Oral Presentation Schedule

September 12, 2017 (TUE)

ND: 2D Nanomaterials and Devices			
Room: The Birchs (B)			**Chairs: Drs. Deepam Maurya / Dae-Yong Jeong**
Time	**Abstract No**	**Presenter**	**Title**
9:30 - 9:50 am Invited	ND - 01	**Ji-Won Choi** Korea Research Institute of Standards and Science, Korea	**Dielectric dependence of A-site modification in 2D perovskite nanosheets**
9:50 - 10:10 am Invited	ND - 04	**Minoru Osada** National Institute for Materials Science, Tsukuba, Japan	TBD
10:10 - 10:25 am	ND - A01	**Taliya Gunawansa**	**Reduced-Graphene-Oxide Protected SnO2 NR battery for Optimized Lithium-Ion Storage Capabilities**
10:45 - 11:05 am Invited	ND -07	**Joe Shapter** US Army Communications-Electronics Research, Development, and Engineering Center, USA	**Nanocarbons in Novel Solar Cells**
11:05 - 11:20 am	ND - A04	**Yim Haena** Korea Institute of Science and Technology, Korea	**High-k dielectric 2D nanosheet thin films using A-site substituted Sr2Nb3O10**
11:20 - 11:35 am	ND - A07	**Debao Zhou** University of Minnesoda Duluth, USA	**Study the Influence of weight percentages of graphene and size of sensing elements on the properties of a highly conductive pressure-sensitive thin-film**
11:35 - 11:50 am	ND - A10	**Deepam Mayura** Virginia Tech, USA	**Soft Phonon Mode Dynamics in Aurivillius Type Structures**

PF: Piezoelectric Thin Films			
Room: The Birchs (B)			**Chairs: Dr. I. Kanno**
Time	**Abstract No**	**Presenter**	**Title**
1:30 - 1:50 pm Invited	PF - 10	**Isaku Kanno** Kobe University, Japan	**Measurement of piezoelectric characteristics of thin films**
1:50 - 2:10 pm Invited	PF - 13	**Takeshi Morita** University of Tokyo, Japan	**Ultrasonic-assisted hydrothermal method for thick piezoelectric films**
2:10 - 2:25 pm	PF - A14	**Hong Goo Yeo** Pennsylvania State University, USA	**Strongly {001} oriented bimorph thick PZT films grown by high temperature rf-magnetron sputtering for a non-resonant mechanical energy harvester**

Oral Presentation Schedule

September 12, 2017 (TUE)

PD: Piezoelectric Materials and Devices

Room: The Birchs (B) — **Chairs: Drs. Ying Yang / Muhammad Hajj**

Time	Abstract No	Presenter	Title
2:50 - 3:10pm Invited	PD -16	**Dae-Yong Jeong** Inha University, Korea	**Improvement of energy density in ferroelectrics with nano-size grains**
3:10 - 3:25pm	PD -A19	**Yongke Yan** Virginia Tech, USA	**Boosting electromechanical response of piezoelectric ceramics via texturing**
3:25 - 3:40 pm	PD -A22	**Chang Kyu Jeong** Pennsylvania State University, USA	**Biocompatibility of Piezoceramic Energy Harvesting: Lead-Free versus Lead-Based for Bioimplantable and Wearable Devices**
3:40 - 3:55 pm	PD -A25	**Hairui Liu**	**Fabrication of [011]PC-textured PMN-PZT polycrsytalline ceramics**
3:55 -4:10 pm	PD- A28	**Tinghai Chen** Changchun University of Technology, China	**Influence of the Waveform Symmetry on the Performance of Piezoelectric Stick-slip actuator based on hybrid driving method**
4:10 - 4:25 pm	PD -A31	**Daisuke Koyama** Doshisha University, Japan	**Liquid crystal variable-focus lens using acoustic radiation force**
4:25 - 4:40 pm	PD -A34	**Xiaotian Li** Virginia Tech, USA	**A tunable multilayer piezoelectric transformer**
4:40 - 4:55 pm	PD -A37	**Xiaoniu Li** Nanjing University, USA	**Analytical Modeling of V-shaped Linear Ultrasonic Motor**

TH: Materials and Generator Concepts for Thermal Energy Harvesting

Room: Oaks 3 (O3) — **Chairs: Drs. Jens Twiefel / Chong-Yun Kang**

Time	Abstract No	Presenter	Title
9:30 - 9:50 am Invited	TH -02	**Armin Feldhoff** Northwestern University in Evanston, IL, USA	**Flexible Thermoelectric Generator Fabricated from Bulk Materials**
9:50 - 10:10 am Invited	TH - 05	**Daryoosh Vashaee** North Carolina State University, USA	**Thermoelectric Generators for Battery-less Wearable Electronics**
10:10 - 10:25 am	TH - A02	**Assmelash Assefa Negash** Korea University of Science and Technology, Korea	**Investigation of Thermoelectric Module for Waste Heat Recovery Based on Engine Exhaust Gas Characteristics**
10:45 - 11:05 am Invited	TH -07	**David Stokes - TBD**	
11:05 - 11:20 am	TH - A05	**Kevin G. Wang** Virginia Tech, USA	**Harvesting Thermal Energy Using Solid/Liquid Phase Change Materials (PCMs)**
11:20 - 11:35 am	TH - A08	**Wenjie Li** Virginia Tech, USA	**Enhancement thermoelectric performance of skutterudite by iron substitution**
11:35 - 11:50 am	TH - A10	**Deepam Mayura** Virginia Tech, USA	**Soft Phonon Mode Dynamics in Aurivillius Type Structures**
11:50 - 12:05 pm	TH -A11	**Yongjia Wu** Virginia Tech, USA	**Thermoelectric energy harvesting for spent fuel canister monitoring**
11:50 - 12:05 pm	TH -A13	**Ravi Anant Kishore** Virginia Tech, USA	**Optimization of segmented thermoelectric generator using Taguchi and ANOVA techniques**

Oral Presentation Schedule

September 12, 2017 (TUE)

MA: Micromotors and Actuators

Room: Oaks 3 (O3)			Chairs: Jungho Ryu
Time	**Abstract No**	**Presenter**	**Title**
1:30 - 1:50 pm Invited	MA -11	**Tomoaki Mashimo** Toyohashi University of Technology, Japan	**Micro Ultrasonic Motor Using One Cubic Millimeter Stator**
1:50 - 2:10 pm Invited	MA -14	**Takefumi Kanda** Okayama University, Japan	**Novel three-way valve for pneumatic and hydraulic actuators using piezoelectric transducers**
2:10 - 2:25 pm	MA -A15	**Masuda Kentaro** Doshisha University, Japan	**Development of an acoustic levitation system for planar objects using a bending vibrator and a reflector**

EI: Mechanical Energy Harvesters and related Electrical Interfaces

Room:Oks 3 (O3)			Chairs: Drs. Masaya Takasaki / Shuxiang Dong
Time	**Abstract No**	**Presenter**	**Title**
2:50 - 3:10 pm	EI -A17	**Jung Inki** Korea University, Korea	**Displacement amplifier module with polymer-based piezoelectric energy harvesting to realize the Self-Powered Green Roadways**
3:10 - 3:25 pm	EI -A20	**Sungtae Kim** Korea University, Korea	**Tunable Timescale in Mechanical Energy Harvesting**
3:25 - 3:40 pm	EI -A23	**Hamid Jabar** Hanyang University, Seoul, Korea	**Piezoelectric Energy Harvesters and Interface Circuits for the ZigBee Green Power Based Wireless Remote Switch**
3:40 - 3:55 pm	EI -A26	**Ji-Tzuoh Lin**	**Applications of Electrostatic Switches for Low Energy Harvesting**
3:55 -4:10 pm	EI -A29	**Lin Xu**	**Energy Harvesting, Ride Comfort, and Suspension Performance of Hydraulic Hydraulic-electromagnetic Energy-Regenerative Shock Absorbers**
4:10 - 4:25 pm	EI -A32	**Mingyi Liu**	**Backpack Energy Harvester with Mechanical Motion Rectifier to Increase Working Bandwidth and User Comfortability**
4:25 - 4:40 pm	EI -A35	**Bang-Fuh Chen** National Sun Yat-sen University, Taiwan	**Design Optimization and Stability Analysis of a Diffuser Augmented Duct**
4:40 - 4:55 pm	EI -A38	**Min Gyu Kang**	**Energy Harvesting from Stray Magnetic Field Around Power Cable**

Oral Presentation Schedule

September 12, 2017 (TUE)

AM: Annual Energy Harvesting Society Meeting			
Room: The Pines (P)		**Chairs: Drs. Mickael Lallart / Nathan Sharpes**	
Time	**Abstract No**	**Presenter**	**Title**
9:30 - 9:50 am Invited	AM -03	**Bernhard Wagner** Fraunhofer Institute for Silicon Technology, Itzehoe, Germany	**High-performance piezoelectric and magnetic**
9:50 - 10:10 am Invited	AM - 06	**Earl Dowell** National Academy of Engineering, USA	**Aeroelastic response and energy harvesting from a cantilevered piezoelectric laminated plate**
10:10 - 10:25	AM -A03	**Mingyi Liu**	**Design, simulation and experiment of a novel energy harvesting paver**
10:45 - 11:05 am Invited	AM -09	**Miso Kim** Korea Research Institute of Standards and Science, Korea	**Metamaterial-based Enhancement of Elastic Wave Energy Harvesting**
11:05 - 11:20 am	AM -A06	**Jia Mi**	**Modeling, Experiments, and Optimization of an Energy-regenerative Type Mechanical Protective Equipment**
11:20 - 11:35 am	AM -A09	**Nicolas Garraud** University of Florida, USA	**Electrodynamic Wireless Power Transmission Using Low-Amplitude, Low-Frequency Magnetic Fields**
11:35 - 11:50 am	AM -A12	**Jae Yong Cho**	**Piezoelectric and Triboelectric Hybrid Generator for Wearable Devices**

AM: Annual Energy Harvesting Society Meeting			
Room: The Pines (P)		**Chairs: Henry Sodano**	
Time	**Abstract No**	**Presenter**	**Title**
1:30 - 1:50 pm Invited	MA -12	**Mickaël Lallart** Laboratoire de Génie Electrique et Ferroélectricité, France	**Efficient Electrical Interface Based on Synchronized Voltage Inversion and Energy Extraction for Piezoelectric Electrical Generators**
1:50 - 2:10 pm Invited	MA -15	**Sang-Gook Kim** Massachusetts Institute of Technology, USA	**MEMS Energy Harvesting: why so slow to be commercialized?**
2:10 - 2:25 pm	MA -A16	**Luong Viet Phung**	**Off-the-Shelf Self-Powered Electrical Interface for Low-voltage DC Energy Harvesting**

Oral Presentation Schedule

September 12, 2017 (TUE)

WH: Mechanical and Wave Energy Harvesting			
Room:Oks 3 (O3)			Chairs: Drs. Jörg Wallaschek/Miso Kim
Time	**Abstract No**	**Presenter**	**Title**
2:50 - 3:10 pm	WH -A18	**Jia Mi**	**Design, Modeling and Tests of a Novel Ocean Surface Wave Energy Harvester**
3:10 - 3:25 pm	WH -A21	**Chien-An Chen**	**Equivalent Circuit Model of a Wave Energy Converter for Irregular Wave**
3:25 - 3:40 pm	WH -A24	**Jiahn-Horng Chen** National Taiwan Ocean University, Taiwan	**Wave Power Amplification in a Caisson for Wave Energy Harvest**
3:40 - 3:55 pm	WH -A27	**Dong Ha** Virginia Tech	**Vibration and Thermal Energy Harvesting from Automobiles**
3:55 - 4:10 pm	WH -A30	**Noha Aboulfotoh** Leibniz University, Germany	**Derivation of design guidelines for detuned array harvester considering constant volume: Theory and experiments**
4:10 - 4:25 pm	WH -A33	**Rammohan Sriramdas** Virginia Tech, USA	**Magnetic Proof Mass for Enhancing the Power from a Piezoelectric Harvester Absorbing both Vibration and Magnetic Energies**
4:25 - 4:40 pm	WH -A36	**Masoud Derakhshani** University of Louisville, USA	**Nonlinear dynamics of a bistable coupled structure for vibration energy harvesting**
4:40 - 4:55 pm	WH -A39	**Haluk Akay**	**Energy Harvesting Footwear**

Oral Presentation Schedule

September 13, 2017 (WED)

UD: Ultrasonic and Resonance Devices			
Room: The Birchs (B)		**Chairs: Drs. Michael Lallart / Meiling Zhu**	
Time	**Abstract No**	**Presenter**	**Title**
9:30 - 9:50 am Invited	UD -17	**Jörg Wallaschek** Leibniz University, Germany	**A Survey on Piezoelectric Actuators in Ultrasonic Process Technologies**
9:50 - 10:10 am Invited	UD -20	**Jens Twiefel** Leibniz University, Germany	**Control of Cavitation - A Sonomechatronical Application**
10:10 - 10:30 am	UD -40	**Rae Karasawa**	**c-Axis zig-zag polarization inverted ScAlN multilayer for FBAR transformer rectifying antennaâ€**
10:50 - 11:10 am Invited	UD -24	**Wiercigroch - TBD**	**TBD**
11:10 - 11:25 am	UD -A42	**Robert E. Skelton**	**Robust resonance entrainment of central pattern generator on a carangiform tensegrity swimmer**
11:25 - 11:40 am	UD -A45	**Kenta Miyoshi** Toyohashi University of Technology, Japan	**Micro Flat Ultrasonic Motor with a Micro Coil Preload Mmechanism**
11:40 - 12:00 am	UD -A48	**Xiaolong Lu**	**Micro Rotary Machines Activated by Ultrasound**

Oral Presentation Schedule

September 13, 2017 (WED)

MH: Mechanical Energy Harvesting			
Room: The Birchs (B)		**Chairs: Joe Shapter / Wi-Hsin Liao**	
Time	**Abstract No**	**Presenter**	**Title**
1:30 - 1:50 pm Invited	MH -27	**Nathan Sharpes** US Army Communications-Electronics Research, Development, and Engineering Center, USA	**Characterization of Solder Gait to Aid the Design and Modeling of Wearable Energy Harvesters**
1:50 - 2:10 pm Invited	MH -30	**Julianne Douglas**	**Overview of Army Kinetic Energy Harvesting Technology Developments and Future Requirements**
2:10 - 2:30 pm	MH -33	**Chong-Yun Kang**	**Vibration based hybrid energy harvesting**
3:00 - 3:20 pm Invited	MH -34	**Geon-Tae Hwang** Korea Institute of Materials Science, Korea	**Flexible and High-performance Piezoelectric Energy Harvesters for Bio-medical and Electronic applications**
3:20 - 3:35 pm	MH -A52	**Jamal Alrowaijeh** Virginia Tech, USA	**A harvester/sensor of wind speed**
3:35 - 3:50 pm	MH -A55	**Andreas S. Schmelt** Leibniz University, Germany	**Modeling and Characterization of a bimodal Tactile Display**
3:50 - 4:05pm	MH -A58	**Zheng Jiang** Nanjing University, China	**A novel design of a manipulator with an open-frame structure driven by Langevin piezoelectric transducers**
4:05 - 4:20 pm	MH -A61	**Zhiyuan Yao** Nanjing University, China	**Structure design of plate ultrasonic motors based on bending mode**
4:20 - 4:35 pm	MH -A64	**Le Wang**	**A Novel Micro Ultrasonic Motor with Dual Output Channels**
4:35 -4:50 pm	MH -A67	**Sisi Di** Nanjing University, China	**Speed control of ultrasonic motors using the model-free adaptive strategy**
4:50 - 5:05 pm	MH -A70	**Peng Han-Min**	**A Study of Acoustic Temperature Coupled Model in Low Frequency Sonophoresis**
5:05 - 5:25 pm	MH -37	**Lourdes Salamanca-Riba**	**FIB/SEM nanotomography of composite cathodes for solid oxide fuel cells**

Oral Presentation Schedule

September 13, 2017 (WED)

PD: Piezoelectric Materials and Devices			
Room: Oaks 3 (O3)		**Chairs: Drs. Masaya Takasaki / Chong-Yun Kang**	
Time	**Abstract No**	**Presenter**	**Title**
9:30 - 9:50 am Invited	PD -18	**Wook Jo** Ulsan National Institute of Science and Technology, Korea	**A strategy for making lead-free piezoceramics practical**
9:50 - 10:10 am Invited	PD -21	**Xiaoli Tan** Iowa State University, USA	**Giant Field-Induced Strains in Modified [Bi1/2Na1/2]TiO3 Ceramics**
10:10 - 10:30 am Invited	PD -23	**Abhijit Pramanick** University of Hong Kong, Hong Kong	**New Insights into Design of Lead-free Ferroelectrics from Direct Measurements of Nanoscale Atomic Ordering and Dynamics**
10:50 - 11:10 am Invited	PD -24	**Shuxiang Dong** Peking University, China	**H-T Piezoelectric Devices Based on Modified BiScO3-PbTiO3 Ceramics**
11:10 - 11:25 am	PD -A43	**Susumu Miyake** The University of Tokyo, Japan	**Investigation of the nonlinear elastic constant of PZT and lead-free piezoelectric materials for the high power application**
11:25 - 11:40 am	PD -A46	**Takahiro Shimidzu**	**DC bias-induced piezoelectric property and polarity inversion property of PMN paraelectric phase epitaxial film for switchable filter**
11:40 - 12:00 pm	PD -A49	**Hossein Danespajooh** Pennsylvania State University, USA	**DC-stress and electric field bias effect on piezoelectric material loss mechanism**

Oral Presentation Schedule

September 13, 2017 (WED)

PD: Piezoelectric Materials and Devices			
Room: Oaks 3 (O3)		Chairs: Takefumi Kanda / Marian Wiercigroch	
Time	**Abstract No**	**Presenter**	**Title**
1:30 - 1:50 pm Invited	PD -28	**Henry A. Sodano** University of Michigan, USA	**Piezoelectric Energy Harvesters based on Lead Zirconate Titanate Nanowires and Films**
1:50 - 2:10 pm Invited	PD -31	**Jungho Ryu** Korea Institute of Materials Science, Korea	**Laser Annealing Process; Unleashing the Full Potential of Magnetoelectric Coupling in Film Heterostructures**
2:10 - 2:25 pm	PD -35	**Seung-Hyun Kim**	**Lead-free Piezoelectric Thin Film-based Flexible Power Generators and Energy Storage Devices**
3:00 - 3:20 pm Invited	PD -36	**Minkyu Choi for Kenji Uchino** Penn State University, USA	**High Power Piezoelectric Characterization System - New Generation**
3:20 - 3:35 pm	PD -A53	**Sung-Hoon Cho**	**Piezoelectric properties of NKN based Lead-free Piezoelectric Ceramics for Knocking Sensor**
3:35 - 3:50 pm	PD -A56	**Tae-Gon Lee** Korea University, Korea	**Low Temperature Sintered <001> Textured PZT-PZNN Piezoelectric Ceramics in the for Multilayer Actuators**
3:50 - 4:05 pm	PD -A59	**Ho-Jun Lee**	**Piezoelectric Properties and Output Characteristics of 33-mode Energy Harvester**
4:05 - 4:20 pm	PD -A62	**Querui Hu**	**Electrical and mechanical characteristics of BiScO3-PbZrO3-PbTiO3 for high power piezoelectric application**
4:20 - 4:35 pm	PD -A65	**Ko-hei Sano** Waseda University, Japan	**Giant piezoelectric ScAlN thick film transducer operating in the ranges of 40-80 MHz**
4:35 - 4:50 pm	PD -A68	**Deepam Maurya** Virginia Tech, USA	**Processing-structure-property relationships in A-site disordered ABO3 type textured lead-free materials**
4:50 - 5:05 pm	PD -A71	**Minkyu Choi** Pennsylvania State University, USA	**Loss Anisotropy in Piezoelectric Ceramics by Polarization Orientation**
5:05 - 5:25 pm Invited	PD -39	**Ashish Garg** Indian Institute of Technology Kanpur, India	**Strategies to Improve the Ferrolectric Behaviour of P(VDF-TrFE) Thin Film Capacitors**

Oral Presentation Schedule

September 13, 2017 (WED)

VM: VibrationEnergy Harvesting Materials and Device			
Room: The Pines (P)		**Chairs: Drs. Yi-Chung Shu / Lei Zuo**	
Time	**Abstract No**	**Presenter**	**Title**
9:30 - 9:50 am Invited	VM -19	**Sahn Nahm** Korea University, Korea	**Synaptic properties of the self-powered artificial synapsis fabricated by (Na0.5K0.5)NbO3 thin film**
9:50 - 10:10 am Invited	VM -22	**Meiling Zhu** University of Exeter, UK	**Versatile Energy Harvesting Powered Wireless Sensor Systems Using Energy Efficient and Adaptive Power Management Circuit**
10:10 - 10:30 am	VM -41	**Yufeng Su**	**Study on the Asymmetric Bistability of the Vibration Energy Harvester Based on Diamagnetic Levitation**
10:50 - 11:10 am Invited	VM -25	**Muhammad Hajj/Shima Shahab** Virginia Tech, USA	**Overview of contactless acoustic energy transfer technology**
11:10 - 11:25 am	VM -A44	**S. Alnuaimi** Virginia Tech, USA	**Energy harvesting from L and T â€“ shaped frames with corner and end masses**
11:25 - 11:40 am	VM -A47	**Rob Carter**	**Design Optimization for Bimorph Piezo Benders**
11:40 - 12:00 pm Invited	VM -26	**Yi-Chung Shu National** Taiwan University, Taiwan	**Development of Broadband Energy Harvesting by Mixed Parallel-Series Connection of Piezoelectric Oscillators**

Oral Presentation Schedule

September 13, 2017 (WED)

MU: Multiferroics and Ultrasound			
Room: The Pines (P)		**Chairs: Tobias Hemsel / Nael Barakat**	
Time	**Abstract No**	**Presenter**	**Title**
1:30 - 1:50 pm Invited	MU -29	**Makhapa Makhafola**	**Development of a Lean-Rare Earth Permanent Magnet for Renewable Energy Applications**
1:50 - 2:10 pm Invited	MU -32	**Ing Eckhard Quandt** Christian-Albrechts-Universität zu Kiel, Germany	**Comparison of Piezoelectric Thin Films for Energy Harvesters**
2:10 - 2:25 pm	MU -A51	**Shuxiang Dong**	**Progress in Piezoelectric Micromotors and Actuators**
3:00 - 3:20 pm Invited	MU -36	**Masaya Takasaki** Saitama University, Japan	**Application of Ultrasonic Vibration to Non-contact Suspension**
3:20 - 3:35 pm	MU -A54	**Song Pan** Nanjing University, China	**Active disturbance rejection control of gimbal servo system for SGCMG driven by USM**
3:35 - 3:50 pm	MU -A57	**Tim Wielert** Leibniz University, Germany	**Control of Flexural Traveling Waves in Finite Beams for the Ultrasonic Small Component Transport**
3:50 - 4:05 pm	MU -A60	**Hiroki Yokozawa** University of Tokyo, Japan	**The resonant frequency ratio controllable ultrasonic transducer**
4:05 - 4:20 pm	MU -A63	**Viktor Hofmann** Leibniz University, Germany	**Cultivator Optimization for Ultrasonic Friction Reduction using the Transfer Matrix Modeling Method**
4:20 - 4:35 pm	MU -66	**Paul Dunst** University of Paderborn, Germany	**Manipulation of characteristic properties and mechanical handling of fine powders by means of vibrations**
4:35 - 4:50 pm	MU -A69	**Tobias Hemsel** University of Paderborn, Germany	**Noise Reduction for Ultrasonic Cleaning Baths**
4:50 - 5:05 pm	MU -A72	**Yingxiang Liu** Harbin Institute of Technology, China	**A Novel Two-DOF Ultrasonic Motor Using a Longitudinal-Bending Hybrid Sandwich Transducer**
5:05 - 5:25 pm Invited	MU -39	**Jens Twiefel** Leibniz University, Germany	**Initial Understanding on the Ultrasonic Assisted Incremental Sheet Forming Process**

Oral Presentation Schedule

September 14, 2017 (THU)

FD: Flexible energy harvesting materials and devices

Room: Oaks 3 (O3) — **Chairs: Drs. Min-Gyu Kang/Yongke Yan**

Time	Abstract No	Presenter	Title
9:30 - 9:50 am Invited	FD-41	**Rusen Yang** University of Minnesota, USA	**Recent Progress on Piezoelectric Peptides for Energy Harvesting Applications**
9:50 - 10:10 am Invited	FD -43	**Junyi Cao**	**A PVDF-based Flexible energy harvester from human motion**
10:10 - 10:25 am	FD -A73	**Oorego Santiago** Johns Hopkins University, USA	**Influence of Loading Conditions on Piezoelectric Energy Harvesting Performance of Electrospun PVDF**
10:25 - 10:40 am Invited	FD -45	**Deepa Singh**	**Nonvolatile one-transistor-type Memory devices with Polymer bilayer gate dielectric for Low Voltage Operation**
10:45 - 11:05 am	FD -A75	**Yu Pan** Virginia Tech, USA	**Design, Modeling and Test of Electromagnetic Energy Harvester for Railway Vehicle Suspensions and Railroad Tracks**
11:20 - 11:35 am	FD -A77	**Sung Sik Won** Brown University, USA	**Flexible Piezoelectric Films on Paper Substrates for Power Generators**

AM: Annual Energy Harvesting Society Meeting

Room: The Pines (P) — **Chairs: Drs. Wook Jo / Eckhard Quandt**

Time	Abstract No	Presenter	Title
9:30 - 9:50 am Invited	FD -42	**Eric D. Wachsman** University of Maryland, USA	**Ion Conducting Oxides for Electrochemical Energy Conversion and Storage**
9:50 - 10:10 am Invited	FD -44	**David Lewis** Flinders University, Australia	**Process Structure - Property Relationships in Organic Solar Cells**
10:10 - 10:25 am	FD -A74	**Dong Yang**	**High efficiency of flexible perovskite solar cells using solid-state ionic liquid for effective electron transport**
10:25 - 10:40 am Invited	FD -46	**Ray Baughman** University of Texas, USA	**Harvesting Torsional and Tensile Mechanical as Electrical Energy Using Nanofiber Yarns**
10:45 - 11:05 am	FD -A76	**Haijin Li**	**Green solvent system for fabricating bismuth based lead-free (CH3NH3)3Bi2I9 perovskite photovoltaics**
11:20 - 11:35 am	FD -A78	**Congcong Wu**	**Crystallization of Highly Efficient, Stable CH3NH3PbI3 Perovskite through Intercalation Process**