



SFB 1083

Structure and Dynamics
of Internal Interfaces

PI - Seminar

"Weinbergschlösschen", Oberheimbach

April 10 – 12, 2019



Scientific Program

Wednesday, 10 April 2019



Schloss Rheinfels, St. Goar

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|---------------|---|
| 12:30 | Lunch |
| 13:30 – 17:00 | Discussions in groups
(Hike from Schloss Rheinfels to Oberwesel) |

Weinbergschlösschen, Oberheimbach

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|-------|----------|
| 18:00 | Check-In |
| 19:00 | Dinner |

Introduction

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|---------------|--|
| 20:00 – 21:00 | Ulrich Höfer
<i>Presentation of the spokesman and discussion</i> |
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Thursday, 11 April 2019



Session I (Chair: Michael Gottfried)

- 08:30 – 09:00 **A2 (Witte)** - Gregor Witte
Inorganic/organic and organic/organic interfaces: structure and charge transport
- 09:00 – 09:20 **A3 (Jakob)** - Peter Jakob
Organic heterolayer interfaces: structure and vibrational excitations
- 09:20 – 09:40 **B2 (Chatterjee)** - Sangam Chatterjee
Ultrafast spectroscopy and control of excitations across internal interfaces
- 09:40 – 10:00 **B8 (Berger)** - Robert Berger
Quantum chemistry for molecular vibrational and electronic transitions at organic interfaces
- 10:00 – 10:30 Coffee Break

Session II (Chair: Peter Jakob)

- 10:30 – 10:50 **B6 (Höfer/Wallauer) I** - Ulrich Höfer
Time-resolved two-photon photoemission studies of interface electron and exciton dynamics
- 10:50 – 11:10 **A4 (Gottfried)** - Michael Gottfried
Reactivity, energetics and structure of buried organic/metal interfaces
- 11:10 – 11:30 **A6 (Tonner)** - Ralf Tonner
Unified density functional description of bonding and interactions at inorganic/organic interfaces
- 11:30 – 11:50 **A8 (Koert/Dürr)** - Ulrich Koert
Organic molecular building blocks for the synthesis of internal interfaces
- 12:00 – 15:00 Lunch Break

Thursday, 11 April 2019 (continued)



Session III (Chair: Ulrich Koert)

- 15:00 – 15:25 **A9 (Dehnen)** - Stefanie Dehnen
Synthesis and properties of molecular inorganic/organic/inorganic multilayer clusters
- 15:25 – 15:50 **A11 (Heine)** - Johanna Heine
Bismuth(III)iodide as a 2D material for hybrid compounds
- 15:50 – 16:20 **A12 (Tautz/Bocquet/Kumpf)** - Stefan Tautz
Structure and phonons of heteroepitaxial stacks of weakly interacting 2D materials and molecular layers
- 16:20 – 17:00 Coffee Break

Session IV (Chair: Kerstin Volz)

- 17:00 – 17:20 **A13 (Rohlfing)** - Michael Rohlfing
Theory of electronic interfaces states in weakly bound heterostructures
- 17:20 – 17:40 **B4 (SW Koch)** - Tineke Stroucken
Microscopic theory of optical excitations in interface-dominated material systems
- 17:40 – 18:10 **B5 (Höfer/Mette)** - Gerson Mette
Time-resolved nonlinear optical spectroscopy at semiconductor interfaces
- 18:10 – 18:25 **B6 (Höfer/Wallauer) II** - Robert Wallauer
Time-resolved two-photon photoemission studies of interface electron and exciton dynamics
- 19:00 Dinner

Friday, 12 April 2019



Session V (Chair: Stefan Tautz)

- 08:30 – 08:50 **A1 (Stolz)** - Kerstin Volz
Metal organic vapour phase epitaxy of semiconductor heterostructures and interfaces
- 08:50 – 09:20 **A5 (Volz)** - Kerstin Volz
Atomically resolved structure of solid/solid interfaces
- 09:20 – 09:45 **B3 (M Koch/Heimbrodt)** - Martin Koch
THz- and time-resolved optical spectroscopy on buried interfaces
- 09:45 – 10:00 **B7 (Stolz/SW Koch)** - Kerstin Volz
Interface-dominated semiconductor laser structures
- 10:00 – 10:15 **New (Chatterjee/Volz)** – Sangam Chatterjee
Inorganic, interface-dominated heterostructures for device concepts
- 10:15 – 10:45 Coffee Break

Session VI (Chair: Ulrich Höfer)

- 10:45 – 11:00 **New (Gottfried/Koert)** - Michael Gottfried
At-interface chemistry
- 11:00 – 11:15 **New (Tautz/Bocquet)** - François Bocquet
HREELS of optically dark excitons at interfaces
- 11:15 – 11:30 **New (Güdde)**
THz-ARPES of dynamical charge transfer at interfaces
- 11:30 – 11:45 **New (Witte/NN)**
Charge transport and optical switching at organic FET structures
- 12:00 – 13:00 Lunch Break

Friday, 12 April 2019 (continued)



Session VII (Chair: Ulrich Höfer)

13:00 – 14:00 **General Discussion**

(New projects, plans for 3rd funding period, ...)

14:00 – 15:00 Meeting of the Managing Board

Overview: PI-Seminar, April 10 – 12, 2019



	Wednesday	Thursday	Friday
08:30		Session I (Gottfried) A2 – Witte A3 – Jakob B2 – Chatterjee B8 – Berger	Session V (Tautz) A1 – Volz A5 – Volz B3 – Koch B7 – Volz New – Chatterjee
09:00			
09:30			
10:00		Coffee Break	Coffee Break
10:30		Session II (Jakob) B6 I – Höfer A4 – Gottfried A6 – Tonner A8 – Koert	Session VI (Höfer) New – Gottfried New – Bocquet New – Gütde New – Witte
11:00			
11:30			
12:00		12:00 Lunch plus Lunch Break	12:00 Lunch
12:30	Lunch Schloss Rheinfels		
13:00			
13:30	Discussion in Groups (Rheinburgenweg, Hike from Schloss Rheinfels to Oberwesel)		Session VII (Höfer) Discussion
14:00			Meeting of the Managing Board
14:30			
15:00			
15:30			
16:00			
16:30		Session III (Koert) A9 – Dehnen A11 – Heine A12 – Tautz	
17:00		Coffee Break	
17:30		Session IV (Volz) A13 – Rohlfing B4 – Stroucken B5 – Mette B6 II – Wallauer	
18:00	Check-In Weinbergschlösschen		
18:30			
19:00	Dinner	Dinner	
19:30			
20:00-	Introduction Presentation of the Spokesman – Höfer		
20:30			

Collaborative Research Centre SFB 1083

Robert Berger	Marburg	Theoretical chemistry	B8
François Bocquet	Jülich	Experimental physics	A12, New
Sangam Chatterjee	Gießen	Experimental physics	B2, New
Stefanie Dehnen	Marburg	Experimental chemistry	A9
Michael Gottfried	Marburg	Physical Chemistry	A4, New
Jens Güdde	Marburg	Experimental physics	New
Wolfram Heimbrod	Marburg	Experimental physics	B3
Johanne Heine	Marburg	Experimental chemistry	A11
Ulrich Höfer	Marburg	Experimental physics	B5, B6
Peter Jakob	Marburg	Experimental physics	A3
Martin Koch	Marburg	Experimental physics	B3
Ulrich Koert	Marburg	Experimental chemistry	A8, New
Christian Kumpf	Jülich	Experimental physics	A12
Gerson Mette	Marburg	Experimental physics	B5
Michael Rohlfing	Münster	Theoretical physics	A12
Tineke Stroucken	Marburg	Theoretical physics	B4
Stefan Tautz	Jülich	Experimental physics	A12
Ralf Tonner	Marburg	Theoretical Chemistry	A6
Kerstin Volz	Marburg	Experimental physics	A1, A5, B7, New
Robert Wallauer	Marburg	Experimental physics	B6
Gregor Witte	Marburg	Experimental physics	A2, New
Helen Pfuhl	Marburg		SFB office

