

GRK 2948 Symposium on “Mixed Ionic-Electronic Transport”

19th – 21st October 2026

Marsilius-Kolleg, Im Neuenheimer Feld 130.1, 69120 Heidelberg, Germany



Monday 19 th October	Tuesday 20 th October	Wednesday 21 st October
9:00 Reception & Hanging Posters	9:00 (Invited) Igor Zozoulenko (Linköping University, Sweden)	9:00 (Invited) Minghao Yu (Dresden University of Technology, Germany)
	9:40 (Contributed) Daniele Fazzi (University of Bologna, Italy)	9:40 (Contributed) Philipp Kollenz (Heidelberg University, Germany)
10:00 Welcome	10:05 Coffee Break	10:05 Coffee Break
10:10 (Invited) Colin P. Nuckolls (Columbia University, USA)	10:40 (Invited) Alessandro Troisi (University of Liverpool, UK)	10:40 (Contributed) Christian Delavier (Heidelberg University, Germany)
10:50 (Invited) Birgit Esser (Ulm University, Germany)	11:20 (Contributed) Richard Schömig (Hamburg University of Technology, Germany)	11:05 (Contributed) Mona M. Hämmerle (Heidelberg University, Germany)
11:30 (Contributed) Fabio Quarti (Heidelberg University, Germany)		
12:00 Lunch	12:00 Lunch	11:30 Departure Guests
13:30 (Invited) Natalie Banerji (University of Bern, Switzerland)	13:30 (Invited) Nicola H. Perry (University of Illinois Urbana-Champaign, USA)	12:30 Internal Meeting Cleaning up Feedback & Debriefing (GRK 2948 doctoral researchers only)
14:10 (Contributed) Xiuming Sun (University of Stuttgart, Germany)	14:10 (Invited) Sahika Inal (King Abdullah University of Science and Technology, Saudi-Arabia)	
14:35 (Contributed) Florian Stammer (Heidelberg University, Germany)	14:50 Poster session 2 & Coffee	
15:00 Coffee Break		
15:40 (Invited) Alexander Giovannitti (Chalmers University of Technology, Sweden)	16:30 (Invited) Luisa Petti (Free University of Bozen-Bolzano, Italy)	16:30 Goodbye
16:20 (Contributed) Yanzhe Huang (University of Stuttgart, Germany)	17:10 (Contributed) Luca Bischof (Heidelberg University, Germany)	
17:00 Poster Session 1 & Dinner	17:35 Poster removal IAB Meeting TBD Invited Speaker Dinner	

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Full Schedule

Monday 19th October

9:00 – 10:00

Reception & Poster hang-up

10:00 – 10:10

Welcome

Prof. Jana Zaumseil & Prof. Sabine Ludwigs

Session 1: New Materials & Material Modification

10:10 – 10:50 Invited Talk

Colin P. Nuckolls

Columbia University, USA

“Designing Ion and Electron Transport in Twisted Graphene Nanoribbons”

10:50 – 11:30 Invited Talk

Birgit Esser

Ulm University, Germany

“Organic Electrode Materials in Next-Generation Batteries”

11:30 – 11:55 Contributed Talk

Fabio Quarti

Heidelberg University, Germany

“Decorating Carbon-based Nanomaterials with Organic Cages for the Detection of Nitrates”

12:00 – 13:30

Lunch

13:30 – 14:10 Invited Talk

Natalie Banerji

University of Bern, Switzerland

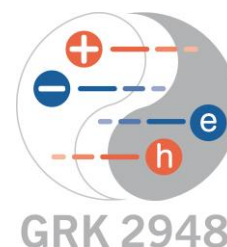
“Visible, Raman and Terahertz Spectro-Electrochemistry to Probe Charge Carriers in Organic Transistors (OECTs)”

14:10 – 14:35 Contributed Talk

Xiuming Sun

University of Stuttgart, Germany

“Electrochemical Doping of Naphthalenediimide-Bithiazole-Copolymer Films: from Fundamentals to Devices”



14:35 – 15:00 Contributed Talk

Florian Stammer

Heidelberg University, Germany

“In Situ Raman Microscopy of Water-gated Single-Wall Carbon Nanotube Transistors”

15:00 – 15:40

Coffee Break

15:40 – 16:20 Invited Talk

Alexander Giovannitti

Chalmers University of Technology, Sweden

“Purification of Conjugated Polymers by High-Performance Liquid Chromatography”

16:20 – 16:45 Contributed Talk

Yanzhe Huang

University of Stuttgart, Germany

“A Self-Stratified PEDOT:PSS / TPU Blend Smart Actuator”

17:00 – 19:00

Poster session 1 & Dinner

Tuesday 20th October

Session 2: Modelling & Simulation

9:00 – 9:40 Invited Talk

Igor Zozoulenko

Linköping University, Sweden

“Density of States in Conducting Polymer Films”

9:40 – 10:05 Contributed Talk

Daniele Fazzi

University of Bologna, Italy

“Modelling Structure and Dynamics in Organic Mixed Ionic-Electronic Conductors”

10:05 – 10:40

Coffee Break

10:40 – 11:20 Invited Talk

Alessandro Troisi

University of Liverpool, UK

“Modelling Materials with Mixed Ionic-Electronic Transport: From Brute Force to Reduced Models”

11:20 – 11:45 Contributed Talk

Richard Schömig

Hamburg University of Technology, Germany

“From Ion Hydration to Differential Capacitance: Charge Storage at Aqueous Electrified Interfaces”

12:00 – 13:30

Lunch

Session 3: Transport & Spectroscopy

13:30 – 14:10 Invited Talk

Nicola H. Perry

University of Illinois Urbana-Champaign, USA

“TBD”

14:10 – 14:50 Invited Talk

Sahika Inal

King Abdullah University of Science and Technology, Saudi-Arabia

“Effect of Electrolyte Uptake on the Performance of Polymeric Electrodes and Transistors”

14:50 – 16:30

Poster session 2 & Coffee Break

16:30 – 17:10 Invited Talk

Luisa Petti

Free University of Bozen-Bolzano, Italy

“Electrochemically-Assembled Polymeric Architectures for Adaptive Mixed Ionic–Electronic Biointerfaces”

17:10 – 17:35 Contributed Talk

Luca Bischof

Heidelberg University, Germany

“Critical Discussion of Light-Enhancing the Li-Ion Battery Cathode LiMn_2O_4 : Separating Light and Heat”

17:35

Poster removal

17:35 – 18:30

International Advisory Board (IAB) Meeting for GRK 2948 PIs and IAB members

TBD

Invited Speaker Dinner

Wednesday 21st October

9:00 – 9:40 Invited Talk

Minghao Yu

Dresden University of Technology, Germany

“Emerging Two-Dimensional Materials: Charge and Ion Transport Properties and Applications”

9:40 – 10:05 Contributed Talk

Philipp Kollenz

Heidelberg University, Germany

“Defect-Mediated Opto-Ionic Transport in Hybrid Perovskites for Edge-Compatible Reservoir Computing”

10:05 – 10:40

Coffee Break

10:40 – 11:05 Contributed Talk

Christian Delavier

Heidelberg University, Germany

“3D Digital Light Processing of Redox-Active Carbazole-Polymers for Electrochemical Applications”

11:05 – 11:30 Contributed Talk

Mona M. Hämmerle

Heidelberg University, Germany

“Towards PEDOT-Incorporated Hydrogel Scaffolds on the Micro-Scale”

11:30

Goodbye Guests

12:30 – 16:30

GRK 2948 Internal Session

GRK 2948 doctoral researchers only

Cleaning up

Feedback & Debriefing

Poster Session 1

New Materials & Material Modification	Transport & Spectroscopy	Theory & Simulation
Pooja Jangra <i>"Functionalization of an Ion-Selective Organic Cage for Mixed Ionic-Electronic Semiconductors"</i>	Yachen Li <i>"Time-Resolved Photoluminescence Imaging of Carrier Density in (6,5) SWCNT Electrochemical Transistors"</i>	Matteo Tosi <i>"Ion Movement as a Key Parameter to Understand Charge Carrier Mobility in Doped Organic Semiconductors"</i>
Silas Eiden <i>"3D DLP Fabrication of Electrically Conductive Polypyrrole Nanocomposites"</i>	Garrett May <i>"Quantifying Anisotropic Charge Carrier Diffusion"</i>	Felix Rinke <i>"Modeling and Characterization of Coupled Behavior in Conductive Polymers"</i>
Mario Feinauer <i>"Silver Nanowire Hybrid Microgels with Tunable Electrical and Mechanical Properties"</i>	Tom Wickenhäuser <i>"Redox-Active Organic Materials for Lithium-Ion Batteries"</i>	Tobias Krebs <i>"Unveiling the Role of Disorder on Carrier Concentration Transients in Electrochemical Transistors"</i>
		Léo Legrand <i>"Scale-Bridging Simulation to Transport and Swelling Properties of (Semi-)Conducting Polymers"</i>

Poster Session 2

New Materials & Material Modification	Transport & Spectroscopy	Theory & Simulation
Jana Lohmann <i>"3D DLP Printing of Responsive Cellulose Derivatives"</i>	Elisabeth Weber <i>"Engineering Conductive Hydrogel Microcapsules for the Restoration of the Electrical Function in Cardiac Tissue"</i>	Kira Fischer <i>"Coupled Electronic Tight-Binding and Ion Dynamics for Mixed Ionic-Electronic Charge Transport"</i>
Semi Kim <i>"Stimuli-Responsive Polymer-Based Hydrogel Networks for Bioelectronic Applications"</i>	Jieyuan Zheng <i>"On Spin and Charge in Perovskite and Antiperovskite Materials: Battery, Magnetic and Thermodynamic Studies"</i>	Gönç Berk Günes <i>"Rheology of 3D-Printed PEDOT:PSS/PVA Hydrogels at Varying Temperature and Relative Humidity"</i>
Silvia Cucinella <i>"TriBenzoTriQuinacene(TBTQ)-based Cage as Host for Hyperpolarized Xenon-129 for Magnetic Resonance Imaging"</i>	Tobias Gehlhaar <i>"Universal Current Transients in Two-Terminal Electrochemical Memristive Devices"</i>	Alireza Karimpour <i>"Pulse-Controlled Conductance Modulation in 2-Terminal LEC-Based Memristive Devices"</i>