

Total Published = 158 Articles (3 co-authored with undergraduate students and 132 co-authored with graduate students)

Journal Articles = 106; Articles in Proceedings = 52; Chapters in Books = 0

- Abdulhalim, I., M. Zourob and **A. Lakhtakia**, "Surface plasmon resonance for biosensing: A mini-review," *Electromagnetics*, 28, 2008, 214 - 242.
- Ahmed, D.*, X. Mao*, B. K. Juluri*, J. Shi*, and **T. J. Huang**, "A milliseconds microfluidic mixer based on single bubble streaming," the 12th International Conference on Miniaturized Systems for Chemistry and Life Sciences, San Diego, CA, October 12-16, 2008.
- Akarapu, R. and **A. E. Segall**, "Active Stressing and the Micro-Manipulation of Stress-States for Delaying Fracture during Unsupported Laser Cutting," *ASME Journal of Manufacturing Science and Engineering*, 130 [4], December 2008, pp. 061004-1-061004-10.
- Asphahani, F., M. Thein*, O. Veiseh, D. Edmondson, R. Kosai, M. Veiseh, **J. Xu**, and M. Q. Zhang, "Influence of cell adhesion and spreading on impedance characteristics of cell-based sensors," *Biosensors and Bioelectronics*, Vol.23, 2008, pp.1307-1313.
- Bala Krishna J.*, Y. B. Zheng*, D. Ahmed*, L. Jensen, and **T. J. Huang**, "Effects of geometry and composition on charge-induced plasmonic shifts in Gold Nanoparticles," *Journal of Physical Chemistry C*, Vol. 112, pp. 7309-7312, 2008.
- Bersuker, G., D. Heh, C.D. Young, H. Park, P. Khanal, L. Larcher, A. Padovani, **P. M. Lenahan**, J. T. Ryan, B. H. Lee, H. Tseng, and R. Jammy, "Breakdown in the Metal/High-k Gate Stack: Identifying the Weak Link in the Multilayer Dielectric," *IEEE International Electron Devices Meeting Technical Digest*, pp. 791-4 (2008).
- Bezdek, M., and **B. R. Tittmann**, "Dispersion analysis of a three-layered waveguide with finite element and matrix methods," *Acta Acoustica*, Vol. 94(1), pp. 792-806, 2008.
- Bezdek, M., K. Joseph, M. Guers*, and **B. R. Tittmann**, "Structural health monitoring and nondestructive evaluation of double wall structures. Presented at SPIE Smart Structures and Materials and Nondestructive Evaluation and Health Monitoring," March 11-13, San Diego, CA. *Health Monitoring of Structural and Biological Systems 2008*, edited by T. Kundu, Vol. 6935, pp. 693516-1- 693516-10, 2008.
- Breon, L. J*., **Rose, J. L.**, and Xu, C., "Guided wave thickness measurement tomography for structural health monitoring in critical zones of pipelines," 17th World Conference on Nondestructive Testing, 25-28 Oct 2008, Shanghai, China.
- Campbell, J. P.*, **P. M. Lenahan**, A. T. Krishnan, and S. Krishnan, "Identification of the atomic scale defects inVolved in the negative bias temperature instability in plasma nitrided p-channel metal-oxide -silicon field effect transistors," *Journal of Applied Physics*, Vol. 103, issue 4, Art #044505 (2008).
- Catton, P., Mudge, P., D'Zurko, D., and **Rose, J. L.**, "Improved methodology for guided wave inspections of pipelines," *Pipeline and Gas Journal*, June 2008, pp. 36-44.
- Cetinkaya, M*., Malvadkar, N*., and **Demirel, M. C.**, "Power-Law scaling of structured poly(P-Xylylene) films deposited by oblique angle," *Journal of Polymer Science Part B: Polymer Physics*, Vol. 46, pp. 640-648, 2008.
- Chernyy, N*., **S. J. Schiff**, and **B. J. Gluckman**, "Multi-taper transfer function estimation for stimulation artifact removal from neural recordings." *Conf Proc IEEE Eng Med Biol Soc.* 2008;1:2772-2776.
- Chin, S., S. Lin* and **T. J. Huang**, "Gradient-Index Phononic Crystals," the 2008 ASME International Mechanical Engineering Congress and Exposition, Boston, MA, November 2-6, 2008.
- Choudhury, P. K. and **A. Lakhtakia**, "The future of optoelectronics technology," *Asian Journal of Physics*, 17, 2008, 181-183.
- Cochrane, C. J. and **P. M. Lenahan**, "Real time exponentially weighted recursive least squares adaptive signal averaging for enhancing the sensitivity of continuous wave magnetic resonance," *Journal of Magnetic Resonance*, Vol. 195, No.1; pp. 17-22 (2008).
- Cochrane, C. J., **P. M. Lenahan**, and A. J. Lelis, "Electrically detected magnetic resonance studies of processing variations in 4H SiC Based MOSFETs," *Materials Science Forum*, Vols. 600-603, pp. 719-722 (2009).
- Cochrane, C. J., **P. M. Lenahan**, and A. J. Lelis, "Interface traps in SiC MOSFETs," Final Report of the IEEE International Integrated Reliability Workshop, pp. 68-71 (2008) article published in a refereed proceedings Volume.
- Costanzo, F. and G. L. Gray**, "A Structured approach to problem solving in statics and dynamics: assessment and eVolution," *Proceedings of the 2008 American Society for Engineering Education Annual Conference and Exposition*, Session No. 2283, conference held in Pittsburgh, PA, June 22-25, 2008. Available on CD ROM, 10 pages, no page numbers, 2008.
- Cusumano, J. P.**, (2007) "Nonlinear Modal Interactions and Low Order Modeling of a Kicked Flexible Rod," *PAMM* 7(1), *Proceedings of the 6th International Congress on Industrial and Applied Mathematics*, July 16-20, 2007, Zurich, Switzerland. Published Online: Oct 6 2008 6:37AM DOI:

*denotes co-authored with graduate student(s)

**denotes co-authored with undergraduate student(s)

- 10.1002/pamm.200700602.
- Demirel, M. C.** "Spatially organized parylene nanowires fabricated by oblique angle vapor deposition," ACS, New Orleans Meeting, preprint, 2008.
- Demirel, M. C.**, "Emergent properties of spatially organized poly(P-xylylene) films fabricated by vapor deposition," Colloids and Surfaces A, Vol. 321, pp. 121-124, 2008.
- Demirel, M. C.**, P. Kao, N. Malvadkar, * H. Wang, and D. Allara, "A SERS substrate for detection of e-coli on nanostructured poly(p-xylylene), in Nanotechnology 2008: Life Sciences, Medicine, and Bio Materials," Romanowicz B., Laudon M., (Eds.) CRC Press, 555-557, (2008).
- Dixit, M.* and **A. Lakhtakia**, "Electrically controlled Bragg resonances of an ambichiral electro-optic structure: oblique incidence," Asian Journal of Physics, 17 2008, 213-223.
- Dixit, M.* and **A. Lakhtakia**, "Selection strategy for circular-polarization-sensitive rejection characteristics of electro-optic ambichiral Reusch piles," Optics Communications, 281, 2008, 4812-4823.
- Drapaca, C. S.**, "A new multi-scale model for magnetic resonance elastography," Proceedings of SISOM 2008 and Session of the Commission of Acoustics (2008), pp. 7-11.
- Dwivedi, R. K., **D. F. Heaney**, and **R. M. German**, "Effect of Powder Characteristics and Sintering Conditions on Density and Corrosion Resistance of MIM 316L Stainless Steel," Proceedings of the 2008 International Conference on Powder Metallurgy and Particulate Materials, Metal Powder Industries Federation, Princeton, NJ, 2005, pp. 4.58-4.71, 2008.
- Fang, C., C. Randall, **M. Lanagan**, and **D. Agrawal**, "Microwave processing of electroceramic materials and devices," J. Electroceram, 22:125-130, Contributing Author, 2008.
- Fang, C., C. Wang, A. Polotai, **D. Agrawal**, and **M. Lanagan**, "Microwave synthesis of nano-sized barium titanate," Materials Letters 62:2551-2553, 2008.
- Fang, L.* , C. L. Muhlstein, J. Collins, A. Romasco, and **L. H. Friedman**, "Continuous electrical in-situ contact area measurement during instrumented indentation," Journal of Materials Research, 23, 2480 (2008).
- Farber, D., M. T. Pietrucha and **A. Lakhtakia**, "Systems and scenarios for a philosophy of engineering," Interdisciplinary Science Reviews, 33, 2008, 214 - 225.
- Feteira, A., D. Sinclair, K. Rajab*, and **M. Lanagan**, "Crystal structure and microwave dielectric properties of alkaline-earth hafnates, AHfO(3) (A = Ba, Sr, Ca)," J. Am. Chem. Soc., 91(3):893-901, Contributing Author, 2008.
- Fladischer, S., S. Jayaraman, and **B. R. Tittmann**, "Simulation of Acoustic Emissions from Delaminations and cracks in Plates of Aluminum and Graphite," Presented at SPIE Smart Structures and Materials and Nondestructive Evaluation and Health Monitoring, March 11-13, San Diego, CA, Nondestructive Characterization for Composite Materials, Aerospace Engineering, Civil Infrastructure, and Homeland Security 2008, edited by P. J. Shull, H. F. Wu, A. A. Diaz, and D. W. Vogel, Vol. 6934, pp. 6934OG-1 - 6934OG-9 (Peer Reviewed), 2008.
- Friedman, L. H.**, "Anisotropy and Morphology of Strained III-V Heteroepitaxial Films," Physical Review B, 78 (19):193302 (2008).
- Friedman, L. H.**, "Stochastic continuum modeling self-assembled epitaxial quantum dot formation," Proc. SPIE, Vol. 7041, 704103 (2008).
- Furman, E. , S. Zhang, N. Kim, T. Shrout, H. Hofmann, R. Stroman* and **M. Lanagan**, "High-temperature, high-power capacitors: the assessment of capabilities," High-Temperature Electronics - Passives and Packaging (Part 1 of 2), Proceeding of the Society of Automotive Engineers, Document Number 2008-01-2853, 2008.
- Gomez, A., **A. Lakhtakia**, J. Marginedam G. J. Molinas-Cuberos, M. J. Nunez, J. A. Saiz Ipina, A. Vegas and M. A. Solano, "Full-wave hybrid technique for 3-D isotropic-chiral-material discontinuities in rectangular waveguides: Theory and experiment," IEEE Transactions on Microwave Theory and Techniques, 56, 2008, 2815-2825.
- Gray, G. L.** and **F. Costanzo** (2008), "A Problem-Centered Approach to Dynamics," Proceedings of the 2008 American Society for Engineering Education Annual Conference and Exposition, Session No. 2295, conference held in Pittsburgh, PA, June 22-25, 2008. Available on CD ROM, 14 pages, no page numbers.
- Guers, M. J.* , C. J. Fontana*, and **B. R. Tittmann**. "A Noninvasive Pressure Measurement Technique and the Potential for Integrated Calibration." Presented at the Thirty-Fourth Annual Review of Progress in Quantitative Nondestructive Evaluation, July 22-27, 2007. Review of Progress in Quantitative Nondestructive Evaluation, edited by D. O. Thompson and D. E. Chimenti, Vol. 27B, pp. 1500-1504, 2008.
- Gullapalli, R., **Demirel, M. C.**, Butler P. J. "Molecular dynamics simulation of long-chain carbocyanine dyes in a DPPC lipid bilayer," Physical chemistry Chemical Physics, Vol. 10, pp. 1-13, 2008.
- Han, J., **A. Lakhtakia** and C. W. Qiu, "Terahertz metamaterials with semiconductor split-ring resonators for magnetostatic tenability," Optics Express, 16, 2008, 14390 -14390.
- Hauck, E. T.* , **Rose, J. L.**, Moose, C. A. "Bondline Inspection of Complex Structures Using Guided

*denotes co-authored with graduate student(s)

**denotes co-authored with undergraduate student(s)

- Waves.” Published in Review of Quantitative Nondestructive Evaluation, 27A, ed. by D. O. Thompson and D. E. Chimenti, AIP Conference Proceedings Vol. 975, American Institute of Physics, Melville, NY, 2008, pp. 207-214.
- Hsiao, V. K. S., Y. B. Zheng*, B. K. Juluri*, **T. J. Huang**, “Light-Driven Plasmonic Switches Based on Au Nanodisk Arrays and Photoresponsive Liquid Crystals,” Advanced Materials, Vol. 20, pp. 3528-3522, 2008, (featured as front cover image).
- Huang*, X., J. Zou, and **S. Zhang**. “Bilinear responses and rippling morphologies of multi-walled Carbon nanotubes under torsion.” Applied Physics Letters, 93, 031915, 2008.
- Huang, S., **S. Zhang**, T. Belytschko, S. S. Terdalkard, and T. Zhu. “Mechanics of nanocrack: Fracture, dislocation emission, and amorphization,” Journal of the Mechanics and Physics of Solids, On-line, 2009.
- Huang, T. J.**, “Recent Developments in Artificial Molecular Machine-Based Active Nanomaterials and Nanosystems,” MRS Bulletin, Vol. 33, pp. 226-231, 2008.
- Huang, T. J.**, B. K. Juluri*, “Biological and Biomimetic Molecular Machines,” Nanomedicine, Vol. 3, pp. 107-124, 2008.
- Iqbal, M., Y. Hong, P. Gary, F. Udrea, P. Migliorato, and **S. J. Fonash**, “The Nanoscale Silicon Accumulation-Mode MOSFET-A Comprehensive Numerical Study,” IEEE Transactions on Electron Devices, Vol. 55, No. 11, 2946-2959 (2008).
- Kamrunnahar, M.**, N. S. Dian* **S. Schiff**, and **B. J. Gluckman**, “Model-based responses and features in Brain Computer Interfaces,” Conf. Proc. IEEE Eng. Med. Biol. Soc. 2008;1:4482-4485.
- Kao, P., Malvadkar N.*, Wang, H., Allara, D. L., **Demirel, M. C.**, “Surface Enhanced Raman Detection of Bacteria on Metalized Nanostructured Poly(p-xylylene) Films,” Advanced Materials, Vol. 20, pp. 3562-3565, 2008.
- Khalmanova, D. K. and **F. Costanzo**, “A Space-Time Discontinuous Galerkin Finite Element Method for Fully Coupled Linear Thermo-Elasto-Dynamic Problems with Strain and Heat Flux Discontinuities,” Computer Methods in Applied Mechanics and Engineering, Vol. 197, No. 13-16, pp. 1323-1342.
- Kim, C. S., **C. J. Lissenden**, K. M. Kang, I. K. Park, “Influence of dislocation substructure on ultrasonic velocity under tensile deformation,” J. Kor. Soc. NDT Vol. 28, pp. 477-482, 2008.
- Kumar, C.* and **L. H. Friedman**, “Effects of elastic heterogeneity and anisotropy on the morphology of self-assembled epitaxial quantum dots,” Journal of Applied Physics, 104 (3):034902 (9 pages).
- Kwon, D.*, T. Akiyoshi, H. Lee and **M. Lanagan**, “Synthesis and electrical properties of stabilized manganese dioxide (a-MnO₂) thin film electrodes,” J. Amer. Ceram. Soc., 91: 906-909, 2008
- Lakhtakia, A.** and J. A. Polo, Jr., “Morphological influence on surface-wave propagation at the planar interface of a metal film and a columnar thin film,” Asian Journal of Physics, 17, 2008, 185-191.
- Lakhtakia, A.** and J. A. Reyes, “Theory of electrically controlled exhibition of circular Bragg phenomenon by an obliquely excited structurally chiral material - Part 1: Axial dc electric field,” Optik, 119, 2008, 253-268.
- Lakhtakia, A.** and J. A. Reyes, “Theory of electrically controlled exhibition of circular Bragg phenomenon by an obliquely excited structurally chiral material - Part 1: Arbitrary dc electric field,” Optik, 119, 2008, 269-275.
- Lakhtakia, A.**, “Axially Excited, tightly interlaced, chiral sculptured thin films for polarization-universal bandgaps,” Optik, 119, 2008, 175-179.
- Lakhtakia, A.**, “Response to comments on boundary problems and electromagnetic constitutive parameters,” Optik, 119, 2008, 250-252.
- Lakhtakia, A., M. C. Demirel, M. W. Horn and J. Xu** (invited), “Six emerging directions in sculptured-thin-film research,” Advances in Solid State Physics, 46, 2008, 295-307.
- Lakhtakia, A.**, “Polarization-universal rejection filtering by ambichiral structures made of indefinite dielectric-magnetic materials,” Physica Scripta, 77, 2008, 055401.
- Lakhtakia, A.**, “Radiation pressure efficiencies of spheres made of isotropic, achiral, passive, homogeneous, negative-phase-velocity materials,” Electromagnetics, 28, 2008, 346-353.
- Lee, C. M., **Rose, J. L.**, and Cho, Y. “A guided wave approach to defect detection under shelling in rail,” NDTandE International, Elsevier Ltd, 2008.
- Lenahan, P. M., B. Knowlton,** and J. F. Conley, “Introduction to the Special Issue on the 2007 International Integrated Reliability Workshop” IEEE Transactions on Device and Materials Reliability, Vol. 8, issue 3, p. 490 (2008).
- Lissenden C. J., and Rose J. L.**, “Structural health monitoring of composite laminates through ultrasonic guided wave beam forming,” NATO Applied Vehicle Technology AVT-157 Symposium on Military Platform Ensured Availability Proceedings, P1, 13 pages, 2008.
- Lissenden, C. J., J. L. Blackshire,** and P. K. Puthillath*. 2008. “Integrated structural health monitoring with guided waves from piezoelectric fibers,” ASME Smart Materials, Adaptive

*denotes co-authored with graduate student(s)

**denotes co-authored with undergraduate student(s)

- Structures, Intelligent Systems Conference Proceedings, paper number SMASIS08-325.
- Lissenden, C. J., N. J. Salamon, and A. J. Miller**, 2008, "Design project design for an elementary strength of materials course," 2008 ASEE Annual Conference Proceedings, AC 2008-1350.
- Lissenden, C. J., P.K. Puthillath*, and J. L. Rose**, 2008, "Guided wave feature identification for monitoring structural damage in joints between composite plates," Materials Forum Vol. 33, Steve Galea (Ed.) Materials Australia, pp. 279-285.
- Litzinger, T., C. Firetto, L. Passmore*, P. Van Meter, K. Higley, **C. Masters, F. Costanzo, G. L. Gray, S. Turns, and J. Kulikowich** (2008) "Identifying and Remediating Deficiencies with Problem-Solving in Statics," Proceedings of the 2008 American Society for Engineering Education Annual Conference and Exposition, Session No. 402, conference held in Pittsburgh, PA, June 22-25, 2008. Available on CD ROM, 18 pages, no page numbers.
- Litzinger, T., **Masters, C.** et al, "Identifying and remediating deficiencies in problem-solving in statics," Proceedings of the 2008 ASEE Annual Conference.
- Macdonald, D., H. S. Kim*, and **M. Urquidi-Macdonald**, "Modeling the electrochemistry of BWR and PWR primary coolant circuits," 14th international Conference on Environmental Degradation of Materials in Nuclear Power Systems-Water Reactors, 2008.
- Mackay, T. G. and **A. Lakhtakia** (invited), "Electromagnetic fields in linear bianisotropic mediums," Progress in Optics, 51, 2008, 121-209.
- Mackay, T. G. and **A. Lakhtakia**, "Response to "On negative refraction in classical vacuum," Journal of Modern Optics, 55, 2008, 323-328.
- Maghsoudy-Louyeh*, S. and **B. R. Tittmann**, "Assessment of Hydrous Affinity of Selected Material," Colloids and Surfaces A, Vol. 331(3), pp. 268-274, 2008.
- Maksimov, O., P. Fisher, M. Skowronski, P. A. Salvador, M. Snyder*, **J. Xu, and X. Weng**, "MgO films grown on yttria-stabilized zirconia by molecular beam epitaxy," Journal of Crystal Growth, Vol. 310, 2008, pp. 2760-2766.
- Malvadkar, N.* , S. Park, **M. Macdonald, H. Wang, and M. C. Demirel**, "Catalytic activity of cobalt deposited on nanostructured Poly(p-xylylene) films," Journal of Power Sources, Vol. 182, pg. 323-328, 2008
- Mangalagiri, P., K. Sarpatwari, A. Yanamandra, V. Narayanan, **O. Awadelkarim**, and Y. Xie, "A low-power phase change memory based hybrid cache architecture," Proceedings of the 18th Edition of GLSVLSI held in Orlando, Florida, May 4-6, 2008, Publishers: Curran Associates, Inc. (2008), pp. 395-398.
- Mao*, X. and **T. J. Huang**, "Microfluidic Drifting: Three Dimensional Hydrodynamic Focusing of Microparticles," the 12th International Conference on Miniaturized Systems for Chemistry and Life Sciences, San Diego, CA, October 12-16, 2008.
- Mao*, X. and **T. J. Huang**, "Focusing Fluids and Light in Micro/Nano Scale -- Enabling Technologies for Single-Particle Detection," IEEE Nanotechnology Magazine, Vol. 2, pp. 22-27, 2008.
- Mao*, X., B. K. Juluri*, S. Chin*, S. Lin*, J. Shi*, M. I. Lapsley*, and **T. J. Huang**, "In-Plane Tunable Optofluidic Microlens," IEEE LEOS Summer Topical 2008, Acapulco, Mexico, July 21-23, 2008.
- Mao*, X., S. C. S. Lin*, J. Shi*, M. I. Lapsley*, and **T. J. Huang**, "Tunable Liquid Gradient Refractive Index (L-GRUB) Lens," The 12th International Conference on Miniaturized Systems for Chemistry and Life Sciences, San Diego, CA, October 12-16, 2008.
- Martin-Palma, R. J. , C. G. Pantano and **A. Lakhtakia**, "Replication of fly eyes by the conformal-evaporated-film-by-rotation technique," Nanotechnology, 19, 2008, 355704.
- Masters, C.**, M. Schuurman, G. Okudan, and S. Hunter, "An investigation of gaps in design process learning: Is there a missing link between breadth and depth?" Proceedings of the 2008 ASEE Annual Conference. Session No. 402, conference held in Pittsburgh, PA, June 22-25, 2008. Available on CD ROM.
- Meeker, J., **A. E. Segall**, and E. Gondar, "An Inverse Method for the Determination of Thermal Stress-Intensity Factors for Semi-Infinite Slabs under Arbitrary Thermal-Shocks," ASME Journal of Pressure Vessel Technology, 130 [4], November, 2008, pp. 041206-1-041206-8.
- Miller, S. T. and **F. Costanzo**, "A numerical Verification for an Unconditionally Stable FEM for Elastodynamics," Computational Mechanics, Vol. 43, No. 2, 223-237. 2008.
- Motyka, M. A.* and **A. Lakhtakia**, "Multiple trains of same-color surface plasmon polaritons guided by the planar interface of a metal and a sculptured nematic thin film," Journal of Nanophotonics, 2, 2008 021910.
- Mu, J.* and **J. L. Rose**, "Guided wave propagation and mode differentiation in hollow cylinders with viscoelastic coatings," J. Acoust. Soc. Am., 2008, 124(2):866-74.
- Mu, J.* and **J. L. Rose**, "Long range pipe imaging with a guided wave focal scan," Materials Evaluation, Vol. 66(6), pp. 663-666, 2008.
- Mullen, T. J., C Srinivasan*, M. J. Shuster, **M. W. Horn**, A. M. Andrews, P. S. Weiss, "Hybrid approaches to nanometer-scale patterning: Exploiting tailored intermolecular interactions," Journal of Nanoparticle Research, 10

*denotes co-authored with graduate student(s)

**denotes co-authored with undergraduate student(s)

- (8): 1231-1240 DEC 2008.
- Mullen, T. J., P. Zhang, C. Srinivasan*, **M. W. Horn** and P.S. Weiss, "Combining electrochemical desorption and metal deposition on patterned self-assembled mono-layers," Journal of Electroanalytical Chemistry Volume 621, Issue 2, 15 Pages 229-237, September 2008.
- Nelatury, S. R., J. A. Polo Jr., and **A. Lakhtakia**, "Electrical control of surface-wave propagation at the planar interface of a linear electro-optic material and an isotropic dielectric material," Electromagnetics, 28, 2008, 162-174.
- Neuberger, T., V. Tyagi, E. Semouchkina, **M. Lanagan**, A. Baker, K. Haines, and A. Webb, "Design of a Ceramic Dielectric Resonator for NMR Microimaging at 14.1 Tesla," Concepts in Magnetic Resonance Part B: Magnetic Resonance Engineering, 33B (2):109-114, Contributing Author, 2008.
- Palacios J., E. Smith, and **J. L. Rose**, "Ultrasonic De-Icing Systems for Helicopter Rotor Blades," 64th Annual Forum Proceedings-American Helicopter Society, Montreal, Canada, May 2008.
- Park, S. J., Y. Wu, **D. F. Heaney**, X. Zou, G. Gai, and **R. M. German**, "Rheological and Thermal Debinding Behaviors in Titanium Powder Injection Molding," Metallurgical and Materials Transactions A, Vol. 40, No. 1, pp. 215-222, January 2009.
- Podraza, N. J., J Li, C. R. Wronski, E. C. Dickey, **M. W. Horn**, and R. W. Collins, "Analysis of Si1-xGex : H thin films with graded composition and structure by real time spectroscopic ellipsometry," Physica Status Solidi A-Applications and Materials Science, 205 (4): 892-895 APR (2008).
- Podraza, N. J., S. M. Pursel*, C. Chen, **M. W. Horn**, and R. W. Collins, "Analysis of the Optical Properties and Structure of Serial Bi-Deposited TiO2 Sculptured Thin Films using Mueller Matrix Ellipsometry," Journal of Nano-Photonics 2, 021930 (2008).
- Polo, J. A., Jr. and **A. Lakhtakia**, "Morphological effects on surface-plasmon-polariton waves at the planar interface of a metal and a columnar thin film," Optics Communications, 281, 2008, 5453-5457.
- Portnov, G., and **C. E. Bakis**, "Analysis of Stress Concentration during Tension of Round Pultruded Composite Rods," Composite Structures, 83:100-109 (2008).
- Pranav,* G., Y. Hong, M. Iqbal, M. Piero, and S. J. Fonash, "The AMOSFET - A Simple, High Performance FET for Thin Films, Nanowires, and Nanoribbons," The Ninth Symposium on Thin Film Transistor Technologies; sponsored by the Electronics and Photonics Division of the Electrochemical Society, Honolulu Hawaii. ECS Transactions Vol. 16 No. 9, (October 2008).
- Puthillath*, P. K., F. Yan, C. **J. Lissenden**, **J. L. Rose**. 2008. "Ultrasonic guided waves for the inspection of adhesively bonded joints." In: Review of Progress in Quantitative Nondestructive Evaluation, Vol. 27, D.O. Thompson and D.E. Chimenti, Eds., American Institute of Physics pp. 200-206.
- Puthillath*, P. K., F. Yan, H. Kannajosyula, **C. J. Lissenden**, **J. L. Rose**, and C. Xu, "Inspection of Adhesively Bonded Joints Using Ultrasonic Guided Waves," 17th World Conference on Nondestructive Testing, 25-28 Oct 2008, Shanghai, China.
- Puthillath*, P. K., Yan, F., C. **J. Lissenden**, and **J. L. Rose**, "Ultrasonic guided waves for the inspection of adhesively bonded joints," In: Review of Progress in Quantitative Nondestructive Evaluation, Vol. 27, D.O. Thompson and D.E. Chimenti, Eds., American Institute of Physics pp. 200-206. 2008.
- Qi, X., **J. L. Rose**, and C. Xu, "Ultrasonic Guided Wave Nondestructive Testing for Helicopter Rotor Blades," 17th World Conference on Nondestructive Testing, 25-28 Oct 2008, Shanghai, China.
- Rafferty, A.**, **J. Cusumano**, and D. Sternad, "Chaotic Frequency Scaling in a coupled oscillator model for Free Rhythmic Actions," Neural Computation, Vol. 20, 205-226 (2008).
- Rajab, K. *, M. Naftaly, E. Linfield, J. Nino, D. Arenas, D. Tanner, R. Mittra, and **M. Lanagan**, "Broadband Dielectric Characterization of Aluminum Oxide (Al2O3)," J. Microelectronics and Electronics Packaging, 5:2-7, (Invited Paper), 2008.
- Rose, J. L.**, J. Mu*, and Y. Cho, "Recent Advances on Guided Waves in Pipe Inspection," 17th World Conference on Nondestructive Testing, 25-28 Oct 2008, Shanghai, China.
- Ross, B. M.* and **A. Lakhtakia**, "Light pressure on chiral sculptured thin films and the circular Bragg phenomenon," Optik, 119, 2008, 7-12.
- Ryan, J. T. * and **P. M. Lenahan**, "Interfacial Layer Defects and Instabilities in HfO2 MOS Structures," Proceedings of the IEEE International Reliability Physics Symposium, pps. 665-666 (2008).
- Ryan, J. T. *, **P. M. Lenahan**, A. T. Krishnan, and S. Krishnan, "An Electrically Detected Magnetic Resonance Study of the Atomic Scale Effects of Flourine on the Negative Bias Temperature Instability," IEEE International Integrated Reliability Workshop Final Report (The final Report is the workshop's proceedings Volume) pp. 137-140 (2008).
- Ryan, J. T. *, **P. M. Lenahan**, J. Robertson, and G. Bersuker, "Direct observation of electrically active interfacial layer defects which may cause threshold Voltage instabilities in HfO2 based metal-oxide-silicon field

*denotes co-authored with graduate student(s)

**denotes co-authored with undergraduate student(s)

- effect transistors,” Applied Physics Letters, Vol. 92, issue12, Art #123506 (2008).
- Sandman, J. S., and **B. R. Tittmann**, “Towards an Ultrasonic Sensor for Pressure Vessels,” Journal of Pressure Vessel Technology, 130(2), pp. 02501-1 to 02501-05.
- Sarpatwari, K. *, S. E. Mohney, **S. Ashok** and **O. Awaderkarim**, “Observation of Space-charge Limited Currents in Re/ 4H-SiC Schottky Diodes,” Semiconductor Sci. Technol.
- Schuurman, M., **C. Masters**, P. Van Meter, G. Okudan, “Enhancing Design Learning by Implementing Electronic Portfolios”, American Society for Engineering Education Annual Conference and Exposition Proceedings, June 2008.
- Segall, A. E.**, D. Engels**, and A. Hirsh, “Thoughts on the deconVolution of Thermal- and stress-states from transient histories,” PVP2008-61824, Proceedings of the 2008 ASME Pressure Vessel and Piping Conference, July 27-31, 2008, Chicago, IL.
- Shan, Y. and **S. J. Fonash**, “Self-Assembling Silicon Nanowires for Device Applications Using the Nanochannel-Guided Grow-in Place Approach,” American Chemical Society, Published online February 22, 2008, 10.1021/nn700232q CCC.
- Shan, Y., M. K. Philen, A. Lotfi, S. Li, **C. E. Bakis**, C. D. Rahn, and K. W. Wang, “Variable Stiffness Structures Utilizing Fluidic Flexible Matrix Composites,” J. Intelligent Material Systems and Structures. doi:10.1177/1045389X08095270.
- Sharma*, A., **C. E. Bakis**, and K. W. Wang, “New Method of Chaining Carbon Nanofibers in Epoxy,” Nanotechnology, 19:325606 (2008). 5 pp.
- Shi, J. *, D. Ahmed*, X. Mao*, **T. J. Huang**, Standing Surface Acoustic Wave (SSAW) “Induced Patterning of Micro Beads in Microfluidic Channels,” 21st IEEE International Conference on Micro Electro Mechanical Systems (MEMS2008), Tucson, Arizona, January 13-17, pp. 26-29, 2008.
- Shi, J. *, S. C. (Steven) Lin*, **T. J. Huang**, “Wide-Band Acoustic Collimating by Phononic Crystal Composites,” Applied Physics Letters, Vol. 92, No. 11, 111901, 2008 (featured as front cover image).
- Shi, J. *, Vincent K. S. Hsiao, Thomas R. Walker*, **T. J. Huang**, “Humidity Sensing Based on Nanoporous Polymeric Photonic Crystals,” Sensors and Actuators B: Chemical, Vol. 129, pp. 391-396, 2008.
- Shi, J. *, X. Mao*, D. Ahmed*, A. Colletti, **T. J. Huang**, “Focusing Microparticles in a Microfluidic Channel with Standing Surface Acoustic Waves (SSAW),” Lab on a Chip, Vol. 8, pp. 221-223, 2008.
- Somiya, Y., S. Perini, **M. Lanagan**, J. De Los Santos Guerra, D. Garcia, J. Eiras, A. Bhalla, and L. Cross, “Dielectric Properties of (Sr0.8Pb0.2)TiO3-MgO Composites at Low and Microwave Frequencies,” Integrated Ferroelectrics. 104: 90-101, 2008.
- Srinivasan, C. *, J. N. Hohman, M. E. Anderson, P. S. Weiss, and **M. W. Horn**, “Sub-30-nm patterning on quartz for imprint lithography templates,” Applied Physics Letters, 93 (8): Art. No. 083123 AUG 25 2008.
- Tan*, Z. A., B. Hedrick*, F. Zhang*, T. Zhu*, **J. Xu**, R. H. Henderson, J. Ruzyllo, A. Y. Wang, “Stable Binary Complementary White Light Emitting Diodes based on Quantum Dot/Polymer Bilayer Structures,” IEEE Photonics Technology Letters, Vol. 20, 2008, pp. 1998-2000.
- Tan*, Z. A., F. Zhang*, T. Zhu*, **J. Xu**, S. E. Mohney, R. Jerzy, A. Y. Wang, D. D. John, and L. S. Li, “Bright and color-saturated emission from blue light emitting diodes based on solution-processed colloidal nanocrystal quantum dots,” Lasers and Electro-Optics Society 2001 28th Annual Meeting, IEEE Annual Meeting Conference Proceedings, 2008, pp. JThA691-2.
- Tewari*, P., E. Furman, R. Rajagopalan, and **M. Lanagan**, “Effect of Interfacial Modification on Electrical Properties of Laminated Organic-Inorganic Composite Insulators,” Intl. Symp. on Elect. Insul., IEEE:312-315, 2008.
- Tewari*, P., G. Sethi*, and **M. Lanagan**, “Enhanced polarization in zirconia-P(VDF-TrFE) laminar composite dielectrics,” J Mater Sci: Mater Electron, Online First Publication, 2008. (Hard copy will be printed in 2009 Journal Volume).
- Tittmann, B. R.**, and C.E. Yen. Acoustic Emission “Technique for Monitoring the Pyrolysis of Composites for Process Control.” Ultrasonics, Vol. 48 (6-7), pp. 621-630 (Peer Reviewed) 2008.
- Urquidi-Macdonald, M.** and A. Tewari*. “Analysis of Crack Growth Rate of Austenitic Stainless Steel Weld Heat Affected Zone in BWR Environments.” POWER-D-08-00326 8th International Conference on Corrosion; May 2008. Israel.
- Urquidi-Macdonald, M.** and A. Tewari*. “Biological Corrosion in Pipeline Systems,” European Federation of Corrosion. May 2008.
- Urquidi-Macdonald, M.** and A. Tewari*. Abstract Title: #1742: “Data Mining of Crack Growth Rate of Austenitic Stainless Steel in BWR Environments” Symposium: D5 – High Temperature Corrosion and Materials Chemistry 7. October 14, 2008 Conference Center, Hilton Hawaiian Village. ECS 08, Section 1, 2008.
- Urquidi-Macdonald, M.** and M. KamrunNahar* “Topological Ordered Maps of General Corrosion of Most Commonly Used Alloys.” ECS Abstract. May 2008.
- Urquidi-Macdonald, M.**, “Data Mining of Crack

*denotes co-authored with graduate student(s)

**denotes co-authored with undergraduate student(s)

- Growth Rate of Austenitic Stainless Steel Weld Heat-Affected Zones in BWR Environments and of Nickel Alloys Welds in PWR Environments". Third International Workshop on Long-Term Prediction of Corrosion Damage in Nuclear Waste Systems; PSU, University Park, PA; May 2008.
- Van Velsor, J. K. *, **Rose, J. L.**, and Nestleroth, J. B., "Detection of Protective Coating Disbonds in Pipe Using Circumferential Guided Waves," 17th World Conference on Nondestructive Testing, 25-28 Oct 2008, Shanghai, China.
- Venkatasubramanian, C. *, **M. Horn** and **S. Ashok**, "Ion implantation studies on VOx films prepared by pulsed dc reactive sputtering," Nucl. Instrum. Methods in Physics (in press).
- Ventsel, E. S.**, Ventsel, L. B., "A numerical method for the analysis of elastostatic problems," Proceedings of the Fifth International Conference of Applied Mathematics and Computing (edited by S. Nenov), August 12-18, Plovdiv, Bulgaria, 2008, pp. 477-479.
- Vincent, W. Y., K. S. Hsiao, Y. Zheng*, **T. J. Huang**, "Nanoporous Polymeric Structures: Fabrication and Applications in Biosensing and Drug Delivery," 21st IEEE International Conference on Micro Electro Mechanical Systems (MEMS2008), Tucson, Arizona, January 13-17, pp. 709-712, 2008.
- Weaver, K. E.* and **A. Lakhtakia**, "Simulation of the diffraction characteristics of a one-dimensional dual-periodicity superlattice," Optik, 119, 2008, 276-285.
- Yan, F.* and **J. L. Rose**, "Composite plate inspection using a novel guided wave skew effect method," to appear, Review of Progress in Quantitative Nondestructive Evaluation 2008.
- Yan, F.* and **J. L. Rose**, "Time delay comb transducers for aircraft inspection," The Aeronautical Journal of the Royal Aeronautical Society, to appear.
- Yan, F. *, **J. L. Rose**, and R. L. Royer, Jr., "Ultrasonic guided wave imaging techniques in structural health monitoring," Proceedings of ASME SMASIS08 Conference.
- Yang, J., J. Heo, T. Zhu*, **J. Xu**, J. Topolancik, F. Vollmer, R. Ilic, and P. Bhattacharya, "Enhanced photoluminescence from embedded PbSe colloidal quantum dots in silicon-based random photonic crystal microcavities," Applied Physics Letters, Vol. 92, 2008, pp. 261110.
- Zhang, C. F.*, F. Zhang*, and **J. Xu**, "Two-three-photon pumped ultraviolet nanorod lasers," Lasers and Electro-Optics Society 2001 28th Annual Meeting, IEEE Annual Meeting Conference Proceedings, 2008, pp. CThS51-2.
- Zhang, C. F.*, F. Zhang*, S. E. Mohny, R. Henderson, and **J. Xu** (FA), "Two-photon pumped lasing from colloidal nanocrystal quantum dots," Optics Letters, Vol. 33, 2008, pp. 2437-2439
- Zhang, C. *, F. Zhang*, S. Qian, N. Kumar, J. Hahm, and **J. Xu**, "Multi-Photon absorption induced amplified spontaneous emission from biocatalyst-synthesized ZnO nanorods," **WHERE WAS THIS PUBLISHED, date??**
- Zhang, F. *, C. F. Zhang*, Z. A. Tan*, T. Zhu*, and **J. Xu**, "Investigating high-speed modulation characteristics of quantum dots in red emitting quantum dot-light emitting diodes," Lasers and Electro-Optics Society 2001 28th Annual Meeting, IEEE Annual Meeting Conference Proceedings, 2008, pp. QFF51-2.
- Zhang, F. *, **J. Xu, A. Lakhtakia**, T. Zhu*, S. M. Pursel*, and **M. W. Horn**, "Circular polarization emission from an external cavity diode laser," Applied Physics Letters, Vol. 92, 2008, pp. 111109-111111.
- Zhang, F. *, **J. Xu, A. Lakhtakia**, T. Zhu*, S. M. Pursel*, and **M. W. Horn**, "Circular polarization emission from an external cavity diode laser," Applied Physics Letters, 92 (11): Art. No. 111109 March 17 (2008).
- Zhang, F. *, **J. Xu, K. Sarpatwari***, **O. Awadelkarim**, and **S. Ashok**, "Investigating charge carrier mobilities in nanocrystal polymerhybrid photoVoltaic-devices," Lasers and Electro-Optics Society 27th, Annual Meeting, 2007, IEEE Annual Meeting Conference Proceedings (2008), pp. JTUA106 1-2.
- Zhang, S.**, J. Li, G. Lykotrafitis, G. Bao, and S. Suresh. "Size-dependent endocytosis of nanoparticles," Advanced Materials, 21, 419-424, 2009.
- Zheng*, Y. B., **T. J. Huang**, "Surface Plasmons of Metal Nanostructure Arrays: from Nanoengineering to Active Plasmonics," Journal of the Association for Laboratory Automation, Vol. 13, pp. 215-226, 2008.
- Zheng*, Y., B. K. Juluri*, X. Mao*, T. R. Walker**, **T. J. Huang**, "Systematic Investigation of Localized Surface Plasmon Resonance of Long-Range Ordered Au Nanodisk Arrays," Journal of Applied Physics, Vol. 103, 014308, 2008.
- Zheng*, Y., V. K. S. Hsiao, and **T. J. Huang**, "Active Plasmonic Devices Based on Ordered Au Nanodisk Arrays," 21st IEEE International Conference on Micro Electro Mechanical Systems (MEMS2008), Tucson, Arizona, January 13-17, pp. 705-708, 2008.
- Zhu*, T. K., A. Berger*, Z. A. Tan*, D. H. Cui*, **J. Xu**, P. Khanchaitit, and Q. Wang, "Composition-Limited Spectral Response of Hybrid PhotoVoltaic Cells Containing Infrared PbSe Nanocrystals," Journal of Applied Physics, Vol. 104, 2008, pp. 044306-044312.
- Zhu*, T. K., Shanmugasundaram, S. C. Price, J. Ruzyllo, F. Zhang*, **J. Xu**, S. E. Mohny, Q. Zhang, and A. Y. Wang, "Mist fabrication of light

*denotes co-authored with graduate student(s)

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emitting diodes with colloidal nanocrystal quantum dots,” Appl. Phys. Lett. 92, 023111 (2008).

Zhu*, Y., J. L. Palacios, **J. L. Rose**, E. C. Smith, "De-Icing for Helicopter Composite blade using ultrasonic guided waves," SDM 2008, Chicago.

Zilinskis, D. R.*, M. J. Guers*, and **B. R. Tittmann**. "Continuous, Noninvasive Level Measurement with a PVDF Strip." Presented at 34th Annual Review of Progress in Quantitative NDE, July 22-26, 2007, Golden, Colorado. Review of Progress in Quantitative Nondestructive Evaluation, edited by D.O. Thompson and D.E. Chimenti, Vol. 27A, pp. 904-909, 2008.

Zou, J.*, X. Huang*, and **S. Zhang**. "Effective coarse-grained simulations of super-thick multi-walled carbon nanotubes under torsion," 105, 033561(1-8), Journal of Applied Physics, 2009.

*denotes co-authored with graduate student(s)

**denotes co-authored with undergraduate student(s)