

# Molecular assemblies on semiconductors and insulating surfaces

joint program project of Jagiellonian University and University of Basel

Program of the annual review meeting, Kraków, June 11-14, 2013

<b>June 11, 2013</b>	<b>Venue</b>		<b><i>Institute of Physics, Jagiellonian University</i></b>
15:00 – 15:05	Marek Szymonski	<i>JU</i>	<i>Welcome</i>
15.05 – 15.25	Bartosz Such	<i>JU</i>	<i>Introduction from Polish side</i>
15:25 – 15:55	Thilo Glatzel	<i>UB</i>	<i>Introduction from Swiss side</i>
15:55 – 16:30		<i>JU&amp;UB</i>	<i>Discussion on recent experimental results</i>
16:30 – 17:00			<i>Coffee break</i>
17:00 – 18:00		<i>JU&amp;UB</i>	<i>Discussion on joint publications under preparation</i>
	<b>Venue</b>		<b><i>Auditorium Maximum, Jagiellonian University</i></b>
18:15 – 20:00		<i>JU&amp;UB</i>	<i>Welcome and social meeting with participants of the 4<sup>th</sup> European Workshop on Nanomanipulation</i>
<b>June 12, 2013</b>	<b>Venue</b>	<i>Joint proceedings with 4<sup>th</sup> European Workshop on Nanomanipulation</i>	<b><i>Auditorium Maximum, Jagiellonian University</i></b>
Poster Session	Antoine Hinaut	<i>UB</i>	<i>Large organic molecules deposition under UHV conditions with an ElectroSpray device</i>
Poster Session	Thilo Glatzel	<i>UB</i>	<i>Scanning Probe Microscopy and Spectroscopy of nanodiamonds under illumination</i>
Poster Session	Amir Zebari	<i>JU</i>	<i>Molecular layer engineering</i>
	<b>Venue</b>		<b><i>JU Rector's Conference and Reception Centre in Modlnica</i></b>
18:00 – 19:00	Marek Szymonski & Ernst Meyer	<i>JU&amp;UB</i>	<i>Annual review meeting summary and discussion on the future activities</i>
19.15 – 21:00			<i>Annual Review Reception &amp; Dinner</i>
<b>June 13, 2013</b>			
10.10 – 10.30	Jakub S. Prauzner-Bechcicki	<i>JU</i>	<i>On-surface polymerization on rutile titania surfaces</i>
<b>June 14, 2013</b>			
9.00 – 9.40	Szymon Godlewski	<i>JU</i>	<i>Manipulation of single atoms and molecules on semiconductors - toward integration of prototypical switches</i>
12.20 – 12.40	Thilo Glatzel	<i>UB</i>	<i>Manipulation and imaging of single molecules by Atomic Force Microscopy</i>

# **Molecular assemblies on semiconductors and insulating surfaces**

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The main aim of the project is to investigate processes taking place around the molecular assemblies formed on insulating and semiconducting substrate under irradiation by photons. The molecular assemblies grown either by evaporation or by electro-spray deposition will be examined by scanning probe methods, especially non contact atomic force microscopy (NC-AFM) and Kelvin probe force microscopy (KPFM) in order to determine dependence of the electrical properties of the assemblies of their morphology, and exploit that dependence to control the electrical properties of the assemblies. Within the project a number of molecule/substrate systems will be tested in order to find the most suitable ones for examination of the evolution of excitation in the assemblies induced by the incoming light. As the result we hope to gain deeper understanding of charge evolution and transport in the assembly which is crucial in many fields of the nanotechnology and research related to development of light-harvesting media.

## **Key personnel involved**

*Jagiellonian University, Kraków*

Marek Szymonski  
Bartosz Such  
Jakub Lis  
Amir Zebari

*University of Basel*

Ernst Meyer  
Thilo Glatzel  
Antoine Hinaut

### List of Participants

Grzegorz Brzezinka	Jagiellonian University
	University of Basel
Paweł Czuba	Jagiellonian University
Thilo Glatzel	University of Basel
Szymon Godlewski	Jagiellonian University
	Jagiellonian University
Marek Kolmer	Jagiellonian University
Franciszek Krok	Jagiellonian University
Ernst Meyer	University of Basel
Antoine Hinaut	University of Basel
Piotr Piatkowski	Jagiellonian University
Jakub Prauzner-Bechcicki	Jagiellonian University
Bartosz Such	Jagiellonian University
Dorota Swierz	Jagiellonian University
Agnieszka Szczygiel	Jagiellonian University
Marek Szymonski	Jagiellonian University
Mateusz Wojtaszek	Jagiellonian University
Amir Zebari	Jagiellonian University
Rafał Zuzak	Jagiellonian University