European Materials Research Society

2024 Spring Meeting

May 27 - 31 / Strasbourg Convention Centre

SYMPOSIUM P

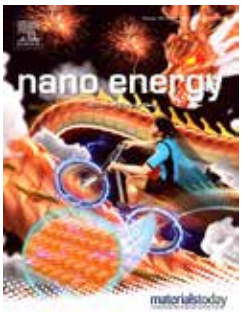
Self-powered sensors based on nanogenerators

Symposium Organizers:

Philippe BASSET, Université Gustave Eiffel, France

Renyun ZHANG (Main organizer), Mid Sweden University, Sweden

Rusen YANG, Xidian University, P. R. China



Monday May 27

P01_Nanogenerators

BRUXELLES - GROUND FLOOR

08:45	921	INV	Hybridized and coupled nanogenerators	**YANG Ya**
09:15	172		Flexible self-charging power sources	**LIU Ruiyuan**
09:30	2090		Graphene Coated Textile Dielectric Materials effect on Performance of Textile Triboelectric Nanogenerator	**QURESHI Saima**
09:45	2764		Impact of seed layer on the growth of aligned ZnO nanostructures for flexible piezoelectric applications	**GODINHO Vanda**

Monday May 27

P02_Nanogenerators

BRUXELLES - GROUND FLOOR

10:30	1410	INV	Improving output performance, energy management and durability of triboelectric nanogenerator	**HU Chenguo**
11:00	2596		Large-area integration of triboelectric drop energy harvesters	**SANCHEZ-VALENCIA Juan Ramon**
11:15	2622		Piezo/pyro multisource nanogenerators on surface supported ZnO polycrystalline nanoarchitectures fabricated by plasma and vacuum deposition.	**DELGADO-ÁLVAREZ Juan**
11:30	1989		Plasma/Vacuum manufacturing of ZnO/ Spiro-OMeTAD Self-Powered Piezo-Pyro-Phototronic devices	**Moreno Martínez Gloria Patricia**
11:45	2529		Piezoelectric Direct Current Generation through Sequential In-phase Polarization Variation	**SONG Hyun-Cheol**

Monday May 27

P03_Nanogenerators

BRUXELLES - GROUND FLOOR

13:45	2721	INV	Electrical modeling and characterization of triboelectric transducers for micro-scale kinetic energy harvesting	**KARAMI Armine**
14:15	2270		Unveiling contact electrification mechanisms at dielectric polymer interfaces	**ŠUTKA Andris**
14:30	2416		Triboelectric Nanogenerator Sensor Utilizing Low Interfacial Toughness for Surface Ice Accretion Detection/Mitigation	**ALASVAND ZARASVAND Kamran**
14:45	1367		Piezo-Tribo Hybrid Nanogenerators Based on 2D Materials for Self Powered Devices	**SINGH Bharti**
15:00	1536		The van der waals epitaxial AlN wafer for Self-driving Pressure Sensor Integrated System for Motion Monitoring	**XIA Maoyang**
15:15	1589		Hybrid PVDF nanofiber-based TENGs with multiple sensing capabilities	**EGINLIGIL Mustafa**
15:30	2202		Triboelectric and Piezoelectric Energy Harvesters for Self-Powered Gas Sensors	**RAMOS Mariana**

Monday May 27

PP01_Poster session

ETOILE - FIRST FLOOR

16:30	01_1059	120	01_1059 An all-protein multisensory highly bionic skin	**LI Shengyou**
16:30	02_1077	120	02_1077 Enhancing triboelectric properties of recycled polystyrene via surface modification methods	**GERMANE Liva**
16:30	03_1577	120	03_1577 Self-Powered Flexible Asymmetric Supercapacitor Power Cell with Onion Scale as an Effective Bio-Piezoelectric Separator	**MAITY Parna**
16:30	04_174	120	04_174 Multiple recycled triboelectric nanogenerators for smart waste management	**RAM PATRA Nikhil**
16:30	05_1828	120	05_1828 Water motion-induced energy conversion by carrier density modulation in 2D nanostructure	**CHO Yong Hyun**
16:30	06_1849	120	06_1849 Carboxymethyl cellulose as flexible triboelectric substrates and free-standing electrodes for supercapacitors	**THOMAS Sharin Maria**
16:30	07_2023	120	07_2023 Recent results on developing tribopositive polymer for nanogenerators by remote plasma-assisted vacuum deposition	**Moreno Martínez Gloria Patricia**

16:30	08_2172	120	08_2172 Recent results on developing tribopositive polymer for nanogenerators by remote plasma-assisted vacuum deposition	**Moreno Martínez Gloria Patricia**
16:30	09_2229	120	09_2229 Piezoelectric peptide nanotube substrate sensors activated through sound wave energy.	**FINLAY Allan J.**
16:30	11_2474	120	11_2474 TiS2/TPU Composite Core-Shell Fibers for Triboelectric Nanogenerator Applications	**DEMIRCIOGLU Onur**
16:30	12_258	120	12_258 Sustainable highly charged Polyimide in non-contact mode triboelectric nanogenerator	**JAE WON Lee**
16:30	13_2589	120	13_2589 Utilization of BiSn/PDMS Composites for Soft Actuation and Triboelectric Nanogenerator Applications	**DEMIRCIOGLU Onur**
16:30	14_261	120	14_261 Artificial tactile perception smart finger for material identification based on triboelectric sensing	**QU Xuecheng**
16:30	15_2638	120	15_2638 Vacuum and plasma synthesis of vertically aligned BaTiO3 nanowires: application to flexible piezoelectric nanogenerators	**JUMILLA Darío**
16:30	16_326	120	16_326 Transforming waste-cigarette butts into high performance triboelectric nanogenerator nanocomposite materials	**DEBELE Nebiyou Tadesse**
16:30	17_392	120	17_392 High performance triboelectric nanogenerators made of different types of cellulose materials	**ZHANG Renyun**
16:30	18_821	120	18_821 Towards self-powered neural interfaces	**DEL CORRO Elena**
16:30	19_872	120	19_872 Ion-Impregnated Copolymer for Intermediate Layer of Energy Conversion	**LIM Dong Un**
16:30	20_881	120	20_881 Visible-light-enhanced Mechanical Energy Harvesting using Polarization-Graded InGaN Nanorod Piezoelectric Nanogenerators	**WU Chung Lin**
16:30	21_99	120	21_99 Comfortable, Warm and Appearance Compatible Triboelectric Chenille Carpet for Smart Home Monitoring and Security Systems	**DONG Shanshan**
16:30	22_996	120	22_996 Modeling of the working mechanism of triboelectric nanogenerators for drop energy harvesting	**BUDAGOSKY MARCILLA Jorge Alejandro**
16:30	10_2319	120	Lubricated Roller TENGs for Self-Charging Units	**CUGUNLULAR Murathan**

Tuesday May 28

P04_Nanogenerators

BRUXELLES - GROUND FLOOR

08:45	1485	INV	Self-powered Medical Devices and Electrical Stimulation Therapy	**LI Zhou**
09:15	2098		Graphene Coated Textile Dielectric Materials effect on Performance of Textile Triboelectric Nanogenerator	**QURESHI Saima**
09:30	1378		Achieving AC/ DC Convertible Triboelectric Nanogenerator by Synergetic Utilization of Triboelectrification, Electrostatic Induction, and Electrostatic Discharge	**WANG Xue**
09:45	1907		Self-Powered Underwater Force Sensor for Simultaneous Detection of Normal and Tangential Forces	**LI Ding**

Tuesday May 28

P05_Nanogenerators

BRUXELLES - GROUND FLOOR

10:30	1296	INV	Integrated Optimization of Triboelectric Energy Harvesting Devices	**DANIIL Yurchenko**
11:00	1904		Converting-Storage-Sensing Paradigm of Mechanical Energy	**XI Yi**
11:15	1558		A comprehensive study of the piezoelectric response of PVDF-based composites submitted to large flexions for energy harvesting	**SIGALLON Marie**
11:30	1852		Potential of 3D-Printed Smart Shoe Sole in Real-time Motion Detection and Health Monitoring	**SAINI Dalip**
11:45	1043		Bioresorbable Polymers for Triboelectric Nanogenerators	**LAPCINSKIS Linards**

Tuesday May 28

P06_Nanogenerators

BRUXELLES - GROUND FLOOR

13:45	1166	INV	Piezotronics in GaN	**HU Weiguo**
14:15	1722		Deep learning enabled triboelectric motion and tactile sensors	**PU Xianjie**
14:30	1733		Mechanical 4D Printing based Integration of Droplet-based Electricity Generator and Triboelectric Nanogenerator for Improvement of Droplet Energy Harvesting Efficiency	**KAM Dongik**
14:45	1723		One-step fabrication process for converting a sol-state composite precursor into a bifunctional, single-layered, and seamless touch position sensor via sedimentation	**RA Yoonsang**
15:00	1990		Unveiling the Promise of On-Demand Nanogenerators for Wearable Devices	**MISHRA Hari Krishna**
15:15	1068		Electrospun of Aligned Nylon 66 Nanofibers on Plasma-Aided Inkjet-Printed Silver Nanoparticle for Wearable Applications	**KUMAR ALIYANA Akshaya**
15:30	161		Polymer Energy Harvesters: From Electricity to Catalysis	**SHERRELL Peter**

Wednesday May 29

P07_Nanogenerators

BRUXELLES - GROUND FLOOR

08:45	1083	INV	2D-Materials and Hydrogels based Triboelectric Nanogenerators (TENGs) for Energy Harvesting and Self-Powered Tactile Sensors	**PACE Giuseppina**
09:15	808		Layered Ceramic Clay Fillers and Metal Oxides incorporated Polymer Nanocomposites for Self-powered Triboelectric Nanogenerators	**VS Irthasa Aazem**
09:30	986		High-performance triboelectric nanogenerators and self-powered smart systems	**JIANJUN Luo**
09:45	977		Moisture-driven Energy Generation of Polymer Aerogel Vertically Structured on Water-collecting Gel	**ZHAO Kaiying**

Wednesday May 29

P08_Nanogenerators

BRUXELLES - GROUND FLOOR

10:30	369	INV	Permeable and Wearable Textile Triboelectric Nanogenerators	**ZHENG Zijian**
11:00	783		Electrochemical heat harvesting and sensing	**YU Boyang**
11:15	833		Self-powered wearable microneedle sensors for health monitoring	**ZHENG Youbin**
11:30	810		Triboelectric Potential Driven FETs for Interactive Neuromorphic Synaptic Devices and Systems	**QIJUN Sun**
11:45	755		Artificial-Intelligence Enhanced Flexible Single-Electrode Mode Multilayer Triboelectric Sensor	**LI Yang**

Wednesday May 29

P09_Nanogenerators

BRUXELLES - GROUND FLOOR

13:45	214	INV	Smart Sensors by using Piezo-phototronics and Flexo-phototronics	**ZHAI Junyi**
14:15	315		A Water Evaporation-Induced Triboelectric Nanogenerator for Low-Grade Heat Harvesting	**WAN Lingyu**
14:30	626		Donor-Acceptor Molecular Piezoelectric Materials for Micropower Generation and Sensing	**DATTA Anuja**
14:45	622		Intrusion-extrusion of water into/from nanopores: Triboelectrification	**BARTOLOMÉ Luis**
15:00	554		Ultrafast metal-free micro-supercapacitor arrays directly store instantaneous high-voltage electricity from mechanical energy harvesters	**CHEN Shiqian**
15:15	439		High Efficient and High Durability Triboelectric Nanogenerators for Blue Energy Harvesting	**JIANG Tao**

Thursday May 30

P10_Nanogenerators

BRUXELLES - GROUND FLOOR

08:45	240	INV	Tribovoltaic Effect and Tribotronics	**ZHANG Chi**
09:15	436		Highly Stretchable Piezoelectric Polymer Blends Enable Strain and Stress Sensing for Soft Structures Under Dynamic Loading Conditions	**SODANO Henry**
09:30	354		Triboelectrification during water intrusion-extrusion into-from nanopores: self-powered pressure and temperature nanosensors	**GROSU Yaroslav**
09:45	328		Theoretical models of triboelectric and tribovoltaic nanogenerators	**SHAO Jiajia**

Thursday May 30

P11_Nanogenerators

BRUXELLES - GROUND FLOOR

10:30	500	INV	TENG - from scientific discoveries to technological innovations	**WANG Zhong Lin**
11:00	INT3	INV	Presentation from Nano Energy	**DOS SANTOS Kayla**
11:30	296		An ultra thin, bright and sensitive interactive tactile display based on organic mechanoluminescence for dual-mode handwriting identification	**HOU Tingting**
11:45	177		High-efficient Hydrovoltaic and Triboelectric Power Generators for Wearable/On-skin Electronics	**BEIBEI Shao**

Thursday May 30

P12_Nanogenerators

BRUXELLES - GROUND FLOOR

13:45	2011	INV	Biomechanical Energy Harvesting Using Airflow-Driven Triboelectric-Electromagnetic Hybridized Nanogenerator	**VENTURA João**
14:15	154		Digital mapping ofsurface turbulence status and aerodynamic stall on wings ofa flying aircraft using triboelectric nanogenerators	**CAO Leo N.Y.**
14:30	123		Stable and Low Dark current ZnGa2O4/p-Si Heterojunction Self-powered Photodiode for Broadband Light Detection	**CHOI Wangmyung**
14:45	70		Metallic Glass-based Triboelectric Nanogenerators	**XIA Xin**
15:00	48		Interfacial polarization effects in silicon carbide and their applications in energy harvesting and self-powered sensors	**ZHU Laipan**
15:15	42		Water Drop-mediated Triboelectric Nanogenerator Employing Microporous Polymeric Film, Using Single-step Microwave Irradiation	**DAS Namrata**
15:30	43		Piezo-tribo effects coupled, arch-shaped triboelectric nanogenerator for scavenging biomechanical energy and sensing low scale energy	**SARKAR Debmalya**
15:45	30		Piezo-Phototronic Effect in Multi-Layer Structured Optoelectronic: Bilateral Piezoelectric Charge Modulation	**WENBO Peng**