

Charge Transport on Ultra-short Length and Time Scales

848. WE-Heraeus-Seminar

8 - 11 February 2026

at the Physikzentrum Bad Honnef, Germany

**WILHELM UND ELSE
HERAEUS-STIFTUNG**



Program

Sunday, 8 February 2026

17:00 - 21:00 Registration

18:00 - 20:00 *BUFFET SUPPER and informal get-together*

Program

Monday, 9 February 2026

07:30 - 09:00	<i>BREAKFAST</i>	
09:00 - 9:45	Cherie Kagan	Colloidal Quantum Dot Assemblies and Devices: Charge and Energy Transport and Transfer
9:45 - 10:05	Pannan Kyesmen	Colloidal quasi-2D Cs₂AgBiBr₆ double perovskite nanosheets: synthesis and application as high-performance photodetectors
10:05 – 10:25	Heyou Zhang	Photoswitchable Nanoparticle Arrays for All-Optical Logic Gate
10:25 - 10:45	<i>COFFEE BREAK</i>	
10:45 - 11:30	Jannika Lauth	Strongly Confined Systems and Fast Laser Pulses – A Match Made in Heaven (Optical and Electronic Properties of Flat Quantum Dots)
11:30 - 12:15	Eleftherios Goulielmakis	Probing correlated materials with sub-cycle optical pulses
12:15 - 12:30	<i>CONFERENCE PHOTO (in front of the main entrance)</i>	
12:30 - 14:00	<i>LUNCH</i>	
14:00 - 14:45	Claus Ropers	Ultrafast Electron Microscopy

Program

Monday, 9 February 2026

14:45 – 15:05	Praful Kumar	A Generalised Framework for Light Induced Insulator-to-Metal Phase Transitions
15:05 - 15:25	Kasra Amini	High-brightness, high-throughput, ultrashort keV and MeV electrons for femtochemistry studies in photoexcited matter
15:25 - 15:45	Manish Garg	Single Molecule Electronics
15:45 - 16:05		COFFEE BREAK
16:05 - 17:15	Panel Discussion 1:	The future of ultra-small and ultra-fast devices (All available keynote speakers.)
17:15 - 17:30	Stefan Jorda	About the Wilhelm and Else Heraeus Foundation
18:00 - 19:30		HERAEUS-DINNER at the Physikzentrum (cold and warm buffet with complimentary drinks)
19:30 - 21:00		Poster Session 1

Program

Tuesday, 10 February 2026

07:30 - 09:00	<i>BREAKFAST</i>	
09:00 - 9:45	Chris Murray	Assembly of Nanocrystal-Based Materials and Devices
9:45 - 10:05	Ata Bozkurt	Inter-Particle ion migration of caesium lead mixed-halide perovskite superlattices
10:05 - 10:25	Ronja Piehler	Carrier Diffusion vs. Waveguiding effects in different layered quasi two-dimensional MAPbI-Perovskites
10:25 - 10:45	<i>COFFEE BREAK</i>	
10:45 - 11:30	Isabelle Staude	Interaction of 2D semiconductors with optically resonant nanostructures
11:30 - 11:50	Dariia Matulka	The Electronic Spectrum in Few-Layer Quasi-2D Crystals
11:50 - 12:35	Stefan Mathias	Unraveling charge transport in 2D quantum materials on ultrashort time- and lengthscales using time-resolved momentum microscopy
12:35 - 14:00	<i>LUNCH</i>	
14:00 - 14:45	Claudia Draxl	Many-body approaches to excitation dynamics in solids
14:45 - 15:05	Jara Vliem	The influence of surface state bands on the optical properties of 2D Bi₂Se₃ nanoplatelets

Program

Tuesday, 10 February 2026

15:05 - 15:50	Bridget Murphy	Structure and dynamics at liquid interfaces
15:50 - 16:10	<i>COFFEE BREAK</i>	
16:10 - 17:15	Panel Discussion 2:	Open Data (Claudia Draxl and Bridget Murphy)
18:00 - 19:30	<i>DINNER</i>	
19:30 - 21:00	Poster Session 2	

Program

Wednesday, 11 February 2026

07:30 - 09:00	<i>BREAKFAST</i>	
09:00 - 09:45	Sascha Feldmann	Tracking charge, spin and light polarization in space & time in emerging semiconductors
09:45 - 10:05	Fedor Lipilin	Natural van der Waals aluminosilicate for electronic applications
10:05 - 10:50	Andres Castellanos-Gomez	Controlling structure and transport in 2D nanomaterials
10:50 – 11:10	<i>COFFEE BREAK</i>	
11:10 - 11:55	Hélène Seiler	Probing electronic disorder in nanomaterials with coherent two-dimensional spectroscopy
11:55 - 12:15	Yadu Ram Panthi	Ultrafast Spectroscopic Insights into Triplet Formation and Thermal Artefacts in Functionalised DPP Derivatives
12:15 - 12:30	Poster prize and closing remarks	
12:30 - 14:00	<i>LUNCH</i>	

End of the seminar and departure