


 Institute for Environmental
Protection and Sensors

NANOAPP 2024

 Nanomaterials & Application
18 – 21 June 2024, Ptuj, Slovenia

PROGRAMME
Day 1: Tuesday, 18th June 2024

	Registration - Dominican Monastery, Ptuj, Slovenia
Session 1	Recycling - our future
Session Chair	Prof. Dr. Aleksandra Lobnik, IOS, UMFS, Slovenia
14:00 – 15:15	Round Table: Recycling – our future Dr. Määttänen Marjo – VTT, Finland, PESCO project Coordinator Dr. Bojan Pahor, Project Manager, Saubermacher Slovenia Dr. Mojca Poberžnik, Head of the Environmental Protection/Recycling processes, IOS, Slovenia MSc. Lutz Walter, The European Technology Platform for the Future of Textiles and Clothing Denis Jahić; General Manager and Board Member, AquafilSLO MSc. Patricia Urban, CEPS (The Centre for European Policy Studies): Policies for textiles circularity
Session 2	Sustainability and circular economy
Session Chair	Määttänen Marjo, VTT, Finland
15:15 - 15:35	IL1: MSc. Satu-Marja Mäkelä, VTT, Finland - AI and data throughout circular textile flow
15:35 - 15:55	IL2: MSc. Alen Erjavec, UM FS, Slovenia - Enhancing Personal Protective Equipment Waste Recycling: A Comprehensive Analysis of Polymer Recyclates from Disposable Surgical Masks
15:55 - 16:30	Coffee Break
16:30 - 16:50	IL3: Dr. Mojca Poberžnik, IOS, Slovenia - Towards secondary raw materials
16:50 - 17:10	IL4: Ramon Pragt, T4E&CuRe, Netherlands - Low energy textile recycling
17:10 - 17:30	IL5: Dr. Heli Kangas, Valmet, Finland - Piloting and scaling-up textile recycling – challenges, solutions and opportunities
19:00 - 21:00	NANOAPP 2024 Conference Welcome Party


Day 2: Wednesday, 19th June 2024

Session 3	NANOAPP 2024 Opening Remarks
9:15 - 9:30	Prof. Dr. Aleksandra Lobnik, UM FS, IOS Prof. Dr. Lidija Fras Zemljič, Vice Dean, UM FS
Session 4	Nanomaterials & Hybrid Nanomaterials
Session Chair	Prof. Dr. John Bartlett, Australia
9:30 - 10:15	PL1: Prof. Dr. Corine Gerardin, France - Controlling interactions at interfaces to determine the molecular and nanometric structures of functional mesoporous materials
10:15 - 10:45	KL1: Prof. Dr. V. G. Kessler, Sweden - Polyoxometalate species as models of sol-gel metal oxide nanoparticles
10:45 – 11:15	Coffee Break
Session Chair	Prof. Dr. Galo Juan De Avila Arturo Soler Illia, Argentina
11:15 - 11:45	KL2: Prof. Dr. John Bartlett, Australia - Modulating textural and chemical properties in mesoporous organosilicas – the effect of addition sequence
11:45 - 12:15	KL3: Prof. Dr. Nicola Hüsing, Austria - Silicon polyolates: Opportunities and challenges in materials synthesis
12:15 - 12:45	KL4: Prof. Dr. Masahide Takahashi, Japan - Infrared crystallography for evaluation of framework and linker orientation in metal-organic framework films
12:45 - 13:15	KL5: Prof. Dr. Benoît Heinrichs, Belgium - Optimization of a synthesis procedure of nanocomposites silica/aliphatic polyesters by reactive extrusion for medical applications
13:15 – 15:00	Lunch
Session 5	Sustainability and circular economy
Session Chair	Prof. Dr. Beatriz Julián-López, Spain
15:00 - 15:30	KL6: Prof. Dr. Urban Bren, Slovenia - Molecular Mechanism of Antimicrobial Activity of Tannins Through Joint Experimental and Computational Techniques
15:30 - 15:50	IL6: Dr. Žiga Zebec, Slovenia - Production of terpenes from textile waste
Session 6	Nanomaterials & Sensors
Session Chair	Prof. Dr. Stephane Parola, France
15:50 - 16:20	KL7: Prof. Dr. Ivana Murković Steinberg, Croatia - Towards wearable (bio)chemical sensing with biocompatible functional nanomaterials
16:20 - 16:40	IL7: Dr. Inna Melnyk, Slovakia - The role of lanthanides and dyes in enhancing the photoluminescence of silica sensors for pharmaceutical monitoring in water
16:40 - 17:00	OL1: MSc. Allwin Mabes Raj - Advancing Mercury Detection: A MerB (Organomercurial-lyase)-based Solid-State Voltammetry Sensor for Methylmercury detection
17:00 - 18:00	Poster Session
18:30 - 21:00	Guided city tour and wine tasting


Day 3: Thursday, 20th June 2024

Session 7	Nanomaterials & Hybrid Nanomaterials
Session Chair	Prof. Dr. Corine Gerardin, France
9:30 – 10:15	PL2: Prof. Dr. Galo Soler Illia, Argentina - Programmable Nanosystems Through Chemical Pathways
10:15 - 10:45	KL8: Prof. Dr. Beatriz Julián-López, Spain - Advancing Scalability and Sustainability of Perovskite Nanocrystals Manufacturing for Photovoltaic and Optoelectronic Applications
10:45 - 11:15	KL9: Prof. Dr. Gulaim Seisenbaeva, Sweden - Design and synthetic approaches to hybrid adsorbents and bio-catalysts
11:15 - 12:00	Coffee Break
Session 8	Magnetic Nanomaterials & Applications
Session Chair	Prof. Dr. V. G. Kessler, Sweden
12:00 - 12:30	KL10: Prof. Dr. Spomenka Kobe, Slovenia - Sustainable Processing of Innovative Rare-Earth Magnets
12:30 - 12:50	IL8: Prof. Dr. Darja Lisjak, Slovenia - Electrical sensitization of magnetic nanoplatelets
12:50 - 13:10	IL9: Prof. Dr. Darko Makovec, Slovenia - Ceria-Based Nanocomposites for Catalysis by Magnetic Heating
13:10 - 14:30	Lunch
Session 9	Sustainability and circular economy
Session Chair	Prof. Dr. Masahide Takahashi, Japan
14:30 - 14:50	IL10: Prof. Dr. Matej Zdravec, Slovenia - Implementing a supportive environment for lifelong learning for sustainable engineering (Green2Eng)
14:50 - 15:10	OL2: MSc. Edoardo Donà - Plasma-Modification of graphene oxide for advanced ammonia
Session Chair	Prof. Dr. Sidney Jose Lima Ribeiro, Brazil
15:10 - 15:40	KL11: Dr. David Ravnjak, Slovenia - A novel approach in the use of bacterial nanocellulose for production of packaging films
15:40 - 16:10	KL12: Dr. Matej Bračič, Slovenia - Nanocoatings from Biopolymers
16:10 - 16:40	KL13: Prof. Dr. Vanja Kokol, Slovenia - Cellulose nanomaterials in innovative and emerging applications for sustainable and recyclable economy
16:40 - 17:00	OL3: MSc. Özkan Yapar - Advanced regenerated cellulose materials for emerging applications
17:00 - 18:00	Poster Session
19:00 - 22:00	Conference Dinner at Dominican Monastery



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PLAN



Faculty of Mechanical Engineering



REPUBLIC OF SLOVENIA
MINISTRY OF HIGHER EDUCATION,
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Day 4: Friday, 21st June 2024

Session 10	Nanomaterials & Photonics
Session Chair	Prof. Dr. Nicola Hüsing, Austria
9:30 – 10:15	PL3: Prof. Dr. Sidney Jose Lima Ribeiro, Brazil - Photonic applications of Organic-Inorganic Hybrids. From direction modulated photoluminescence to cellulose aerogels for environmental applications
10:15 - 10:45	KL14: Prof. Dr. Stephane Parola, France - Playing with the plasmonic properties of metal nanoparticles : single particles, colloidal self-assemblies and hybrid plasmonic glasses
10:45 - 11:15	KL15: Prof. Dr. Uroš Cvelbar, Slovenia - Plasma nanofabrication for advanced SERS detection
11:15 - 11:45	KL16: Prof. Dr. Mladen Franko, Slovenia - Characterisation of Thin Films and Nanolayered Composite Materials by Photothermal Techniques
11:45 - 12:05	OL4: Prof. Dr. Aleksandra Lobnik, Slovenia - OpenLOOP Recycling project presentation
12:05 - 13:00	Farewell Party