

**9th World Congress on Nanotechnology and Materials Science  
November 21-22, 2022 at Holiday Inn Los Angeles - LAX Airport, an IHG Hotel, Los Angeles, USA**

**Day 1- November 21, 2022**

**09:40- 10:00**

**Introduction, Welcome note and Conference Inauguration**

**Keynote Sessions**

**10:00-10:20**

**Title: Co-culture fermentation on the production of bacterial cellulose nanocomposite produced by Komagataeibacter hansenii**

Jeffrey M. Catchmark, Pennsylvania State University, United States

**10:20- 10:40**

**Title: Organophosphorus pesticides: Impacts, detection and removal strategies**

Timothy Oladiran Ajiboye, Florida International University, USA

**10:40- 11:00**

**Title: Nanoscale LiNi<sub>0.5</sub>Co<sub>0.2</sub>Mn<sub>0.3</sub>O<sub>2</sub> cathode materials for lithium ion batteries via a polymer-assisted chemical solution method**

Hongmei Luo, New Mexico State University, United States

**Tea and Refreshments Break- 11:00-11:20**

**Breakout Room 1- Speaker Sessions- Day 1**

**11:20- 11:35**

**Title: Enhanced adsorption performance of chitosan/cellulose nanofiber isolated from durian peel waste/graphene oxide nanocomposite hydrogels**

Diana Alemin Barus, Universitas Sumatera Utara, Indonesia

**11:35- 11:50**

**Title: Cr(VI) adsorption on binary and ternary composites of raw cocoa shell with magnetic nanoparticle and Prussian blue**

Jülide Hizal, Yalova University, Yalova, Turkey

**11:50- 12:05**

**Title: Oxidative dissolution of uraninite nanoparticles in the presence of manganite**

Chunli Liu, Peking University, China

**12:05- 12:20**

**Title: Amino-functionalization of hydroxylated SBA-15 for enhanced uranium adsorption from seawater**

Guiru Zhu, Ocean University of China, Qingdao, China

**12:20- 12:35**

**Title: Environmental considerations and current status of grouping and regulation of engineered nanomaterials**

Harald R. Tschiche, German Federal Institute for Risk Assessment (BfR), Germany

**12:35-12:50**

**Title: Potential behavior, implication and risk of nanohybrids in the environment: A review**

Tianjiao Xia, Northwest A&F University, China.

Session Wrap 12:50- 13:00	
Lunch Break 13:00- 13:45	
13:45- 14:00	<p><b>Title: A mini-review of nanocellulose-based nanofiber membranes incorporating carbon nanomaterials for dye wastewater treatment</b></p> <p>Edward N. Nxumalo, University of South Africa, South Africa</p>
14:00- 14:15	<p><b>Title: Adaptive Modulation of Interfacial Kinetics between Homogenous Bilayer Oxide Memristor for Emulating Learning Protocols</b></p> <p>Fei Zeng, School of Materials Science and Engineering, Tsinghua University, China</p>
14:15- 14:30	<p><b>Title: Conductive/magnetic metal–organic frameworks</b></p> <p>Francisco Torrens, Institut de Ciència Molecular, Universitat de València, Spain</p>
14:30- 14:45	<p><b>Title: Ca-SrCu<sub>2</sub>O<sub>2</sub> nanomaterial for High-Performance Supercapacitors</b></p> <p>Hasi Rani Barai, School of Mechanical and IT Engineering, Yeungnam University, Korea</p>
14:45- 15:00	<p><b>Title: Food-waste enables carboxylated gold nanoparticles to completely abat hexavalent chromium in drinking water</b></p> <p>Irene Vassalini, National Interuniversity Consortium of Materials Science and Technology (INSTM), R.U. Brescia, Florence, Italy</p>
Tea and Refreshments Break 15:00-15:15	
15:15- 15:30	<p><b>Title: Gene resistance profile and multidrug-resistant bacteria isolated from a stream in midwestern Brazil</b></p> <p>Raylane Pereira Gomes, Federal University of Goiás, Brazil</p>
15:30-15:45	<p><b>Title: Mechanism adsorption analysis during the removal of Cd<sup>2+</sup> and Cu<sup>2+</sup> onto cedar sawdust via experiment coupled with theoretical calculation: Mono- and multicomponent systems</b></p> <p>Angélica Forgianny, Universidad de Medellín, Colombia</p>
15:45-16:00	<p><b>Title: Spirulina-based carbon bio-sorbent for the efficient removal of metoprolol, diclofenac and other micropollutants from wastewater</b></p> <p>Marta Pedrosa, University of Porto, Portugal</p>
16:00-16:15	<p><b>Title: Carbothermal reduction synthesis of eggshell-biochar modified with nanoscale zerovalent iron/activated carbon for remediation of soil polluted with lead and cadmium</b></p> <p>Lin Zhao, Tianjin University, China</p>
16:15-16:30	<p><b>Title: Octacalcium phosphate crystals including a higher density dislocation improve its materials osteogenecity</b></p> <p>Osamu Suzuki, Tohoku University, Japan</p>

Room 1 Session Wrap 16:30- 16:40	
<b>Breakout Room 2- Speaker Sessions- Day 1</b>	
<b>11:20- 11:35</b>	<p><b>Title: Zinc blende and wurtzite CoO polymorph nanoparticles: Rational synthesis and commensurate and incommensurate magnetic order</b></p> <p>A. López-Ortega, Universidad de Castilla-La Mancha, Spain</p>
<b>11:35- 11:50</b>	<p><b>Title: Fluorescent and magnetic stellate mesoporous silica for bimodal imaging and magnetic hyperthermia</b></p> <p>Mariana Tasso, Universidad Nacional de La Plata – CONICET, Argentina</p>
<b>11:50- 12:05</b>	<p><b>Title: Synthesis and characterization of photoactive porphyrin and poly(2-hydroxyethyl methacrylate) based materials with bactericidal properties</b></p> <p>Nuno M.M. Moura, University of Aveiro, Portugal</p>
<b>12:05- 12:20</b>	<p><b>Title: Challenges on waste-to-energy for the valorization of industrial wastes: Electricity, heat and cold, bioliquids and biofuels</b></p> <p>A. Gil, Public University of Navarra, Spain</p>
<b>12:20- 12:35</b>	<p><b>Title: Polymeric nanoparticles encapsulating <math>\alpha</math>-mangostin inhibit the growth and metastasis in colorectal cancer</b></p> <p>Bilan Wang, Sichuan University, PR China</p>
<b>12:35-12:50</b>	<p><b>Title: Lithium-calcium-silicate bioceramics stimulating cementogenic/osteogenic differentiation of periodontal ligament cells and periodontal regeneration</b></p> <p>Fuhua Yan, Medical School of Nanjing University, China</p>
<b>Session Wrap 12:50- 13:00</b>	
<b>Lunch Break 13:00- 13:45</b>	
<b>13:45- 14:00</b>	<p><b>Title: Radical-functionalized plasma polymers: Stable biomimetic interfaces for bone implant applications</b></p> <p>Behnam Akhavan, University of Sydney, Australia</p>
<b>14:00- 14:15</b>	<p><b>Title: The role of bacterial cellulose loaded with plant phenolics in prevention of UV-induced skin damage</b></p> <p>Charles Windson Isidoro Haminiuk, Universidade Tecnológica Federal do Paraná (UTFPR), Brazil</p>
<b>14:15- 14:30</b>	<p><b>Title: A review on the preparation and characterization of chitosan-clay nanocomposite films and coatings for food packaging applications</b></p> <p>Yangchao Luo, University of Connecticut, USA.</p>

14:30- 14:45	<p><b>Title: Algal-based polysaccharides as polymer electrolytes in modern electrochemical energy conversion and storage systems: A review</b></p> <p>Fernando G. Torres, Pontificia Universidad Catolica del Peru, Peru</p>
14:45- 15:00	<p><b>Title: Optimization and characterization of bacterial nanocellulose produced by Komagataeibacter rhaeticus K3</b></p> <p>Miguel Gama, University of Minho, Portugal</p>
<b>Tea and Refreshments Break 15:00-15:15</b>	
15:15- 15:30	<b>Speaker Slots Available</b>
15:30-15:45	<b>Speaker Slots Available</b>
15:45-16:00	<b>Speaker Slots Available</b>
16:00-16:15	<b>Speaker Slots Available</b>
16:15-16:30	<b>Speaker Slots Available</b>
<b>Room 2 Session Wrap 16:30- 16:40</b>	
<b>Breakout Room 3- Speaker Sessions- Day 1</b>	
11:20- 11:35	<p><b>Title: Conjugation of folic acid with TEMPO-oxidized cellulose hydrogel for doxorubicin administration</b></p> <p>Eliane Trovatti, University of Araraquara, Brazil</p>
11:35- 11:50	<p><b>Title: Time temperature superposition of the dissolution of cellulose fibres by the ionic liquid 1-ethyl-3-methylimidazolium acetate with cosolvent dimethyl sulfoxide</b></p> <p>James E Hawkins, University of Leeds, UK</p>
11:50- 12:05	<p><b>Title: Design of self-cleaning and self-disinfecting paper-shaped photocatalysts based on wood and eucalyptus derived cellulose fibers modified with gCN/Ag nanoparticles</b></p> <p>Klaudia Maślana, West Pomeranian University of Technology Szczecin, Poland</p>
12:05- 12:20	<p><b>Title: Fabrication of alginate/chitosan complex fibers via diffusion controlled in-situ polyelectrolyte complexation</b></p> <p>Liping Zhu, Donghua University, China</p>

12:20- 12:35	<p><b>Title: A novel dental re-mineralizing blend of hydroxyethyl-cellulose and cellulose nanofibers oral film loaded with nepheline apatite glass: Preparation, characterization and in vitro evaluation of re-mineralizing effect</b></p> <p>Mohammad L. Hassan, National Research Centre, Egypt</p>
12:35-12:50	<p><b>Title: Production and identification of galacto-oligosaccharides from lactose using <math>\beta</math>-D-galactosidases from <i>Lactobacillus leichmannii</i> 313</b></p> <p>Dominic Agyei, University of Otago, New Zealand</p>
<b>Session Wrap 12:50- 13:00</b>	
<b>Lunch Break 13:00- 13:45</b>	
13:45- 14:00	<p><b>Title: Electrochemical ammonia stripping from non-nitrified animal rendering wastewater</b></p> <p>Sudeep C. Popat, Clemson University, United States</p>
14:00- 14:15	<p><b>Title: Syngas to higher alcohols synthesis over 3D printed KMoCo/ZSM5 monolith</b></p> <p>Muxina Konarova, University of Queensland, Australia</p>
14:15- 14:30	<p><b>Title: Machine learning-based discrete element reaction model for predicting the dechlorination of poly (vinyl chloride) in NaOH/ethylene glycol solvent with ball milling</b></p> <p>Shogo Kumagai, Tohoku University, Japan</p>
14:30- 14:45	<p><b>Title: Efficient adsorption of organic matters and ions by porous biochar aerogel as pre-treatment of ultrafiltration for shale gas wastewater reuse</b></p> <p>Baicang Liu, Sichuan University, PR China</p>
14:45- 15:00	<p><b>Title: Large-scale synthesis of highly structural-connecting carbon nanospheres as an anodes material for lithium-ion batteries with high-rate capacity</b></p> <p>Jian Chen, Sichuan University of Science and Engineering, PR China</p>
<b>Tea and Refreshments Break 15:00-15:15</b>	
15:15- 15:30	<b>Speaker Slots Available</b>
15:30-15:45	<b>Speaker Slots Available</b>
15:45-16:00	<b>Speaker Slots Available</b>
16:00-16:15	<b>Speaker Slots Available</b>

16:15-16:30	<b>Speaker Slots Available</b>
	<b>Room 3 Session Wrap 16:30- 16:40</b>
<b>Day 2- November 22, 2022</b>	
	<b>Keynote Sessions</b>
09:30- 09:50	<b>Title: Selective laser melting of metal structures onto graphite substrates via a low melting point interlayer alloy</b> Scott N. Schiffres, Binghamton University, USA
09:50- 10:10	<b>Title: Electrophoretic mobility shift as a molecular beacon-based readout for miRNA detection</b> Getulio P. Oliveira-Jr, Harvard Medical School, United States
	<b>Breakout Room-1 Speaker Sessions- Day 2</b>
10:10-10:25	<b>Title: A novel Multi-Phase Flash Sintering (MPFS) technique for 3D complex-shaped ceramics</b> Eva Gil-González, Universidad de Sevilla, Spain
10:25- 10:40	<b>Title: Development of an alveolar chip model to mimic respiratory conditions due to fine particulate matter exposure</b> Guan-Yu Chen, National Yang Ming Chiao Tung University, Taiwan
10:40-10:55	<b>Title: Bioinspired, injectable, tissue-adhesive and antibacterial hydrogel for multiple tissue regeneration by minimally invasive therapy</b> Yuxiao Lai, Chinese Academy of Sciences, China
	<b>Tea and Refreshments Break 10:55-11:10</b>
11:10- 11:25	<b>Title: Flash sintering of complex shapes</b> Charles Manière, Normandie Univ, ENSICAEN, UNICAEN, CNRS, CRISMAT, Caen, France
11:25- 11:40	<b>Title: 2D MoS<sub>2</sub>/carbon/polylactic acid filament for 3D printing: Photo and electrochemical energy conversion and storage</b> Martin Pumera, Brno University of Technology, Czech Republic
11:40- 11:55	<b>Title: Scalable aqueous processing-based radiative cooling coatings for heat dissipation applications</b> Jinshu Wang, Central South University, China
11:55- 12:10	<b>Title: Ladder-structured boron nitride nanosheet skeleton in flexible polymer films for superior thermal conductivity</b> Min Chen, Fudan University, China

12:10-12:25	<b>Title: Self-aligned CH<sub>3</sub>NH<sub>3</sub>PbBr<sub>3</sub> perovskite nanowires via dielectrophoresis for gas sensing applications</b>
	Jihoon Choi, Chungnam National University, Republic of Korea
12:25-12:40	<b>Title: Autonomous self-propelled MnO<sub>2</sub> micromotors for hormones removal and degradation</b>
	Osamah Alduhaish, King Saud University, Saudi Arabia
12:40-12:55	<b>Title: The origin of opto-functional enhancement in ZnO/CuO nanoforest structure fabricated by submerged photosynthesis</b>
	Melbert Jeem, Hokkaido University, Japan
<b>Session Wrap 12:55- 13:05</b>	
<b>Lunch Break 13:05- 13:50</b>	
13:50- 14:05	<b>Title: Tuning the emission color and temperature range of dual-mode luminescent thermometer by dopant valence states control</b>
	Estelle Glais, Université de Nantes, France
14:05- 14:20	<b>Title: The role of oxygen defects engineering via passivation of the Al<sub>2</sub>O<sub>3</sub> interfacial layer for the direct growth of a graphene-silicon Schottky junction solar cell</b>
	Seong Chan Jun, Yonsei University, South Korea
14:20- 14:35	<b>Title: Preparation of high-quality few-layers bismuthene hexagons</b>
	Félix Zamora, Universidad Autónoma de Madrid, Spain
14:35- 14:50	<b>Title: Zeolite templated carbon from Beta replica as metal-free electrocatalyst for CO<sub>2</sub> reduction</b>
	G. Papanikolaou, University of Messina, Italy
14:50-15:05	<b>Title: Covalent organic frameworks based on electroactive naphthalenediimide as active electrocatalysts toward oxygen reduction reaction</b>
	José L. Segura, Universidad Complutense de Madrid, Spain
<b>Tea and Refreshments Break 15:05-15:20</b>	
<b>Poster Presentation 15:20- 16:20</b>	
<b>Closing and Award Ceremony 16:20-16:40</b>	
<b>Breakout Room-2 Speaker Sessions- Day 2</b>	
10:10-10:25	<b>Title: Graphene oxide for efficient treatment of real contaminated water by mining tailings: Metal adsorption studies to Paraopeba river and risk assessment</b>
	Marcelo Machado Viana, Universidade Federal de Minas Gerais, Brazil
10:25- 10:40	<b>Title: Wearable patch delivery system for artificial pancreas health diagnostic-therapeutic application: A review</b>

	Yew Hoong Wong, Universiti Malaya, Malaysia
<b>10:40-10:55</b>	<b>Title: Cas14a1-mediated nucleic acid detection platform for pathogens</b>
	Yi Wan, Hainan University, China
	<b>Tea and Refreshments Break 10:55-11:10</b>
<b>11:10- 11:25</b>	<b>Title: Harnessing recombinase polymerase amplification for rapid multi-gene detection of SARS-CoV-2 in resource-limited settings</b>
	Rachel A. McKendry, University College London, London, United Kingdom
<b>11:25- 11:40</b>	<b>Title: Disposable electrochemical glucose sensor based on water-soluble quinone-based mediators with flavin adenine dinucleotide-dependent glucose dehydrogenase</b>
	Seiya Tsujimura, University of Tsukuba, Japan
<b>11:40- 11:55</b>	<b>Title: Polydopamine aggregation: A novel strategy for power-free readout of loop-mediated isothermal amplification integrated into a paper device for multiplex pathogens detection</b>
	Nae Yoon Lee, Gachon University, South Korea
<b>11:55- 12:10</b>	<b>Title: SERS-based sensor for the detection of sexually transmitted pathogens in the male swab specimens: A new approach for clinical diagnosis</b>
	Agnieszka Kamińska, Polish Academy of Sciences, Poland
<b>12:10-12:25</b>	<b>Title: Improving ultra-fast charging performance and durability of all solid state thin film Li-NMC battery-on-chip systems by in situ TEM lamella analysis</b>
	León Romano Brandt, University of Oxford, United Kingdom
<b>12:25-12:40</b>	<b>Title: A MoS<sub>2</sub> platform and thionine-carbon nanodots for sensitive and selective detection of pathogens</b>
	Encarnación Lorenzo, Ciudad Universitaria de Cantoblanco, Spain
<b>12:40-12:55</b>	<b>Title: Replacement of antibodies with bacteriophages in lateral flow assay of Salmonella Enteritidis</b>
	Ugur Tamer, Gazi University, Turkey
	<b>Session Wrap 12:55- 13:05</b>
	<b>Lunch Break 13:05- 13:50</b>
<b>13:50- 14:05</b>	<b>Title: Fluorescent paper-based DNA sensor using pyrrolidinyl peptide nucleic acids for hepatitis C virus detection</b>
	Orawon Chailapakul, Chulalongkorn University, Thailand
<b>14:05- 14:20</b>	<b>Speaker Slots Available</b>



14:20- 14:35	<b>Speaker Slots Available</b>
14:35- 14:50	<b>Speaker Slots Available</b>
14:50-15:05	<b>Speaker Slots Available</b>
	<b>Tea and Refreshments Break 15:05-15:20</b>
	<b>Poster Presentation 15:20- 16:20</b>
	<b>Closing and Award Ceremony 16:20-16:40</b>
	<b>Breakout Room-3 Speaker Sessions- Day 2</b>
10:10-10:25	<b>Title: Label-free photoelectrochemical immunosensor for aflatoxin B1 detection based on the Z-scheme heterojunction of g-C3N4/Au/WO3</b> Wu Lei, Nanjing University of Science and Technology, China
10:25- 10:40	<b>Title: Integrated microneedle-smartphone nucleic acid amplification platform for in-field diagnosis of plant diseases</b> Qingshan Wei, North Carolina State University, USA
10:40-10:55	<b>Title: An integrated liquid crystal sensing device assisted by the surfactant-embedded smart hydrogel</b> Jin-Ming Lin, Tsinghua University, China
	<b>Tea and Refreshments Break 10:55-11:10</b>
11:10- 11:25	<b>Title: Monofunctional pyrenes at carbon nanotube electrodes for direct electron transfer H2O2 reduction with HRP and HRP-bacterial nanocellulose</b> Serge Cosnier, Univ. Grenoble Alpes - CNRS, France
11:25- 11:40	<b>Title: Development of 6E3 antibody-mediated SERS immunoassay for drug-resistant influenza virus</b> Juyeon Jung, University of Science and Technology (UST), Republic of Korea
11:40- 11:55	<b>Title: Microbial whole-cell biosensors: Current applications, challenges, and future perspectives</b> Sylvia Daunert, University of Miami Miller School of Medicine, USA
11:55- 12:10	<b>Title: Rational selection of hidden epitopes for a molecularly imprinted electrochemical sensor in the recognition of heat-denatured dengue NS1 protein</b> Eduardo Costa Figueiredo, Federal University of Alfenas, Brazil
12:10-12:25	<b>Title: Enzyme-free impedimetric biosensor-based molecularly imprinted polymer for selective determination of L-hydroxyproline</b>

	Whitchuta Jesadabundit, Chulalongkorn University, Thailand
<b>12:25-12:40</b>	<b>Title: A rapid quantitative on-site coronavirus disease 19 serological test</b> Yong Beom Shin, BioNano Health Guard Research Center, Republic of Korea
<b>12:40-12:55</b>	<b>Title: 3D fuzzy graphene microelectrode array for dopamine sensing at sub-cellular spatial resolution</b> Tzahi Cohen-Karni, Carnegie Mellon University, USA
<b>Session Wrap 12:55- 13:05</b>	
<b>Lunch Break 13:05- 13:50</b>	
<b>13:50- 14:05</b>	<b>Title: Interfacing the enzyme multiheme cytochrome c nitrite reductase with pencil lead electrodes: Towards a disposable biosensor for cyanide surveillance in the environment</b> Deniz Aktaş Uygun, Adnan Menderes University, Turkey
<b>14:05- 14:20</b>	<b>Title: High selectivity detection of FMDV- SAT-2 using a newly-developed electrochemical nanosensors</b> Ibrahim M. El-Sherbiny, Zewail City of Science and Technology, Egypt
<b>14:20- 14:35</b>	<b>Speaker Slots Available</b>
<b>14:35- 14:50</b>	<b>Speaker Slots Available</b>
<b>14:50-15:05</b>	<b>Speaker Slots Available</b>
<b>Tea and Refreshments Break 15:05-15:20</b>	
<b>Poster Presentation 15:20- 16:20</b>	
<b>Closing and Award Ceremony 16:20-16:40</b>	
<b>Poster 1</b>	<b>Title: Titanosilicates enhance carbon dioxide photocatalytic reduction</b> Jiří Čejka, Charles University, Czech Republic
<b>Poster 2</b>	<b>Title: Engineering of domain wall propagation in magnetic microwires with graded magnetic anisotropy</b> A. Zhukov, University of Basque Country, Spain
<b>Poster 3</b>	<b>Title: Recent progress in acoustic metamaterials and active piezoelectric acoustic metamaterials - A review</b> John Huber, University of Oxford, UK

Poster 4	<b>Title: NIR powered Janus nanocarrier for deep tumor penetration</b> Yongqiang Wen, University of Science and Technology Beijing, China
Poster 5	<b>Title: Surface charge density of triboelectric nanogenerators: Theoretical boundary and optimization methodology</b> Zhong Lin Wang, Chinese Academy of Sciences, China
Poster 6	<b>Title: Saikosaponin D loaded macrophage membrane-biomimetic nanoparticles target angiogenic signaling for breast cancer therapy</b> Fei Yan, Jilin University, China
Poster 7	<b>Title: Glioma-sensitive delivery of Angiopep-2 conjugated iron gold alloy nanoparticles ensuring simultaneous tumor imaging and hyperthermia mediated cancer theranostics</b> Ren-Jei Chung, National Taipei University of Technology, Taiwan
Poster 8	<b>Title: ECM-mimicking nanofibrous matrix coaxes macrophages toward an anti-inflammatory phenotype: Cellular behaviors and transcriptome analysis</b> Fa-Ming Chen, Fourth Military Medical University, China
Poster 9	<b>Title: Polymeric microellipsoids with programmed magnetic anisotropy for controlled rotation using low (<math>\approx 10</math> mT) magnetic fields</b> Sonia Contera, University of Oxford, UK
Poster 10	<b>Title: High speed 4D printing of shape memory polymers with nanosilica</b> Yu Ying Clarrisa Choong, Nanyang Technological University, Singapore
Poster 11	<b>Title: Self-assembled, biocompatible and biodegradable TEMPO-conjugated nanoparticles enable folate-targeted tumor magnetic resonance imaging</b> M. Zubair Iqbal, Chinese Academy of Sciences, PR China
Poster 12	<b>Title: Optimization of ionic-liquid based electrolyte concentration for high-energy density graphene supercapacitors</b> Jaka Sunarso, Swinburne University of Technology, Malaysia
Poster 13	<b>Title: Enhanced bacteriostatic activity, osteogenesis and osseointegration of silicon nitride/polyetherketoneketone composites with femtosecond laser induced micro/nano structural surface</b> Kai Zheng, University of Erlangen-Nuremberg, Germany

Poster 14	<b>Title: Sticky bone-specific artificial extracellular matrix for stem cell-mediated rapid craniofacial bone therapy</b>
	Sang Ho Jun, Korea University Medical Center, Republic of Korea
Poster 15	<b>Title: Hydrophobic to superhydrophilic tuning of multifunctional sporopollenin for microcapsule and bio-composite applications</b>
	Nam-Joon Cho, Nanyang Technological University, Singapore
Poster 16	<b>Title: Specific phase modulation and infrared photon confinement in solar selective absorbers</b>
	Hongtao Cao, Chinese Academy of Sciences, China
Poster 17	<b>Title: Mutual contaminants relational realization and photocatalytic treatment using Cu<sub>2</sub>MgSnS<sub>4</sub> decorated BaTiO<sub>3</sub></b>
	Yaodong Yang, Xi'an Jiaotong University, PR China
Poster 18	<b>Title: Bi-stable electronic states of cobalt phthalocyanine molecules on two-dimensional vanadium diselenide</b>
	Ping Kwan Johnny Wong, National University of Singapore, Singapore
Poster 19	<b>Title: Harnessing energy from micropollutants electrocatalysis in a high-performance supercapacitor based on PEDOT nanotubes</b>
	Marcio Vidotti, Universidade Federal do Paraná, Brazil
Poster 20	<b>Title: Probing the influence of tether density on tethered bilayer lipid membrane (tBLM)-peptide interactions</b>
	Minsub Chung, Hongik University, Republic of Korea
Poster 21	<b>Title: Surface-PASylation of ferritin to form stealth nanovehicles enhances in vivo therapeutic performance of encapsulated ellipticine</b>
	Zbynek Heger, Mendel University in Brno, Czech Republic
Poster 22	<b>Title: Genetically engineered elastin-like recombinamers with sequence-based molecular stabilization as advanced bioinks for 3D bioprinting</b>
	Jose Carlos Rodríguez-Cabello, University of Valladolid, Spain
Poster 23	<b>Title: Tuning the structural, optical and photoluminescence properties of hybrid perovskite quantum dots by A-site doping</b>
	Juan Jesús Gallardo, Universidad de Cádiz, Spain

Poster 24	<b>Title: Mesenchymal stem cells transplanted with self-assembling scaffolds differentiated to regenerate nucleus pulposus in an ex vivo model of degenerative disc disease</b>
	G. Rasul Chaudhry, Oakland University, USA
Poster 25	<b>Title: Asymmetric polyelectrolyte multilayer membranes with ultrathin separation layers for highly efficient micropollutant removal</b>
	Wiebe M. de Vos, Institute for Nanotechnology, The Netherlands
Poster 26	<b>Title: Additive manufacturing by template-assisted 3D electrodeposition: Nanocrystalline nickel microsprings and microspring arrays</b>
	Patrik Schürch, Laboratory for Mechanics of Materials and Nanostructures, Switzerland
Poster 27	<b>Title: CO<sub>2</sub> permeability control in 3D printed light responsive structures</b>
	Annalisa Chiappone, Politecnico di Torino, Italy
Poster 28	<b>Title: Anchoring of single-platinum-adatoms on cyanographene: Experiment and theory</b>
	Piotr Błoński, Palacký University, Czech Republic
Poster 29	<b>Title: New insights on Uranium recovery from seawater and aqueous media</b>
	Tamara Elzein, National Council for Scientific Research, Lebanon
Poster 30	<b>Title: Elements beyond graphene: Current state and perspectives of elemental monolayer deposition by bottom-up approach</b>
	Rigoberto C. Advincula, University of Chemistry and Technology Prague, Czech Republic
Poster 31	<b>Title: 3D printing for membrane separation, desalination and water treatment</b>
	Leonard D. Tijing, University of Technology Sydney, Australia
Poster 32	<b>Title: Review: Silicon oxycarbide based materials for biomedical applications</b>
	Aldo R. Boccaccini, University of Erlangen-Nuremberg, Germany
Poster 33	<b>Title: Hydrogel-based 3D bioprinting: A comprehensive review on cell-laden hydrogels, bioink formulations, and future perspectives</b>
	Ambalangodage C. Jayasuriya, University of Toledo, USA
Poster 34	<b>Title: The rise of conductive copper inks: challenges and perspectives</b>
	Wanli Li, National Institute for Materials Science, Japan
Poster 35	<b>Title: Recent trends on the development of systems for cancer diagnosis and treatment by microfluidic technology</b>

	Carmen S.R. Freire, University of Aveiro, Portugal
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