

**Progress in Applied Surface, Interface and  
Thin Film Science  
Solar Renewable Energy News  
(SURFINT – SREN IV)  
November 23 – 26, 2015, Florence, Italy**

**Scientific Programme of the SURFINT-SREN IV  
Florence, Italy  
Hotel Laurus, 23 - 26 November 2015**



<b>Monday, 23 November 2015</b>			
<b>7:00 – 9:00</b>	<b>Registration of participants in the hotel Laurus</b>		
<b>Chairman:</b>	<b>Prof. Katsuhiko Akimoto, <i>Tsukuba University, Tsukuba, Japan</i></b>		
9:00 – 9:15	Prof. Paolo Del Bianco	OPENING	President of Fondazione Romualdo Del Bianco, Florence, Italy
9:15 – 9:55	<b>IL1</b> Hikaru Kobayashi	Si surface control for achieving high conversion efficiencies of crystalline Si solar cells	Institute of Scientific and Industrial Research and CREST, Osaka University, Japan
9:55 – 10:35	<b>IL2</b> Alexander Kromka	Chemical Vapor Deposition of Diamond Thin Films for Bio-Medical/Electrical Applications	Institute of Physics of the ASCR, Prague, Czech Republic
<b>10:35 – 10:50</b>	<b>Coffee and tea break</b>		
<b>Chairman:</b>	<b>Prof. Hikaru Kobayashi, <i>Institute of Scientific and Industrial Research and CREST, Osaka University, Japan</i></b>		
10:50 – 11:30	<b>IL3</b> Edmund Dobročka	X-ray diffraction analysis of residual stresses in textured ZnO thin films	Institute of Electrical Engineering SAS, Bratislava, Slovakia
11:30 – 11:55	<b>1</b> José Carlos Piñero	Thermal treatment and interface-related effects on WC/ and Zr/O-terminated diamond Schottky diodes by TEM	Universidad de Cádiz, Spain
11:55 – 12:20	<b>2</b> Stanislav Jurečka	Multifractal analysis and optical properties of nanostructured silicon layers	Institute of Aurel Stodola, University of Zilina, Slovakia
<b>12:20– 13:30</b>	<b>Lunch</b>		
<b>Chairman:</b>	<b>Prof. Pavel Tománek, <i>Faculty of Electrical Engineering and Communication / FEEC, Brno University of Technology, Brno, Czech republic</i></b>		
13:30 – 14:10	<b>IL4</b> Bert Stegemann	Substrate Texturization and Interface Passivation for Silicon Heterojunction Solar Cells	HTW Berlin, University of Applied Sciences, Berlin, Germany
14:10 – 14:35	<b>3</b> Vladmír Tvarožek	Plasmonic behaviour of sputtered Au nanostructures on glass substrate	Slovak Technical University in Bratislava, Institute of Electronics and Photonics, Slovakia
14:35 – 15:00	<b>4</b> Jozef Novak	Optical and mechanical properties of compact ZnO layer with embedded GaP nanowires	Institute of Electrical Engineering SAS, Slovakia
<b>15:00 – 15:15</b>	<b>Coffee and tea break</b>		
<b>Chairman:</b>	<b>Prof. Shigeru Masuda, <i>Graduate School of Arts and Sciences, The University of Tokyo, Japan</i></b>		
15:15 – 15:55	<b>IL5</b> Cesare Frigeri	Structure and Strain Relaxation in Self-Assisted Grown InAs/GaAs Nanowires	CNR-IMEM Institute, Parma, Italy
15:55 – 16:20	<b>5</b> Sahadev Pradhan	Thin film deposition using rarefied gas jet	Department of Chemical Engineering, Indian Institute of Science, India
16:20– 16:45	<b>6</b> Pavol Kováč	Interface MgB <sub>2</sub> layers made by magnesium diffusion into boron	Institute of Electrical Engineering of SAS, Slovakia
16:45 – 17:10	<b>7</b> Ratiba Outemzabet	Grafting of biomolecules on hydrogenated mesoporous silicon surfaces	Université des Sciences et de la Technologie Houari Boumedienne, Faculté de Physique, Alger, Algeria
<b>19:00 – 22:00</b>	<b>Welcome party</b>		

<b>Tuesday, 24 November 2015</b>			
<b>7:00 – 8:30</b>	<b>Breakfast</b>		
<b>Chairman:</b>	<b>Prof. Renato Gonnelli, Dipartimento Scienza Applicata e Tecnologia, Politecnico Di Torino, Italy</b>		
8:30 – 9:10	<b>IL6</b> Dietrich R.T. Zahn	Surface and Interface Properties of Semiconductor Quantum Dots Studied by Raman Spectroscopy	Technische Universität Chemnitz, Chemnitz, Germany
9:10 – 9:50	<b>IL7</b> Vitaly L. Alperovich	Photon-enhanced thermionic emission from GaAs surface with nonequilibrium Cs overlayers	Institute of Semiconductor Physics, Novosibirsk, Russia
9:50 – 10:30	<b>IL8</b> Nadia Saoula	Effect of substrate bias on the TiO <sub>2</sub> films grown by a rf-magnetron sputtering deposition	Equipe Plasma Décharge - Division des Milliéux Ionisés et Laser - Centre de Développement des Technologies Avancées, Alger, Algerie
<b>10:30 – 10:45</b>	<b>Coffee and tea break</b>		
<b>Chairman:</b>	<b>Prof. Thomas Chassé, Institut für Physikalische und Theoretische Chemie, Universität Tübingen, Germany</b>		
10:45– 11:25	<b>IL9</b> Taketoshi Matsumoto	Improvement of crystalline silicon solar cells by the nitric acid oxidation (NAOS) method	Institute of Scientific and Industrial Research and CREST, Osaka University, Japan
11:25– 12:05	<b>IL10</b> Andrej Plecenik	High sensitive Pt/TiO <sub>2</sub> /Pt sandwich type hydrogen gas sensor operating at room temperature	Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava, Slovakia
12:05 – 12:30	<b>8</b> Beatriz Medina Rodr'iguez	Record solar efficiency for CZTSe solar cells fabricated by ink-jet printing technology	Francisco Albero S.A.U. (FAE), Spain
<b>12:30 – 13:30</b>	<b>Lunch</b>		
<b>Chairman:</b>	<b>Prof. Taketoshi Matsumoto, Institute of Scientific and Industrial Research and CREST, Osaka University, Japan</b>		
13:30 – 14:10	<b>IL11</b> Thomas Chassé	Interactions of Organic Films on Metals - Influence of Graphene Buffer Layers	Institut für Physikalische und Theoretische Chemie, Universität Tübingen, Germany
14:10 – 14:50	<b>IL12</b> Ratiba Outemzabet	Effect of light on the electrochemical behaviour of electrodes based TiN dioxide	Université des Sciences et de la Technologie Houari Boumedienne, Faculté de Physique, Alger, Algeria
14:50 – 15:15	<b>9</b> Jozef Osvald	Al <sub>2</sub> O <sub>3</sub> /AlGaIn/GaN heterostructure interface studied by frequency dependent capacitance technique	Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia
<b>15:15 – 15:30</b>	<b>Coffee and tea break</b>		
<b>Chairman:</b>	<b>Prof. Nadia Saoula, Equipe Plasma Décharge - Division des Milliéux Ionisés et Laser – Centre de Développement des Technologies Avancées, Alger, Algerie</b>		
15:30 – 16:10	<b>IL13</b> Martin Kopáni	IR spectroscopy of silicon oxide thin layer	Faculty of Medicine, Comenius University, Bratislava, Slovakia
16:10 – 16:35	<b>10</b> Marek Szymonski	Ordering of meso-tetraphenyl porphyrins-Zn(II) (ZnTPP) and Zn(II)-phthalocyanines (ZnPc) on the TiO <sub>2</sub> (011) surface: STM studies	Jagiellonian University Krakow, Poland
16:35 – 17:00	<b>11</b> Dagmar Gregušová	Technology Of InGaAs/GaAs Metal-Oxide-Semiconductor Heterostructure Field-Effect Transistors: Surface Treatment	Institute of Electrical Engineering, SAS, Slovakia
<b>17:00 – 19:00</b>	<b>POSTER Session I with refreshment, coffee, tea, etc.</b>		
<b>Exhibition</b>			
<b>SPECS Surface Nano Analysis GmbH</b>		Voltastrasse 5, 13355 Berlin, Germany	

<b>Wednesday, 25 November 2015</b>			
<b>7:00 – 8:30</b>	<b>Breakfast</b>		
<b>Chairman</b>	<b>Dr. Štefan Chromik, <i>Institute of Electrical Engineering SAS, Bratislava, Slovakia</i></b>		
8:30 – 9:10	<b>IL14</b> Giampiero Pepe	Unconventional superconductivity for optical photon detection	Faculty of Engineering, University of Naples Federico II and CNR-SPIN, Naples, Italy
9:10 – 9:50	<b>IL15</b> Shigeru Masuda	UPS and MAES studies for organic–metal interfaces	Graduate School of Arts and Sciences, The University of Tokyo, Japan
9:50 – 10:30	<b>IL16</b> Renato Gonnelli	The physics of few-layer graphene under strong surface doping via electrochemical gating	Dipartimento Scienza Applicata e Tecnologia, Politecnico Di Torino, Italy
<b>10:30 – 10:45</b>	<b>Coffee and tea break</b>		
<b>Chairman:</b>	<b>Dr. Alexander Kromka, <i>Institute of Physics of the ASCR, Prague, Czech Republic</i></b>		
10:45 – 11:25	<b>IL17</b> Katsuhiko Akimoto	Defect characterization of Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> and feasibility study of amorphous carbon film growth	Tsukuba University, Tsukuba, Japan
11:25 – 11:50	<b>12</b> František Dubecký	Study of Novel Metal Contacts on Semi-Insulating GaAs: Electrical, Photoelectronic and XPS Characterization	Institute of Electrical Engineering, SAS, Bratislava, Slovakia
<b>11:50 – 13:30</b>	<b>Lunch</b>		
<b>Chairman:</b>	<b>Prof. Ratiba Outemzabet, <i>Université des Sciences et de la Technologie Houari Boumedienne, Faculté de Physique, Alger, Algeria</i></b>		
13:30 – 14:10	<b>IL18</b> Štefan Chromik	Advanced perovskite thin films and structures for applications	Institute of Electrical Engineering SAS, Bratislava, Slovakia
14:10 – 14:35	<b>13</b> Natalia Fernández-Delgado	Effect of an in-situ thermal anneal on the structural properties of self-assembled GaSb/GaAs quantum dots	Department of Material Science, Metallurgical Engineering and Inorganic Chemistry, IMEYMAT, University of Cadiz, Cadiz, Spain
14:35 – 15:00	<b>14</b> Krzysztof Sztymelski	The voltage asymmetry of batteries discharge in the off-grid solar systems	Silesian University of Technology, Poland
<b>15:00 – 15:15</b>	<b>Coffee and tea break</b>		
<b>Chairman:</b>	<b>Prof. Giampiero Pepe, <i>Faculty of Engineering, University of Naples Federico II and CNR-SPIN, Naples, Italy</i></b>		
15:15 – 15:40	<b>15</b> Nuria Baladés	Structural characterization of InAlAsSb/InGaAs/InP for solar cells	Department of Material Science, Metallurgical Engineering and Inorganic Chemistry, IMEYMAT, University of Cadiz, Cadiz, Spain
15:40 - 16:05	<b>16</b> Björn Münzig	EnviroESCA™ – The Beginning of a New Era	Specs Surface Nano Analysis GmbH, Berlin, Germany
<b>16:05 – 18:00</b>	<b>POSTER Session II with refreshment, coffee, tea, etc.</b>		
<b>Exhibition</b>			
<b>SPECS Surface Nano Analysis GmbH</b>		Voltastrasse 5, 13355 Berlin, Germany	

<b>Thursday, 26 November 2015</b>			
<b>7:00 – 8:30</b>	<b>Breakfast</b>		
<b>Chairman</b>	<b>Prof. Alexander Šatka, <i>Institute of Electronics and Photonics, Slovak University of Technology, Bratislava, Slovakia</i></b>		
8:30 – 9:10	<b>IL19</b> Dario Daghero	Effect of ion irradiation on surface morphology and superconductivity of BaFe(As,P) films	Dipartimento Scienza Applicata e Tecnologia, Politecnico Di Torino, Italy
9:10 – 9:50	<b>IL20</b> Martin Weis	The role of secondary doping in conductive polymer poly(3,4-ethylenedioxythiophene):poly(4-styrenesulfonate)	Faculty of Electrical Engineering and Information Technology, Slovak University of Technology, Bratislava, Slovakia
<b>9:50 – 10:05</b>	<b>Coffee and tea break</b>		
10:05 – 10:45	<b>IL21</b> Pavel Tománek	Multiscale characterization of solar cells	Faculty of Electrical Engineering and Communication / FEEC/, University of Technology, Brno, Czech republic
10:45 – 11:25	<b>IL22</b> Andrea Šagatová	GaAs Radiation Sensor Improvement by Low Doses of Gamma-rays, Neutrons and Electrons	Faculty of Electrical Engineering and Information Technology, Slovak University of Technology, Bratislava, Slovakia
<b>11:25 – 12:00</b>	<b>Conclusion – results of competition of works of young researchers</b>		
<b>13:00 – 21:00</b>	<b>Trip to Pisa</b>		