



Workshop on Progress in Nanotechnology and Optoelectronics 25-27. April 2019, Lodz, Poland

under the AUSPICES of:
European Polymer Federation
President of the Board of the Foundation for Polish Science
Rector of Lodz University of Technology
Dean of Faculty of Chemistry, Lodz University of Technology

Preliminary program

Thursday 25 April

- 08:30 – 09:50 Registration and Welcome coffee
- 09:50 – 10:00 Welcome and opening
- Functional nanomaterials I (chair – J. Ulanski)**
- 10:00 – 10:40 **Krzysztof Matyjaszewski**
Molecular engineering of nanostructured materials by Reversible Deactivation Radical Polymerization
- 10:40 – 11:05 **Adam Pron**
Ternary and quaternary inorganic semiconductor nanocrystals for electronics and biomedicine: core and surface engineering
- 11:05 – 11:30 **Stefan Jurga**
Nanomaterials as contrast agents
- 11:30 – 11:50 **COFFEE BREAK**
- Functional nanomaterials II (chair – M. Kozanecki)**
- 11:50 – 12:15 **Francesca Nanni**
Multifunctional polymeric composite materials for 3d printing: the scenario in industry 4.0
- 12:15 – 12:40 **Andrzej Galeski**
Nanomechanisms of plastic deformations of polymers
- 12:40 – 13:05 **Marcin Stepień**
Curvature vs. π -conjugation: new routes to chiral and low-bandgap systems
- 13:05 – 14:30 **Sandwich lunch**





Synthesis of organic semiconductors (chair – M. Zagorska)

- 14:30 – 15:10 **Klaus Müllen**
Graphene nanoribbons - merging the conjugated polymer and graphene worlds
- 15:10 – 15:35 **Yingping Zou**
High performance polymer solar cells
- 15:35 – 16:00 **Pierre Audebert**
New insights in tetrazines and heptazines chemistry; synthetic improvements and original properties in fluorescence and photoactivation

16:00– 16:20 **COFFEE BREAK and installation of posters**

Simulation and models (chair – P. Polanowski)

- 16:20 – 16:45 **Andrzej Sikorski**
Dynamics in complex macromolecular systems. Simulations with the dedicated parallel machine ARUZ
- 16:45 – 17:10 **Jiri Pflieger**
Organic Electronic Memory Devices: how to make advantage from unwanted behaviour.
- 17:10 – 17:35 **Zbigniew Klusek**
Graphene hybrid systems. Physics and applications.
- 17:35 – 18:00 **Marek Szymanski**
Inverse problems in organic electronics

18:00 – 19:30 **Poster session**

20:00 – 22:30 **Official dinner for invited speakers and guests**



Friday 26 April

Molecular Optoelectronics I (chair – T. Marszalek)

- 09:00 – 09:40 **Anna Köhler**
Describing charge separation in organic semiconductors
- 09:40 – 10:05 **Juliusz Sworakowski**
How accurate are energies of HOMO and LUMO levels in small-molecule organic semiconductors determined from cyclic voltammetry
- 10:05 – 10:30 **Eric Glowacki**
Abundant organic semiconductor catalysts for a peroxide clean energy cycle

11:30 – 11:50 COFFEE BREAK

Molecular Optoelectronics II (chair – H. Bässler)

- 11:50 – 12:30 **Paul W. M. Blom**
Charge transport in organic semiconductors
- 12:30 – 12:55 **Wojciech Pisula**
Organic ultrathin transistors interconnecting Lodz and Mainz
- 12:55 – 13:20 **Jasper J. Michels**
Structuring in thin-film solutions upon liquid-vapour mass exchange

13:20 – 14:50 Sandwich lunch

Molecular Optoelectronics III (chair – J. Jung)

- 14:50 – 15:30 **Marek Samoc**
The use of upconversion processes in nanosystems for biological and theranostic applications
- 15:30 – 15:55 **Andy Monkman**
Thermally activated delayed fluorescence from exciplexes, how dilution increases performance
- 15:55 – 16:20 **Luiz Pereira**
Efficient design of OLEDs structure: electrical carrier transport and recombination

16:20 – 16:40 COFFEE BREAK

Inorganic and hybrid materials (chair – B. Luszczynska)

- 16:40 – 17:05 **Xinliang Feng**
Polymer synthesis enabled by interfaces: towards a world of organic 2D materials
- 17:05 – 17:30 **Jean-François Gerard**
Nanostructuring of polymers from assembling ionic liquids and metal-oxo clusters
- 17:30 – 17:55 **Malgorzata Jakubowska**
Graphene pastes and inks for printing and their application in electronics and medicine

18:00 – 20:00 Poster session

18:15 – 19:00 Meeting of Polish Platform for Printed Electronics

20:30 – 23:00 Informal dinner



Saturday 27 April

Department of Molecular Physics Alumnae & Co-workers - Overview

Session DMP I (chair L. Okrasa)

- 09:00 – 9:15 **Piotr Polanowski**
Simulation of aggregation process in frame of DLL model
- 09:15 – 9:30 **Jeremiasz K. Jeszka**
Simulations of synthesis of polymer brushes from the surface of nanostructures
- 09:30 – 9:45 **Gisele Boiteux**
Segregated polymer-carbon nanofillers composites with specific thermal and electrical properties
- 09:45 – 10:00 **Ireneusz Glowacki**
Solution-processed OLEDs
- 10:00 – 10:15 **Jaroslav Jung**
Technology of Real-World Analyzers (TAUR)
- 10:15 – 10:30 **Aleksandra Wypych-Puszkarcz**
Functional materials investigated by means of broadband dielectric spectroscopy
- 10:30 – 10:45 **Marcin Kozanecki**
Photo and thermal stability of Ag nanoparticles stabilized by sodium citrate
- 10:45 – 11:00 **Marcin Pastorczak**
Femtosecond infrared pump – stimulated Raman probe spectroscopy: the method and its first application to study vibrational relaxation pathway in liquid water
- 11:00 – 11:20 COFFEE BREAK**

Session DMP II (chair I. Glowacki)

- 11:20 – 11:35 **Piotr Cywinski**
A day in the life of a patent examiner
- 11:35 – 11:50 **Andrzej Rybak**
Polymer composites for energy applications: challenges and opportunities
- 11:50 – 12:05 **Lidia Okrasa**
Relaxation processes in macromolecules with complex structure
- 12:05 – 12:20 **Pawel Miskiewicz**
Dielectric Materials for Displays
- 12:20 – 12:35 **Olivier Siri**
Metallo-oligomers synthesis: from solution to surface
- 12:35 – 12:50 **Tomasz Marszalek**
Organic Field Effect transistors from lab scale (DMP) to potential application
- 12:50 – 13:10 **Beata Luszczynska**
Organic photodetectors- examples of devices with fast time response and high responsivity
- 13:10 – 13:30 **Jacek Ulanski**
Recent progress in printed OLEDs
- 13:30 – 13:40 Closing remarks**
- 14:00 – 17:00 Informal party**