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Biosketch

Dr. Wong began his graduate training in 1993 in mechanics and mechanisms of fracture of polymer blends with and without glass fiber reinforcements at UMass Amherst, working with Shanti V. Nair. Later he joined the group of Yiu-Wing Mai, FRS, at University of Sydney on identifying the roles of maleated block copolymers as a sequence of events in toughening nylon polypropylene blends. He later pursued an academic career in Singapore, teaching in the School of Materials Science and Engineering in Nanyang Technological University. He has since graduated 9 masters, 3 PhDs and 6 postdocs and received demonstrable external research funding in excess of $3 million as a PI and co-PI. In addition to pursuing bio-inspired materials research, he has worked on mechanical behavior and functional properties of polymers, electrospinning, processing-structure-property relationships, coatings, bio- and nano-materials and composites. Dr. Wong has authored and coauthored over 70 research articles in books, journals and patent literatures, with additional papers in conference proceedings and refereed abstracts. Some of these research papers were highly cited with three recent publications specially featured in (i) the February 13, 2012 issue of *Virtual Journal of Nanoscale Science & Technology*, American Institute of Physics; (ii) Lab Talk, nanotechweb.org on June 2, 2011; and (iii) the *Top 25 Hottest Articles* by *Composite Science and Technology*. In 2007 he received an NSF CAREER award entitled "Electrospinning-Enabled Bio-Inspired Materials Research and Education" from the Program of Materials Processing and Manufacturing. He presently serves as the Chair of the Engineering Properties and Structures Division (EPSDIV) of the Society of Plastics Engineers (SPE) and the Vice-Chair of Polymer Technical Committee of the American Society of Mechanical Engineers (ASME). He is presently an associate professor with tenure at the University of Akron and an honorary associate professor at the University of Sydney.

Education

1999 **Ph.D. (Engineering) – Center for Advanced Materials Technology**
School of Aerospace, Mechanical and Mechatronic Engineering
University of Sydney, Sydney, Australia
Thesis title: "Structure-property relationship of novel multi-component polymeric materials" – Advisor: Prof. Yiu-Wing Mai

1995 **M.S.M.E.- Mechanical Engineering**
University of Massachusetts, Amherst, USA
Thesis title: "Mechanics and mechanisms of fracture for nylon6,6/ABS blends with and without fiber reinforcements" – Advisor: Prof. Shantikumar V. Nair

1993 **B.S. magna cum laude – Engineering Physics**
West Virginia Wesleyan College, Buckhannon, USA

Appointment

2004 - Present **University of Akron**, Akron, OH 44325-3903, USA
Associate Professor (2008 -), Assistant Professor (2004-2008)
Department of Mechanical Engineering
Honorary Associate Professor, **University of Sydney**
School of Aerospace, Mechanical and Mechatronic Engineering
(http://sydney.edu.au/camt/about/people/honorary_associate_professors/index.shtml)

9/2011 **Nanyang Technological University, Singapore**

	Visiting Professor and Guest Speaker, School of Materials Science and Engineering
6/2010	**City University of Hong Kong** Academic Visitor, Department of Physics and Materials Science
2008	**Senior Faculty Fellow**, Office of Naval Research (ONR)-American Society of Engineering Education (ASEE) Summer Faculty Research Program, **U.S. Naval Research Laboratory**, Washington, D.C.
2007	**International Visiting Research Fellow**, University of Sydney, Australia
2006	**Summer Faculty Fellow** (AFOSR-ASEE), Materials and Manufacturing Directorate, **US Air Force Research Lab**, Wright Patterson Air Force Base, Ohio
2002 – 2004	**North Dakota State University (NDSU)**, Fargo, ND 58105, USA Assistant Professor, Department of Mechanical Engineering Adjunct Assistant Professor, Department of Polymers and Coatings Faculty Associate, Center for Nanoscale Science & Engineering and Center of Excellence for Microsensors and their Fabrication with NanoBlock and Fluidic Self Assembly Technology
1999 – 2002	**Nanyang Technological University (NTU)**, Singapore Assistant Professor, School of Materials Science and Engineering
11/2000	**City University of Hong Kong** Academic Visitor, Department of Manufacturing and Engineering Management
1995 – 1999	**University of Sydney**, Sydney, Australia Tutor, Lab Demonstrator, School of Aerospace, Mechanical and Mechatronic Engineering
1995	**Hong Kong University of Science & Technology**, Hong Kong Staff Research Assistant, Center for Advanced Engineering Materials
1993 - 1995	**University of Massachusetts**, Amherst Graduate Research Assistant, Advanced Composites Lab

Supervised Graduate Theses

Directly Supervised PhD Dissertations:

(1) "Responsive Fibers by Co-Axial Electrospinning" "Shuwen Chen (B.S. M.E. Wuhan University of Technology, China)
(2) "Electrospun Polymer Nonwovens for Water Filtration" Ms. Guang Ji (B.S., M.E. Dalian University of Technology, China)
(3) "Adhesive Behavior of Aligned Electrospun Nanofibers" Mr. John Najem (B.S., M.S. University of Akron)
(4) "Electrospun Polymer Nanofibers for Water Generation" Mr. Pei Chen (M.S. University of Akron, B.S. Xiamen University, P.R. China)
(5) "Development of High Toughness Bioactive Composites using Electrospinning Techniques" – Avinash Baji (M.S. University of Akron, Ohio) Graduated, 2008, now at University of Sydney.
(6) "Toughening of Low Weight Foam-based Composites for Defense Applications"– Mr. Erwin Merijn Wouterson (M.S. from Delft University of Technology, The Netherlands) Graduated, 2007. Principal Engineer at Vestas Technology R&D, Singapore.
(7) "Elastomer-containing LCP Hybrid Composites"– Mr. Sreekumar Pisharath (M.S. from Indian Institute of Technology, Madras) Graduated. Energetics Research Institute (EnRI-NTU), Singapore.

Master Theses:

(8) Master's thesis "Piezoelectric Polymer Nanofibers" Mr. Shane Hague (B.S. University of Akron)
(9) Master's thesis "Electrospun Ultrahigh Molecular Weight Polyethylene" Ms. Qian Li (B.S. Xiamen University, P.R. China)
(10) Master's thesis "Structure-property Relationship of Fiber Reinforced Polymers" Mr. Rabih Mansour (B.S. Damascus University, Syria) - graduated in spring 2012.
(11) Master's thesis "Strain Fatigue Lives of Nylon and Polypropylene" Mr. Pei Chen (B.S. Xiamen University, P.R. China) - graduated in Spring 2010.
(12) Master's thesis "Effect of Specimen Thickness on Strain Fatigue Lives of Insulation Plastics" Mr. Dan Forpahl (B.S. University of Akron)
(13) Master's thesis "Deformation of Aligned Electrospun Nanofibers" Mr. John Najem (B.S. University of Akron) - graduated in Fall 2009.
(14) Master's thesis "Nanoscratch of Polymers" Ms. Deepthi Das Varadi Jasline, (B.S. Sri Krishnadevaraya University, Anantapur, India) - graduated in Fall 2009.
(15) Master's thesis "Deformation and Durability Studies of Polymers" Mr. Sunil Kumar Reddy (B. Tech, Jawaharlal Nehru Technological University- Hyderabad, India) – graduated, 2008
(16) Master's thesis "Cost-effective Substitutes for Carbon Nanotubes - Fabrication of Graphene-based Nanocomposites" Mr. Eric Sutherland (B.S. North Dakota State University) - graduated, 2004.
(17) Master's thesis "Microstructural Control of UV-curable Nanocomposites for Flexible Plastic Substrates" Mr. Siva Prashanth Davuluri (B. Tech, Jawaharlal Nehru Technological University, India) - graduated, 2004
(18) Master's thesis "Fracture Behavior of Soft and Microporous Chitosan Tissue Scaffolds" Mr. Jason Holm (B.S. North Dakota State University) - graduated, 2004
(19) M.Eng. thesis "Microstructure and Fracture Behavior of Polypropylene/Nanoclay Composites"– Mr. Chen Ling (B.S. from Tongji University, Shanghai) graduated. Worked at Institute of Materials Research and Engineering (IMRE), Singapore. - graduated, 2002, now at University of Akron for PhD.
(20) Master's thesis "Detection of Incipient Rubber Cavitation in Impact Modified Polymer Blends Containing Short Glass Fiber – A ternary composite"– Mr. Gary Huang, graduated, 2002.

Postdoctoral Supervision:

- Dr. Haining Na - University of Akron on Electropun Polymer Fibers. (Ph.D. from Tianjin University)
- Prof. Qiang Shi - University of Akron on Deformation of Electrospun Nanofibers (Now at Changchun Institute of Applied Chemistry, Chinese Academy of Science, China)
- Dr. Xiaofan Wei - University of Akron on Mechanics Modeling of Electrospun Nanofibers (Ph.D. from University of Akron)
- Dr. Vardhan Bajpai in collaboration with Seldon Laboratories LLC, Windsor, Vermont
- Dr. Fawn M. Uhl (now at Owens Corning, Granville, Ohio)
- Dr. W. Zheng (now at Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Science, P.R. China)
- Dr. Guoxin Sui (now at Institute of Metals Research, Chinese Academy of Science, P.R. China)

Visiting Graduate Students:

- Ing. Florencia Montini Ballarin, División Polímeros, INTEMA, University of Mar del Plata - CONICET, Argentina
- Yoshika Ikeda, Department of Advanced Fibro-Science, Kyoto Institute of Technology, Japan

Thesis Committee Member at the University of Akron (since 2004):

1. Suneel Battula (PhD) – Department of Biomedical Engineering
2. Zehra Kalkan (PhD) – Department of Polymer Engineering
3. Mohammad Karim (PhD)- Department of Mechanical Engineering
4. Guillermo Jimenez (PhD) – Department of Polymer Engineering
5. Vardhan Bajpai (PhD) – Department of Polymer Engineering
6. Ashutosh Agrawal (MS) - Department of Mechanical Engineering
7. Jianguo Zhou (PhD)– Department of Polymer Engineering
8. Jason Kuznicki (MS) – Department of Polymer Engineering
9. Haifeng Shan (Ph.D) – Department of Polymer Engineering
10. Ravindrabharathi Narayanan (PhD) – Department of Chemical Engineering
11. Ling Du (PhD) - Department of Polymer Engineering
12. Jackapon Sunthornvarabhas (PhD) – Department of Chemical Engineering
13. Ruofeng Wang (PhD) – Department of Chemical Engineering
14. I-Ta Chang (PhD) – Department of Polymer Engineering
15. Ali A. Al-Quraishi (PhD) – Department of Mechanical Engineering
16. Sughun Bumm (PhD) – Department of Polymer Engineering
17. Cole S. Hamey (Ph.D.) – Department of Civil Engineering
18. Uday P. Karmarkar (Ph.D.) – Department of Polymer Engineering
19. Yuanmei Cao (Ph.D.) - Department of Polymer Engineering
20. Byoung Jo Lee (Ph.D.) - Department of Polymer Engineering
21. Todd Lewis (Ph.D.) - Department of Polymer Engineering
22. Sayantan Roy (Ph.D.) - Department of Polymer Engineering
23. Kitchaporn Nartetamrongsutt (Ph.D.) - Department of Chemical and Biomolecular Engineering
24. Laila Shahreen (Ph.D.) - Department of Chemical and Biomolecular Engineering
25. Jonathan Rajala (Ph.D.) - Department of Chemical and Biomolecular Engineering

Panelist/Reviewer/Referee

1. National Science Foundation CAREER Panel (2010)
2. National Science Foundation (NSF) Materials Processing and Manufacturing Program, Civil, Mechanical, Manufacturing and Innovation Division (CMMI) Panel (2010)
3. National Science Foundation (NSF) SBIR Phase I Panel (2002)
4. Estonian Science Foundation (2009, 2010, 2011)
5. The German Israeli Foundation for Scientific Research and Development (2012)
6. Reviewer for Ph.D. Program in Materials Science and Engineering on behalf of University of Akron
7. U.S. Civilian Research and Development Foundation (CRDF) Reviewer
8. American Chemical Society Petroleum Research Fund

9. External Examiner, University of Sydney, 2008
10. External Examiner, MSE, Nanyang Technological University (NTU), Singapore, 2011
11. External Examiner, MAE, Nanyang Technological University (NTU), Singapore, 2012
12. *Journals (2004-2012):*
    a. *Materials Chemistry and Physics*
    b. *Nature Nanotechnology,*
    c. *Advanced Materials,*
    d. *Journal of Biomedical Materials Research*
    e. *Advanced Functional Materials,*
    f. *Materials Science and Engineering: A,*
    g. *Composite Science and Technology,*
    h. *Advances in Polymer Technology*
    i. *Journal of Applied Polymer Science,*
    j. *Colloids and Surfaces A: Physicochemical and Engineering Aspects,*
    k. *Polymer International,*
    l. *Journal of Composite Part B: Engineering,*
    m. *Journal of Polymer Science Polymer Physics Edition,*
    n. *Polymer,*
    o. *Macromolecular Materials and Engineering,*
    p. *Materials and Manufacturing Processes,*
    q. *Journal of Materials Science,*
    r. *ASME Journal of Mechanical Design.*
    s. ACS Applied Materials & Interfaces
    t. Langmuir
    u. Journal of Materials Research
    v. Polymer Engineering and Science

13. ASME International Mechanical Engineering Congress and Exposition
14. International Conference on Composite Materials (ICCM)
15. MRS International Conference on Materials for Advanced Technologies (ICMAT), Symposium on Advances in Polymers and Composites
16. 5th Asia Pacific Conference on Materials Processing

Selected Research Grant Activities as PI:

Total demonstrable external research funding since becoming an assistant professor from 1999: >US$1,800,000 as PI and US$1,233,737 as Co-PI

Project	**Source and Dates**	**Status**	**Amount**
Reinforced Polymers for Bearings Cage	The Timken Company November 2010-October 2011	Funded and Active	**US$44,836.00**
Diagnostic Engineering Technologies for Evaluating Connective Tissues (DETECT)	Wright Center of Sensor Systems Engineering (WCSSE) -ABIA, State of Ohio, September, 2010 - 2013	Funded and Active	**US$223,035.25** Wong's research expenditure.
NSF Supplement	NSF, awarded June 2010	Active	**US$5,658**

Adhesion and Fracture Studies	Koch Knight LLC	Funded and Active	**US$20,000**
Deformation and Durability Studies of Insulation Polymers	awarded on September 1, 2008 by Delphi Corporation.	Funded and Completed	**US$100,000**
NSF CAREER Award: Electrospinning-Enabled Bio-Inspired Materials Research and Education	awarded on January 18, 2008 by the National Science Foundation. Award No. CMMI-0746703. FY 2008-2013.	Funded and Active	**US$400,000**
Deformation and Durability Studies of Insulation Polymers	awarded on March 1, 2007 by Delphi Corporation.	Funded and Completed	**US$48,000**
Acquisition of a Nanoindentation System for Nanocomposite and Advanced Materials Research	awarded on July 15, 2005 by the National Science Foundation. Award No. DMI-0520967. FY 2005-2007	Funded and Completed	**US$244,645**
NSF Supplemental Request for Research Experiences for Undergraduates	awarded on May 9, 2006 by the National Science Foundation.	Funded and Completed	**US$12,000**
Collaborative Postdoctoral Research Fellowship in Nanotechnology	awarded on October 10, 2006 by Seldon Laboratories, LLC.	Funded and Completed	**US$94,500**
Sub-recipient Award from Texas Engineering Experiment Station	Texas A&M University July 15, 2006 – June 15, 2007	Funded and Completed	**US$10,000**
Cost-Effective Substitutes for Carbon Nanotubes and Other Nanocomposites	awarded by the National Science Foundation. Award No. CMI-0335390. FY 2003-2004	Funded and Completed	**US$63,415**
Development of Graphene-based Nanocomposite Films	North Dakota State NSF EPSCoR IIP SEED award	Funded and Completed	**US$17,500**
Acquisition of a Twin Screw Extruder for Polymer/Bio Nanocomposite Research and Education	awarded by the National Science Foundation. Award No. DMR-0413967. FY 2004-2005	Funded and Completed	**US$103,308**
Modeling of a nanoscale graphene reinforced polymer and its effect on radiation shielding	NASA-EPSCoR Seed Award on February 15, 2003	Funded and completed	**US$25,890**
Microstructural Control of Polymer Nanocomposites for Microelectronic Packaging and	Defense Microelectronics Activity under contract DMEA90-02-C-0224 on	Funded and completed	**$21,640**

Static Dissipation	November 15, 2002		
Toughening mechanisms of fiber containing polymer blends	Academic Research Fund, Ministry of Education, Singapore (2000-2002)	Funded and completed	**S$216,452**

Principal Investigator for Industrial Donations (2009 - Present):

Source	**Equipment**	**Date and Conditions**	**Estimated Value**
Delphi Corporation	MTS (300.05, 312.36, 314.11)High Frequency Servohydraulic Tesing Machines	9/2009 Fully Upgraded.	**$602,552** Quoted by MTS.
The Timken Company	Morgan Press Injection Molding Machine	2/2011 As new.	

Other Multi-Investigator Research Grant Activities (2001 - Present): Wong's Role: Co-PI

Project	**Source**	**Status**	**Funded Amount**
I/UCRC Phase I: Center for Tire Research	National Science Foundation IIP 1160982 PI: Celal Batur	Funded and Active	**$254,708**
Clean Technology Sensors Support for Ohio Companies to Add Value to their Products and help Move Them to the Market Place at An Accelerated Pace	Ohio Department of Development/Wright Center for Sensors System Engineering Phase 2 2010 Funding Cycle PI: Jose Alexis De Abreu Garcia	Funded and Active	**$316,672**
Acquisition of an AFM/Raman Integrated System for Bio/Nano Functional Materials and Devices Research and Education	National Science Foundation CMMI-0923053 for FY 2009-2011 PI: Zhenhai Xia	Funded and Active	**$372,166**
Acquisition of Scanning Probe Microscopy and Nanoindentation Instrumentation for	National Science Foundation - DMR Instrumentation for Materials Research for FY 2003 PI: Kalpana	Completed	**$155,150**

Nanomaterials and Biomaterials Research and Education	Katti		
Acquisition of fourier transform infrared microspectroscopy instrumentation for advanced materials and biomaterials research and education	National Science Foundation - MRI: Major Research Instrumentation for FY 2003 PI: Kalpana Katti	Completed	**$135,041**
Fracture and toughening of composites of polymers and nanoscale inorganic and organic fillers	AFOSR- Institute of Materials Research and Engineering, Singapore PI: Albert F. Yee	Expired	

Professional Services

- Chair, (2012-2013) Engineering Properties and Structures Division, Society of Plastics Engineers, USA
- Chair-Elect (2011-2012), Engineering Properties and Structures Division, Society of Plastics Engineers, USA
- ASME Materials Division, Polymer Technical Committee, Vice-Chair (2010-)
- Topic Organizer, "Processing-Structure-Property Relationships of Polymer Micro-/Nano-fibers" 2010 ASME International Mechanical Engineering Congress and Exposition, Vancouver, Canada November 12-18, 2010
- Editorial Board Member, ISRN Mechanical Engineering
- Elected Technical Program Chair, Engineering Properties and Structures Division, SPE Annual Technical Conference, McCormick Place, Chicago, IL, 2009
- Elected Director (2005-2009), Engineering Properties and Structures Division (EPSDIV), Society of Plastics Engineers (SPE), USA. (Number of Voters: 82)
- Elected Director (2005- present), SPE, Akron Section.
- Appointed Director (2005 - 2008), ASME, Akron Section.
- Symposium Organizer, "Processing and Properties of Multiscale Polymers and Composites" 2007 ASME International Mechanical Engineering Congress and Exposition, Seattle, Washington November 11-15, 2007
- Advisor to Nano-Network, a northeast Ohio organization 2007-present
- Elected Local Organizing Committee Chair for SPE sponsored Conference on "Recent Advances in Organic and Polymer Display Technologies" University of Akron, OH, October 23-24, 2006
- Session Organizer, "Mechanical Behavior of Nanostructured Polymers and Composites" 2006 ASME International Mechanical Engineering Congress and Exposition, Chicago, IL November 5-10, 2006
- Guest Editor, *Materials and Manufacturing Processes*, 2005

- Session Organizer, "Processing-Structure-Property Relationships of Polymer Nanocomposites", 2005 ASME International Mechanical Engineering Congress and Exposition, Orlando, FL November 5-11, 2005
- Technical Program Co-Chair, Engineering Properties and Structure Division, Society of Plastics Engineers Annual Technical Conference, *ANTEC 2004*, May 16-20, 2004 Chicago, IL.
- Session Moderator – Society of Plastics Engineers 61st Annual Technical Conference, *ANTEC 2003*, Nashville, TN May 4 – 8, 2003, 62nd Annual Technical Meeting, ANTEC 2004, Chicago, Annual Technical Meeting, ANTEC 2005, Boston.
- Organized 7th Asia Pacific Electron Microcopy Conference, Singapore – June 2000
- Organized International Conference on Materials for Advanced Technologies, Singapore, Symposium on Advances in Polymers and Composites – July 2001
- Session chair – 5th Asia Pacific Conference on Materials Processing, Seoul, Korea, June 2001
- Session chair – Symposium on Advances in Polymers and Composites, ICMAT 2001

Research Skills

Summary: 18+ years graduate and postdoctoral research experience in polymers and composites research, 13+ year hands-on experience in electrospinning, plastics processing and composite manufacturing, 11+ year in synthesis of carbon nanomaterials and UV curable thin and thick films for microelectronics and nanotechnology, advocate for a strong interdisciplinary approach, strong interpersonal skills, a proactive team worker

Instrumental: Experienced in polymer and composite fabrication techniques (curing kinetics, radiation curing, extrusion compounding, injection molding, autoclave, pultrusion, filament winding, ball milling), fracture characterization of polymers, thermoplastic composites and metallic alloys, INSTRON and MTS mechanical testing devices, computer-controlled thermal analysis instruments (DSC, TGA, DMA, DEA), ultramicrotomy, TEM, SEM with EDX, TOM, electron probe microanalysis, atomic force microscopy, nanoindenter, THIN sectioning system, automatic grinding and polishing equipment

Computer: Experienced in Windows, System administration, MSOffice, Internet, webpage maintenance, Sigma-Plot, Sigma-Scan, SAS, FORTRAN, Matlab, FEM/ANSYS

Languages: Fluent in English and Chinese. Excellent verbal communication and presentation skills

Educational Development

- Supervised PhD, M.S. MEng, BEng students and postdoctoral researchers in research projects and industrial attachments
- Courses Developed: (1) Deformation and Failure of Polymers and Soft Materials; (2) Mechanical Behavior of Nanostructured Materials and Composites; (3) Fundamentals of Composite Processing and Mechanics.
- Instructor for Materials Science at Nanyang Technological University (NTU), Singapore (Class enrollment: 914 engineering students in one lecture theatre. Teaching tools included MS Powerpoint, online Blackboard platform involving online submission of assignments, discussion, quiz and assessment, lecture notes and tutorials.)
    - Materials Science Subject Coordinator for ~2000 common engineering students
- Use of Personal Response System (PRS), Blackboard/Springboard/Moodle to administer quizzes in teaching engineering classes at NDSU/Akron.

Teaching (Courses)

Semester	Course	Level	Students	Credits
Spring 2012	4600:694:801 Deformation and Failure of Polymers and Soft Materials	Graduate	10	3
Spring, 2011	4600:486/696:008 Fundamentals of Composite Processing and Mechanics	Undergraduate/Graduate	19	3
Spring, 2011	4600:260 Engineering Analysis I	Undergraduate	70	2
Fall, 2010	4600:360 Engineering Analysis II	Undergraduate	24	2
Fall, 2010	4600:658:001/:486:802 Mechanical Behavior of Nanostructured Materials and Composites	Graduate/Undergraduate	9	3
Spring 2010	4600:260 Engineering Analysis I	Undergraduate	69	2
Spring 2010	4600:694:801 Deformation and Failure of Polymers and Soft Materials	Graduate	10	3
Fall, 2009	4600:360 Engineering Analysis II	Undergraduate	31	2
Fall, 2009	4600:696:804/4600:486:802 Mechanical Behavior of Nanostructured Materials and Composites	Graduate	8	
Spring 2009	4600:260 Engineering Analysis I	Undergraduate	63	2
Spring 2009	4600:696:803 Deformation and Failure of Polymers and Soft Materials	Graduate	6	3
Fall 2008	4600:360 Engineering Analysis II	Undergraduate	15	2
Fall 2008	4600:696:804/4600:486:802 Mechanical Behavior of Nanostructured Materials and Composites	Graduate	6	3
Spring 2008	4600:260 Engineering Analysis I	Undergraduate	20	2
Spring 2008	4600:696:803 Deformation and Failure of Polymers and Soft Materials	Graduate	11	3
Summer 2007	4600:260 Engineering Analysis I	Undergraduate	14	2
Spring 2007	4600:696:803 Deformation and Failure of Polymers and Soft Materials	Graduate	5	3
Spring 2007	4600:260 Engineering Analysis I	Undergraduate	27	2
Fall 2006	4600:360 Engineering Analysis	Undergraduate	25	3
Fall 2006	4600:696:804/4600:486:802 Mechanical Behavior of Nanostructured Materials and	Graduate	11	3

	Composites			
Spring 2006	4600:696:804/4600:486:802 Mechanical Behavior of Nanostructured Materials and Composites	Graduate	6	3
Fall 2005	4600:696:803 Deformation and Failure of Polymers and Soft Materials	Graduate	10	3
Fall 2005	4600:460 Concept of Design – Engineering Economy	Undergraduate	40	(3)
Spring 2005	4700:425, 9841:425/525 Introduction to Blending and Compounding	Senior/Graduate	12	3
Spring 2004	ME474/674: Composite Materials and Mechanics	Senior/Graduate	15	3
Spring 2004	ME221: Engineering Mechanics I Statics	Freshman/Sophomore	100	3
Fall 2003	ME221: Engineering Mechanics I Statics	Freshman/Sophomore	100	3
Spring 2003	ME474/674: Composite Materials and Mechanics	Senior/Graduate	15	3
Spring 2003	ME221: Engineering Mechanics I Statics	Freshman/Sophomore	100	3
Fall 2002	ME473: Engineering Plastics for Design	Senior/Graduate	21	3
Spring 2002	G169: Intro to Materials Science	Freshman	914	3
Spring 2002	ME454: Composite Materials	Honors Year (Senior)	10	3
Fall 2001	ME202: Analytical Techniques	Sophomore	180	3
Spring 2001	ME454: Composite Materials	Senior	15	3
Fall 2000	ME443: Fracture Mechanics and Failure Analysis	Senior	10	3
Fall 2000	M6133: Mechanics of Composites	Graduate	30	3
Spring 2000	ME106: Materials Structures and Mechanical Behavior	Freshman	20	3
Spring 2000	ME454: Composite Materials	Senior	15	3
Fall, 1999	ME106: Materials Structures and Mechanical Behavior	Freshman	180	3
Fall, 1999	ME443: Fracture Mechanics and Failure Analysis	Senior	20	3
Fall 1999	M6133: Mechanics of Composites	Graduate	30	3

Undergraduate research/laboratory/design projects

Year	Title	Level	Students	Credits
2007/2008	Design of a rotational collector for electrospinning of nanofibers		4	2
2005/2006	Design of a testing apparatus to conduct peel	Senior	3	3

	testing of a polymer-ceramic interface			
2005/2006	Design for self-sensing piezoelectric polymer nanocomposites	Senior	2	2
2004/2005	Design for a processing method to prepare bone substitute	Senior	4	2
2004/2005	Design for high toughness tissue scaffolds	Senior	1	3
2003/2004	Design for scratch tester for scratch-resistant plastics	Senior	3	6
2002/2003	Design of a polymeric battlebot	Senior	4	6
2002/2003	Mechanics and materials considerations for a composite bicycle frame	Senior	4	6
2001/2002	Polycarbonate nanocomposites	Honors (Senior)	1	12
2001/2002	Thermal characterization of clay filled polyamide/polypropylene blends	Honors (Senior)	1	12
2001/2002	Structure-property relationships of natural fiber composites	Honors (Senior)	1	12
2000/2001	Processing and characterization of natural fiber composites	Junior	2	12
1999/2000	Processing and properties of liquid crystalline polymer blends	Junior	2	12
1999/2000	Failure mechanisms of rubber toughened nylons with and without fiber reinforcements	Sophomore	2	6

University Services

- Chair, Retention, Tenure and Promotion Committee, Department of Mechanical Engineering, University of Akron 2010-2011
- Search Committee, Department of Biomedical Engineering, University of Akron, Spring, 2010.
- Established a student chapter of the Society of Plastics Engineers at NDSU in 2003 - serving as the founding faculty advisor
- Supervisor for 3M sponsored Injection Molding Program and Polymers and Coatings Option in Mechanical Engineering Department, NDSU
- Honors Year (NTU) and Plastic Senior Design Coordinator (NDSU) – coordinated senior design projects and honors year thesis projects, syllabus review, technical seminars, essays and exam matters
- NTU Subject Coordinator for Year 2 Engineering Materials (Class enrollment: 1800 engineering students)
- Polymer Processing Facility (NTU)– Supervisor
- Curriculum committee (NTU)- Member: developed undergraduate curriculum for common engineering students and subject syllabi for Polymer Science and Engineering, Mechanical Behavior of Materials, Engineering Materials
- NDSU Graduate Committee - Member
- NDSU Undergraduate Committee - Member
- NDSU Faculty Search Committee - Member
- Junior College Liaison Officer, President's Office, Nanyang Technological University
- NTU Career Guidance Committee: Member

- NTU Technology and Engineering Research Program: Coordinator
- NTU Inter-semester Program Coordinator, Division of Materials Technology

Awards/Honors

- Invited Speaker and Visiting Professor, Institute of Metals Research, Chinese Academy of Science, Shenyang, China, June 2011
- Invited Speaker, Engineering Properties and Structures Division, SPE ANTEC 2011, Boston, 2011
- Invited Speaker, Symposium U on Composites and Nanocomposites, The 6th Biennial International Conference on Materials for Advanced Technologies (ICMAT 2011), June 29-July 1, 2011, Singapore
- Invited Speaker, 11th Bi-National Congress on Metallurgy and Materials SAM/CONAMET 2011 October 18-21, 2011, Rosario – Argentina
- Visiting Research Professor, State Key laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Science, China, December 16-19, 2010
- Visiting Professor, Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Science, China, December 19-21, 2010
- Visiting Professor, School of Materials Science and Engineering, Nanyang Technological University, Singapore, December 13-16, 2010
- Honorary Associate Professor, University of Sydney 2009-2012
- National Science Foundation CAREER Award, 2008
- Senior Faculty Fellow – ONR-ASEE, 2008
- International Visiting Research Fellowship, University of Sydney, 2007
- Summer Faculty Fellow – AFOSR-ASEE, 2006
- Academic Visitor, Fudan University, Shanghai, China, 2005
- Invited Speaker, China Nano Conference, June 2005
- Academic Visitor, Huaqiao University, Fujian, China, 2004
- Researcher of the Year 03-04, College of Engineering & Architecture, North Dakota State University
- First Place Cash Award for Poster Presentation- Annual Meeting and International Coatings Exposition, November 12-14,2003, Federation of Societies for Coatings Technology, USA
- Certificate of Appreciation in recognition of a substantial contribution to the Engineering Properties and Structures Division, Society of Plastics Engineers, USA, 2004
- Australian Postdoctoral Fellowship from Australian Research Council (99-02)
- Certificate of Appreciation in recognition of a substantial contribution to the Failure Analysis and Prevention Special Interest Group, Society of Plastics Engineers, USA, 2002
- Certificate of Appreciation in recognition of a substantial contribution to the Thermoplastic Materials and Foams Division, Society of Plastics Engineers, USA, 2003
- Who's Who in Science and Engineering, 2002, 2005
- Who's Who in America, 2004
- Phi Kappa Phi Member 1992
- Postgraduate Research Scholarship (95-98) funded by ARC, Australia
- Research Assistantship (93-95) funded by National Science Foundation, USA
- Wesleyan Academic Scholarship (90-93) from WVWC, USA
- Dorothy Lee International Scholarship (90-93) from WVWC, USA

Professional Membership

- American Society of Mechanical Engineers (Corporate Member, elected 1999)
- Society of Plastics Engineers (Member, since 1994),
- Materials Research Society
- Society for the Advancement of Material and Process Engineering (SAMPE, 2010)
- American Society for Composites (Member, since 2003)
- Institution of Engineers, Australia (Graduate member and Professional Engineer)

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1. **S.-C. Wong** "Electrospun Microtubes and Nanotubes Containing Rheological Fluid" Non-Provisional Full Patent Application, United States Patent and Trademark Office, Patent Application Number: 13359020 filed January 22, 2012

2. **S.-C. Wong**, Chelsea Monty, Jie Zheng, George Chase "Smart Wound Dressings that Identify and Destroy Pathogenic Bacteria", United State Patent and Trademark Office, Patent Application number: USPTO Serial No.: 61/590,449, January 25 2012

3. **S.-C. Wong**, Q. Shi and K.T. Wan, "Dry Adhesives Made by Electrospun Polymer Fibers and the Applications of the Same", 2009, United State Patent and Trademark Office, Serial Number: 61/261110, November 13, 2009

4. B. Z. Jang, L. Yang, **S. C. Wong** and Y. Bai "Process for Producing Nanoscale Graphene Plates" US Patent Application 2005271574

5. **S.-C. Wong** and K.T. Wan: UA876 "Micro- and Nano-scale Concentric Tubes Containing Electro-rheological and Magneto-rheological Fluids made by Coaxial and Multiaxial Electrospinning and their Applications for Dry Adhesives and Armor Protection" Patent Application No. USPTO: 61/436,423, January 26, 2011

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1. P. Chen and **S.-C. Wong** "Piezoresistive Behavior of Polymers Filled by Carbonaceous Nanoinclusions" in *Physical Properties of Polymer Nanocomposites*, eds. S.-C. Tjong and Y.-W. Mai Woodhead Publishing Ltd. Cambridge, UK, 2010, ISBN 978-1-84569-672-6, Chapter 16, pp. 404-427.

2. **S. C. Wong**, Y. W. Mai and X. H. Chen "Fracture Behavior of Polymer Blends", in *Polymer Characterization Techniques and Their Applications to Blends*, ed. G. P. Simon, American Chemical Society and Oxford University Press, New York, 2003, ISBN 0-8412-3818-9, Chapter 7, pp. 191-234

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4. Y. W. Mai, **S. C. Wong** and X. H. Chen "Application of Fracture Mechanics in Characterization of Polymer Blends", in *Polymer Blends: Volume 2: Performance*, eds. D. R. Paul and C. B. Bucknall, John Wiley & Sons, New York, 1999, ISBN 0-471-35280-2, Chapter 20, pp. 17-58

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2. H. Na, P. Chen, **S.-C. Wong**, S. Hague, Q. Li "Fabrication of PVDF/PVA Microtubules by Coaxial Electrospinning" *Polymer*, accepted for publication (2012)

3. X. Wang, J. F. Najem, **S.-C. Wong**, K.T. Wan "A Nano-Cheese-Cutter to Directly Measure Interfacial Adhesion of Freestanding Nano-Fibers" *Journal of Applied Physics* Vol. 111, (2012) 024315 DOI: 10.1063/1.3677947, featured in the February 13, 2012 issue of *Virtual Journal of Nanoscale Science & Technology*, American Institute of Physics

4. Q. Shi, **S.-C. Wong**, W. Ye, J. Hou, J. Zhao, J. Yin "Mechanism of Adhesion Between Polymer Fibers at Nanoscale Contacts" *Langmuir* Vol. 28 (2012) 4663-4671

5. A. Baji, Y.-W. Mai, X. S. Du, **S.-C. Wong** "Improved Tensile Strength and Ferroelectric Phase Content of Self-assembled Polyvinylidene Fluoride Fiber Yarns using Electrospinning Technique" *Macromolecular Materials and Engineering* DOI: 10.1002/mame.201100176, Vol. 297 (2012) 209-213

6. A. Baji, Y.-W. Mai, **S.-C. Wong**, X. Du, Y. Liu "Influence of Carbon Nanotube Reinforcement on Crystalline Structures and Tensile Strength of Electrospun Polyvinylidene Fluoride Fibers" submitted to *Composites Science and Technology*, (2012)

7. A. Baji, Y.-W. Mai, **S.-C. Wong** "Effect of Fiber Diameter on the Deformation Behavior of Self-Assembled Carbon Nanotube Reinforced Electrospun Polyamide 6,6, Fibers" *Materials Science and Engineering A* Vol. 528 (2011) 6565-6572

8. A. Baji, Y.-W. Mai, Q. Li, **S.-C. Wong**, Y. Liu, Q.W. Yao "One-dimensional Multiferroic Bismuth Ferrite Fibers Obtained by Electrospinning Techniques" *Nanotechnology* Vol. 22 (2011) 235702 - 234708 DOI: 10.1088/0957-4484/22/23/235702 Excerpt from Article: "Multiferroic Nanofibers Spun Out for Nanoscale Sensing and Actuation" featured in Lab Talk, *nanotechweb.org* June 2, 2011 URL: http://nanotechweb.org/cws/article/lab/46178

9. Q. Shi, K.-T. Wan, **S.-C. Wong**, P. Chen, T.A. Blackledge "Do Electrospun Polymer Fibers Stick?" *Langmuir*, Vol. 26 (2010) 14188–14193 (Impact factor = 4)

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11. A. Baji, Y.-W. Mai, **S.-C. Wong**, M. Abtahi, P. Chen "Electrospinning of Polymer Nanofibers: Effects on Oriented Morphology, Structures and Tensile Properties" *Composites Science and Technology* Vol. 70 (2010) 703-718 (Selected as the **Top 25 Hottest Articles** by *CST* http://top25.sciencedirect.com/subject/materials-science/15/journal/composites-science-and-technology/02663538/archive/26)

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16. X. Wei, Z. Xia **S.-C. Wong** and A. Baji "Modeling of Mechanical Properties of Electrospun Nanofiber Network" *International Journal of Experimental and Computational Biomechanics*, Vol. 1 (2009) 45-57

17. **S.-C. Wong**, A. Baji and S. Leng "Effect of Fiber Diameter on Tensile Properties of Electrospun Poly(ε -caprolactone)" *Polymer*, Vol. 49 (2008) 4713-4722

18. **S.-C. Wong** and S. Bandaru "Strain Fatigue Lives of Insulation Plastics" *Journal of Materials Science*, Vol. 44 (2009) 365-373.

19. **S.-C. Wong** and A. Baji "Fracture Strength and Adhesive Strength of Hydroxyapatite-Filled Polycaprolactone" *Journal of Materials Science Materials in Medicine*, Vol. 19 (2008) 929-936

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24. A. Baji, **S.-C. Wong**, T.X. Liu, T. C. Li, S.T. Srivatsan "Morphological and X-ray Diffraction Studies of Crystalline Hydroxyapatite Reinforced Polycaprolactone" *Journal of Biomedical Materials Research Part B: Applied Biomaterials*, Vol 81B (2007) 343-350

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41. W. Zheng, X. Lu and **S. C. Wong** "Electrical and mechanical properties of expanded graphite reinforced HDPE" *Journal of Applied Polymer Science*, Vol. 91(2004) 2781-2788

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43. E. M. Wouterson, F.Y.C. Boey, X. Hu, **S. C. Wong** "Fracture and impact toughness of syntactic foam" *Journal of Cellular Plastics*, Vol. 40 (2004) 145-154

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45. S. Pisharath and **S. C. Wong** "Processability of LCP/glass/nylon hybrid composites" *Polymer Composites*, Vol 24 (2003) 109-118

46. L. Chen and **S. C. Wong** "Fracture properties of nanoclay-filled polypropylene" *Journal of Applied Polymer Science*, Vol 88 (2003) 3298-3305

47. W. Zheng and **S. C. Wong** "Electrical conductivity and dielectric properties of PMMA/expanded graphite composites" *Composite Science and Technology*, Vol 63 (2002) 225 – 235 (Cited >> 100)

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53. **S. C. Wong** and Y. W. Mai "Effect of Rubber Functionality on Microstructures and Fracture Toughness of Impact Modified Nylon 6,6/PP Blends Part II Toughening Mechanisms", *Polymer* Vol. 41 (2000) 5471-5483

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57. **S. C. Wong** and Y. W. Mai "Effect of Rubber Functionality on Mechanical and Fracture Properties of Impact Modified Nylon 6,6/PP Blends", *Key Engineering Materials*, Vol. 137 (1998) 55-62

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1. **S.-C. Wong**, H. Na "Effect of Multiaxial Electrospinning on Fiber Deformation and Adhesion" in Proceedings of ASME International Mechanical Engineering Congress & Exposition IMECE 2011, November 11-17, 2011, Denver, Colorado, USA

2. X. Wang, K.-T. Wan, **S.-C. Wong** "Direct Adhesion Measurement of Electrospun Microfibers" in Proceedings of ASME International Mechanical Engineering Congress & Exposition IMECE 2011, November 11-17, 2011, Denver, Colorado, USA

3. **S.-C. Wong**, H. Na, S. Hague, P. Chen, Q. Shi and K.-T. Wan "Mechanical Deformation and Adhesion of Electrospun Polymer Fibers" in Proceedings of 241th ACS National Meeting, Division of Polymeric Materials: Science and Engineering, March 27-31, 2011, Anaheim, California, USA

4. Q. Shi, **S.-C. Wong**, K.-T. Wan, T.A. Blackledge "Dry Adhesion Based on Electrospun Polymer Fibers" in Proceedings of ASME International Mechanical Engineering Congress & Exposition IMECE 2010, November 12-18, 2010, Vancouver, British Columbia, Canada

5. Q. Shi, K.-T. Wan, **S.-C. Wong**, P.Chen, Q. Li, T.A. Blackledge "Bio-Mimicking Dry Adhesives Based on Electrospun Polymer Nanofibers" in Proceedings of SAMPE 2010, Seattle, May 17-20, 2010

6. Q. Shi, K.-T. Wan, **S.-C. Wong**, P. Chen, Q. Li, T.A. Blackledge "Techniques to Measure Adhesive Forces Between Electrospun Polymer Nanofibers" in Proceedings of MRS Fall Meeting 2009, Boston, November 30-December 4, 2009

7. X. Wang, J.F. Najem, K.-T. Wan, **S.-C. Wong** "Direct Adhesion Measurement of Electrospun Micro-fibers using Atomic Force Microscopy" in Proceedings of the 34th Annual Meeting of the Adhesion Society (2011)

8. X. Wei, **S.-C. Wong** and A. Baji. "Hyperelastic Modeling of Enhanced Mechanical Properties of Electrospun Poly(ε-caprolactone) Fibers" in Proceedings of the Annual Technical Conference of the Society of Plastics Engineers, ANTEC 2009, Chicago, June 22-24, 2009

9. J. Najem and **S.-C. Wong**. "Study of Take-Up Velocity in Enhancing Tensile Properties of Aligned Electrospun Nylon 6 Fibers" in Proceedings of the Annual Technical Conference of the Society of Plastics Engineers, ANTEC 2009, Chicago, June 22-24, 2009

10. A. Baji, **S.-C. Wong**, T.A. Blackledge, S. Leng "Mechanical Properties of Electrospun Composites and Their Crystallinity Measurements using X-ray Diffraction" in Proceedings of the Annual Technical Conference of the Society of Plastics Engineers, ANTEC 2008, Milwaukee, USA May 4-7, 2008

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14. **S.-C. Wong** and A. Baji "Fracture Behavior of Hydroxyapatite-Filled Polycaprolactone" Proceedings of 2006 ASME Congress, November 5-10, 2006, Chicago, IL

15. B. Yang and **S.-C. Wong** "A Micromechanics Model of Progressive Particle Debonding in Particle-Reinforced Composites Using Defect Green's Function" Proceedings of 2006 ASME Congress, November 5-10, 2006, Chicago, IL

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39. S. Pisharath and **S. C. Wong** "Effect of LCP addition on the properties of hybrid composites" accepted for publication in Proceedings of the 60th Annual Technical Conference of the Society of Plastics Engineers, ANTEC 2002, USA, Society of Plastics Engineers, vol II, pp. 1404-1408

40. **S. C. Wong**, G. X. Sui, C. Y. Yue and Y. W. Mai "Failure behavior of fiber-reinforced toughened polymers" accepted for publication in Proceedings of the 60th Annual Technical Conference of the Society of Plastics Engineers, ANTEC 2002, USA, Society of Plastics Engineers, vol III, pp. 3041-3045

41. G. X. Sui, **S. C. Wong** and C. Y. Yue "Toughening mechanisms in fiber containing impact modified polymers", in Proceedings of the 59th Annual Technical Conference of the Society of Plastics Engineers, ANTEC 2001, USA, Society of Plastics Engineers, May 2001 pp.1567-1570

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44. Fasce L. A., Frontini P. M., **S. C. Wong**, Mai Y.-W., "Fracture behavior of polypropylene modified with metallocenecatalyzed polyolefins", Proceedings of the 58th Annual Technical Conference of the Society of Plastics Engineers, ANTEC 2000, USA, Society of Plastics Engineers, 2000 pp. 3241-3244

45. Fasce L. A., Frontini P. M., **S. C. Wong**, Mai Y.-W., "Deformation mechanisms of polypropylene modified with metallocene catalyzed polyolefin", Proceedings of the IV Simposio Argentino de Polimeros - SAP99 Los Cocos, Sierras de Cordoba, Argentina, 22 Nov 1999 - 24 Nov 1999

46. **S. C. Wong** and Y. W. Mai "Use of functionalized copolymers to toughen interfaces: An attempt to understand some toughening mechanisms in rubber-modified rigid-rigid blends", Plenary Lecture in *Proceedings of 2nd Asian Polymer Conference*, CHAN, C. M. (editor), Hong Kong University of Science and Technology, Hong Kong, 14-16 January, 1999

47. **S. C. Wong** and Y. W. Mai "Mechanics and Mechanisms of Fracture of Novel Polymer Blends with and without Fiber-reinforcements", in *Proceedings of Australian Fracture Group Conference, Symposium on "Structural Integrity and Fracture 98"* WANG, C. H. (editor), Melbourne, Australia, 21-22 September, 1998, pp.53-62

48. **S. C. Wong** and Y. W. Mai "Fracture Resistance and Microstructures of Unreinforced and Fiber-reinforced PA6,6/PP/SEBS-*g*-MA", in *Proceedings of the 56th Annual Technical Conference of the Society of Plastics Engineers*, Atlanta, 1998, Vol. 3, pp. 3113-3117

49. **S. C. Wong** and Y. W. Mai "On Novel PA6,6/PP/SEBS-*g*-MA Blends", Keynote Paper in *Proceedings of the 5th Japan International SAMPE Symposium and Exhibition*, MIYANO, Y. and YAMABE, M. (editors), Tokyo, Japan, 28-31 October, 1997, pp. 89-94

50. **S. C. Wong**, Y. W. Mai and L. Ye "Reactive Blending and J-Integral Fracture Resistance of PA6,6/PP Blends with SEBS-*g*-MA", in *Proceedings of the 55th Annual Technical Conference of the Society of Plastics Engineers*, Toronto, April, 1997 Vol. 2, pp. 2540-2545

51. **S. C. Wong,** Y-W Mai and Y. Leng "LCP Toughened PC/PBT Blend", in *Progress in Advanced Materials and Mechanics, Proceedings of the International Conference on Advanced Materials*, WANG, T. and CHOU, T.-W. (editors), (Peking University Press, Beijing, China, 1996) pp. 168-173

52. S. V. Nair, **S. C. Wong**, A. Subramaniam, L. A. Goettler and L. A. Gustafson "Adequacy of J-integral to Predict Failure Behavior of Fiber-reinforced and Unreinforced Polymer Alloys", in *Proceedings of the 53rd Annual Technical Conference of the Society of Plastics Engineers*, Boston, 1995 v. 2, 1749-1752

53. **S. C. Wong**, S. V. Nair, L. A. Goettler and L. A. Gustafson "Mechanics of Crack Initiation and Growth in Fiber Reinforced Polymer Alloys", in *Proceedings of Nov. 94 ASME Winter Annual Meeting Symposium on "Recent Advances in Structural Mechanics*, ASME Pressure Vessels & Piping Division" 1994 v. 295, 81-85

54. **S. C. Wong**, S. V. Nair, L. H. Vestergaard, L. A. Goettler and L. A. Gustafson "Fracture Resistance of Unreinforced and Glass Fiber Reinforced Nylon/ABS Alloys", in *Proceedings of the 52nd Annual Technical Conference of the Society of Plastics Engineers*, San Francisco, 1994

Technical Report:

1. "Microsensor Polymer Materials Development" D. C. Webster, **S.-C. Wong**, S. C. Croll, Appendix B.9 in "Center of Excellence for Microsensors and their Fabrication with NanoBlock and Fluidic Self Assembly Technology - Phase I Final Report," G.J. McCarthy, Program Manager, submitted to the Defense Microelectronics Activity, McClellan, CA, under contract DMEA90-02-C-0224, January 2004, 67 pp.57-61

Abstracts of Papers and Invited Talks

1. H. Na, P. Chen, Q. Shi, **S.-C. Wong** "Do Electrospun Polymers Fibers Stick?" International Conference on Materials for Advanced Technologies (ICMAT 2011), June 29-July 1, 2011, Singapore, Symposium U: Composites and Nanocomposites
2. Y. Ikeda, X. Zhang, K. K. H. Chan, C.-C. Tsai, S.-C. Wong, M. Kotaki "Structures and Mechanical Properties of Electrospun PLLA Single Nanofibers" International Conference on Materials for Advanced Technologies (ICMAT 2011), June 29-July 1, 2011, Singapore, Symposium Z: Sustainable Biobased Polymers
3. **S.C. Wong**, Invited Seminar, City University of Hong Kong "Do Electrospun Nanofibers Stick?" July 5 2010
4. **S.C. Wong**, Invited Seminar, Technion -Israel Institute of Technology, Haifa, Israel "Dry Adhesion between Electrospun Nanofibers" June 7, 2010
5. **S. C Wong**, Invited Speaker for 2009 National Polymer Conference, Tianjin, People's Republic of China August 18-23, 2009 "Mechanical Behavior of Aligned Electrospun Nanofibers"
6. **S. C. Wong**, Invited Speaker for 2009 ASME International Congress, November 13-19, Lake Buena Vista, Florida "Tensile Properties of Aligned Electrospun Polymer Nanofibers"
7. **S. C. Wong**, Invited Speaker: Nanocomposites 2008 – Enabling Technologies and New Markets Symposium: Novel Preparation and Manufacturing Methods, September 15-17, 2008, San Diego, CA
8. **S. C. Wong** "Mechanical and Molecular Deformations of Polymer Nanofibers" Invited Talk at the Department of Polymer Engineering Seminar Series, University of Akron, November 30 2007
9. **S. C. Wong** "Processing and Structure-Property Relationships of Polymer Nanocomposites" Invited Talk at the Department of Mechanical Engineering, Florida Institute of Technology, April 14, 2006
10. **S.-C. Wong** "Cost-effective Substitutes for Carbon Nanotubes: Development of Graphene-based Nanocomposites" Invited Talk in China Nano Conference 2005, June 9-11, Beijing, China

11. **S. C. Wong** "Graphene-based Polymer Nanocomposites" invited presentation at the Society of Plastics Engineers Akron Section Meeting, Martin Center, University of Akron, January 24, 2005

12. **S. C. Wong** "Graphene Nanoplatelet Reinforced Polymer Coatings' Invited Talk at Huaqiao University, Quanzhou, PRC, June, 2004

13. F. M. Uhl, B. R. Hinderliter, S. P. Davuluri, S. C. Croll, **S.-C. Wong** and D. C. Webster, "Organically Modified Layered Silicates in UV Curable Formulations," a poster presented at the International Coatings Exposition sponsored by the Federation of Societies for Coatings Technology, PA, November 12-14, 2003 - First Place Award

14. S. P. Davuluri, **S.-C. Wong**, F. M. Uhl, D. C. Webster "Development of light weight and cost effective nanocomposites" presented in ND STaR (North Dakota Space Training and Research) Conference "Space on the Prairie" August 10-11, Hilton Garden Inn, Grand Forks, ND

15. **S. C. Wong**, B. Z. Jang, W. Zheng and X. H. Lu, "Processing-property relationship of novel expanded graphite nanocomposites" invited paper in Symposium I: Advanced Polymers, Second International Conference on Materials for Advanced Technologies, 29 June - 4 July 2003, Singapore

16. W. Zheng, X. H. Lu and **S. C. Wong**, "Structures and properties of graphite-reinforced HDPE composites" in Proceedings of Symposium I: Advanced Polymers, Second International Conference on Materials for Advanced Technologies, 29 June - 4 July 2003, Singapore

17. **S. C. Wong**, G. X. Sui, C. Y. Yue and Y. W. Mai, "Characterization of toughening behavior in fiber-containing rubber-toughened nylon 6,6" invited paper in Symposium K: Advances in Polymers and Composites, International Conference on Materials for Advanced Technologies, 1-6 July 2001, Singapore, p.293

18. T. X. Liu, C. B. He, K. X. Ma, Z. H. Liu, **S. C. Wong**, X. Hu, T.S. Chung and A. F. Yee, "Structure, morphology and thermal behavior of polyamide 6/layered silicate nanocomposites: an XRD, AFM and DSC study", in Proceedings of Symposium K: Advances in Polymers and Composites, International Conference on Materials for Advanced Technologies, 1-6 July 2001, Singapore, p. 310

19. **S. C. Wong** and Y. W. Mai, "Essential Fracture Work of Short Glass Fiber Reinforced Polymer Blends," presented in 2nd European Structural Integrity Society Conference on Polymers and Composites, Symposium on "Fracture of Polymers, Composites and Adhesives", 13-15 September, 1999, Les Diablerets, Switzerland

20. **S. C. Wong** and Y. W. Mai, "Reactive Blending and J-Integral Fracture Resistance of PA6,6/PP Blends with SEBS-*g*-MA," presented in the 22nd Australian Polymer Symposium, 2-5 February, 1997, Auckland, New Zealand

21. **S. C. Wong**, S. V. Nair, L. A. Goettler and L. A. Gustafson, "Microstructure-Fracture Toughness Relationship of Polymer Alloys and Blends with and without Fiber Reinforcements", presented in Symposium on Polymer-matrix Composites, 1994 Fall Meeting, Materials Research Society, November 28 - December 2, Boston, Massachusetts, USA

22. **S. C. Wong** "Study of mechanics and mechanisms of fracture in novel polymer blends using electron microscopic techniques" in Proc. of the 7th Asia Pacific Electron Microscopy Conference Singapore, 26 Jun 2000 - 30 Jun 2000 Vol. Physical Science pp. 112-113

Invited Seminars:

1. Bi-National Conference in Metallurgy and Materials, Rosario, Argentina (October 19, 2011)
2. School of Materials Science and Engineering, Nanyang Technological University, Singapore, (September 23, 2011)
3. School of Materials Science and Engineering, Tianjin University, PRC (September 9, 2011)
4. Department of Chemical Engineering and Materials Science, University of Alberta, Edmonton, Canada (July 17, 2011)
5. Society of Women Engineers Seminar, University of Akron (October 27 2010)
6. Department of Materials Science and Physics, City University of Hong Kong (July 5, 2010)
7. Technion - Israeli Institute of Technology, Haifa, Israel (June 7, 2010)
8. Invited Speaker, Engineering Properties and Structures Division, Society of Plastics Engineers Annual Technical Conference 2011, Boston MA
9. Florida Institute of Technology (April 14, 2006)
10. Lockheed Martin Defense and Surveillance Systems (February 22, 2006, February 21, 2007)
11. The 49th Annual Sink or Swim Symposium, Akron, Ohio (May 24, 2006)
12. Owens Corning (February 28, 2005 and 2006)
13. Bridgestone-Firestone Center for Research and Technology (July 11, 2005),
14. Goodrich (June 27, 2005)
15. Graftech International (July 2005, December 2006)
16. Cleveland Society for Coatings Technology (2005)
17. SPE Akron Section Technical Meeting (February 21, 2005)