

## Books

Wilson, P. R., **H. A. Mantooth**, *Model Based Engineering of Complex Electronic Systems*, Elsevier Publishers, London, England, 511 pgs., March 2013. (wrote half of book)

**Varadan, V. K.** (Editor), *Nanosensors, Biosensors and Info-Tech Sensors and Systems*, SPIE Publishing, Bellingham, Washington, 2013

**Varadan, V. K.**, P. S. Kumar and P. Rai, *Nanosensor Systems, e-bra, e-bandaaid, e-bro and wireless electronics for monitoring and control of cardiovascular diseases and neurological disorders*, Global Scientific Publishing, 2013

## Refereed Journal Papers – Published

**Ang, S.**, H. Alan Mantooth, and Juan C Balda, “Power Electronic Module Packaging at UA,” *Electrochemical Society Transactions*, 2013 58(4): pg. 253-257.

Burford, N. and **M. El-Shenawee**, “Plasmonic Enhancement of Irregular Shape Nano-Patch for Thin Film Silicon Solar Cells,” *J. of Applied Computational Electromagnetics*, vol. 28, no. 5, pp. 359-373, 2013.

Elkadi, A., E. Decrossas, **S.-Q. Yu**, H. Naseem, and S. El-Ghazaly, “Aligned semiconducting single-walled carbon nanotubes: Semi-analytical solution,” *Journal of Applied Physics*, 114, 114306 (2013)

Escobar, A., C. Stewart, J.K. Hayes, **S. Ang**, J. C. Balda, S. Talakokkula, “Realization of a modular indirect matrix converter system using normally-off SiC JFETs,” *IEEE Transactions on Power Electronics*, vol. PP, 20 November 2013.

Fan, D., P. C. Grant, **S.-Q. Yu**, V. G. Dorogan, X. Hu, Z. Zeng, C. Li, M. E. Hawkridge, M. Benamara, Yu, I. Mazur, G. J. Salamo, S. R. Johnson, Zh. M. Wang, MBE Grown GaAsBi/GaAs Double Quantum Well Separate Confinement Heterostructures, *J. Vac. Sci. Technol. B* 31, 03C105 (2013).

Gurakan, B. O. Ozel, **J. Yang** and S. Ulukus, “Energy Cooperation in Energy Harvesting Communications,” *IEEE Trans. on Communications*, 61(12):4884-4898, December 2013.

Hassan, A. M., T. C. Bowman, and **M. El-Shenawee**, “Efficient Microwave Imaging Algorithm Based on Hybridization of the Linear Sampling and Level Set Methods,” *IEEE Trans. on Antennas and Propag.*, vol. 61, no. 7, pp. 3765-3773, July 2013.

Hossain, N., K. Hild, S. R. Jin, **S.-Q. Yu**, S. R. Johnson, D. Ding, and Y. H. Zhang, S. J. Sweeney, The influence of growth conditions on carrier recombination mechanisms in 1.3  $\mu\text{m}$  GaAsSb/GaAs quantum well lasers, Appl. Phys. Lett. 102, 041106 (2013).

Khorrami, M. A., **S. El-Ghazaly**, H. Naseem, S.-Q. Yu, "Global Modeling of Active Terahertz Plasmonic Devices," IEEE Transaction of THz Science and Technology, Vol. 4, No. 1, pp. 101-109, 2014.

Kumar, P. S., P. Rai, S. Oh, H. Kwon, **V. K. Varadan**, "Flexible Capacitive Electrodes using Carbon Nanotube and Acrylic Polymer Nanocomposites for Healthcare Textiles", Smart Nanosystems in Engineering and Medicine, pp 18-24, Vol. 2 Issue 1, 2013.

Kumar, P.S., S. Oh, N. Banerjee and **V. K. Varadan**, "Wearable wireless body sensor networks for healthcare applications, Advances in Science and Technology, vol. 85, pp.11-16, 2013

Kumar, P.S., P. Rai, S. Oh, H. Kwon, **V. K. Varadan** and R. Harbaugh, "Cardiovascular Diagnostic Sensor Systems for Soldiers under Intense Physical Training", Smart Nanosystems in Engineering and Medicine pp 3-9, Vol2 Issue2, 2013.

Kunets, V. P., M. R. S. Dias, T. Rembert, M. E. Ware, Y. I. Mazur, V. Lopez-Richard, **H. A. Mantooh**, G. E. Marques, G. J. Salamo, "Hopping conductance in quantum dot chains," J. Applied Physics, vol. 113, issue 18, pp. 183709-183709-7, Jan. 2013.

Kwon, H., S. Oh, and **V. K. Varadan**, "An ICA algorithm to remove motion artifact for E-bra system: women ECG measurement system", Smart Nanosystems in Engineering and Medicine pp 55-63, Vol2 Issue 1, 2013

Kwon, H., S. Oh, and **V. K. Varadan**, "An ICA-based motion artifact removal algorithm for E-Bra system", Smart Nanosystems in Engineering and Medicine pp 42-49, Vol2 Issue2, 2013.

Makableh, Y. F., R. Vasan, S. Lee, and **O. M. Manasreh**, Appl. Phys. Lett. 102, 051904 (2013). <http://dx.doi.org/10.1063/1.4789908m> "Enhancement of the performance of InAs quantum dots solar cell by surface modification using Poly-L-Lysine homopolymers

Mangham, S. C., M. A. Kahn, M. Benamara, **M. O. Manasreh**, "Synthesis of iron pyrite nanocrystals utilizing trioctylphosphine oxide (TOPO) for photovoltaic devices," Materials Letters 97, 144-147 (2013). <http://dx.doi.org/10.1016/j.matlet.2013.01.101>

**Mantooh, H. A.**, S. Ahmed, and S. S. Ang, "Power Semiconductor Device Modeling and Simulation," Electrochemical Society Transactions, 2013 58(4): pg. 391-398.

Mazur, Yu. I., V. G. Dorogan, M. Schmidbauer, G. G. Tarasov, S. R. Johnson, X. Lu, **S.-Q. Yu**, T. Tiedje, and G. J. Salamo, Strong excitation intensity dependence of the photoluminescence line shape in GaAs<sub>1-x</sub>Bix single quantum well samples, *J. Appl. Phys.* 113, 144308 (2013). See attachment II.A.1.a.5

Mazur, Yu. I., V. G. Dorogan, M. Benamara, M. E. Ware, M. Schmidbauer, G. G. Tarasov, S. R. Johnson, X. Lu, **S.-Q. Yu**, T. Tiedje, and G. J. Salamo, Effects of spatial confinement and layer disorder in photoluminescence of GaAs<sub>1-x</sub>Bix /GaAs heterostructures, *J. Phys. D: Appl. Phys.* 46, 065306 (2013).

Mazur, Yu. I., V. G. Dorogan, L. D. de Souza, D. Fan, M. Benamara, M. Schmidbauer, M. E. Ware, G. G. Tarasov, **S.-Q. Yu**, G. E. Marques and G. J. Salamo, Effects of AlGaAs cladding layers on the luminescence of GaAs/GaAs<sub>1-x</sub>Bix /GaAs heterostructures, *Nanotechnology* 25 (2014) 035702 (9pp).

Mudholkar, M., **H. A. Mantooth**, "Characterization and modeling of 4H-SiC Lateral MOSFETs for Integrated Circuit Design," *IEEE Transactions on Electron Devices*, pp. 1923-1930, June 2013.

Nelson A., J. Sechmandt, P. Kumar, W. Williams, D. Lachut, N. Banerjee, S. Rollins, J. Parkerson, **V. Varadan**, "Wearable multi-sensor gesture recognition for paralysis patients", *Sensors IEEE*, 2013

Oh, S., H. Kwon, R. Harbaugh and **V.K. Varadan**, "Wireless Point-of-Care Diagnosis for Sleep Disorders in WPAN and WLAN", *Smart Nanosystems in Engineering and Medicine* pp 46-57, Vol 2 Issue 1, 2013

Oh, S., P. Shyamkumar, M. Ramasamy, H. Kwon, P. Rai, and **V. K. Varadan**, "Smart Helmet Sensor System for Real Time Athletic Applications: Concussion and Fatigue", *Smart Nanosystems in Engineering and Medicine* pp 34-41, Vol2 Issue 2, 2013.

Ozel, O., **J. Yang** and S. Ulukus, "Optimal Transmission Schemes for Parallel and Fading Broadcast Channels with an Energy Harvesting Rechargeable Transmitter", *Elsevier Computer Communications*, special issue for selected papers from WiOpt 2011, 36(12):1360-1371, July 2013.

Rai, P., J. Lee, G. N. Mathur, **V. K. Varadan**, "Carbon Nanotube-Polymer Nanoparticles inks for Textile Based Sensor and Computing Systems for Healthcare", *Smart Nanosystems in Engineering and Medicine* pp 31-38, Vol2 Issue 1, 2013.

Ramasamy, M., S. Oh, **V. K. Varadan** and R. Harbaugh, "Textile based Nanosensors and Wireless Mobile Communication Platform for Real Time Driver Alertness Monitoring", Smart Nanosystems in Engineering and Medicine pp 23-33, Vol2 Issue2, 2013.

Reddy, V. R., J. Wu, and **M. O. Manasreh** "Colloidal Cu(In<sub>x</sub>Ga<sub>1-x</sub>)Se<sub>2</sub> nanocrystals for all-inorganic nanocomposite solar cells," Materials Letters 92, 296-299 (2013).

<http://dx.doi.org/10.1016/j.matlet.2012.10.097>

Sun, G., **S.-Q. Yu**, The SiGeSn Approach towards Si-based Lasers, Invited paper, Solid-State Electronics 83, 76–81 (2013).

Wang, G., L. Chen, G. N. Mathur, and **V. K. Varadan**, "Synthesis and Electrochemical Properties of Spinel Lithium Manganese Oxides for Lithium Ion Batteries", Smart Nanosystems in Engineering and Medicine pp 50-57, Vol2 Issue2, 2013.

Yoon, S. W., **M. D. Glover**, H. A. Mantooth, and K. Shiozaki, "Reliable and repeatable bonding technology for high temperature automotive power modules for electrified vehicles," Journal of Micromechanics and Microengineering, vol. 23, no. 1, p. 015017, Jan. 2013.

Zeng, Z., T. A. Morgan, D. Fan, C. Li, Y. Hirono, X. Hu, Y. Zhao, J. S. Lee, J. Wang, Z. M. Wang, **S. Yu**, M. E. Hawkrige, M. Benamara, and G. J. Salamo, Molecular beam epitaxial growth of Bi<sub>2</sub>Te<sub>3</sub> and Sb<sub>2</sub>Te<sub>3</sub> topological insulators on GaAs (111) substrates: a potential route to fabricate topological insulator p-n junction, AIP Advances 3, 072112 (2013).

Zhou, H., H. Deng, S. Ghetmiri, H. Abu-Safe, **S.-Q. Yu**, X. Yang, Z. Tian, Optimizing Height and Packing-Density of Oriented One-Dimensional Photocatalysts for Efficient Water-Photolysis, The Journal of Physical Chemistry C vol. 117 issue 40 October 10, 2013. p. 20778-20783.

### **Refereed Conference Proceedings**

Abu-Safe, H., A. Hickerson, **H. Naseem**, and S.-Q. Yu, "Selected Area Crystallization of Amorphous Si and Ge Thin Films on Glass Substrates for Solar Cell and 3D-Optoelectronic Applications," 2013 IEEE PVSC Conference (Tampa).

Ahmed, S., **H. A. Mantooth**, R. Singh, M. Mudholkar, "Characterization and modeling of SiC junction barrier Schottky diode for circuit simulation," 14th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL), pp. 1-5, Salt Lake City, Utah, June 2013.

**Ang, S. S.**, H. A. Mantooth, and J. C. Balda, "Power Electronic Module Packaging at UA," ECS Symposium on GaN and SiC Power Technologies - 3, 224th Electrochemical Society Meeting, San Francisco, October 27 – November 1, 2013.

Bailey, J., **M. Glover**, E. Decrossas, K. Porter, T. Cannon, A. Mantooth, and M. Hamilton, "Frequency and Time-Domain Performance of LTCC Transmission Lines Fabricated Using Multiple Printing Techniques," IMAPS CICMT 2013, Orlando, FL, April 23-25, 2013.

Barnes, A., **J.C. Balda**, "Sizing and Economic Assessment of Energy Storage with Real-Time Pricing and Ancillary Services," IEEE 4th Symposium on Power Electronics for Distributed Generation Systems (IEEE PEDG 2013), Rogers (AR), July 8-11

Bell, B. A., A. L. Suchanek, D. Cartman, J. D. Stuckey, C. Farnell, B. Sparkman, G. Zhou, **J. Wu**, and S. C. Smith, "Unexploded Ordnance Detection with Cooperative Mobile Robots," International Conference on Embedded Systems and Applications, pp. 67-73, July 2013.

Bowman, T. and **M. El-Shenawee**, "Terahertz Spectroscopy and Imaging of FFPE Breast Cancer Tissue Samples," Proc. of the 8th Annual Breast Cancer Challenge Conference, Branson, USA, July 26-27, 2013.

Bowman, T. and **M. El-Shenawee**, "Pulsed Terahertz Spectrometry of Excised Breast Cancer Tissue," Proc. of the IEEE Int. Symp. on Antennas and Prop. and USNC/URSI National Radio Science Meeting, Orlando, USA, July 7-13, 2013.

Bowman, T., A. M. Hassan, and **M. El-Shenawee**, "Terahertz Imaging of Breast Cancer Margin Using the Linear Sampling Method," Proc. of the IEEE Int. Symp. on Antennas and Prop. and USNC/URSI National Radio Science Meeting, Orlando, USA, July 7-13, 2013.

Bowman, T., **M. El-Shenawee**, S. G. Sharma "Pulsed Terahertz Imaging of Heterogeneous Breast Cancer Tissue," (Poster) ABI Fall Research Symposium 2013, Little Rock, 15 October 2013.

Burford, N. and **M. El-Shenawee**, "Terahertz Spectroscopy of Photovoltaic Semiconductors," Proc. of the IEEE Int. Symp. on Antennas and Prop. and USNC/URSI National Radio Science Meeting, Orlando, USA, July 7-13, 2013.

Burford, N. and **M. El-Shenawee**, "Optimization of Nanotoroid Arrays for Plasmonic Solar Cell Applications," Proc. of the IEEE Int. Symp. on Antennas and Prop. and USNC/URSI National Radio Science Meeting, Orlando, USA, July 7-13, 2013.

Burford, N. and **M. El-Shenawee**, "Parallel MoM Computation of Localized Field in Silicon due to Finite Array of Nanotoroids," Proc. 29th Annual Review of Progress in Applied Computational Electromagnetics, March 24-28, 2013.

Burford, N. and **M. El-Shenawee**, "Qualitative Measure of Photocurrent Enhancement in Silicon Solar Cells due to Plasmonic Antennas," Proc. 29th Annual Review of Progress in Applied Computational Electromagnetics, March 24-28, 2013

Carr, J. A., **J. C. Balda**, "Dual Active Inverter for Solar PV Farms", IEEE 4th Symposium on Power Electronics for Distributed Generation Systems (IEEE PEDG 2013), Rogers (AR), July 8-11

Chen, L., G. Wang, J. Xie, P. Rai, J. Lee, G. N. Mathur and **V. K. Varadan**, "Study of the electrochemical properties of magnetite, maghemite and hematite nanoparticles for their applications in lithium ion batteries", Nanosensors, Biosensors, and Info-Tech Sensors and Systems vol. 8691, 2013

Clemmer, T., **H. A. Mantooth**, H. Xu, and R. Dougal, "Design and evaluation of a next generation residential energy management system," IEEE Power Electronics for Distributed Generation, pp. 1-8, July 8-11, 2013.

Conley, B. R., A. Mosleh, S. Ghetmiri, **H A. Naseem**, J. Tolle, S.-Q Yu, "CVD Growth of Ge<sub>1-x</sub>Sn<sub>x</sub> Using Large Scale Si Process for Higher Efficient Multi-Junction Solar Cells," 2013 IEEE PVSC Conference (Tampa).

Decrossas, E., **M. D. Glover**, K. Porter, T. Cannon, H. A. Mantooth and M. C. Hamilton, "Broad frequency LTCC vertical interconnect transition for multichip modules and system on package applications," in Proc. 44th European Microwave Conf., Nuremberg, Germany, pp. 104-107, Oct. 2013.

Dodson, A.M., **R.A. McCann**, "Benchmark Study of a Multifunction Series Compensator for Improved Transmission System Operation," 46th Annual Frontiers of Power Conference, Stillwater OK, Oct. 28-29, 2013.

Dodson, A.M., **R.A. McCann**, "Investigation of Thermal Feedback Design for Improved Load-Following Capability of Thorium Molten Salt Reactors," IEEE 2013 Green Technologies Conference, pp. 215-219, April 2013.

Dodson, A.M., **R.A. McCann**, "A modular multilevel converter for series compensation of an EVH transmission line with battery energy storage," IEEE 2013 Power and Energy Conference at Illinois, pp. 155-161, Feb. 22-23, 2013.

Dutta, A., S. Wang, J. Zhou, **S. S. Ang**, J.-C. Chang, and C.-S. Chen," The Design and Fabrication of a 50KVA 450A Silicon Carbide Power Electronic Module," The 4th International Symposium on Power Electronics for Distributed Generation Systems, July 8-11, 2013, USA.

Escobar Mejía, A., J. Hayes, **J. C. Balda**, C. Busada, "New Control Strategy for Indirect Matrix Converters Operating in Boost Mode", IEEE 2013 Energy Conversion Congress and Expo (ECCE 2013), Denver (CO), September 15-19, 2013.

Escobar Mejía, A., D. Guzman, **J. C. Balda**, C. Busada, "New Control Technique for Sensorless Grid Synchronization of Modular Multilevel Converters for HVDC Systems", IEEE 2013 Energy Conversion Congress and Expo (ECCE 2013), Denver (CO), September 15-19, 2013.

Fogel, K., G. McBrayer, and **J. Wu**, "CEO-director social clustering and firm value," to appear in Proc. Southern Finance Association Annual Meetings, Nov. 2013.

Foulkes, J., P. Tucker, M. Caronan, R. Curtis, L. G. Parker, C. Farnell, B. Sparkman, G. Zhou, **J. Wu**, and S. C. Smith, "Livestock Management System," International Conference on Embedded Systems and Applications, pp. 3-9, July 2013.

García Rodriguez, L.A., E. Williams, **J. C. Balda**, A. Oliva, E. Lindstrom, J. D. Gonzalez-Llorente, "Dual-Stage Microinverter Design of a GaN-based Interleaved Flyback Converter Stage", IEEE 2013 Energy Conversion Congress and Expo (ECCE 2013), Denver (CO), September 15-19, 2013.

García Rodriguez, L. A., E. Williams, **J. C. Balda**, C. Stewart, "A Comparison of Selected Silicon and Silicon-Carbide Switching Devices for PV Microinverter Applications", IEEE 4th Symposium on Power Electronics for Distributed Generation Systems, Rogers (AR), Jul 8-11.

García Rodríguez, L. A., **J.C. Balda**, "A Comparison of Isolated DC-DC Converters for Microinverter Applications", 28th Annual IEEE Applied Power Electronics Conference & Exposition, Long Beach (CA), March 17-21, 2013.

**Glover, M. D.**, M. Hamilton, E. Decrossas, K. Porter, A. Pfeiffenberger, and A. Mantooh, "A Low Loss Power Distribution Network Design in Low Temperature Co-fired Ceramic Technology," Proceedings of the 46th International Symposium on Microelectronics, Orlando, Florida, September 29-October 3, 2013.

Grant, P. C., D. Fan, A. Mosleh, V. G. Dorogan, M. E. Hawkrige, Y. I. Mazur, M. Benamara, **S.-Q. Yu**, G. J. Salamo, Photoluminescence Studies of the Effects of Rapid Thermal Annealing on Molecular Beam Epitaxy Grown GaAs<sub>1-x</sub>Bix/GaAs Heterostructures, 30th North American Molecular Beam Epitaxy Conference (NAMBE), Banff, Alberta from October 5-11, 2013.

Grant, P.C., D. Fan, A. Mosleh, M. Hawkrige, Y. Mazur, M. Benemara, V. Dorogan, **S.-Q. Yu**, G. Salamo, Investigation of Rapid Thermal Annealing on GaAs<sub>1-x</sub>Bix/GaAs Heterostructures, 4th International Workshop on Bismuth-Containing Semiconductors (4th BCS), Fayetteville, AR, USA, July14-17, 2013.

Grekov, A., **A. Mantooth**, E. Santi, "Design Considerations for Half- and Full-Bridge Resonant Gate Drive Topologies," IEEE Power Electronics for Distributed Generation, pp. 1-8, July 8-11, 2013.

Gurakan, B., O. Ozel, **J. Yang** and S. Ulukus, "Energy Cooperation in Energy Harvesting Two-Way Communications", IEEE International Conference on Communications, Budapest, Hungary, June 2013.

Guzman, D., **J. C. Balda**, "The Impact of High-Voltage and Fast-Switching Devices on Modular Multilevel Converters", 28th Annual IEEE Applied Power Electronics Conference & Exposition, Long Beach (CA), March 17-21, 2013.

Hong, L. and **J. Wu**, "Graph modulations for massive MIMO systems," to appear in Proc. IEEE Global Telecommun. Conf. Globecom'13, Dec. 2013.

Huang, L., H. Deng, T. Pham, M. Young, **H. Naseem**, H. H. Abu-Safe, X. Yang, S.-Q. Yu, "Amorphous Silicon Solar Cells Using Metallic Fishnet Nanostructures Simultaneously for Schottky Contact and Plasmonics Enhancement EBL," 2013 IEEE PVSC Conference (Tampa),

Khan, M. A., S. A. Little, Y. Makablah, S. Mangham, S.Y. Lee and **M. O. Manasreh**, Materials Research Society , "Colloidal growth, characterization and optoelectronic study of strong light absorbent inexpensive iron pyrite nanomaterials by using amine ligands for photovoltaics application," , Spring 2013, Symposium K, San Francisco, April 1-5. (Accepted)

Khan, M. A., M. Matsumura and **M. O. Manasreh**, "Processing of pristine single and multiwalled carbon nanotubes as different stacking layers in bulk heterojunction solar cells," Materials Research Society, Spring 2013, Symposium B, San Francisco, April 1-5. (Accepted).

Kumar P S., S. Oh, H. Kwon, P. Rai and **V. K. Varadan**, "Smart real-time cardiac diagnostic sensor systems for football players and soldiers under intensive training" Nanosensors, Biosensors, and Info-Tech Sensors and Systems vol. 8691, 2013

Kwon H., S. Oh and **V. K. Varadan**,” Motion artifact removal algorithm by ICA for e-bra: a woman ECG measurement system”, Nanosensors, Biosensors, and Info-Tech Sensors and Systems vol. 8691, 2013

Lee, J., H. J. Kim, L. Chen, S. H. Choi, G. N. Mathur and **V. K. Varadan**,” Development of thermoelectric inks for the fabrication of printable thermoelectric generators used in mobile wearable health monitoring systems”, Nanosensors, Biosensors, and Info-Tech Sensors and Systems vol. 8691, 2013

Lee, S., Rick Eyi, Mahmood Khan, Scott Little, **M. O. Manasreh**, “The Optimization of InP/ZnS Core/Shell Nanocrystals and TiO<sub>2</sub> Nanotubes for Quantum Dot Sensitized Solar Cells,” Materials Research Society, Spring 2013, Symposium YY, San Francisco, April 1-5. (Accepted).

Li, C., Z. Zeng, D. Fan, Y. Hirono, **J. Wu**, T. A. Morgan, X. Hu, S.-Q. Yu, Z. M. Wang, and G. J. Salamo, Nanostructures induced by bismuth nano-droplets using molecular beam epitaxy, 4th International Workshop on Bismuth-Containing Semiconductors (4th BCS), Fayetteville, AR, USA, July14-17, 2013

Liederbach, R., A. Little, F. Xiao, C. Zlibut, G. Zhou, C. Farnell, B. Sparkman, **J. Wu**, and S. C. Smith, "Developing an Ultra-Low Power Remote Infrastructure Monitoring System," International Conference on Embedded Systems and Applications, pp. 48-54, July 2013.

Lu, J. and **S. S. Ang**, “"Design philosophy of hysteretic controller for DCDC switching converters,” IEEE ASCION 2013, Shenzhen, China, October 28-31, 2013. Invited talk.

Mackey, K.N., **R.A. McCann**, K. Rahman, "Evaluation of a Battery Energy Storage System for Coordination of Demand Response and Renewable Energy Resources," 2013 IEEE Power Electronics for Distributed Generation (PEDG), 7-11 July 2013.

Mackey, K.N., **R.A. McCann**, “Improved inter-area stability using an LQG controller incorporating synchrophasor data,” IEEE 2013 Power and Energy Conference at Illinois, pp. 238-242, Feb. 22-23, 2013.

Makableh, Y.F., R. Vasan, S. Lee, M. Alam Khan, and **M. O. Manasreh**, “Enhanced Response in InAs Quantum Dot in a Quantum Well Solar Cells by Using Poly-L-lysine Homopolymers,” Materials Research Society, Spring 2013, Symposium R, San Francisco, April 1-5.

**Mantooth, H. A.**, S. Ahmed, and S. S. Ang, “Power Semiconductor Device Modeling and Simulation,” ECS Symposium on GaN and SiC Power Technologies - 3, 224th Electrochemical Society Meeting, San Francisco, October 27 – November 1 2013.

**Mantooth, H. A.**, S. Ahmed, and S. S. Ang, "Power Semiconductor Device Modeling and Simulation," Electrochemical Society Meeting, 8 pgs., Oct. 27-31, 2013.

Mazur, Y. I., V. G. Dorogan, L. D. de Souza, D. Fan, M. Benamara, M. Schmidbauer, M. E. Ware, G. G. Tarasov, **S.-Q. Yu**, G. E. Marques, and G. J. Salamo, Effect of AlGaAs cladding on the luminescent properties of GaAs/GaAs<sub>1-x</sub>Bix/GaAs heterostructures, 4th International Workshop on Bismuth-Containing Semiconductors (4th BCS), Fayetteville, AR, USA, July 14-17, 2013.

Mosleh, A., S. A. Ghetmiri, B. R. Conley, **S.-Q. Yu**, H. A. Naseem, M. Benamara, J. Tolle, "Strain Engineering of high quality CVD grown GeSn films for optoelectronic devices," EMC conference 2013.

Mosleh, A., Z. Waqar, **S.-Q. Yu**, H. Abu-Safe, S. Ghetmiri, B. R. M. Benamara, H. A. Naseem, "Nucleation-step study of silicon homoepitaxy for low-temperature fabrication of solar cells," 2013 IEEE PVSC Conference (Tampa).

Oh S., P. Kumar, H. Kwon, P. Rai, M. Ramasamy and **V. K. Varadan**, "Wireless health monitoring helmet for football players to diagnose concussion and track fatigue", Nanosensors, Biosensors, and Info-Tech Sensors and Systems vol. 8691, 2013

Qian, C., **J. Wu**, Y. R. Zheng, and Z. Wang, "Low complexity detection algorithm for under-determined MIMO systems," to appear in Proc. IEEE International Conference on Communications ICC'14, Jun. 2014.

Roddy, M. A., and **M. El-Shenawee**, "Computational Design of Steerable Broadband MEMS Antennas, Annual Review of Progress in Applied Computational Electromagnetics, March 24-28, 2013.

Saadeh, M., C. Madhu, B. Ozpineci, **H. A. Mantooth**, "Anti-series normally-on SiC JFETs operating as bidirectional switches," IEEE Energy Conversion Congress and Exposition (ECCE), pp. 2892-2897, Sept. 2013.

Saadeh, M, **R.A. McCann**, "Improved stability design of interconnected distributed generation resources," 2013 North American Power Symposium (NAPS), 22-24 Sept. 2013.

Shepherd, P., S. C. Smith, J. Holmes, A. M. Francis, N. Chiolino, **H. A. Mantooth**, "A robust, wide-temperature data transmission system for space environments," IEEE Aerospace Conference, pp. 1-13, March 2013.

Shook, B. W., A. Nizam, Z. Gong, A. M. Francis, **H. A. Mantooth**, "Multi-objective layout optimization for multi-chip power modules considering electrical parasitics and thermal performance," 14th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL), pp. 1-4, Salt Lake City, Utah, June 2013.

Shumate, S., M. G. Young, H. M. Khaja, D. Hutchings, L. Cousar, **S.-Q. Yu**, and H. Naseem, "Progress on the Hydrogen Selective Emitter for N-type solar cells," 2013 IEEE PVSC Conference (Tampa),

Shumate, S., H. M. Khaja, D. Hutchings, **S.-Q. Yu**, and H. Naseem, "Top-down Aluminum Induced Crystallization for N-type Solar Cell," 2013 IEEE PVSC Conference (Tampa).

Smith, N.L., **R. A. McCann**, "Decentralized systems in the Bahamas for smart grid implementation," 46th Annual Frontiers of Power Conference, Stillwater OK, Oct. 28-29, 2013.

Smith, N.L., **R.A. McCann**, "Investigation of Vanadium Redox Battery Dynamics with a Single-Stage Boost Inverter for Microgrid Applications," 2013 IEEE Power Electronics for Distributed Generation (PEDG), 7-11 July 2013.

Stewart, C., A. Escobar Mejía, **J. C. Balda**, "Guidelines for Developing Power Stage Layouts Using Normally-Off SiC JFETs based on Parasitic Analysis", IEEE 2013 Energy Conversion Congress and Expo (ECCE 2013), Denver (CO), September 15-19, 2013.

Sun, N. and **J. Wu**, "Minimum error transmissions with imperfect channel information in high mobility systems," to appear in Proc. Military Communications Conference (MILCOM'13), November 2013.

Sun, N. and **J. Wu**, "Maximizing spectral efficiency with imperfect channel information in high mobility systems," to appear in Proc. IEEE Global Telecommunications Conference Globecom'13, Dec. 2013.

Sun, N., **J. Wu**, and G. Zhou, "Distributed joint source-channel code for spatial-temporally correlated Markov sources," in Proc. IEEE International Conference Communications ICC'13, June 2013.

Traore, W.F., **R.A. McCann**, "Torque measurements in synchronous generators using giant magnetoresistive sensor arrays via the Maxwell stress tensor," 2013 IEEE Power and Energy Society General Meeting (PES), 21-25 July 2013.

Tuyishimire B., **R.A. McCann**, J. Bute, "Evaluation of a Kalman Predictor Approach in Forecasting PV Solar Power Generation," 2013 IEEE Power Electronics for Distributed Generation (PEDG), 7-11 July 2013.

Vasan, R., Y. F. Makableh, J. C. Sarker, and **M. O. Manasreh**, "Enhanced Photocurrent due to Interband Transitions from InAs Quantum Dots Embedded in InGaAs Quantum Well Solar Cells," Materials Research Society, Spring 2013, Symposium R, San Francisco, April 1-5. (Accepted)

Wang, G. L. Chen, G. N. Mathur and **V. K. Varadan**, "Synthesis and electrochemical properties of spinel lithium manganese oxides for lithium ion batteries", Nanosensors, Biosensors, and Info-Tech Sensors and Systems vol. 8691, 2013

Wang, G., **J. Wu**, and Y. R. Zheng, "An accurate frame error rate approximation of coded diversity systems with non-identical diversity branches," to appear in Proc. IEEE International Conference on Communications ICC'14, Jun. 2014.

Wang, G., **J. Wu**, and Y. R. Zheng, "Optimum energy efficient communications for hybrid ARQ systems," to appear in Proc. IEEE Global Telecommun. Conf. Globecom'13, Dec. 2013.

White, T., V. P. Kunets, Y. Hirono, M. E. Ware, **H. A. Mantooth**, G. J. Salamo, "High performance quantum well micro-Hall device for current sensing in inverters," IEEE Power Electronics for Distributed Generation, pp. 1-6, July 8-11, 2013.

**Wu, J.**, L. Wang, and C. Xiao, "Low complexity soft-interference cancellation turbo equalization for MIMO systems with multilevel modulations," to appear in Proc. IEEE Global Telecommun. Conf. Globecom'13, Dec. 2013.

**Wu, J.**, G. Wang, and Y. R. Zheng, "Energy and spectral efficient transmissions of coded ARQ systems," in Proc. IEEE Intern. Conf. Commun. ICC'13, June 2013.

Yan, T. and **J. Yang**, "Micro-trained Crowdsourcing: the case where common sense no longer suffices", CrowdScale Workshop, Los Angeles, CA, 2013.

Yan, T. and **J. Yang**, "Participation Management for Mobile Crowdsensing", ACM HotMobile 2013, Jekyll Island, GA, February 2013.

**Yang, J.** "Optimal Collaborative Sensing Scheduling with Energy Harvesting Nodes", GlobalSIP, Austin, TX, December 2013.

Young, M., B. Newton, H. Abu-Safe, **S.-Q. Yu**, H. Naseem, Fabrication of Al Nanodots by Electron Beam Evaporation, 2013 IEEE PVSC Conference (Tampa).

Zhang, H., **S. S. Ang**, H. A. Mantooth, S. Krishnamurthy, "A high temperature, double-sided cooling SiC power electronic module, IEEE Energy Conversion Congress and Exposition (ECCE), pp. 2877-2883, Sept. 2013.

Zhang, H., **S. S. Ang**, H. A. Mantooth, and S. Krishnamurthy, "A Double-side Cooling Power Electronic Module Using a Low-Temperature Co-fired Ceramic Device Carrier," 2013 IEEE Energy Conversion Congress and Exposition held in Denver, Colorado, USA in September 15-19, 2013.

Zhang, H., **S. S. Ang**, C. Farnell, Y. Liu, J. C. Balda, H. A. Mantooth, "A SiC SGTO/PIN Diode Power Electronic Module for a Fault Current Limiter," The 4th International Symposium on Power Electronics for Distributed Generation Systems, July 8-11, 2013, USA.

Zhong, H., H. Abu-Safe, A. Hickerson, B. R. Conley, **H. Naseem**, S.-Q. Yu, "Crystallization of Patterned Amorphous Si and Ge Thin Films for 3D Integrated Optoelectronics," IEEE Group IV Photonics conference, Korea (2013),

Zhou, J., S. S. Ang, J. C. Balda, and **H. A. Mantooth**, "Nano-diamond composite application in power module," IEEE Power Electronics for Distributed Generation, pp. 1-5, July 8-11, 2013.

Zhou, W., **J. Wu**, and P. Fan, "Maximum Doppler diversity transmissions for high mobility systems with imperfect channel state information," to appear in Proc. IEEE International Conference on Communications ICC'14, Jun. 2014.