

**865. WE-Heraeus-Seminar**

Confinement Control on the Molecular Level: Principles, Mechanisms, Applications

When: 13 Sep – 17 Sep 2026**Where:** Physikzentrum Bad Honnef**Scientific organizers:** Dr. Thais Schroeder Rossi, Ruhr-Universität Bochum
Prof. Dr. Karina Morgenstern, Ruhr-Universität Bochum
Prof. Dr. Lars Schäfer, Ruhr-Universität Bochum

Geometrical confinement is relevant to various disciplines, ranging from the natural sciences via the life sciences to the material science field. Confinement effects have far-reaching influences. They shape efficient hydrodynamic flows, deepen the understanding of biological processes, advance carbon capture technologies, and provide new chemical reactivities. So far, much of the research has focused on demonstrating the importance of confinement in physical and chemical systems while neglecting the fundamental principles that govern these effects. Thus, not much is known about how and why exactly confinement effects modulate key physical phenomena, alter reactivities, or change product selectivity and material properties. As a result, essential questions remain unanswered — what are the underlying physical mechanisms at play in confinement, and how do they alter atomic interactions and influence dynamical properties?

Whereas selected specific cases and systems have been studied by experimental computational means, the prediction of confinement effects remains challenging due to a lack of general rules and a common language. With the help of the WE-Heraeus foundation, we will bring together experimentalists and theoreticians to discuss recent findings, match these with confinement effects in 2D, 1D, or 0D spaces, and develop general guidelines that will be applied in calculations and machine learning. In the interdisciplinary WE-Heraeus seminar, we will connect early career researchers with established scientists to create solid scientific networks.

Scientific Programme

Sunday, 13.09.2026		
		Arrival and Check-in
Session 1 <i>Chair: Lars Schäfer</i>	16:30 – 17:00	Opening Remarks
	17:00 – 18:00	Cheng-Yong Su
	18:00 – 19:00	Dinner
Session 2 <i>Chair: Karina Morgenstern</i>	19:00 – 20:00	Jennifer MacLeod

Monday, 14.09.2026		
	08:00 – 09:00	Breakfast
Session 3 <i>Chair: Poul Petersen</i>	09:00 – 10:00	Paul Lusby
	10:00 – 11:00	Gregori Ujaque
	11:00 – 11:30	Coffee
Session 4 <i>Chair: Christian Merten</i>	11:30 – 12:30	Joost Reek
	12:30 – 12:45	Irina Cuesta
	12:45 – 13:00	Lucas Araujo
	13:00 – 14:30	Lunch
Session 5 <i>Chair: Kristina Tschulik</i>	14:30 – 15:30	Hannah Kurz
	15:30 – 15:45	Kai Zhang
	15:45 – 16:00	Maya Heine
	16:00 – 16:30	Coffee
Session 6 <i>Chair: David van Craen</i>	16:30 – 16:45	Laurie Stevens
	16:45 – 17:00	Russell Kajouri
	17:00 – 18:00	Flash Talks I (Posters 01 to 11)
	18:00 – 19:00	Dinner
	19:00 – 22:00	Poster Session I (Posters 01 to 11)

Tuesday, 15.09.2026		
	08:00 – 09:00	Breakfast
Session 7 <i>Chair: Martina Havenith</i>	09:00 – 10:00	Marie-Pierre Gaigeot
	10:00 – 11:00	Shadi Fatayer
	11:00 – 11:30	Coffee
Session 8 <i>Chair: Karina Morgenstern</i>	11:30 – 12:30	Katrin Domke
	12:30 – 12:45	Bashar Moussa
	12:45 – 13:00	Ihab Mohamed Abdelbaki
	13:00 – 14:30	Lunch
Session 9 <i>Chair: Lars Schäfer</i>	14:30 – 14:45	Antonio J. Martínez-Martínez
	14:45 – 15:00	Aleksandr Mikherdov
	15:00 – 19:00	Excursion: hiking to Drachenfels and Schloss Drachenburg. Possible to stop in a Café on the way, and/or visit the Schloss Drachenburg.
	19:00 – 22:00	Heraeus Dinner

Wednesday, 16.09.2026		
	08:00 – 09:00	Breakfast
Session 10 <i>Chair: David van Craen</i>	09:00 – 10:00	Niels Hansen
	10:00 – 11:00	Venkat Kapil
	11:00 – 11:30	Coffee
Session 11 <i>Chair: Axel Rosenhahn</i>	11:30 – 12:30	Angela Grommet
	12:30 – 12:45	Luca Marie Sicking
	12:45 – 13:00	Mandy Hoffmann
	13:00 – 14:30	Lunch
Session 12 <i>Chair: Marialore Sulpizi</i>	14:30 – 15:30	Sofia Kolin
	15:30 – 15:45	Qixuan Li
	15:45 – 16:00	Johannes Fiedler
	16:00 – 16:30	Coffee
Session 13 <i>Chair: Guido Clever</i>	16:30 – 16:45	Ebba Matic
	16:45 – 17:00	Mingkai Zhao
	17:00 – 18:00	Flash Talks II (Posters 12 to 22)
	18:00 – 19:00	Dinner
	19:00 – 22:00	Poster Session II (Posters 12 to 22)

Thursday, 17.09.2026		
	08:00 – 09:00	Breakfast
Session 14 <i>Chair: Christian Merten</i>	09:00 – 10:00	Erna Wieduwilt
	10:00 – 11:00	Arne Lützen
	11:00 – 11:30	Coffee
Session 15 <i>Chair: Lars Schäfer</i>	11:30 – 12:30	Roland Netz
	12:30 – 13:00	Closing Remarks
	13:00 – 14:30	Lunch
	14:30	Departure

Poster number	Presenter
01	Mercè Alemany Chavarria
02	Malte Feßner
03	Lars Hebenbrock
04	Yifan Li
05	Luciana Herbeck
06	Matthias-Julian Justen
07	Simon Knüver
08	Abhinu Menoth Sasisharan
09	Andriana Loukovitou
10	Xiaochen Yang
11	Anne Müller-Feyen
12	Ashley Stingel
13	Yannick Weidemann
14	Hannah Wessely
15	Arkecia Santana Damascena
16	Björn Schmidt
17	Veronika Stoianova
18	Aiswarya Roby
19	Cagri Turan
20	Laura Schneider
21	Iqra Yousaf
22	Min Zou

A detailed programme, including presentation titles, will be available soon.