, April 2008

45. C. Cao, L. Lilge, P. Wong, H. Xing, and N. Zamarripa, "Advanced Shape Tracking to Improve Flexible Endoscopic Diagnostics", proceedings of **SPIE, Smart Structures and Materials, Non-Destructive Testing and Health Monitoring** 2008, San Diego, CA, March 2008

44. W. Huang, B. Brizuela, and P. Y. Wong, "Integrating Algebra and Engineering in the Middle School Classroom," accepted to **ASEE** Annual Conference, Pittsburgh, PA, June 2008

43. J. Grossman, M. Porche, A. Noonan, and P. Y. Wong, "Key factors that affect retention in and attrition of STEM for high school girls," accepted to **ASEE** Annual Conference, Pittsburgh, PA, June 2008

42. K. Tsioris, R. D. White, D. L. Kaplan, and P. Y. Wong, "The Effect of Hydrophobic Patterning on Micromolding of Aqueous-Derived Silk Structures," proceedings of **Materials Research Society**, Fall 2007 Boston Meeting, 2007

41. "A Model STEM Team Collaboration: 4 Schools for WIE," **Women in Engineering Programs & Advocates Network,** Annual Meeting, Pittsburgh, PA, June 2006

40. S. Sontgerath, S. Blaisdell, P. Wong, A. Swan, and K. Ziemer, "Growing a STEM Team: Review of an Innovative Program for Middle School Students," proceedings of **Women in Engineering Programs & Advocates Network**, Annual Meeting, Las Vegas, NV, 2005

39. I. E. Gundez, T. Ando, E. Shattuck, P. Y. Wong, C. C. Doumanidis, "Effects of High-Speed Deformation on the Phase Stability and Interdiffusion in Ultrasonically Joined Aluminum and Zinc Foils," proceedings of **Materials Research Society**, Fall 2004 Boston Meeting, 2004

38. "Simulation of the Temperature and Extent of Nickel Dissolution During the reactive Fabrication of Nickel Aluminide Coatings by Rapid Heating of Plated Precursors," **6th International Conference on Frontiers of Design and Manufacturing**, Xi'an CHINA, 441st paper, June 20-23 2004

37. M. T. Knight, C. A. Browning, P. Y. Wong, S. Ingraham,"4 Schools for Women in Engineering (WIE): Creating Partnerships for Gender Equity," Proceedings of the **ASEE New England Section 2004 Annual Conference**, Dedham, MA, April2-3 2004

36. H. Tada and P. Y. Wong, "MEMS based Microcalorimeter for Liquid Samples," proceedings of the 2003 International Mechanical Engineering Congress and Exposition, **American Society of Mechanical Engineers**, Washington DC, Fall 2003

35. J. Zou and P. Y. Wong, "Thermal Effects in Plasma Treatment of Patterned PDMS for Bonding Stacked Channels," **Materials Research Society**, proceedings of Fall 2003 Boston Meeting, 2003

34. M. Alaeddine, R. Ranganathan, T. Ando, C. C. Doumanidis, and P. Y. Wong, "Thermal and Mass Balance in Reactive Thermal Processing of Nickel Aluminide Coatings on Steel Substrates," **Materials Research Society**, proceedings of Fall 2002 Boston Meeting, 2002

33. M. Bargmann*, A. Kumpel*, H. Tada, I. N. Miaoulis, P. Y. Wong, P. Nieva, and P. Zavracky, "High-Temperature-Dependent Coefficient of Thermal Expansion of Silicon Nitride Films used in Microelectromechanical Systems," **Materials Research Society**, Vol. 605, pp. 235-240, 2000

32. P. Nieva, P. Zavracky, G. Adams, H. Tada, A. R. Abramson, I. N. Miaoulis, and P. Y. Wong, "Temperature Measurements During Rapid Thermal Annealing Using MEMS," Proceedings of the 5th **ASME/JSME Joint Thermal Engineering Conference**, San Diego, CA, 1999

31. H. Tada, P. Nieva, P. Zavracky, I. N. Miaoulis, and P. Y. Wong, "Determining the High Temperature Properties of Thin Films Using Bi-Layered Cantilevers," **Materials Research Society**, Vol. 546, pp. 39-44, 1999

30. P. Nieva, H. Tada, P. Zavracky, G. Adams, I. N. Miaoulis, and P .Y. Wong, "Mechanical and Thermophysical Properties of Silicon Nitride Thin Films at High Temperatures," **Materials Research Society**, Vol 546, pp. 97-102, 1999

29. H. Tada, A. R. Abramson, I. N. Miaoulis, and P. Y. Wong, "Effect of Surface Patterning in Thin Film Structures on the Thermal Radiative Properties During Rapid Thermal Processing," Proceedings of the 1998 International Mechanical Engineering Congress and Exposition, **American Society of Mechanical Engineers**, HTD-Vol. 361-2, pp. 93-98, 1998

28. H. Tada, I. N. Miaoulis, and P. Y. Wong, "Numerical Simulation of Radiant Thermal Processing of Bilayer Microcantilevers," Conference Proceedings, **American Society of Mechanical Engineers,** DSC-Vol.66, pp.37-44, 1998

27. H. Tada, A. R. Abramson, I. N. Miaoulis, P. Y. Wong, P. Nieva, and P. Zavracky, "MEMS as Temperature Sensors During High Temperature Processing," Proceedings of the Symposium on Microelectromechanical Structures for Materials Research, **Materials Research Society**, Vol. 518, pp. 161-166, 1998

26. A. R. Abramson, I. N. Miaoulis, P. Y. Wong, P. Nieva, and P. Zavracky, "Partial Transparency Effects of Silicon During Rapid Thermal Processing," **Materials Research Society,** Vol.525, pp. 15-20, 1998

25. V. P. Manno, R. N. Smith, P. Y. Wong, and R. W. Messler, "Tufts-Rensselear Thermal Manufacturing Research-Curriculum Development Program," Manufacturing Education for the 21st Century - Volume 5, **Society of Manufacturing Engineers**, Vol. 5, pp. 171-176, 1998

24. H. Tada, S. E. Mann, I. N. Miaoulis, and P. Y. Wong, "Microscale Radiative Effects in Complex Microstructures of Iridescent Butterfly Wing Scales," **Materials Research Society,** Vol.489, pp. 173-180, 1998

23. I. N. Miaoulis, H. Tada, S. E. Mann*, and P. Y. Wong, "Selective Multilayer Thin-Film Development in Insects," Advances in Heat and Mass Transfer in Biotechnology**, Proceedings of the 1997 International Mechanical Engineering Congress and Exposition**, American Society of Mechanical Engineers Heat Transfer Division, Vol. 355, pp. 33-40, 1997

22. S. D. Bluestein*, D. P. Y. Bramono*, I. N. Miaoulis, and P. Y. Wong, “Viscoelastic Behavior of PolymerThin-Film under Thermo Stresses,” **Materials Research Society**, Vol. 445, pp. 185-190, 1997

21. J. B. Hoppert*, I. N. Miaoulis, and P. Y. Wong, "Numerical Modeling of Radiative Properties of Patterned Wafers with Sub-Micron Features," Proceedings of Symposium on Rapid Thermal and Integrated Processing V, **Materials Research Society**, Vol. 429, pp. 51-56, 1996

20. P. Y. Wong and I. N. Miaoulis, "Microscale Reflectance Spectrometry of Thin-Film Structures in Butterfly Wing Scales," Proceedings of Session on Measurement Techniques and Instrumentation in Bio-Heat and Mass Transfer; Heat Transfer Division, **American Society of Mechanical Engineering**, Vol. 322, pp. 5-10, 1995

19. P. Y. Wong and I. N. Miaoulis, "Thermal Radiative Analysis of Rapid Thermal Processing of Electronic Materials," Proceedings of Session on Transport Phenomena in Electronic Materials Processing; Heat Transfer Division, **American Society of Mechanical Engineering**, Vol. 317-2, pp. 475-482, 1995

18. P. Y. Wong, I. N. Miaoulis, and C. G. Madras, "Transient and Spatial Radiative Properties of Patterned Wafers During Rapid Thermal Processing," Proceedings of Symposium on Rapid Thermal and Integrated Processing IV, **Materials Research Society**, Vol. 387, pp. 15-20, 1995

17. C. G. Madras, P. Y. Wong, and I. N. Miaoulis, "Adhesion and Thermal Deformation of Ceramic/Polymer Heterostructures," Proceedings of Symposium on Polymer/Inorganic Interfaces II, **Materials Research Society**, Vol. 385, pp. 71-76, 1995

16. C. G. Madras, P. Y. Wong, I. N. Miaoulis, and L. Goldman, "Measurement of the Effect of Temperature on Stress Distribution and Deformation in Multilayer Optical Thin Film Structures," Proceedings of Symposium on Thin Films: Stresses and Mechanical Properties V, **Materials Research Society**, Vol. 356, pp. 351-356, 1995

15. P. Y. Wong, R. D. Robinson, and I. N. Miaoulis, "Processing Uniformity Issues During Zone-Melting Recrystallization of Large Thin-Film Areas," Proceedings of Session on Heat Transfer in Thin Films; Heat Transfer Division, **American Society of Mechanical Engineers**, Vol. 293, pp. 9-16, 1994

14. S. E. Rosenberg, P. Y. Wong, and I. N. Miaoulis, "Thermal and Deposition Stress Relaxation in Low-Melting-Point Substrates with High-Melting-Point Coatings," Proceedings of Session on Thermal-Mechanical Effects in Materials Processing and Manufacturing; Heat Transfer Division, **American Society of Mechanical Engineers**, Vol. 289, pp. 1-5, 1994

13. P. Y. Wong, B. D. Heilman, and I. N. Miaoulis, "The Effect of Microscale and Macroscale Patterns on the Radiative Heating of Multilayer Thin-Film Structures," Proceedings of Session on Microscale Heat Transfer; Heat Transfer Division, **American Society of Mechanical Engineers**, Vol. 291, pp. 27-34, 1994

12. P. Y. Wong and I. N. Miaoulis, "Thermal-Radiation Absorption Characteristics of Patterned Wafers During Rapid Thermal Processing," Proceedings of Symposium on Rapid Thermal and Integrated Processing III, **Materials Research Society**, Vol. 342, pp. 395-400, 1994

11. C. G. Madras, L. Goldman, P. Y. Wong, and I. N. Miaoulis, "The Effect of Substrate Temperature on the Crystallinity and Stress of Ion Beam Sputtered Silicon on Various Substrates," Proceedings of Symposium on Materials Reliability in Microelectronics IV, **Materials Research Society**, Vol. 338, pp. 179- 184, 1994

10. P. Y. Wong and I. N. Miaoulis, "Real Time Image Analysis and Control of Zone-Melting Recrystallization of Thick Gallium Films," Proceedings of Symposium on Microelectronic Processes, Sensors, and Controls; Microelectronic Processing '93, **Society of Photo-Instrumentation Engineering**, Vol. 2091, pp. 358-368, 1993

9. P. Y. Wong and I. N. Miaoulis, "Thermal Radiation Phenomena in Rapid Thermal Processing of Thin-Film Structures," Proceedings of 1st International Rapid Thermal Processing Conference, **RTP '93**, pp. 459-465, 1993, Invited paper

8. P. Y. Wong, C. K. Hess, and I. N. Miaoulis, "Microscale Radiation Effects in Multilayer Thin-Film Structures During Rapid Thermal Processing," Proceedings of Symposium on Rapid Thermal and Integrated Processing II, **Materials Research Society**, Vol. 303, pp. 217-222, 1993

7. C. K. Hess, P. Y. Wong, and I. N. Miaoulis, "Thermal Effects of Isolated Step Perturbations During Processing with a Line Heat Source," Proceedings of Session on Transport Phenomena in Materials Processing and Manufacturing; Heat Transfer Division, **American Society of Mechanical Engineers**, Vol. 196, pp. 221-223, 1992

6. P. Y. Wong, L. M. Trefethen, and I. N. Miaoulis, "Cross-Correlation Thermal Radiation Phenomena in Multilayer Thin-Film Processing," Proceedings of Session on Microstructures, Sensors, and Actuators; Dynamic Systems and Control Division, **American Society of Mechanical Engineers**, Vol. 32, pp. 349- 359, 1991

5. I. N. Miaoulis, S. M. Yoon, R. D. Robinson, C. K. Hess, and P. Y. Wong, "Thermal Analysis of Multilayer Thin Film Structure Processing with an Infrared Heat Source; an Overview," Proceedings of Session on Thin-Film Heat Transfer - Properties and Processing; Heat Transfer Division, **American Society of Mechanical Engineers**, Vol. 184, pp. 81-90, 1991

4. P. Y. Wong, I. N. Miaoulis, and P. Zavracky, "Microscale Heat Transfer Phenomena in Multilayer Thin Film Processing with a Radiant Heat Source," Proceedings of Session on Microstructures, Sensors, and Actuators; Dynamic Systems and Control Division, **American Society of Mechanical Engineers**, Vol. 19, pp. 175-187, 1990

3. P. Y. Wong, I. N. Miaoulis, and P. Zavracky, "Optical Effects Induced by the Multilayer Nature of SOI Films During transient Thermal Processing with a Radiant Line Heat Source," Proceedings of Symposium on Surface Chemistry and Beam Solid Interactions, **Materials Research Society,** Vol. 201, pp. 445-450, 1990

2. J. D. Lipman, P. Y. Wong*, I. N. Miaoulis, and J. S. Im, "Numerical Simulation of the Radiation Effects in Graphite-Strip Zone-Melting Recrystallization of Thin Silicon Films," Proceedings of Session on Collected Papers in Heat Transfer; Heat Transfer Division, **American Society of Mechanical Engineers**, Vol. 123, pp. 211-217, 1989

1. I. N. Miaoulis, J D. Lipman, D. A. Flodman*, P. Y. Wong*, M. W. Wolfson*, J. Barrett III, and A. Nelson, "Texture Enhancement of Thick High-Tc Superconductive Films by Zone-Melting," Proceedings of Session on Collected Papers in Heat Transfer; Heat Transfer Division, **American Society of Mechanical Engineers**, Vol. 123, pp. 77-81, 1989

* - refers to undergraduate student

C. THESES

Ph.D. Dissertation, "Processing Uniformity in Thin-Film Manufacturing by Thermal Radiative Heating," Tufts University, 1995
Thesis Committee: I. N. Miaoulis (Advisor), C. C. Doumanidis, V. P. Manno, and P. Zavracky

M.S.M.E. Thesis, "Microscale Heat Transfer Effects in Multilayer Thin Films Subjected to Thermal Radiation," Tufts University, 1991
Thesis Committee: I. N. Miaoulis (Advisor), L. M. Trefethen, and P. Zavracky

B.S.M.E. Thesis, "Zone-Melting Recrystallization of Y-Ba-Cu-Ox and Sr-Bi-Ca-Cu-Ox Superconducting Films," Tufts University, 1990
Thesis Advisor: I. N. Miaoulis

II. PRESENTATIONS IN PROFESSIONAL CONFERENCES AND SEMINARS

(References for those presentations that were published in refereed proceedings volumes are given in the previous section)

A. INVITED

•*Synergy 06, Royal Sonesta, Cambridge, MA*, August 2006

16. "Re-Engineering" Engineering 101

• *Department of Mechanical Engineering Seminar, Tufts University*, September 2005

15. "BioMEMS for Materials Discovery and Analysis"

• *2nd Annual COMCAST Technology Summit for Higher Education, Royal Sonesta, Cambridge, MA*, October 2004

14. "Partnerships for Technology/Engineering Initiatives"

• *American Science and Technology Centers, The Tech Museum of Innovation, San Jose, CA*, September 2004

13. "Science Centers and Universities: Creating Partnerships for Strategic Mutual Benefit"

• *Thermal Manufacturing Workshop, Tufts University*, June 2002

12. "Tufts Initiatives in Microscale Research and Education"

• *Department of Mechanical Engineering, Aerospace Engineering, and Manufacturing, Rensselaer Polytechnic Institute,* October 1999

11. "Links between Butterflies and Microchips"

• *Department of Mechanical, Industrial, and Manufacturing Engineering, Northeastern University,* May 1999

10. "Microscale Heat TransferThermal Processing"

• *NIST Physics Laboratory-Optical Technology Division,Gaithersburg, MD,* January 1998

9. "MEMS as Temperature Sensors in Rapid Thermal Processing"

• *Int. Symposium on Mechanics on Plants, Animals, and Their Environment, San Diego, CA,* January 1998

8. "How Butterflies Optimize Solar Energy Absorption and Convective Heat Transport by Wing Design"

• *Optical Society of America, Light and Color in the Open Air, Santa Fe, NM,* February 1997

7. "Multifunctional Thin Films in Butterflies"

• *Biomedical Engineering Society 1996 Annual Fall Meeting, University Park, PA,* October 1996

6. "BioHeat Transfer in Butterfly Wings for Thermoregulation"

• *Department of Mechanical Engineering Seminar, Tufts University*, June 1996

5. "Thermo-Mechanical Effects in Polymer Thin-Film Structures"

• *Department of Mechanical Engineering Seminar, Tufts University*, April 1995

4. "Thermal Radiative Effects in the Manufacturing of Thin-Film Structures "

• *Department of Mechanical Engineering Seminar, University of Rhode Island,* November 1994

3. "Thin Film Heat Transfer in Materials Processing"

• *Department of Mechanical Engineering Seminar, Tufts University*, January 1994

2. "Thin Film Heat Transfer in Materials Processing"

• *1st International Rapid Thermal Processing Conference*, *Scottsdale, AZ,* 1993

1. "Thermal Radiation Phenomena in Rapid Thermal Processing of Thin-Film Structures"

B. CONTRIBUTED *(Actual presenter or listed as co-author on presentation)*

• *Materials Science & Technology 2008 Conference and Exhibit*, Pittsburgh, PA, October 2008
58. "Ultrasonic Consolidation of Pure Al and Composite Al-Ni Compacts "

• *1st Int. Conf. from Nanoparticles & Nanomaterials to Nanodevices & Nanosystems*, Halkidki, Greece, June 2008
57. "Nanoheater Reactive Heterostructures as Sources for Thermal Nanomanufacturing,"

• *3rd Frontiers in Biomedical Devices Conference*, Irvine, CA, June 2008
56. "Design of a Navigational Aid for Colonoscopy"

• ASME 2008 *SummerBioengineering Conference*, Marco Island, FL, June 2008
55. "Endoscope Shape-Tracker Based on Embedded Fluorescent Dyes in an Optical Fiber"

• *Nanotech 2008*, Boston, MA, June 2008
54. "Fabrication and Characterization of Nanoscale Heating Sources ("Nanoheaters") for Nanomanufacturing,"

• *Design of Medical Devices Conference*, Minneapolis, MN, April 2008
53. "Key factors that affect retention in and attrition of STEM for high school girls"

• *SPIE, Smart Structures & Materials, Non-Destructive Testing & Health Monitoring*, San Diego, CA, March 2008
52. "Advanced Shape Tracking to Improve Flexible Endoscopic Diagnostics"

• *ASEE Annual Conference*, Pittsburgh, PA, June 2008
51. "Key factors that affect retention in and attrition of STEM for high school girls"
50. "Integrating Algebra and Engineering in the Middle School Classroom"

• *Materials Research Society Fall Meeting*, Boston, MA, 2007
49. "The Effect of Hydrophobic Patterning on Micromolding of Aqueous-Derived Silk Structures"

• *Massachusetts Technology Transfer Center, Microfluidics Technology Fair,* Boston, MA, October 2006
48. "Polymer Discovery Via Microfluidic Enzymatic Synthesis"

• *Women in Engineering Programs & Advocates Network, Annual Meeting,* Pittsburgh, PA June 2006
47. "A Model STEM Team Collaboration: 4 Schools for WIE"

• *Mass. Technology Transfer Center,* Early-Stage Life Sciences Technology Conference II*,* Boston, MA, May 2006
46. "Bio-LOM Tissue Scaffolds: Continual Improvement Strategy"

• *Women in Engineering Programs & Advocates Network, Annual Meeting,* Las Vegas, NV, 2005
45. "Growing a STEM Team: Review of an Innovative Program for Middle School Students"

• *Materials Research Society Fall Meeting*, Boston, MA, 2004
44. "Effects of High-Speed Deformation on the Phase Stability and Interdiffusion in Ultrasonically Joined Aluminum and Zinc Foils"

• *6th International Conference on Frontiers of Design and Manufacturing, Xi'an CHINA, 441st paper, June 2004*
43. "Simulation of the Temperature and Extent of Nickel Dissolution During the reactive Fabrication of Nickel Aluminide Coatings by Rapid Heating of Plated Precursors"

• *ASEE New England Section 2004 Annual Conference, Dedham, MA, April 2004*
42. "4 Schools for Women in Engineering (WIE): Creating Partnerships for Gender Equity"

• *American Society of Mechanical Engineers International Mechanical Engineering Congress and Exposition*, Washington DC, 2003
41. "MEMS based Microcalorimeter for Liquid Samples"

• *Materials Research Society Fall Meeting*, Boston, MA, 2003
40. "Thermal Effects in Plasma Treatment of Patterned PDMS for Bonding Stacked Channels"

• *Materials Research Society Fall Meeting*, Boston, MA, 2002
39. "Thermal and Mass Balance in Reactive Thermal Processing of Nickel Aluminide Coatings on Steel Substrates"

• *Materials Research Society Fall Meeting*, Boston, MA, 1999
38. "Microscale Rapid Prototyping using UV curing polymers"
37. "High-Temperature-Dependent Coefficient of Thermal Expansion of Silicon Nitride Films used in Microelectromechanical Systems"

• *American Society of Mechanical Engineers/Japanese Society of Mechanical Engineers Joint Thermal Engineering Conference,* San Diego, CA, 1999
36. "Temperature Measurements During Rapid Thermal Annealing Using MEMS"

• *Materials Research Society Fall Meeting*, Boston, MA, 1998
35. "Mechanical and Thermophysical Properties of Silicon Nitride Thin Films at High Temperatures"
34. "Determining the High Temperature Properties of Thin Films Using Bi-Layered Cantilevers"

• *American Society of Mechanical Engineers International Mechanical Engineering Congress and Exposition*, Annaheim, CA, 1998
33. "Effect of Surface Patterning in Thin Film Structures on the Thermal Radiative Properties During Rapid Thermal Processing"
32. "Numerical Simulation of Radiant Thermal Processing of Bilayer Microcantilevers"

• *Society of Manufacturing Engineers International Conference on Education in Manufacturing ,* San Diego, CA 1998
31. "Tufts-Rensselear Thermal Manufacturing Research-Curriculum Development Program,"

• *Materials Research Society Spring Meeting*, San Francisco, CA, 1998
30. "Partial Transparency Effects of Silicon During Rapid Thermal Processing"
29. "MEMS as Temperature Sensors During High Temperature Processing"

• *Society of Manufacturing Engineers International Conference on Education in Manufacturing*, San Diego, CA 1998
28. "Tufts-Rensselear Thermal Manufacturing Research-Curriculum Development Program"

• *Materials Research Society Fall Meeting*, Boston, MA, 1997
27. "Microscale Radiative Effects in Complex Microstructures of Iridescent Butterfly Wing Scales"

• *American Society of Mechanical Engineers International Mechanical Engineering Congress and Exposition*, Dallas, TX 1997
26. "Selective Multilayer Thin-Film Development in Insects"

• *Materials Research Society Fall Meeting*, Boston, MA, 1996
25. "*In-Situ* Measuring of Thermo-Mechanical Effects and Properties in Thin-Film Polymers"

• *Materials Research Society Spring Meeting*, San Francisco, CA, 1996
24. "Numerical Modeling of Radiative Properties of Patterned Wafers with Sub-Micron Features"

• *Materials Research Society Fall Meeting*, Boston, MA, 1995
23. "Temperature and time dependent viscosity of polymer adhesives in multilayer structures"

• *American Society of Mechanical Engineers International Mechanical Engineering Congress and Exposition*, San Francisco, CA, 1995
22. "Thermal Radiative Analysis of Rapid Thermal Processing of Electronic Materials"
21. "Microscale Reflectance Spectrometry of Thin-Film Structures in Butterfly Wing Scales"

• *Materials Research Society Spring Meeting*, San Francisco, CA, 1995
20. "Transient and Spatial Radiative Properties of Patterned Wafers During Rapid Thermal Processing"
19. "Adhesion and Thermal Deformation of Ceramic/Polymer heterostructures"

• *Materials Research Society Fall Meeting*, Boston, MA, 1994
18. "Measurement of the Effect of Temperature on Stress Distribution and Deformation in Multilayer Optical Thin Film Structures"

• *American Society of Mechanical Engineers Winter Annual Meeting*, Chicago, IL, 1994
17. "Processing Uniformity Issues During Zone-Melting Recrystallization of Large Thin-Film Areas"
16. "Thermal and Deposition Stress Relaxation in Low-Melting-Point Substrates with High-Melting-Point Coatings"
15. "The Effect of Microscale and Macroscale Patterns on the Radiative Heating of Multilayer Thin-Film Structures"

• *Materials Research Society Spring Meeting,* San Francisco, CA, 1994
14. "Thermal-Radiation Absorption Characteristics of Patterned Wafers During Rapid Thermal Processing"
13. "The Effect of Substrate Temperature on the Crystallinity and Stress of Ion Beam Sputtered Silicon on Various Substrates"
12. "Thermal Stress and Creep Modeling in Thin-Film Structures on Substrates with Low Melting Temperatures"

• *Society of Photo-Instrumentation Engineering*, *Microelectronic Processing*, Monterey, CA, 1993
11. "Real Time Image Analysis and Control of Zone-Melting Recrystallization of Thick Gallium Films"

• *Materials Research Society Spring Meeting,* San Francisco, CA, 1993
10. "Microscale Radiation Effects in Multilayer Thin-Film Structures During Rapid Thermal Processing"
9. "Solidification Front Stability During Zone-Melting Recrystallization of Thin Silicon Films"

• *American Society of Mechanical Engineers, 28th National Heat Transfer Conference and Exhibition*, San Diego, CA, 1992
8. "Thermal Effects of Isolated Step Perturbations During Processing with a Line Heat Source"

• *American Society of Mechanical Engineers Winter Annual Meeting*, Atlanta, GA, 1991
7. "Cross-Correlation Thermal Radiation Phenomena in Multilayer Thin-Film Processing"
6. "Thermal Analysis of Multilayer Thin Film Structure Processing with an Infrared Heat Source; an Overview"

• *American Society of Mechanical Engineers Winter Annual Meeting,* Dallas, TX, 1990
5. "Microscale Heat Transfer Phenomena in Multilayer Thin Film Processing with a Radiant Heat Source"

• *Materials Research Society Fall Meeting*, Boston, MA, 1990
4. "Optical Effects Induced by the Multilayer Nature of SOI Films During Transient Thermal Processing with a Radiant Line Heat Source"

• *American Society of Mechanical Engineering Winter Annual Meeting*, San Francisco, CA, 1989
3. "Numerical Simulation of the Radiation Effects in Graphite-Strip Zone-Melting Recrystallization of Thin Silicon Films"
2. "Texture Enhancement of Thick High-Tc Superconductive Films by Zone-Melting"

• *Materials Research Society Fall Meeting*, Boston, MA, 1988
1. "Development of Thick Sr-Bi-Ca-Cu-O Superconductive Films by a Simple Screen Processing Technique"