## UHMob International Conference – Organic Semiconductors: From Principles to Applications

6-9 September 2022

# Max Planck Institute for Polymer Research

### Mainz, Germany





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#### Tuesday September 6<sup>th</sup> 2022

12.30	Registration and lunch
14.00	Ellen Backus (University of Vienna) and Yves Geerts (Université Libre de Bruxelles) Opening
14.20	Lucia Maini, University of Bologna Thermal expansion and polymorphic transition in perylendiimide compounds
15.00	Ines Martins, University of Bologna Study of bulk and thin-film polymorphism of NDI-C6: annealing and deposition procedures to access elusive polymorphs
15.30	Break
16.00	Ann Maria James, Technical University of Graz Study of polymorph tuning at the surfaces in an organic semiconductor
16.30	<b>Priya Pandey</b> , University of Bologna Exploring polymorphism, crystal structure and charge transport property of BTBT derivative
17.00	Lorenzo Pandolfi, University of Bologna Polymorph formation in OSC driven by the crystalline form of the chemical precursor
17.30	End

#### Wednesday September 7<sup>th</sup> 2022

09.30	<b>Shu Seki</b> , Kyoto University Electronic Properties of Molecular Systems in Condensed Phases: Interplays of Interaction Fields and Charge/Spin Transport
10.10	<b>Mindaugas Gicevičius</b> , University of Cambridge Probing the out-of-plane charge transport and contact resistance in organic semiconductors using atomic force microscopy
10.40	Break
11.10	Jan Elsner, University College London Temperature dependence of charge mobility and thermoelectric physics in rubrene from fragment orbital-based surface hopping
11.40	<b>Nemo McIntosh</b> , University of Mons Theoretical analysis of phonons and their influence on charge transport in novel thienoacene molecular crystals
12.10	<b>Christos Gatsios</b> , Humboldt Universität zu Berlin Surface doping of rubrene single crystals by molecular electron donors and acceptors
12.40	Lunch
14.00	Natalie Stingelin, Georgia Institute of Technology Establishing structure/property interrelations of organic semiconductors using fast calorimetry
14.40	<b>Taishi Takenobu</b> , Nagoya University Charge transport and thermoelectric conversion in electrochemically doped polymer films
15.10	Andriy Zhugayevych, Max Planck Institute for Polymer Research, Mainz Charge storage mechanism in metal-organic polymers for alkali-ion battery electrodes
15.40	Break
16.10	<b>Lamiaa Fijahi</b> , Institut de Ciència de Materials de Barcelona Organic field-effect transistors based on solution sheared thin films of DNTT and BTBT derivatives
16.40	<b>Renan Colucci</b> , Max Planck Institute for Polymer Research, Mainz Ions in mixed organic semiconductors: Is there a limit to the ionic depth penetration?
17.10	Poster presenters Poster flash contributions
17.45	Informal discussion
18.00	Posters with drinks and fingerfood

#### **Poster presentations**

Jaco Geuchies, Max Planck Institute for Polymer Research, Mainz Directionality of phonon transition dipole moments and hints of anisotropy in the photoconductivity of single-crystalline two-dimensional lead-halide perovskites

**Alessandro Greco**, Max Planck Institute for Polymer Research, Mainz Proton transfer across the air-water interface

**Vladimir Grigorescu**, VU Amsterdam Exciton diffusion and annihilation in porphyrin/metal-organic cage structures

Kripa Merin Joseph, University of Strasbourg The conductivity of PEDOT: PSS under vibrational strong coupling

**Elizabeth Killalea**, Université Libre de Bruxelles Chiral organic semiconductors for spintronic applications

**Thomasz Marszalek**, Max Planck Institute for Polymer Research, Mainz Self-aligned bilayers for flexible free-standing organic field-effect transistors

**Rahul Meena**, Université Libre de Bruxelles Design and synthesis of organic semiconductor adapted to couple with vacuum electromagnetic field

**Roland Resel**, Graz University of Technology Thin film structure of the asymmetric Ph-BTBT-10 molecule for application in organic thin film transistors

**Kalyani Thakur**, Max Planck Institute for Polymer Research, Mainz Photoexcited charge separation dynamics in a conformationally flexible acceptor-donor-acceptor molecular triad

**Naz Ugur**, Max Planck Institute for Polymer Research, Mainz Temperature dependent photophysics in polycrystalline perylene diimide aggregates

Lucia Di Virgilio, Max Planck Institute for Polymer Research, Mainz Correlating charge transport properties of conjugated polymer aggregates in solution and thin film

**Wenhao Zheng**, Max Planck Institute for Polymer Research, Mainz Charge transport and exciton formation in graphene nanoribbons

#### Thursday September 8<sup>th</sup> 2022

09.30	Kazuo Takimiya, RIKEN Center for Emergent Matter Science, Tohoku "Design and Synthesis" of organic semiconductor crystals: towards the rational design of crystal structures for efficient carrier transport
10.10	<b>Tomasz Marszalek</b> , Max Planck Institute for Polymer Research, Mainz Optimized charge transport in molecular semiconductors by control of fluid dynamics and crystallization in meniscus-guided coating
10.40	Break
11.10	<b>Martina Volpi</b> , Université Libre de Bruxelles Design and synthesis of chiral molecular semiconductors for spintronic applications
11.40	Guillaume Schweicher, Université Libre de Bruxelles Structure-property relationships in thienoacenes for improved charge transport
12.10	<b>Takashi Kubo</b> , Osaka University 1D-Chain of Organic Radicals and Biradicals with Close π–π-Contact
12.40	Lunch
14.00	<b>Natalie Banerji</b> , University of Bern In-situ THz measurements of electrochemical processes in organic electrochemical transistors
14.40	<b>Marco Bardini</b> , University of Mons Temperature-dependent transient charge delocalization in high-mobility organic molecular semiconductors
15.10	<b>Shuai Fu</b> , Max Planck Institute for Polymer Research, Mainz Outstanding charge mobility by band transport in two-dimensional semiconducting covalent organic frameworks
15.40	Break
16.10	<b>Omer Omar</b> , University of Liverpool High-throughput virtual screening of existing organic chromophores for materials discovery
16.40	<b>Federico Modesti</b> , BASF SE, Ludwigshafen The role of molecular structure of p-type small-molecule organic semiconductors on the contact resistance in organic field-effect transistors
17.10	<b>Paddy Chan</b> , University of Hong Kong Monolayer organic transistors developed by solution shearing
17.40	Informal discussion
18.00	Drinks and dinner BBQ

#### Friday September 9<sup>th</sup> 2022

09.30	Paschalis Gkoupidenis, Max Planck Institute for Polymer Research, Mainz Organic neuromorphic electronics: processing, learning and biointerfacing
10.10	Nicholas Turetta, University of Strasbourg Optically switchable organic electrochemical transistors based on a conjugated polymer/spiropyran blend
10.40	Break
11.10	Yusuke Ishigaki, Hokkaido University Strained $\pi$ -electronic systems: control of structures and physical properties by external stimuli
11.40	<b>Elena Ferrari</b> , University of Palma Bilayer to monolayer phase transition of the organic semiconductor Ph-BTBT-10 investigated by Raman spectroscopy
12.10	Ellen Backus and Yves Geerts Closing remarks
12.30	Lunch and departure