Yirong Lin, Ph.D.

Department of Mechanical Engineering
The University of Texas at El Paso
El Paso, TX 79968

EDUCATION AND TRAINING

Postdoc, Mechanical Engineering *December 2010 – July 2011*
University of Florida, Gainesville, Florida
Sponsor: Henry A. Sodano

Postdoc, Mechanical Engineering *August 2009 – December 2010*
Arizona State University, Tempe, Arizona
Sponsor: Henry A. Sodano

Ph.D. Mechanical Engineering *August 2009*
Arizona State University, Tempe, Arizona
Advisor: Henry A. Sodano

M.S. Mechanical Engineering *July 2006*
Harbin Institute of Technology, Harbin, China
Advisor: Yingxue Yao

B.S. Mechanical Engineering *July 2004*
Harbin Engineering University, Harbin, China

PROFESSIONAL EXPERIENCES

Academic

Assistant Professor *July 2011 – July 2016*
Department of Mechanical Engineering
University of Texas at El Paso

Associate Professor *August 2016 – Present*
Department of Mechanical Engineering
University of Texas at El Paso

AWARDS AND HONORS

ASME Best Paper in Materials, SPIE Smart Structures/NDE, San Diego, CA, 2011

Honorable Mention Award at SMASIS Technical Conference, Oxnard, CA, 2009
Best Paper at SAMPE Fall Technical Conference, Memphis, TN, 2008
Outstanding Performance in Securing Extramural Funding, ORSP, UTEP, 2014

PUBLICATIONS

Journal Articles

1. Hwang, S., Choi, H, Martinez, R., Lin, Y. and Kim, N., "Study of Thermoplastic Polyurethane and Conductive Carbon Filler Composites for 3D Printed Electronics Using Fused Deposition Modeling," Rapid Manufacturing Journal, (Currently under review)

2. Shuvo, M., Rodriguez, G., Gastelum, I., Karim, H., Sandoval, A., Shafirovich, E., Noveron., J., and Lin, Y., "Hybrid Nanocomposites for Li-ion battery applications" ACS Applied materials and interface (Currently under review)

3. Sarker, R., Karim, H., Martinez, R., Love, N. and Lin, Y., "A Lithium Niobate High Temperature Sensor for Energy System Applications," Sensors and Actuators, part A: Physical, (Currently under review)

4. Gonzalez, J., Mireles, J., Lin, Y., and Wicker, R., "Characterization of ceramic components fabricated using binder jetting additive manufacturing technology," Ceramics International, in press.

5. Karim, H., Sarker, M., Shahriar, S., Shuvo, M., Delfin, D., Hodges, D., Tseng, T., Roberson, D., Love, N., and Lin, Y., 2016. "Lead free pyroelectric energy harvesting", Journal of Smart Materials and Structures, Revision submitted.

6. Castellanos, A., Islam, M., Quevedo, S., Shuvo, M., Lin, Y., and Prabhakar, P., 2016, "Nanowire Reinforcement of Woven Composites for Enhancing Interlaminar Fracture Toughness," journal of Sandwich Structures and Materials, in press.

7. Hossain, M., Gonzalez, J., Martinez, R., Shuvo, M., Mireles, J., Choudhuri., Wicker., and Lin, Y., 2015. "Fabrication and Characterization of Smart Parts using Electron Beam Melting Additive Manufacturing Technology". Additive Manufacturing, in Press.

8. Shuvo, M. A. I., Rodriguez, G., Islam, M. T., Karim, H., Ramabadran, N., Noveron, J. C., and Lin, Y. 2015. "Microwave exfoliated graphene oxide/TiO_2 nanowire hybrid for high performance lithium ion battery," Journal of Applied Physics, 118(12), 125102. (Selected as the cover image of the volume 118, number 12.)

9. Sarker, MD, Karim, H., Martinez, R., Delfin, D., Enriquez, R., Shuvo, M., Love, N., and

Lin, Y., 2015, "Temperature measurements using a lithium nobate ($LiNbO_3$) pyroelectric ceramic," Measurement, 75, 104-110.

10. Rajib, M., Martinez, R., Shuvo, M., Karim, H., Delfin, D., Afrin, S., Rodriguez, G., and Ramana, C.V., and Lin, Y., 2015, "Enhanced energy storage of dielectric nanocomposites at elevated temperatures," International Journal of Applied Ceramic Technology, DOI: 10.1111/ijac.12410.

11. Gaytan, S., Cadena, M., Karim, H., Delfin, D., Lin, Y., Espalin, D. MacDonald, E. and Wicker, R., 2015, "Fabrication of barium titante by binder jetting additive manufacturing technology," Ceramics International, 41, 6610-6619.

12. Torrado, A., Shemelya, C., English, J., Lin, Y., Wicker, R., and Roberson, D., 2015, "Characterizing the effect of additives to ABS on the mechanical property anisotropy of specimens fabricated by material extrusion 3D printing," Additive Manufacturing, 6, 16-29.

13. Karim, H., Delfin, D., Shuvo, M., Chavez. L., Garcia, C., Barton, H., Gaytan., S., Cadena, M., Rumpf, R., Wicker, R., Lin, Y., and Choudhuri., A., 2014, "Concept and model of a metamaterial based passive wireless temperature sensor for harsh environment applications," IEEE Sensors Journal, 15, 1445-1452. (Top 50 most downloaded paper in December 2014 of IEEE Sensors Journal Papers)

14. Rajib, M., Shuvo, M. and Karim, H., Delfin, D., Afrin, S., and Lin, Y., 2014, "Temperature influence on dielectric energy storage of nanocompoistes," Ceramics International, 41, 1807-1813.

15. Shuvo, M., Karim, H. and Delfin, D., and Lin, Y., 2013, "Nanowire modified carbon fibers for enhanced electrical energy storage," Journal of Applied Physics, 114, 104306.

16. Shuvo, M., Khan, M., Karim, H. and Morton, P., Wilson, T., and Lin, Y., 2013, "Investigation of modified graphene for energy storage applications", ACS applied materials and interfaces, 5, 7881-7885.

17. Zhou, Z., Lin, Y., Tang, H. and Sodano, H. A., 2013, "Hydrothermal growth of highly textured BaTiO3 films composed of nanowires", Nanotechnology, 24, 095602.

18. Zhou, Z., Tang, H., Lin, Y., and Sodano, H. A., 2013, "Hydrothermal growth of textured Ba1-xSrxTiO3 films composed of nanowires", Nanoscales, 5, 10901-10907.

19. Lin. Y., Zhou, Z. and Sodano, H.A., 2013, "Barium titanate and barium strontium titanate coated carbon fibers for multifunctional structural capacitors," Journal of Composite Materials, 47(12), 1527–1533.

20. Tang, H., Lin, Y. and Sodano, H.A., 2012, "Synthesis of high aspect ratio BaTiO3 nanowires for high energy density nanocomposite capacitors," Advanced Energy Materials, 3, 451-456.

21. Mendoza, M, Khan, M., Shuvo, M., Guerrero, A. and Lin, Y., 2012, "Development of lead-free nanowire composites for energy storage application", Journal of Nanomaterials, 2012, 151748.

22. Tang, H., Lin, Y. and Sodano, H.A., 2012, "Enhanced energy storage in nanocomposite capacitors through aligned pzt nanowire by uniaxial strain assembly," Advanced Energy Materials, 2, 469-476.

23. Tang, H., Lin, Y., Ehlert, G. and Sodano, H.A., 2012, "Highly efficient synthesis of graphene nanocomposites," Nano Letter, 12, 84-90.

24. Lin, Y., Ehlert, G., and Bukowsky, C. and Sodano, H.A., 2011, "Superhydrophobic functionalized graphene aerogels," ACS Applied Materials and Interfaces, 3, 2200-2203.

25. Ehlert, G., Lin, Y. and Sodano, H.A., 2011, "Carboxyl functionalization of carbon fibers via a non-oxidative reaction that preserves fiber tensile strength," Carbon, 49, 4246-4255.

26. 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, 1879–1886.

27. Tang, H., Lin, Y., Andrews, C. and Sodano, H.A., 2011, "Nanocomposites with increased energy density through high aspect ratio PZT nanowires," Nanotechnology, 22, 015702.

28. Galan, U., Lin, Y., Ehlert, G. and Sodano, H.A., 2011, "Effect of ZnO nanowire morphology on the interfacial strength of nanowire coated carbon fibers," Composites Science and Technology, 71: 946-954.

29. Ehlert, G., Lin, Y. and Sodano, H.A., 2010, "Enhanced multi-scale composites through an engineered hierarchical fiber," International Journal of Mechanics and Materials Engineering, 4: 1687-1698 (Invited paper).

30. Garcia, M., Lin, Y. and Sodano, H.A., 2010, "Autonomous materials with controlled toughening and healing," Journal of Applied Physics, 108, 093512.

31. Lin, Y., Andrews, C. and Sodano, H.A., 2010, "Enhanced piezoelectric properties of lead zirconate titanate (PZT) sol-gel derived ceramics using single crystal PZT cubes,"

Journal of Applied Physics, 108, 064108.

32. Lin, Y., Shaffer, J., and Sodano, H.A., 2010, "Electrolytic deposition of PZT on carbon fibers for multifunctional composites," Smart Materials and Structures, 19, 124004 (Invited Paper).

33. Andrews, C., Lin, Y. and Sodano, H.A., 2010, "The effect of particle aspect ratio on the electroelastic properties of piezoelectric nanocomposites," Smart Materials and Structures, 19, 02518.

34. Lin, Y. and Sodano, H.A., 2010, "Double Inclusion model for multiphase piezoelectric composites," Smart Materials and Structures, 19, 035003.

35. 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.

36. Lin, Y., Liu, Y. and Sodano, H.A., 2009, "Vertically Aligned PZT nanowires for sensing and actuation," Applied Physics Letters, 95, 122901.

37. Lin, Y. and Sodano, H.A., 2009, "Electromechanical characterization of single active structural fiber laminas for multifunctional composites," Composites Science and Technology, 69, 1825-1830.

38. Lin, Y. and Sodano, H.A., 2009, "Characterization of multifunctional structural capacitors for embedded energy storage," Journal of Applied Physics, 106, 114108.

39. Lin, Y. and Sodano, H.A., 2008, "Fabrication and electromechanical characterization of a piezoelectric structural fiber for multifunctional composites," Advanced Functional Materials, 19, 592-598.

40. Lin, Y. and Sodano, H.A., 2008, "Concept and model of a piezoelectric structural fiber for multifunctional composites," Composites Science and Technology, 68, 1911-1918.

Conference Articles

1. Shuvo, M. Karim, A., Islam, M., Rodriguez, G., Nandasiri, M., Schwarz, A., Devaraj, A., Noveron, J., Vijayakumar, M., and Lin, Y., 2015, "Porous carbon/CeO2 composites for Li-ion battery application," 2015 SPIE Smart Materials/NDE, March 12th, San Diego, CA.

2. Shuvo, M. Karim, A., Islam, M., Rodriguez, G., Nandasiri, M., Schwarz, A., Devaraj, A., Noveron, J., Vijayakumar, M., and Lin, Y., 2015, "High-performance porous carbon/CeO2 nanoparticles hybrid super-capacitors for energy storage," 2015 SPIE

Smart Materials/NDE, March 12th, San Diego, CA.

3. Delfin, D., Love, N., Lin, Y., and Tseng, T., 2015 "Instructional Setting on Student Learning Effectiveness Using Flipped Classroom in an Engineering Laboratory," ASEE 122nd Annual Conference and Exposition, ASEE, Seattle, WA, June 14 – 17.

4. Shuvo, M. Karim, A., Delfin, D., and Lin, Y., 2014, "Structural supercapacitor based on hybrid graphene nanocomposites," 2014 SPIE Smart Materials/NDE, March 12th, San Diego, CA.

5. Karim, A., Delfin, D., Shuvo, M. and Lin, Y., 2014, "Concept and Design of a low cost wireless temperature sensor using metamaterials," 2014 SPIE Smart Materials/NDE, March 12th, San Diego, CA.

6. Karim, H., Delfin, D., Rumpf, R., Lin, Y., and Choudhuri, A., 2014, "Development of Passive Wireless Temperature Sensors Using Metamaterials". AIAA Science and Technology Forum and Exposition 2014: 52nd Aerospace Sciences Meeting.

7. Karim, H., Delfin, D., Gaytan, S., Lin, Y., Cadena, A., Choudhuri, A., 2014 "A Metamaterial Inspired Passive Wireless Temperature Sensor For Harsh Environment Applications" ISAs 56th Power Industry Division Symposium, June 1-6, Scottsdale, Arizona.

8. Hossain, M. S., Gonzalez, J. A., Gaytan, S. M., Lin, Y., Choudhuri, A., and Wicker, R., 2014, "Stop and Go Process to Fabricate Smart Parts using Electron Beam Melting", ISAs 56th Power Industry Division Symposium, June 1-6, Scottsdale, AZ.

9. Sarker, M., Sandoval, S., Love, N., Lin, Y., 2014, " Wireless Temperature Sensor Measurements through Various Materials Using a Lithium Niobate Pyroelectric Ceramic", ISAs 56th Power Industry Division Symposium, June 1-6, Scottsdale, Arizona.

10. Shuvo, M. Mendoza, M., Khan, M., and Lin, Y., 2013, "Development of Graphene Nanowires Composites for Enhanced Energy Storage Applications," 2013 SPIE Smart Materials/NDE, March 15th, San Diego, CA.

11. Mendoza, M., Khan, M., Shuvo, M. and Lin, Y., 2012, "Fabrication and Characterization of nanowire polymer composites for high energy density capacitors," 2012 ASME IMECE, November 15th, Houston, TX.

12. Shuvo, M., Mendoza, M., Khan, M. A. and Lin, Y., 2012, "Characterization of

Graphene/Nanowire hybrids for Supercapacitor," 2012 ASME IMECE, November 15th, Houston, TX.

13. Tang, H., Lin. Y. and Sodano, H.A., 2011, "Enhanced Energy Storage in Nanocomposites through aligned PZT nanowires," ASME Conference on Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS), September 18th-21st, Scottsdale, AZ.

14. Lin. Y., Zhou, Z., Romero J. and Sodano, H.A., 2011, "Multifunctional Structural Capacitors consisting of Barium Titanate and Barium Strontium Titanate Coated Carbon Fibers," 18th Internatnional Conference on Composite Materials, August 21st-26th, Jeju Island, Korea.

15. Liao. Y., Lin, 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/NDE, March 6th-10th, San Diego, CA.

16. Tang, H., Lin, Y., and Sodano, H.A., 2011, "Improved energy density and d33 property of nanocomposites with aligned PZT nanowires," SPIE's 18th Annual International Symposium on Smart Structures and Materials, March 6th-10th, San Diego, CA.

17. 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 presentation only).

18. 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.

19. Tang, H., Lin, Y., Andrews, C. and Sodano, H.A., 2010, "Characterization of PZT Nanocomposites for Enhanced Energy Storage," ASME 2010 Conference on Smart Materials, Adaptive Structures and Intelligent Systems, September 28th-October 1st, Philadelphia, PA.

20. Lin, Y. Ehlert, G. and Sodano, H.A., 2010, "Piezoelectric Nanowire Interface for Increased Strength and Multifunctionality," Proceedings of the 2010 M&M International Symposium for Young Researchers, March 1-3, 2010, California Institute of Technology, Pasadena, CA, USA.

21. Andrews, C., Lin, Y. and Sodano, H.A., 2009, "Effect of aspect ratio on the electroelastic properties of piezoelectric nanocomposites," SPIE's 16th annual International

Symposium on Smart Structures and Materials, March 8th-12th, San Diego, CA.

22. 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.

23. 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.

24. 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.

25. Lin, Y. and Sodano, H.A., 2009, "Characterization of Multifunctional Structural Capacitors for Embedded Energy Storage," ASME 2009 Conference on Smart Materials, Adaptive Structures and Intelligent Systems, September 21st-23rd, Oxnard, CA.

26. Shaffer, J., Lin, Y. and Sodano, H.A., 2009, "Electromechanical Characterization of Single Active Structural Fiber for Multifunctional Composites," 20th International Conference on Adaptive Structures and Technologies, October 20th-22nd, Hong Kong.

27. 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.

28. 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.

29. 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.

30. 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, NV, USA.

1. Gonzalez, J. A., Hossain, M. S., Martinez, R., Rodriguez, G., Shuvo, M.A.I., Mireles, J., Wicker, R., Choudhuri, A., Lin, Y. 2015, "Investigation on Smart Parts with Embedded Piezoelectric Sensors via Additive Manufacturing: Characterization of Smart Parts", 5th Southwest Energy Science and Engineering Symposium (SESES), April 4th, El Paso, TX.

2. Delfin D., Karim, H., Chavez, L. A., Romero, J. A., Enriquez, R. E., Martinez, R., Sarker, R., Shuvo, M.A.I., Rumpf, R., Lin, Y., 2015 " A Passive Wireless Temperature Sensor for Harsh Environment Applications Based on Frequency Selective Surface Structures" 5th Southwest Energy Science and Engineering Symposium (SESES), April 4th, El Paso, TX.

3. Hossain, M. S., Gonzalez, J. A., Mireles, J., Lin, Y., Choudhuri, A., and Wicker, R., 2015, "Smart Part Fabrication using Electron Beam Melting Additive Manufacturing Technology", 5th Southwest Energy Science and Engineering Symposium, El Paso, TX.

4. Gonzalez, Jose A., Mireles J., Lin Y., Wicker R.B., 2015, "Fabrication of Ceramic Components Using Binder Jetting Additive Manufacturing Technology." 5th Southwest Energy Science and Engineering Symposium (SESES), April 4th, El Paso, TX.

5. Shuvo, M., Karim, H., Rodriguez, G., and Lin, Y., 2015. "High-Performance Hybrid Super-Capacitors for Energy Storage" 5th Southwest Energy Science and Engineering Symposium (SESES), April 4th, El Paso, TX.

6. Rodriguez-Melo, G., Shuvo, M. Karim, A., Islam, M., Nandasiri, M., Schwarz, A., Devaraj, A., Noveron, J., Vijayakumar, M., and Lin, Y., 2015, "Porous Carbon/CeO2 Composites for Li-ion Battery Application," 5th Southwest Energy Science and Engineering Symposium (SESES), April 4th, El Paso, TX.

7. Sarker, M., Karim, H., Martinez, R., Delfin, D., Enriquez, R., Shuvo, M., Love, N., and Lin, Y., 2015, "Temperature Measurement Using a Lithium Niobate Pyroelectric Ceramic", 5th Southwest Energy Science and Engineering Symposium, April 4, El Paso, TX

8. Karim, H., Delfin, D., Shuvo, M., Choudhuri, A., Wicker, R., Lin, Y., 2014, "Concept and Model of a Metamaterial Based Passive Wireless Temperature Sensor", 4th Southwest Energy Science and Engineering Symposium (SESES), March 22nd, El Paso, TX.

9. Martinez, R., Rajib M.D., Shuvo, M.A.I., Karim, H., Delfin, D., Afrin, S., Rodriguez, G., Lin, Y., 2014, "Enhanced Energy Storage of Dielectric Nanocomposites at Elevated

Temperatures" 4th Southwest Energy Science and Engineering Symposium (SESES), March 22nd, El Paso, TX.

10. Hossain, M. S., Gaytan, S. M., Lin, Y., and Wicker, R., 2014, "Conceptual Design to Fabricate Smart Parts for High Efficiency System Using Electron Beam Melting", 4th Southwest Energy Science and Engineering Symposium (SESES), March 22nd, El Paso, TX.

11. Gonzalez, Jose A., Gaytan S. M., Lin Y., Wicker R.B. 2014, "Literature Review of Mechanical Testing of Ti-6Al-4V Fabricated by Electron Beam Melting" 4th Southwest Energy Science and Engineering Symposium (SESES), March 22nd, El Paso, TX.

12. Delfin, D., Karim, H., Shuvo, M.A.I., Cadena, M., Gaytan S., Lin, Y., 2014, "Fabrication and preliminary testing of metamaterial based passive wireless temperature sensors" Southwest Energy Science and Engineering Symposium (SESES), March 22nd, El Paso, TX.

13. Shuvo, M., Rajib, M., Karim, H., Morton, P., and Lin, Y., 2014. "Flexible Super-capacitor for Energy Storage Application" 4th Southwest Energy Science and Engineering Symposium (SESES), March 22nd, El Paso, TX.

14. Rodriguez-Melo, G., Shuvo, M.A.I., Lin, Y., 2014 "A Basic Introduction To Graphene And Its Application In Graphene Composites," 4th Southwest Energy Science and Engineering Symposium (SESES), March 22nd 2014, El Paso, TX.

15. Rajib, M., Marinez, R., Shuvo, M., Karim, H., Delfin, D., Afrin, S., and Lin, Y., 2014. "Enhanced Energy Storage of Dielectric Nanocomposited at Elevated Temperatures". 4th Southwest Energy Science and Engineering Symposium (SESES), March 22nd, El Paso, TX.

16. Sarker, M., Sandoval S., Love, N., and Lin, Y., 2014, "Development of a Wireless Temperature Sensor using a Lithium Niobate Pyroelectric Ceramic", 4th Southwest Energy Science and Engineering Symposium, March 22nd, El Paso, TX

17. Karim, H., Shuvo, M., Rajib, M., Delfin, D., Lin, Y., Rumpf, R., 2013, "Development of Metamaterial Based Passive Wireless Temperature Sensor" 3rd Southwest Energy Science and Engineering Symposium (SESES), April 27th, El Paso, TX

18. Delfin, D., Mendoza M., Khan, A., Shuvo, M. Guerrero, A., and Lin, Y., 2013, "The Effect of Lead-Free Nanowire Fillers in Dielectric Capacitors" Southwest Energy Science and Engineering Symposium (SESES), April 27th, El Paso, TX.

19. Shuvo, M., Rajib, M., Karim, H., Morton, P., and Lin, Y., 2013. "Flexible Nanowire Hybrid

Super-capacitor for Energy Storage". 3rd Southwest Energy Science and Engineering Symposium (SESES), April 27th, El Paso, TX.

20. Rajib, M., Shuvo, M., Karim, H., and Lin, Y., 2013. "Fabrication of Barium Titanate Nanocomposite for Dielectric Capacitor". 3rd Southwest Energy Science and Engineering Symposium (SESES), April 27th, El Paso, TX.

21. Khan, M.R., Mendoza, M., Shuvo, M.I., Garcia, M., Wilson, T., and Lin, Y., 2012, "Control study of hierarchical structural fiber for electrochemical energy storage," 2nd Southwest Energy Science and Engineering Symposium, March 24th, El Paso, TX.

22. Shuvo, M., Mendoza, M., Khan, M., Garcia, M. A., Wilson, T., Lin, Y., 2012, "Synthesis and Characterization Of Graphene Aerogel For High Performance Energy Storage Application," 2nd Southeast Energy Science & Engineering Symposium, March 24th, El Paso, TX.

23. Mendoza, M., Khan, A., Shuvo, M., Garcia, M., Wilson, T. and Lin, Y., 2012. "Development of TiO2 Nanowires on Carbon Fiber Substrate Utilizing Different Titanium Precursors". 2nd Southwest Energy Science and Engineering Symposium (SESES), March 24th, El Paso, TX.

Book Chapter

1. "Smart Composites, Mechanics and Design", CRC Press, Taylor and Francis Group. December 2013, ISBN 9781439895917.

SPONSORED RESEARCH

1. Project title: Development of graphene based carbon-carbon composites

   Funding Agency: UTEP URI Award (UTEP Internal seed funding)

   Amount: $4,960

   Duration: 1/1/2012-12/31/2012

   Investigator(s): PI: Yirong Lin (100%)

2. Project title: Development of "Lick and Stick" Wireless Temperature Sensors

   Funding Agency: Department of Energy

   Amount: $200,000

Duration: 1/1/2013-12/31/2013

Investigator(s): PI: Ahsan Choudhuri, (20%), co-PI: Yirong Lin (60%), co-PI: Ryan Wicker (20%).

3. Project title: Investigation on Pyroelectric Ceramic Temperature Sensors for Energy System Applications

   Funding Agency: Department of Energy

   Amount: $200,000

   Duration: 7/1/2013-6/30/2016

   Investigator(s): PI: Yirong Lin (50%), co-PI: Norman Love (50%)

4. Project title: Investigation of "Smart Parts" with Embedded Sensors for Energy System Applications

   Funding Agency: Department of Energy

   Amount: $1,150,894 (Including $237,532 of Cost Share from UTEP)

   Duration: 10/1/2013-9/30/2016

   Investigator(s): PI: Yirong Lin (40%), co-PI: Ahsan Choudhuri (30%), co-PI: Ryan Wicker (30%)

5. Project title: Development and Enhancement of Green Energy Learning for Effective Engineering Education to Foster the 21st Century Hispanic Sustainability Leaders

   Funding Agency: Department of Education

   Amount: $900,000 (UTEP share: $600,000; Arizona State University Share: $300,000)

   Duration: 10/1/2013-9/30/2016

   Investigator(s): PI: Tze-Liang Tseng (50%), co-PI: Yirong Lin (25%), co-PI: Norman Love (25%)

6. Project title: Development of Educational Courses on Nuclear Engineering Materials at the University of Texas at El Paso (UTEP)

   Funding Agency: Nuclear Regulatory Commission

   Amount: $188,684

   Duration: 10/1/2014 – 9/30/2016

   Investigator(s): PI: Ahsan Choudhuri (34%), co-PI: Yirong Lin (22%), co-PI: Ramana

Chintalapalle (22%), co-PI: Louis Everett (22%)

7. Project title: Acquisition of an X-Ray Scattering System with Solid-Gas Reactor Chamber and Ultrafast Detection Capabilities or Research and Instruction in Science and Engineering

   Funding Agency: The Department of Defense

   Amount: $395,721

   Duration: 2/1/2014-1/31/2017

   Investigator(s): PI: Christian Botez (100%), Senior Personnel: Yirong Lin, Luis Echegoyen, Dino Villagran, David Zubia

STUDENT SUPERVISION

Completed Undergraduate Studies

1. Nicholas Grasas
2. Josh Romero
3. Brent Dodson
4. Alberto Guerrero
5. Matthew Garcia
6. Diego Delfin
7. Travis Wilson
8. Leonardo Orea
9. Ivan Gastellum
10. Armando Sandavol
11. Jose Romero

Completed Ph.D. Dessertation

1. Mohammad Arif Ishtiaque Shuvo
   Dissertation Title: *Hybrid Nano Structures for Enhanced Energy Storage.*
   Currently Process Engineer with Intel.

Completed MS Thesis

2. Mohammed Ashiqur Rahaman Khan
   Thesis Title: *Development of Nanocomposites for Lithium-ion Batteries.*
   Currently at General Electric.

3. Miguel Mendoza
   Thesis Title: *Development of Polymer Nanocomposites Capacitors.*
   Currently at Key Energy.

4. Mohammad Arif Ishtiaque Shuvo
   Thesis Title: *Graphene Structures for Energy Storage Applications.*
   Continued as a Ph.D. Student at the University of Texas at El Paso.

5. Md Rajib
   Thesis Title: *Advanced Polymer Nanocomposites Capacitors.*
   Currently at General Electric.

6. Hasanul Karim
   Thesis Title: *Investigation of Passive Wireless Temperature Sensors for Harsh Environment.*
   Currently a Ph.D. Student at the University of Texas at El Paso.

7. Linda Vera
   Thesis Title: *Micromechanics Modeling of Multifunctional Composites.*
   Currently Undergraduate Advisor at with College of Engineering at the University of Texas at El Paso.

8. Gerardo Rodriguez-Melo
   Thesis Title: *Graphene Material Systems with Enhanced Thermal and Mechanical Performance.*
   Currently with NavAir.

9. Diego Delfin
   Thesis Title: *Micromechanics Modeling of Multifunctional Composites.*
   Currently Process Engineer with Intel.

Current Undergraduate Students

1. Luis Chavez
2. Luis Delfin
3. Celina Lopez
4. Fernando Torres

Current MS Students

Emilio Tarango
Thesis Title: *Multifunctional Composites with embedded sensing*

Jorge Silva
Thesis Title: *Pyroelectric Energy Harvesting*

Current Ph.D. Students

1. Ricardo Martinez, Mechanical Engineering
   Dissertation Title: *Modeling and Characterization of "Smart Parts" with Embedded Sensors.*

2. Hasanul Karim, Mechanical Engineering
   Dissertation Title: *Wireless Temperature Sensors: Modeling, Fabrication, and Characterization.*

3. Mohammad Shojib Hossain, Mechanical Engineering
   Dissertation Title: *Fabrication and Characterization of smart parts.*
   Co-Chair

4. Jose A. Gonzalez, Materials Science
   Dissertation Title: *Powder Bed based 3D printing.*
   Co-Chair

5. Rashedul Sarker, Mechanical Engineering
   Dissertation Title: *Wireless Temperature Sensor: Design and Characterization.*
   Co-Chair

6. Hoejin Kim, Mechanical Engineering
   Dissertation Title: *3D printing of active nanocomposites - FDM.*
   Co-Chair

7. Carlos Garcia, Electrical Engineering
   Dissertation Title: *3D printing of active nanocomposites – Micro Dispersing.*
   Co-Chair

SERVICE

Reviewer

Reviewer, Advanced Functional Materials
Reviewer, Journal of Applied Physics
Reviewer, Applied Physics Letters
Reviewer, Composites Science and Technology
Reviewer, Journal of Composite Materials

Reviewer, Composites Part B: Engineering
Reviewer, Smart Materials and Structure
Reviewer, Journal of Intelligent Material Systems and Structures
Reviewer, Nanotechnology
Reviewer, Journal of Materials Science
Reviewer, Journal of Physics: Applied Physics
Grant Panel Reviewer, NSF (DUE's TUES Program, CMMI's MEP Program)
Conference Reviewer, ASME SMASIS Best Student Paper Reviewer (2010, 2011)