Molecular assemblies on semiconductors and insulating surfaces

joint program project of Jagiellonian University and University of Basel

Program of the annual review meeting, Mulhouse/Basel, June 17-21, 2014

June 17, 2014	**Venue**	*Joint with the 5th European Workshop on Nanomanipulation*	***CLOUS, Residence Master Doctorat Université de Haute-Alsace, Mulhouse, France***
18:00 – 20:00		*JU&UB*	*Welcome and social meeting with participants of the 5th European Workshop on Nanomanipulation*
June 18, 2014	**Venue**	*Joint with the 5th European Workshop on Nanomanipulation*	***Faculté des Sciences et Technique, Université de Haute-Alsace, Mulhouse, France***
9:00 – 9:10	Ernst Meyer	*UB*	*General welcome note*
11:10 – 11:40	Marek Szymonski	*JU*	*Dangling bond logic gates by STM tip-induced manipulation on surfaces of H-passivated semiconductors*
11:40 – 12:00	Jakub Lis	*JU*	*Three ways of switching the dangling bond dimer on Ge(001):H surface*
	Venue	*Joint with the 5th European Workshop on Nanomanipulation*	***Hôtel de Ville, Place de la Réunion, Mulhouse***
18:00 – 20:00		*JU&UB*	*Reception of the Ville de Mulhouse by Mme Anne-Catherine GOETZ, Assistant of the mayor of Mulhouse for foreign affairs*
June 19, 2014	**Venue**	*Joint with the 5th European Workshop on Nanomanipulation*	***Faculté des Sciences et Technique, Université de Haute-Alsace, Mulhouse, France***
9:30 – 9:50	Franciszek Krok	*JU*	*Stability of para-sexiphenyl thin films on TiO2 (110) surfaces*
Poster Session	Łukasz Zając	*JU*	*Adsorption of carboxyphenyl-substituted porphyrin on titanium dioxide*
Poster Session	Rémy Pawlak	*UB*	*Frictional behaviour of a single molecule sliding on a surface*
	Venue	*Joint with the 5th European Workshop on Nanomanipulation*	***Cité de l'Automobile, Mulhouse***
17:30 – 22:30			*Annual Review Reception & Dinner*
June 20, 2014		*Joint with the 5th European Workshop on Nanomanipulation*	***Faculté des Sciences et Technique, Université de Haute-Alsace, Mulhouse, France***
9:30 – 9:50	Rémy Pawlak	*UB*	*Tip-induced displacements at the surface of metallic glass*
11:20 – 11:40	Bartosz Such	*JU*	*On the stability of the chiral clusters of functionalized helicenes on Ag(111) surface*

		Only project partners	***Separate Project meeting,*** *Faculté des Sciences et Technique, Université de Haute-Alsace, Mulhouse, France*
14:00 – 14:15	Thilo Glatzel	*UB*	*Welcome & Introduction*
14.15 – 14.30	Bartosz Such	*JU*	*On the organization of CTPP(Zn(II)) on TiO2 surfaces*
14:30 – 14:45	Jakub Lis	*JU*	*AFM imaging of the Ge(001):H surface -- experiment and theory*
14:45 – 15:00	Łukasz Zając	*JU/UB*	*Dye sensitized solar cells with natural dyes*
15:00 – 15:15	Antoine Hinaut	*UB*	*Molecular spray deposition on KBr(001)*
15:15 – 15:30	Res Jöhr	*UB*	*Single Cu-porphyrines on the rutile TiO2 surface*
15:30 – 16:00			*Coffee break*
16:00 – 17:00		*JU&UB*	*Discussion on recent experimental results and on joint publications*
17:00 – 18:00		*JU&UB*	*Annual review meeting summary and discussion on the future joint activities*
June 21, 2014		*Only project partners*	*Joint Excursion to the Haut-Kœnigsbourg, France*

SWISS CONTRIBUTION

Polish-Swiss Research Programme

Molecular assemblies on semiconductors and insulating surfaces

joint program project of Jagiellonian University and University of Basel

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

University of Basel

Ernst Meyer
Thilo Glatzel
Antoine Hinaut
Res Jöhr

UNIVERSITAS IAGELLONICA CRACOVIENSIS

UNI BASEL

SWISS CONTRIBUTION

Polish-Swiss Research Programme

List of Participants

Alexander Bubendorf	University of Basel
Sara Freund	University of Basel
Thilo Glatzel	University of Basel
Antoine Hinaut	University of Basel
Res Jöhr	University of Basel
Marcin Kisiel	University of Basel
Franciszek Krok	Jagiellonian University
Jakub Lis	Jagiellonian University
Ernst Meyer	University of Basel
Piotr Olszowski	Jagiellonian University
Remy Pawlak	University of Basel
Bartosz Such	Jagiellonian University
Marek Szymonski	Jagiellonian University
Łukasz Zając	Jagiellonian University

UNIVERSITAS IAGELLONICA CRACOVIENSIS

UNI BASEL