
LIST OF PUBLICATIONS

Book Chapters:

1. Lin, Y. and Sodano, H.A., 2013, Fabrication and Electromechanical Characterization of Active Fiber Composites, *Mechanics and Design of Smart Composites: Materials, Structures and Sensing*, ISBN: 978-1439895917, CRC Press, pp. 99-130.
2. Sodano, H. A., 2009, "Energy Harvesting from the Straps of a Backpack Instrumented with Piezoelectric Materials," *Energy Harvesting Technologies*, ISBN 978-0-387-76463-4, Springer, pp. 431-458.
3. Sodano, H.A., 2012, Energy Harvesting from Ambient Vibration for Aerospace Structures," *AIAA Progress in Aeronautics and Astronautics*, In Press.
4. Inman, D. J. and Sodano H. A., 2009 "Energy Harvesting using Thermoelectric Materials," *Encyclopedia of Structural Health Monitoring*, ISBN: 978-0-470-05822-0, Wiley, Hoboken, NJ, pp. 1351-1360.
5. Inman, D.J., Grisso, B.L. and Sodano, H.A., 2006, "Smart Structures in Structural Health Monitoring," *Mechanical Vibrations: Where do we stand?*, ISBN: 978-3-211-68586-0, Springer, New York, USA, pp. 179-188.
6. Ruggiero, E., Sodano, H.A., Park, G. and Inman, D.J., 2002, "Active Vibration Suppression of a Gossamer Spacecraft," *Mechanics of Electromagnetic Material Systems and Structures*, ISBN: 1-85312-920-8, WIT Press, South Hampton, UK, pp. 287-293.

Journal Papers in Print:

1. Sodano, H.A., Koka, A, Guskey, C.R., Seigler, T.M. and Bailey, S.C.C., 2015, Interaction of Oscillating Ultra Long Vertically Aligned Nanowire Arrays with Turbulent Flows, *ASME Journal of Fluids Engineering*, **137**(2): 024501.
2. Malakooti, M.H., Hwang, H.-S. and Sodano H.A., 2015, Morphology-Controlled ZnO Nanowire Arrays for Tailored Hybrid Composites with High Damping, *ACS Applied Materials & Interfaces*, **7**(1): 332-339.
3. Hwang, H.-S., Malakooti, M.H., Patterson, B. and Sodano H.A., 2015, Increased Interyarn Friction through ZnO Nanowire Arrays Grown on Aramid Fabric, *Composites Science and Technology*, **107**(11): 75-81.
4. Zhou, Z., Tang, H. and Sodano, H. A., 2014, Scalable Synthesis of Morphotropic Phase Boundary Lead Zirconium Titanate Nanowires for Energy Harvesting, *Advanced Materials*, **26**(45): 7547 – 7554. (Cover Article)
5. Bowland, C., Zhou, Z. and Sodano, H. A., 2014, Multifunctional Barium Titanate Coated Carbon Fibers, *Advanced Functional Materials*, **24**(40): 6303-6308.
6. Koka, A., Zhou, Z., Tang, H. and Sodano, H.A., 2014, Controlled Synthesis of Ultra-long Vertically Aligned BaTiO₃ Nanowire Arrays, *Nanotechnology*, **25**(37): 375603. (Cover Article)
7. Paneri, A., Heo, Y.-S., Sodano, H.A. and Moghaddam, S., 2014, Proton Selective Ionic Graphene-based Laminate, *Journal of Membrane Science*, **467**: 217-225.

8. Ehlert, G.J. and Sodano, H.A., 2014, Strain Sensors with Carbon Nanotubes Self Assembled to Aramid Fibers, *Journal of Intelligent Material Systems and Structures*, **25**(17): 2117–2121.
9. Koka, A., Zhou, Z., Tang, H. and Sodano, H.A., 2014, Low Frequency Energy Harvester from Ultra-long Vertically Aligned BaTiO₃ Nanowire Arrays, *Advanced Energy Materials*, **4**(11): 1301660. (Cover Article)
10. Heo, Y. and Sodano, H.A., 2014, Self-healing Polyurethanes with Shape Recovery, *Advanced Functional Materials*, **24**(33): 5261-5268. (Cover Article)
11. Tang, H., Zhou, Z. and Sodano, H. A., 2014, Relationship between BaTiO₃ Nanowire Aspect Ratio and the Dielectric Permittivity of Nanocomposites, *ACS Applied Materials and Interfaces*, **6**: 5450-5455.
12. Malakooti, M.H., Anderson, P.L. and Sodano, H.A., 2014, “Toughening Mechanism of Heterogeneous Aliphatic Polyurethanes” *Polymer*, **55**(8): 2086-2093.
13. Tang, H., Zhou and Z. Sodano, H. A., 2014, Large-scale Synthesis of Ba_xSr_{1-x}TiO₃ Nanowires with Controlled Stoichiometry, *Applied Physics Letters*, **104**: 142905.
14. Malakooti, M.H., and Sodano, H.A., 2014, Toughening Response of a Crack-tip Surrounded by a Local Elastic Gradient, *Smart Materials and Structures*, **23**(3): 035009.
15. Sankar, V., Sanchez, J.C., McCumiskey, E., Brown, N., Taylor, C.R., Ehlert, G.J. Sodano H.A. and Nishida T., 2014, A High Compliance Two Dimensional Microelectrode Array for Front-End Strain Relief in Chronic Neural Implants, *Frontiers in Neuroprosthetics*, **4**: 124, 10.3389/fneur.2013.00124.
16. Koka, A., Zhou, Z. and Sodano, H.A., 2014, Synthesis and Characterization of Vertically Aligned BaTiO₃ Nanowire Arrays for Energy Harvesting, *Energy and Environmental Science*, **7**(1): 288 - 296.
17. Zhou, Z., Tang, H. and Sodano, H.A., 2013, Vertically Aligned Arrays of BaTiO₃ Nanowires, *ACS Applied Materials & Interfaces*, **5**(22): 11894–11899.
18. Tang, H., Malakooti, M., Sodano, H. A., 2013, Relationship between Orientation Factor of PZT NWs and Dielectric Permittivity of Nanocomposites, *Applied Physics Letters*, **103**, 222901.
19. Koka, A. and Sodano, H.A., 2013 “Ultra Long Vertically Aligned Barium Titanate Nanowire Arrays for High Sensitivity NEMS Accelerometer, *Nature Communications*, **4**: 2682. (Awarded ASME Best Paper in Materials)
20. Zhou, Z., Lin, Y., Tang, H. and Sodano, H.A., 2013, Hydrothermal Growth of Textured Ba_{1-x}Sr_xTiO₃ Films, *Nanoscale*, **5**(22): 10901-10907.
21. Galan, U. and Sodano, H.A., 2013, Supramolecular Interactions dictating Adhesion between ZnO and Graphite, *Carbon*, **63**: 517-522.
22. Malakooti, M.H., and Sodano, H.A., 2013, “Direct Measurement of Piezoelectric Shear Coefficient,” *Journal of Applied Physics*, **113**(21): 214106.
23. Lin, Y., Zhou, Z. and Sodano, 2013, “Barium Titanate and Barium Strontium Titanate Coated Carbon Fibers for Multifunctional Structural Capacitors,” *Journal of Composite Materials*, **47**(12): 1527-1533.
24. Tang, H. and Sodano, H.A., 2013, Synthesis of High Aspect Ratio BaTiO₃ Nanowires for High Energy Density Nanocomposite Capacitors, *Advanced Energy Materials*, **3**(4): 451-456.

25. Tang, H. and Sodano, H.A., 2013, Ultra High Energy Density and Fast Discharge Nanocomposite Capacitors Using Ba_{0.2}Sr_{0.8}TiO₃ Nanowires and PVDF, *Nano Letters*, **13**(4) 1373-1379.
26. Ehlert, G.J., Galan, U. and Sodano, H.A., 2013, Role of Surface Chemistry in Adhesion between ZnO Nanowires and Carbon Fibers in Hybrid Composites, *ACS Applied Materials and Interfaces*, **5**(3) 635-645.
27. Tang, H. and Sodano, H.A., 2013, High energy density nanocomposite capacitors using non-ferroelectric nanowires, *Applied Physics Letters*, **102**, 063901.
28. Malakooti, M. and Sodano, H.A., 2013, Noncontact and Simultaneous Measurement of the d₃₃ and d₃₁ Piezoelectric Strain Coefficients, *Applied Physics Letters*, **102**: 061901.
29. Zhou, Z., Lin, Y., Tang, H. and Sodano, H.A., 2013, Hydrothermal Growth of Highly Textured BaTiO₃ Films Composed of Nanowires, *Nanotechnology*, **24**: 095602.
30. Malakooti, M. and Sodano, H.A., 2013, Multi-Inclusion Modeling of Multiphase Piezoelectric Composites, *Composites Part B: Engineering*, **47**: 181-189.
31. Galan, U. and Sodano, H.A., 2012, Molecular Dynamics Prediction of Interfacial Strength and Validation through Atomic Force Microscopy, *Applied Physics Letters*, **101**: 151603.
32. Liao, Y. and Sodano, H.A., 2012, "Optimal Placement of Piezoelectric Material for Maximum Piezoelectric Damping and Power Harvesting Efficiency, *Smart Materials and Structures*, **21**: 105014.
33. Tang, H, Lin, Y. and Sodano, H.A., 2012, "Enhanced Energy Storage in Nanocomposite Capacitors through Aligned PZT Nanowires by Uniaxial Strain Assembly," *Advanced Energy Materials*, **2**(4): 469-476. (Cover Article)
34. Tang, H, Ehlert, G., Lin, Y and Sodano, H.A., 2012, "Highly Efficient Synthesis of Graphene Nanocomposites," *Nano Letters*, **12**(1): 84-90.
35. Ehlert, G.J., Meeks, N., Tang, H. and Sodano, H.A., 2012, "Poly(vinylidene fluoride) Interleaves for Multifunctional Fiber Reinforced Composites," *Advances in Science and Technology*, **77**: 138 - 145.
36. Ehlert, G. and Sodano, H.A., 2011, "Carbonyl Functionalization of Carbon Fibers through a Grafting Reaction that Preserves Fiber Tensile Strength, *Carbon*, **49**(13): 4246-4255.
37. Andrews, C., Lin, Y., Tang, H. and Sodano H.A., 2011, "Influence of aspect ratio on effective electromechanical coupling of nanocomposites with lead zirconate titanate nanowire inclusion," *Journal of Intelligent Material Systems and Structures*, **22**(16): 1879-1876.
38. Lin, Y., Ehlert, G. and Sodano, H.A., 2011, "Super Hydrophobic Functionalized Graphene Aerogels," *ACS Applied Materials & Interfaces*, **3**(7): 2200-2203.
39. Galan, U., Lin, Y., Ehlert, G. and Sodano, H.A., 2011, "Effect of Nanowire Morphology on Interfacial Strength of Nanowire Coated Carbon Fibers," *Composite Science and Technology*, **71**: 946-954 (2011).
40. Tang, H., Lin, Y., Andrews, C. and Sodano H.A., 2010, "Characterization of Nanocomposites Incorporating PZT Nanowires for Enhanced Energy Storage," *Nanotechnology*, **22**: 015702. (Awarded ASME Best Paper in Materials)
41. Ehlert, G., Yirong, L., Galan, U. and Sodano, H.A., 2010, "Interaction of ZnO Nanowires with Carbon Fibers for Hierarchical Composites with High Interfacial Strength," *International Journal of Mechanics and Materials Engineering*, **4**(11): 1687-1698.

42. Lin, Y., Shaffer, J.W. and Sodano, H.A., 2010, Electrolytic Deposition of PZT on Carbon Fibers for Multifunctional Composites, *Smart Materials and Structures*, **19**: 124004 (Invited paper).
43. Garcia, M., Lin, Y. and Sodano, H.A., 2010, "Autonomous Materials with Controlled Toughening and Healing," *Journal of Applied Physics*, **108**(9): 093512.
44. Lin, Y. and Sodano, H.A., 2010, "Enhanced piezoelectric properties of lead zirconate titanate sol-gel derived ceramics using single crystal $\text{PbZr}_{0.52}\text{Ti}_{0.48}\text{O}_3$ cubes," *Journal of Applied Physics*, **108**, 064108.
45. Liao, Y. and Sodano, H.A., 2010, "Damping of Resistively Shunted Piezoelectric Beams and Optimal Tuning for Maximum Damping," *Journal of Vibration and Acoustics*, **132**(4): 041014.
46. Liao, Y. and Sodano, H.A., 2010, "Modeling and Comparison of Bimorph Power Harvesters with Piezoelectric Elements Connected in Parallel and Series," *Journal of Intelligent Material Systems and Structures*, **21**(2): 149-159.
47. Lin, Y. and Sodano, H.A., 2010, "Double Inclusion Model for Multiphase Piezoelectric Composites," *Smart Materials and Structures*, **19**: 035003.
48. Andrews, C., Lin, Y. and Sodano, H.A., 2010, "Effect of Inclusion Aspect Ratio and Orientation on the Electromechanical Coupling of Piezoelectric Nanocomposites," *Smart Materials and Structures*, **19**: 025018.
49. Lin, Y. and Sodano H.A., 2009, "Characterization of Multifunctional Structural Capacitors for Embedded Energy Storage," *Journal of Applied Physics*, **106**: 114108.
50. Lin, Y., Liu, Y. and Sodano, H.A., 2009, "Hydrothermal Synthesis of Vertically Aligned PZT Nanowires," *Applied Physics Letters*, **91**: 122901.
51. Ehlert, G. and Sodano, H.A., 2009, "Zinc Oxide Nanowire Interphase for Enhanced Lightweight Polymer Fiber Composites," *ACS Applied Materials & Interfaces*, **1**(8): 1827–1833.
52. Lin, Y. Ehlert, G. and Sodano, H.A., 2009, "Increased Interface Strength in Carbon Fiber Composites through a ZnO Nanowire Interphase," *Advanced Functional Materials*, **19**: 2654-2660.
53. Lin, Y. and Sodano, H.A., 2009, "Electromechanical Characterization of a Multifunctional Active Structural Fiber Lamina," *Composites Science and Technology*, **69**: 1825–1830.
54. Liao, Y. and Sodano, H.A., 2009, "Optimal Parameters and Power Characteristics of Piezoelectric Energy Harvesters with an RC Circuit," *Smart Materials and Structures*, **18**: 045011.
55. Liao, Y. and Sodano, H.A., 2009, "On Structural Effects and Energy Conversion Efficiency of Power Harvesting," *Journal of Intelligent Material Systems and Structures*, **20**: 505-514.
56. Lin, Y. and Sodano, H.A., 2009, "Fabrication and Electromechanical Characterization of a Piezoelectric Structural Fiber for Multifunctional Composites," *Advanced Functional Materials*, **19**: 592-598.
57. Liao, Y. and Sodano, H.A., 2008, "Model of a Single Mode Energy Harvester and Properties for Optimal Power Generation," *Smart Materials and Structures*, **17**: 065026.
58. Sodano H.A. and Cheah, S.-K., 2008, "Novel Eddy Current Damping Mechanism for Passive Magnetic Bearings," *Journal of Vibration and Control*, **14**(11): 1749-1766.

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60. Lin, Y. and Sodano, H.A., 2008, "Concept and Model of a Piezoelectric Structural Fiber for Multifunctional Composites," *Composites Science and Technology*, **68** (7-8): 1911-1918.
61. Sodano, H.A. and Inman, D.J., 2008, "Modeling of a New Active Eddy Current Vibration Control System," *ASME Journal of Dynamic Systems, Measurement and Control*, **130**(2): 021009-1-11.
62. Feenstra, J., Granstrom, J. and Sodano, H.A., 2008, Mechanically Amplified Piezoelectric Stack Actuators for Harvesting Electrical Energy from a Backpack," *Mechanical Systems and Signal Processing*, Vol. **22**(3): 721-734.
63. Simmers, G.E., Sodano, H.A., Park, G. and Inman, D.J., 2007, "Thermal Protection for a Self-Sensing Piezoelectric Control System," *Smart Materials and Structures*, **16**: 2492-2500.
64. Granstrom, J., Feenstra, J., Sodano, H.A. and Farinholt, K., 2007, Energy Harvesting from a Backpack Instrumented with Piezoelectric Shoulder Straps, *Smart Materials and Structures*, **16**(5): 1810-1820.
65. Sodano, H.A. and Inman, D.J., 2007, "Closure: Improved Concept and Model of Eddy Current Damper," *ASME Journal of Vibration and Acoustics*, **129**(4): 530.
66. Sodano, H.A. and Inman, D.J., 2007, "Non-Contact Vibration Control System Employing an Active Eddy Current Damper," *Journal of Sound and Vibration*, **305**(4-5): 596-613.
67. Sodano, H.A., 2007, "Development of an Automated Eddy Current Structural Health Monitoring Technique with Extended Sensing Region," *International Journal of Structural Health Monitoring*, **6**(2): 111-119.
68. Anton, S.R. and Sodano, H.A., 2007, "A Review of Power Harvesting Using Piezoelectric Materials (2003-2006)," *Smart Materials and Structures*, **16**: R1-R21.
69. Sodano, H.A., Simmers, G.E., Dereux, R., and Inman, D.J., 2007, "Recharging Batteries using Energy Harvested from Thermal Gradients," *Journal of Intelligent Material Systems and Structures*, **18**(1): 3-10.
70. Simmers, G.E., Sodano, H.A., Park, G., and Inman, D.J., 2006, "Detection of Corrosion using Piezoelectric Impedance Based Structural Health Monitoring," *AIAA Journal*, **44**(11): 2800-2803.
71. Sodano, H.A., 2006, "Non-Contact Eddy Current Excitation Method for Vibration Testing," *Experimental Mechanics*, **46**(5): 627-635.
72. Sodano, H.A., Lloyd, J. and Inman, D.J., 2006, "An Experimental Comparison between Several Active Composite Actuators for Power Generation," *Smart Materials and Structures*, **15**: 1211-1216.
73. Sodano, H.A., Inman, D.J., and Belvin, W.K., 2006, "Development of a New Passive-Active Magnetic Damper for Vibration Suppression," *ASME Journal of Vibration and Acoustics*, **128**: 318-327.
74. Sodano, H.A., Bae, J.S., Inman, D.J. and Belvin, W.K., 2006, "Improved Concept and Model of Eddy Current Damper," *ASME Journal of Vibration and Acoustics*, **128**: 295-302.
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77. Sodano, H.A., Park, G., and Inman, D.J., 2005, "Comparison of Piezoelectric Energy Harvesting Devices for Recharging Batteries," *Journal of Intelligent Material Systems and Structures*, **16**(10): 799-807.
78. Sodano, H.A., Park, G. and Inman, D.J., 2005, "Multiple Sensors and Actuators for Vibration Suppression of an Inflated Torus," *AIAA Journal of Spacecraft and Rockets*, **42**(2): 370-373.
79. Sodano, H.A., Park, G. and Inman, D.J., 2005, "Generation and Storage of Electricity from Power Harvesting Devices," *Journal of Intelligent Material Systems and Structures*, **16**(1): 67-75.
80. Sodano, H.A., Park, G. and Inman, D.J., 2004, "Estimation of Electric Charge Output for Piezoelectric Energy Harvesting," *Strain*, **40**: 49-58.
81. Sodano, H.A. and Bae, J.S., 2004, "Eddy Current Damping in Structures," *Shock and Vibration Digest*, **36**(6): 469-478.
82. Sodano, H.A., Park, G. and Inman, D.J., 2004, "A Review of Power Harvesting Using Piezoelectric Materials," *Shock and Vibration Digest*, **36**(3): 197-206.
83. Sodano, H.A., Park, G. and Inman, D.J., 2003, "An Investigation into the Performance of Macro-Fiber Composites for Sensing and Structural Vibration Applications," *Mechanical Systems and Signal Processing*, **18**(3): 683-697.

Journal Papers in Press:

84. Malakooti, M.H. and Sodano H.A., 2015, Piezoelectric Energy Harvesting Through Shear Mode Operation, *Smart Materials and Structures*, In Press.
85. Sigamani, N., Ounaies, Z., Ehlert, G. and Sodano, H.A., 2015, "Electromechanical response of reduced graphene oxide - polyvinylidene fluoride nanocomposites prepared through in-situ thermal reduction," *Journal of Applied Physics*, In Press.

Journal Papers in Review:

86. Patterson, B.A., Galan, U. and Sodano, H.A., 2015, Direct Measurement of the Adhesive Force Between Zinc Oxide Nanowires and Oxygen Functional Groups for Carbon Fiber Composite Interfaces, *Advanced Materials Interfaces*, In Review.
87. Tang, H., Zhou, Z. and Sodano, H.A., 2015, Hydrothermal Growth of PbTiO₃ films with High Electromechanical Coupling on Conductive Substrate, *Applied Physics Letters*, In Review.
88. Hwang, H.-S., Malakooti, M.H., Patterson, B. and Sodano H.A., 2015, Tailorable Interyarn Friction of ZnO Nanowire-Aramid Fiber Composite Fabrics by Controlling Morphology of ZnO Nanowires, *Composites Part A: Applied Science and Manufacturing*, In Review.
89. Heo, Y. and Sodano, H.A., 2014, Thermally Responsive Self-Healing Composites with Continuous Carbon Fiber Reinforcement, *Composite Science and Technology*, In Review.

Conference Papers Accepted by Peer Review:

1. Nafari, A. and Sodano, H.A., 2015 "Impact Driven Triboelectric Energy Harvester," ASME's 8th Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept. 21 – 23

Colorado Springs, CO.

2. Nafari, A., Bowland, C.C. and Sodano, H.A., 2015 "Ultra-Long Vertically Aligned Lead Titanate Nanowires for Energy Harvesting," ASME's 8th Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept. 21 – 23 Colorado Springs, CO.
3. Koka, A., Nishida, T. and Sodano, H.A., 2015, "Lumped Element Model for Estimating Power from Long BaTiO₃ Nanowire Arrays Based Vibrational Energy Harvesters," ASME's 8th Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept. 21 – 23 Colorado Springs, CO.
4. Heo, Y. and Sodano, H.A., 2015, "Thermo-Responsive Shape Memory Self-Healing Polyurethanes and Composites with Continuous Carbon Fiber Reinforcement," ASME's 8th Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept. 21 – 23 Colorado Springs, CO.
5. Koka, A and Sodano, H.A., 2014, "Ultra-long Barium Titanate Nanowire Arrays for Low Frequency Energy Harvesting Applications," ASME's 7th Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept. 8 – 10 Newport, RI.
6. Malakooti, M. and Sodano, H.A., 2013, "Electromechanical Characterization of Piezoelectric Shear Actuators," ASME's 6th Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept. 16 – 19 Snow Bird, UT.
7. Koka, A and Sodano, H.A., 2013, "Energy harvesting from Arrays of Long Barium Titanate nanowires," ASME's 6th Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept. 16 – 19 Snow Bird, UT.
8. Hwang, H.-S., Patterson B. A., Malakooti, M. and Sodano, H.A., 2013, "Modification of Pullout Behavior of Kevlar Fabric by Zinc Oxide Nanowire Reinforcement," Proceedings of the ASME 2013 International Mechanical Engineering Congress & Exposition, Nov. 15 - 21, San Diego, CA.
9. Patterson, B.A. and Sodano, H.A., 2013, "Effect of Zinc Oxide Nanowire Length on the Interfacial Strength of Carbon Fiber Composites," Proceedings of ASME 2013 International Mechanical Engineering Congress and Exposition, November 15-21, San Diego, CA
10. Bailey, S.C.C. Calhoun, J.C., Guskey, C.R. Siegler, T.M., Aneesh K. and Sodano H.A., 2012 "Exploring the Potential of Turbulent Flow Control Using Vertically Aligned Nanowire Arrays" 65th Annual Meeting of the APS Division of Fluid Dynamics, San Diego, USA, Bulletin of the American Physical Society, Vol. 57.
11. Koka, A and Sodano, H.A., 2012, "Vibration sensing and energy harvesting using ultra-long vertically aligned array of barium titanate nanowires," ASME's 5th Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept. 19 – 21 Stone Mountain, GA.
12. Malakooti, M. and Sodano, H.A., 2012, "Fracture Modeling of an Embedded Crack in Self-healing Polymers," ASME's 5th Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept. 19 – 21 Stone Mountain, GA.
13. Sigamani, N., Ounaies, Z. and Sodano, H.A., 2012, "Synthesis and Characterization of PVDF-Based SWNT/GO Hybrid Films," ASME's 5th Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept. 19 – 21 Stone Mountain, GA.
14. Malakooti, M. and Sodano, H.A., 2012, "Micromechanics Modeling of Multiphase Piezoelectric Composites," ASME's 5th Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept. 19 – 21 Stone Mountain, GA.

15. Tang, H., Lin, Y. and Sodano, H.A., 2011, Enhanced Energy Storage in Nanocomposites through aligned PZT Nanowires, ASME's 4th Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, October 18 – 21 Phoenix, AZ.
16. Tang, H., Lin, Y., Andrews, C. and Sodano, H.A., 2010, "Nanocomposites with Increased Energy Density through High Aspect Ratio PZT Nanowires," ASME's 3rd Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept 28 – Oct. 1 Philadelphia, PA.
17. Lin, Y. and Sodano H.A., 2009, "Characterization of Multifunctional Structural Capacitors for Embedded Energy Storage," ASME's 2nd Annual Conference on Smart Materials, Adaptive Structures and Intelligent Systems, September 21st-23rd Oxnard, CA.
18. Lin, Y. and Sodano, H.A., 2009, "Double Inclusion Model for Multifunctional Piezoelectric Composites," Proceedings of the 50th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference (SDM), May 4-7th, Palm Springs, CA.
19. Ehlert, G., and Sodano, H.A., 2009, "Zinc Oxide Nanowire Interphase for Enhanced Lightweight Polymer Fiber Composites, Proceedings of the 50th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference (SDM), May 4-7th, Palm Springs, CA.
20. Lee, S., Youn, B. and Sodano, H.A., 2008 "Stochastic Topology Optimization for Energy Harvester Design," Proceedings of the 12th AIAA/ISSMO Multidisciplinary Analysis and Optimization (MAO) Conference, Sept. 10-12, Victoria, British Columbia, Canada.
21. Feenstra, J., Granstrom, J. and Sodano, H.A., 2007 "Amplified Piezoelectric Stack Actuators for Harvesting Electrical Energy from a Backpack," Proceedings of the International Design Engineering Technical Conference, Sept. 4-7, Las Vegas, Nevada, USA.
22. Wells, L., Lin, Y., Sodano, H.A. and Youn, B., 2007, "Geometric Optimization of a Piezoelectric Power Harvesting Plate for Increased Bandwidth," Proceedings of the International Design Engineering Technical Conference, Sept. 4-7, Las Vegas, Nevada, USA.
23. Sodano, H.A. and Chaeh, S.K., 2007, "Novel Eddy Current Damping Mechanism for Passive Magnetic Bearings," Proceedings of the 48th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics and Materials Conference (SDM), April 22-26th, Honolulu HI.
24. Sodano, H.A. and Kneeland, P., 2006, "Small Thermoelectric Energy Source using Various Fuels," Proceedings of 2006 ASME International Mechanical Engineering Congress and Exposition, November 5-10, Chicago, IL.
25. Sodano, H.A., Bae, J.S., Inman, D.J. and Belvin, W.K., 2005, "Model of Eddy Current Damper for the Suppression of Transverse Membrane Vibrations," Proceedings of the 46th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics and Materials Conference (SDM), April 18-21st, Austin, TX.
26. Sodano, H.A., Bae, J.S., Inman, D.J. and Belvin, W.K., 2004, "Model of Eddy Current Damping mechanism for the Suppression of Beam Vibrations," Proceedings of ASME's International Mechanical Engineering Congress and Exposition, November 13-19th, Anaheim, CA.
27. Sodano, H.A., Park, G., Leo, D. and Inman, D.J., 2003, "Model of Piezoelectric Power Harvesting Beam," Proceedings of ASME's International Mechanical Engineering Congress and Exposition, November 16-21st, Washington D.C.
28. Sodano, H.A., Park, G. and Inman, D.J., 2003, "Vibration Testing and Control of an Inflatable Torus Using Multiple Sensors/actuators," Proceedings of the 44th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics and Materials Conference (SDM), April 7-10th, Norfolk, VA, AIAA Paper 2003-1644.

Conference Papers Accepted by Abstract:

29. Bowland, C.C. and Sodano, H.A., 2015, "Fiber Reinforced Piezoelectric Composites," 20th International Conference on Composite Materials, July 19-24, Copenhagen, Denmark.
30. Zhou, Z., Patterson, B., Christopher, B. and Sodano, H.A., "Conformal growth of textured BaTiO₃ film on Si and its piezoelectric property," 2014 MRS Fall Meeting & Exhibit, Nov. 30 – Dec. 5, Boston, MA.
31. Zhou, Z., Tang, H. and Sodano, H.A., "Large Scale Fabricated Lead Zirconium Titanate Nanowires for Energy Harvesting," 2014 MRS Fall Meeting & Exhibit, Nov. 30 – Dec. 5, Boston, MA.
32. Tang, H. and Sodano, H. A. 2013, "Ultra High Energy Density of Nanocomposite Capacitors," 2014 TMS Annual Meeting & Exhibition, Feb 16 – 20, San Diego CA.
33. Tang, H. and Sodano, H. A. 2013, "Investigation of Relationship between Orientation Factor of PZT NWs and Dielectric Permittivity of Nanocomposites," The 24th international conference on adaptive structures technologies, October 6-9, Palm Beach, Aruba
34. Sigamani, N., Ounaies Z. and Sodano, H.A., "Effect of graphene oxide on the ferroelectric properties of P(VDF-TrFE) (56/44)," American Society for Composites 28th Technical Conference, September 9-11, 2013, University Park, Pennsylvania, USA
35. Bowland, C., Zhou, Z., and Sodano, H.A., "Electromechanical Characterization of Barium Titanate Coated Carbon Fibers," 19th International Conference on Composite Materials, Symposium on Composites with Sensing, Actuation, and Energy Transduction Capabilities, July 28-August 2, 2013, Montreal, Canada (Invited Speaker).
36. Zhou, Z., Tang, H. and Sodano, H.A., 2013, "Synthesis and Electromechanical Characterization of Vertically Aligned Arrays of BaTiO₃ Nanowires," E-MRS 2013 Spring Meeting, May. 27 – 31, Strasbourg, France.
37. Malakooti, M.H., and Sodano, H.A., 2013, "Simultaneous Measurement of Longitudinal and Lateral Piezoelectric Strain Coefficients using Digital Image Correlation" SPIE's 20th Annual International Symposium on Smart Structures and Materials, March 10-14, San Diego, California.
38. Malakooti, M.H., and Sodano, H.A., 2013, "Shear-Mode Energy Harvesting of Piezoelectric Sandwich Beam" SPIE's 20th Annual International Symposium on Smart Structures and Materials, March 10-14, San Diego, California.
39. Tang, H. and Sodano, H. A. 2013, "Ultra High Energy Density and Fast Discharge Nanocomposite Capacitors," SPIE's 20th Annual International Symposium on Smart Structures and Materials, March 10-14, San Diego, CA (1st Place Best Student Paper Award).
40. Koka, A. and Sodano, H.A., 2013, "Energy Harvesting Using Arrays of Long Barium Titanate Nanowires," Materials Research Society - Spring Meeting, April 1-5, San Francisco, CA.
41. Paneri, A., Ehlert, G.J., Sodano, H.A. and Moghaddam, S., "Graphene-based Proton Exchange Membrane for Direct Methanol Fuel Cell (DMFC)," Nanotech Conference and Expo, June 18-21, 2012, Santa Clara, CA.
42. Galan, Ulises, and Henry A. Sodano. "Adhesive Energy of Zinc Oxide and Graphite, Molecular Dynamics and Atomic Force Microscopy Study." *MRS Proceedings*. Vol. 1479. Cambridge University Press, 2012.

43. Ehlert, G.J., Meeks, N., Tang, H. and Sodano, H.A., "High Dielectric Nanocomposite Interleaves for Multifunctional Structural Composites," 4th International Conference on Smart Materials and Structures Systems, June 10-14, 2012, Montecatini Terme, Italy.
44. Riddick, J.C, Hall, A., Ayes, J.T., Ghoshal, A. and Sodano, H.A. "Real-Time Stress Estimation Using Embedded Piezoresistive Fibers and the Eshelby Equivalent Inclusion Method, SAMPE 2012, May 21-24th 2012, Baltimore, MD.
45. Ehlert, G.J. and Sodano, H.A., "Adhesion of ZnO Nanowire Interphase to Carbon Fiber for Enhanced Interfacial Strength," Proceedings of the 53th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference (SDM), April 23-26th, Honolulu, HI.
46. Tang, H. and Sodano, H.A., High energy density nanocomposites based on high aspect ratio surface-functionalized BaTiO₃ NWs, SPIE's 19th Annual International Symposium on Smart Structures and Materials, March 11th-15th, San Diego, CA.
47. Nirmal, S., Ounaies, Z. and Sodano, H.A., Electromechanical Actuation Response of PVDF-Based SWNT/GO Hybrid Films, SPIE's 19th Annual International Symposium on Smart Structures and Materials, March 11th-15th, San Diego, CA.
48. Zhou, Z., Lin, Y. and Sodano, H.A., Synthesis and Characterization of Textured BaTiO₃ Thin Films, 36th International Conference and Expo on Advanced Ceramics and Composites, January 22 – 27, 2012, Daytona Beach, FL.
49. Sodano, H.A., 2011, "Nanowire Interfaces for Simultaneously Increased Strength and Functionality, Composites at Lake Louise Conference, October 30th – November 4th, Alberta, Canada (Invited Speaker).
50. Sodano, H.A., 2011, "Multifunctional Materials and Nanocomposites for Energy Storage," Nanotechnology for Defense Conference (NT4D), October 24 – 27, Bellevue, WA (Invited Speaker).
51. Sodano, H.A., 2011, "Multifunctional Solutions for Piezoelectric Energy Harvesting," International Symposium on Green Manufacturing and Applications (ISGMA 2011), October 6 – 7, Seoul National University, Seoul, Korea (Keynote Speaker).
52. Lin, Y., Zhou, Z. and Sodano, H.A., 2011, "Multifunctional Structural Capacitors Consisting of Barium Titanate and Barium Strontium Titanate Coated Carbon Fibers, 18th International Conference on Composite Materials, August 21-26, Jeju Island, South Korea.
53. Liao, Y. and Sodano, H.A., 2011, "Optimal Parameters and Power Characteristics of Piezoelectric Energy Harvesters with an RC Circuit," SPIE's 18th Annual International Symposium on Smart Structures and Materials, March 6th-10th, San Diego, CA.
54. Tang, H., Lin, Y., and Sodano, H.A., 2011, "Improved Energy Density of Nanocomposites with Aligned PZT Nanowires" SPIE's 18th Annual International Symposium on Smart Structures and Materials, March 6th-10th, San Diego, CA.
55. Lin, Y. and Sodano H.A. 2011 "Multifunctional Structural Capacitors Consisting of Barium Strontium Titanate Coated SiC Fibers," Electronic Materials and Applications 2011, Jan. 19th-21st Orlando, FL (Invited).
56. Ehlert, G.J., Lin, Y. and Sodano H.A. 2010 "Self-Assembly of Carbon Nanotubes to Aramid Fibers for Enhanced Electrical Conductivity," Materials Research Society Fall Meeting, Nov 29th - Dec 3rd, Boston, MA.

57. Ehlert, G.J. and Sodano H.A. 2010, "Non-Oxidative Carboxyl Functionalization of Carbon Fibers with Meldrum's Acid," 2010 SAMPE Fall Technical Conference, Oct. 11th -14th, Salt Lake City, UT.
58. Lin, Y. and Sodano, H.A., 2010, Enhanced Piezoelectric Properties of Lead Zirconate Titanate (PZT) Sol-Gel derived Ceramics using Single Crystal PZT Cubes, SPIE's 17th annual International Symposium on Smart Structures and Materials, March 7th-11th, San Diego, CA.
59. Garcia, M.E. and Sodano H.A., 2010, Biologically Inspired Autonomous Structural Materials with Controlled Toughening and Healing, SPIE's 17th annual International Symposium on Smart Structures and Materials, March 7th-11th, San Diego, CA.
60. Lin, Y. Ehlert, G. and Sodano, H.A., 2010, ZnO Nanowire Interphase for Increased Interfacial Strength in Fiber Reinforced Composites, Proceedings of the 2010 M&M International Symposium for Young Researchers, March 1-3, 2010, California Institute of Technology, Pasadena, CA, USA (invited)
61. Shaffer, J.W., Lin, Y. and Sodano, H.A., 2009, Electrolytic Deposition of PZT on Carbon Fibers for Multifunctional Composites, Proceeding of the 15th International Conference on Adaptive Structures and Technologies (ICAST), October 20th – 22nd, Hong Kong, China.
62. Lin, Y. Ehlert, G. and Sodano, H.A., 2009, "Advanced Multiscale Carbon Fiber Composites with a ZnO Nanowire Interface," 17th International conference on Composite Materials, July 27th - 31st, Edinburgh, UK.
63. Galan U., Ehlert, G., Lin, Y. and Sodano, H.A., 2009, "Effect of Size and Morphology of ZnO Nanowire Interfaces in Carbon Fiber Composites," Materials Research Society Spring Meeting, April 13th-17th, San Francisco, CA.
64. Lin, Y. and Sodano, H.A., 2009, "Electromechanical Characterization of a Single Fiber Lamina for Multifunctional Composites," SPIE's 16th annual International Symposium on Smart Structures and Materials, March 8th-12th, San Diego, CA.
65. Andrews, C., Lin, Y. and Sodano, H.A., 2009, "Investigation of Aspect Ratio on the Electroelastic Properties of Nanocomposites," SPIE's 16th annual International Symposium on Smart Structures and Materials, March 8th-12th, San Diego, CA.
66. Liao, Y. and Sodano, H.A., 2009, "On Structural Effects and Energy Conversion Efficiency of Power Harvesting," SPIE's 16th annual International Symposium on Smart Structures and Materials, March 8th-12th, San Diego, CA.
67. Lin, Y. and Sodano, H.A., 2008, "Fabrication and Electromechanical Characterization of a Piezoelectric Structural Fiber for Multifunctional Composites," 2008 SAMPE Fall Technical Conference, Sept. 8-11th, Memphis, TN.
68. Fenstra, J. and Sodano, H.A., 2008, "Enhanced Active Piezoelectric Nanocomposites Fabricated through Electrospun Nanowires," 3rd International Conference on Smart Materials and Structures Systems, June 8-13, Acireale, Sicily, Italy.
69. Magoteaux, K., Sanders, B. and Sodano, H.A., 2008, "Investigation of an energy harvesting small unmanned air vehicle," SPIE's 15th annual International Symposium on Smart Structures and Materials, March 9th-13th, San Diego, CA.
70. Lin, Y. and Sodano, H.A., 2008, "Concept and Model of a Piezoelectric Structural Fiber for Multifunctional Composites," SPIE's 15th annual International Symposium on Smart Structures and Materials, March 9th-13th, San Diego, CA.

71. Liu, Y. and Sodano, H.A., 2008, "An Investigation into Active Piezoelectric Nanocomposites for Distributed Energy Harvesting," SPIE's 15th annual International Symposium on Smart Structures and Materials, March 9th-13th, San Diego, CA.
72. Sodano, H.A., 2007, "Power Harvesting Using Piezoelectric Materials," Power MEMS, Nov. 28-29, Freiburg, Germany.
73. Sodano, H.A., Granstrom, J., Feenstra, J. and Farinholt, K., 2007, "Harvesting of Electrical Energy from an Backpack with a Piezoelectric Strap," SPIE's 14th annual International Symposium on Smart Structures and Materials, February 26th – March 2nd, San Diego, CA.
74. Van Karsen, C., Avitabile, P. Sodano, H., Blough, J. and Evensen, H., 2006 "Implementation of Some Dynamic Systems Material into the Mechanical Engineering Curriculum," 2006 ASEE Annual Conference & Exposition, June 18-21, Chicago, IL.
75. Sodano, H.A. and Inman, D.J., 2006, "Experimental Validation of an Active Eddy Current Vibration Control Scheme," SPIE's 13th annual International Symposium on Smart Structures and Materials, February 26th – March 2nd, San Diego, CA.
76. Sodano, H.A. and Inman, D.J., 2006, "Model of an Active Eddy Current Vibration Control System," SPIE's 13th annual International Symposium on Smart Structures and Materials, February 26th – March 2nd, San Diego, CA.
77. Sodano, H.A., 2006, "New Non-Contact Excitation Method for Vibration Testing," Proceedings of the 24th annual International Modal Analysis Conference (IMAC), Jan. 30 - Feb. 2, St. Louis, MO.
78. Sodano, H.A., 2006, "Design of Automated Eddy Current Structural Health Monitoring Techniques with Extended Sensing Region," Proceedings of the 24th annual International Modal Analysis Conference (IMAC), Jan. 30 - Feb. 2, St. Louis, MO.
79. Simmers, G.E., Sodano, H.A., and Inman, D.J., 2005, "Self-Sensing Active Control in the Presence Temperature Changes," Proceeding of the 15th International Conference on Adaptive Structures and Technologies (ICAST), October 9-12th, Paris, France.
80. Sodano, H.A., Bae, J.S., Inman, D.J. and Belvin, W.K., 2005, "Passive-Active Eddy Current Damper," SPIE's 12th annual International Symposium on Smart Structures and Materials, March 7-10th, San Diego, CA.
81. Simmers, G.E., Sodano, H.A., Park, G., and Inman, D.J., 2005, "Impedance Based Corrosion Detection" SPIE's 12th annual International Symposium on Smart Structures and Materials, March 7-10th, San Diego, CA.
82. Sodano, H.A., Bae, J.S., Inman, D.J. and Belvin, W.K., 2005, "Improved Eddy Current Damping Model for Transverse Vibrations," Proceedings of the 23rd annual International Modal Analysis Conference (IMAC), Jan. 31 - Feb. 3, Orlando, FL.
83. Simmers, G.E., Sodano, H.A., Park, G., and Inman, D.J., 2005, "Impedance Based Structural Health Monitoring to Detect Corrosion," Proceedings of the 23rd annual International Modal Analysis Conference (IMAC), Jan. 31 - Feb. 3, Orlando, FL.
84. Inman, D.J., Sodano, H.A. and Park, G., 2004, "Piezoelectric Materials for Structures: A State of the Art and Future of Harvesting," The Air Force/Army/NSF Joint Workshop on Multifunctional Structures for Energy Harvesting & Storage, Dec., Palo Alto, CA.

85. Sodano, H.A., Dereux, R., Simmers, G.E. and Inman, D.J., 2004, "Power Harvesting Using Thermal Gradients for Charging Batteries," Proceeding of the 15th International Conference on Adaptive Structures and Technologies (ICAST), October 25-27th, Bar Harbor, ME.
86. Sodano, H.A., Bae, J.S., Inman, D.J. and Belvin, W.K., 2004, "Improved Eddy Current Damping Mechanism for Transverse Vibrations," Proceeding of the 15th International Conference on adaptive Structures and Technologies (ICAST), October 25-27th, Bar Harbor, ME.
87. Sodano, H.A., Lloyd, J. and Inman, D.J., 2004, "An Experimental Comparison between Several Active Composite Actuators for Power Generation," SPIE's 11th annual International Symposium on Smart Structures and Materials, March 14-18th, San Diego, CA.
88. Salehian, A., Sodano, H. A., Cliff, E. M., Herdman, T.L., Burns, J. A. and Inman, D. J., 2004, "Slewing Issues in LSS/ISAT (Integration of Smart Materials)," presented in *NASA-LaRC*, Hampton, VA.
89. Sodano, H.A., Park, G., and Inman, D.J., 2004, "Review of Power Harvesting Advances and Applications," Proceedings of the 22st annual International Modal Analysis Conference (IMAC), January 26-29th, Dearborn, MI.
90. Sodano, H.A., Park, G., Leo, D.J. and Inman, D.J., 2003, "Use of Piezoelectric Energy Harvesting Devices for Charging Batteries," SPIE's 10th annual International Symposium on Smart Structures and Materials, March 2-6th, San Diego, CA.
91. Sodano, H.A., Magliula, E.A., Park, G. and Inman, D.J., 2002, "Electric Power Generation Using Piezoelectric Devices," Proceeding of the 13th International Conference on adaptive Structures and Technologies (ICAST), October 7-9th, Potsdam/Berlin, Germany.
92. Sodano, H.A., Peairs, D.M., Magliula, E.A., Park, G. and Inman, D.J., 2003, "The Use of Macro-Fiber Composites in Structural Vibration Applications," Proceeding of the 21st International Modal Analysis Conference (IMAC), February 3-6th, Kissimmee, FL.
93. Ruggiero, E., Sodano, H.A., Park, G. and Inman, D.J., 2002, "Active Vibration Suppression of a Gossamer Spacecraft," Proceedings of the 14th U.S. National Congress of Theoretical and Applied Mechanics, Blacksburg, VA.