

## FNMA 2024 – Program

### 21.11.2024, Thursday

Session 1, 17.00 – 18.00, chairman: K.W. Wojciechowski

17.00 – 17.15	J. Grima	Protective Gear for Coastal Rowing: Meeting Athletes' Expectations Through the Use of Advanced Materials
17.15 – 17.30	A. Sikorski	Structure of functional polymer films: a computer simulation study
17.30 – 17.45	M. Cardona	Novel calixarene-based polymers with potential auxetic properties
17.45 – 18.00	G. Muscat	Auxetic Potential of Covalent Organic Frameworks: A Molecular Modelling Approach

Session 2, 18.15 – 19.15, chairman: J. Narojczyk

18.15 – 18.30	I. Shtablavyi	Influence of external factors on the formation of bulk amorphous metal alloys by selective laser melting
18.30 – 18.45	S. Mudry	Molecular dynamics simulation of Zr-Cu-Al nanoparticles sintering
18.45 – 19.00	B. Bochentyn	Methods to improve the stability of biogas-fed Solid Oxide Fuel Cells – our different material approaches
19.00 – 19.15	K. Kujawska	Use of the exolution phenomenon to create metallic particles on the surface of doped strontium titanate grains as an anode in Solid Oxide Fuel Cells

Session 3, 19.30 – 20.30, chairman: K. Dudek

19.30 – 19.45	A. Ducka	Optimizing $\text{La}_{0.3}\text{Sr}_{1.7}\text{Fe}_{1.5}\text{Mo}_{0.5}\text{O}_6$ Double Perovskite in Solid Oxide Fuel Cells: The Role of Transition Metal Doping
19.45 – 20.00	P. Błaszczak	Enhancing catalytic activity of the SOECs for the electroreduction of $\text{CO}_2\text{-H}_2\text{O}$ via the modification of the electrodes with various promoter metals
20.00 – 20.15	M. Dominów	Structural and electrical properties of Ru- and Pt-doped strontium titanate materials for catalytic applications
20.15 – 20.30	H. Kavaliuk	High entropy cobaltites: structure and electrical properties

## 23.11.2024, Saturday

Session 4, 9.00 – 10.00, chairman: A. Sikorski

9.00 – 9.15	K. Dudek	Controllable dynamic properties of magneto-mechanical metamaterials
9.15 – 9.30	M. Dudek	Numerical modeling of ferromagnetic resonance
9.30 – 9.45	P. Duniec	The influence of local constraints on the motion of solvent in polymer systems
9.45 – 10.00	K. Hałagan	Intermolecular interactions in aqueous solutions of 2-aminopyrimidine and its tautomers

Session 5, 10.15 – 11.15, chairman: B. Padlyak

10.15 – 10.30	J. Jung	Features and characterization of selected organic electronics devices
10.30 – 10.45	K.W. Wojciechowski	Computer simulations of elastic properties of a model crystal with spherical voids
10.45 – 11.00	J. Narojczyk	Increase of the auxetic properties in the f.c.c. hard sphere crystal containing combined nanolayer–nanochannel inclusion composed of disordered crystalline phase of hard dumbbells
11.00 – 11.15	K. Tretiakov	Thermal conductivity of polydisperse Yukawa crystals: a molecular dynamics study

Session 6, 11.30 – 12.30, chairman: M. Dudek

11.30 – 11.45	B. Padlyak	Local structure and EPR spectroscopy of the $\text{Li}_2\text{B}_4\text{O}_7:\text{Cu},\text{Eu}$ and $\text{Li}_2\text{B}_4\text{O}_7:\text{Mn},\text{Sm}$ glasses
11.45 – 12.00	I. Kindrat	Spectroscopy of the lithium tetraborate glass co-doped with Cu and Sm
12.00 – 12.15	Z. Dendzik	Study of properties of liquid crystalline layers of selected cyanobiphenyls on surfaces of carbon and boron nitride nanostructures by computer simulations methods
12.15 – 12.30	P. Raczyński	Self-repairing behavior of phospholipid membranes after interactions with diverse nanostructures – an MD simulation analysis

Session 7, 12.45 – 13.45, chairwoman: B. Bochentyn

12.45 – 13.00	M. Czudec	Thermoelectric properties of multicomponent oxides
13.00 – 13.15	D. Lewoc	Pyrochlore thermoelectric materials, based on oxide/oxide and oxide/metal alloy composition
13.15 – 13.30	K. Prusik	Photocatalytic Performance of Nanodiamond-Decorated Potassium Vanadates for Organic Dye Degradation
13.30 – 13.45	R. Gatt	Magneto-mechanical metamaterials
13.45	J. Rybicki	Conference closing