



European Materials Research Society

2024 Spring Meeting

May 27 - 31 / Strasbourg Convention Centre

SYMPOSIUM E

Smart textiles for human health and well-being

Symposium Organizers:

Faming WANG, KU Leuven, Belgium

Marie-Ange BUENO (Main organizer), Université de Haute Alsace,
Laboratory of Textile Physics and Mechanics, Mulhouse, France

Raul FANGUEIRO, University of Minho, School of Engineering, Portugal

René M. ROSSI, Empa, Switzerland

Monday May 27

E01A_Fibre Processing 01

CHURCHILL - FIRST FLOOR

Chairperson(s) : BUENO Marie-ange

09:00	1607	INV	Advanced Functional Fibers and Textiles for Health Care	SORIN Fabien
09:30	543		Hydrogel-assisted microfluidic wet spinning of poly(lactic acid) fibers from a green and pro-crystallization spinning dope	WANG Wuchao
09:45	1761		Soft multi-material fiber-based pressure sensors for sleep monitoring	LAPERROUSAZ Stella

Monday May 27

E01B_Fibre Processing 02

CHURCHILL - FIRST FLOOR

Chairperson(s) : SORIN Fabien

10:30	475		Biocompatible scalable electrospinning for nanofibrous membrane composites in biomedical and healthcare applications	HERWIG Gordon
10:45	1219		Liquid Crystal Elastomer-Based Actuating Fibers: From Contraction to Elongation	AHN Suk-Kyun
11:00	2730		A hydrogel-based textile sensor for lactate acid monitoring	SONG Chi
11:15	2250		Fibroin-based eco-friendly composites for advanced sensing applications	GALSTYAN Vardan

Monday May 27

E02_E-textiles and Functionnalisation 1

CHURCHILL - FIRST FLOOR

Chairperson(s) : HEGEMANN Dirk

13:45	2285		Numerical modelling of knitted structures used in medical compression stockings to simulate their impact on physiology	PITA MIGUELEZ Inés
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14:00	1390	Stent grafts from polymeric material: a novel design to improve the implant durability	ASAAD Abdul Rahman
14:15	397	New elastic knitted fabric concept for rehabilitation goods	KYZYMCHUK Olena
14:30	1321	Innovative Air Mattress for Pressure Injury Prevention	JUCKER Tino
15:15	239	Improved Bacterial Elimination Using Fluid Straining via Capillary Condensation	ZHAO Yuanyuan
15:15	776	Multi-Material Magnetic Textiles for Rehabilitation Assistance and Soft Orthoses	BANERJEE Hritwick
15:30	1802	Smart Textiles: Mechanical Characterization and Application of Polymeric Optical Fiber Sensors	BENZARTI MILADI Meriem

Monday May 27

EP01_Poster session

ETOILE - FIRST FLOOR

16:30	01_1362	120	01_1362 Moisture-absorbing and sweat-releasing multilayer polylactic acid (PLA) fabric and manufacturing technology	JU Zixin
16:30	02_1841	120	02_1841 Wear resistance of polyhydroxyalkanoate (PHA), a biobased and biodegradable polymer to be used to produce fibers	KUJAWA Maciej
16:30	04_2489	120	04_2489 Micro two-dimensional battery for application to smart clothing equipped with heating or sensing functions	KANG Ha Eun
16:30	06_2574	120	06_2574 A surface-modified recycled jute non-woven material with PANI/nanotubular TiO ₂ composite for the removal of Pb ²⁺ and Cu ²⁺ ions from water	ŠAPONJIC Zoran
16:30	08_2805	120	08_2805 Advancing Smart E-Textiles with BaTiO ₃ Ceramics and PTC Polymer Composites for Efficient Surface Heating Fiber Development	CHOI Ji-Hyeok
16:30	09_2922	120	09_2922 Fiber Revolution: Shape-Memory Polymers Redefining Future of Textiles	VERBUC Julija
16:30	13_515	120	13_515 Soft and biocompatible Graphene Oxide Hydrogel Electrodes for a Portable Electrophysiological Biosignal Monitoring System	PARK Hyung Ju
16:30	14_588	120	14_588 Sustainable textiles with laser plasma surface processing	SAROTTO Samuele
16:30	15_811	120	15_811 Flexible, sensing and sweating composite material reinforced by e-textile for the development of a skin model	PINATEAU Astrid

Tuesday May 28

E03A_ E-textiles and Fonctionnalisation 1

CHURCHILL - FIRST FLOOR

Chairperson(s) : ROSSI René michel

09:45	227	Beeswax Triboelectric Nanogenerators in Textiles for Sustainable Sound Energy Processing	KOVALSKA Evgeniya
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Tuesday May 28

E03B_ E-textiles and Fonctionnalisation 1

CHURCHILL - FIRST FLOOR

Chairperson(s) : ROSSI René michel

10:30	2615	Quantifying the Parasitic Capacitance of Conductive Yarns Used in High-Frequency Applications	YE Terry
10:45	493	A Signal Analysis based Approach to Improving Triboelectric Nanogenerators (TEGs)	THEOMAN LEON Ronald
11:00	777	Smart Apparel for Movement Monitoring in Ice Hockey	AHMADIZADEH Chakaveh

Tuesday May 28

E04_ E-textiles and Fonctionnalisation 2

CHURCHILL - FIRST FLOOR

Chairperson(s) : KYZYMCHUK Olena

13:45	1985	Textile electronics for real-time wound healing monitoring	CORTELLI Giorgio
14:00	91	A Breathable and Stretchable Temperature Sensor Using Partially Reduced Graphene Oxide and Mesh-Shaped Textile	KANG Hyun Jin
14:15	2312	Rolled graphene-perovskite fibre phototransistors	AKHAVAN Shahab

Wednesday May 29

EF01_Joint Session Symposia E and F: Coating 1

CHURCHILL - FIRST FLOOR

Chairperson(s) : BUENO Marie-ange - PLUTINO Maria rosaria

08:45	1969	INV	Wound dressing technologies for wound healing and infection management	TRONCI Giuseppe
09:15	3074		Titanium surface modification for coatings with anti-bacterial adhesion properties	CELESTI Consuelo
09:30	519		Ultrathin coating structures for smart textile applications	HEGEMANN Dirk

Wednesday May 29

EF02_Joint Session Symposia E and F: Coatings 2

CHURCHILL - FIRST FLOOR

Chairperson(s) : BUENO Marie-ange - PLUTINO Maria rosaria BUENO Marie-ange

10:30	142	INV	Recent Research Results Related to E-textiles and the Need for E-textile Standards	Koncar Vladan
11:15	2341		AuNPs-CNT decorated cotton for e-nose application	Casalinuovo Silvia
11:30	1097		Conductive Textile with Tunable Piezoresistivity and Biodegradation for Wearable Vibrotactile Haptics Systems	CATALDI Pietro