

# SPIG 2014 PROGRAM

Belgrade, Serbia, August 26 – 29, 2014

Tuesday 26 <sup>th</sup> August 2014	
<b>Workshops</b>	
	<b>DEA Workshop</b>
08:30-09:00	Registration
09:00-09:10	Opening and Introduction Nigel Mason (Open University)
	<b>Session 1, Hall A, Chair: Nigel Mason</b>
09:10-09:30	<i>Electron attachment to molecules studied by electron-molecular crossed beam experiment</i> <b>Janina Kopyra</b> , Siedlce University, Siedlce, Poland
09:30-09:50	<i>Electron attachment to unstable molecules</i> <b>Tom Field</b> , Queen's University of Belfast, Belfast, UK
09:50-10:10	<i>Dissociative electron attachment studies with potential radiosensitizers</i> <b>Stephan Denifl</b> , University of Innsbruck, Institute of Ion Physics, Innsbruck, Austria
10:10-10:30	<i>(Time-dependent) Density Functional Theory for understanding dissociative chemistry of organometallic compounds</i> <b>Matija Zlatar</b> , Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Serbia
<b>10:30-11:00</b>	<b>Coffee break</b>
	<b>Session 2, Hall A, Chair: Oddur Ingólfsson</b>
11:00-11:20	<i>Dissociation of polar molecules at very low energies</i> <b>Roman Čurík</b> , J. Heyrovský Institute of Physical Chemistry of the ASCR, Prague, Czech Republic
11:20-11:40	<i>Role of symmetry lowering in DEA</i> <b>Juraj Fedor</b> , Department of Chemistry, University of Fribourg, Fribourg, Switzerland
11:40-12:00	<i>Velocity slice imaging study on dissociative electron attachment</i> <b>Ewelina Szymanska</b> , Department of Physical Sciences, The Open University, Milton Keynes, UK
12:00-12:20	<i>Theoretical treatment of dissociative electron attachment</i> <b>Peter Papp</b> , Comenius University, Bratislava, Slovakia
<b>12:20-13:50</b>	<b>Lunch break (&amp; registration)</b>
	<b>XiBiGP Workshop</b>
	<b>NonEqProc Workshop</b>
13:50-14:00	Opening and Introduction Christophe Nicolas (SOLEIL synchrotron)
	Opening and Introduction Zoran Lj. Petrovic (SASA)
	<b>Session 1, Hall A</b> <i>Chair: Christophe Nicolas</i>
	<b>Session 1, Hall B</b> <i>Chair: Saša Dujko</i>
14:00-14:30	<i>Study of single photon multiple ionization processes with a magnetic bottle spectrometer</i> <b>Pascal Lablanquie</b> , LCP-MR CNRS & Université Paris VI, Paris, France
	<i>Non-equilibrium transport of charged particles in gaseous and disordered materials</i> <b>Ron White</b> , ARC Centre of Excellence for Antimatter-Matter Studies, James Cook University, Townsville, Australia
14:30-15:00	<i>Synchrotron radiation studies of biomolecules: photoabsorption, and core and valence photoionization</i> <b>Kevin Prince</b> , Sincrotrone Trieste, Trieste, Italy
	<i>First principles calculation of the effect of Coulomb collisions on electron swarms</i> <b>Zoltan Donko</b> , Wigner Research Centre for Physics, Hungarian Academy of Sciences, Budapest, Hungary
15:00-15:30	<i>Electron-ion coincidence spectroscopy as a tool to study radiation-induced molecular dynamics</i> <b>Edwin Kukkk</b> , Department of Physics and Astronomy, University of Turku, Turku, Finland
	<i>Recent progress in the Newtonian three-body problem</i> <b>Veljko Dmitrašinović and Milovan Šuvakov</b> , Institute of Physics, Belgrade, Serbia

<b>15:30-16:00</b>	<b>Coffee break and discussion</b>	
	<b>Session 2, Hall A</b> <i>Chair: Lidija Andrić</i>	<b>Session 2, Hall B</b> <i>Chair: Marija Radmilović-Rađenović</i>
16:00-16:30	<i>Biomolecular ionization and fragmentation dynamics studied with energetic photons from synchrotrons and free electron lasers</i> <b>Thomas Schlathöler</b> , University of Groningen, Groningen, Netherlands	<i>Emission spectroscopy of dense plasmas in liquids: a winding road from light to chemistry</i> <b>Thierry Belmonte</b> , Institut Jean Lamour, Université de Lorraine, Nancy, France
16:30-17:00	<i>Action spectroscopy of stored biomolecular ions in the soft X-ray range</i> <b>Alexandre Giuliani</b> , Synchrotron SOLEIL, France/ <b>Aleksandar Milosavljević</b> , Institute of Physics, University of Belgrade, Belgrade, Serbia	<i>Picosecond-TALIF to probe atomic oxygen in the plume of an RF driven atmospheric pressure plasma jet in ambient air</i> <b>Jérôme Bredin</b> , The University of York, York, UK
17:00-17:30	<i>Proton transfer and non-local electronic relaxation in aqueous solutions revealed from core-level autoionization</i> <b>Bernd Winter</b> , BESSY, Germany	<i>Comparison of surface vacuum ultraviolet emissions with resonance level number densities in Argon and Argon containing plasmas</i> <b>Svetlana Radovanov</b> , Applied Materials/Varian Semiconductor, USA
<b>17:30-18:00</b>	<b>Coffee break</b>	
	<b>Joint Session (XiBiGP &amp; NonEqProc), Hall A</b> <i>Chair: Bratislav Marinković</i>	
18:00-18:30	<i>Spectral analysis from physics for optimization of magnetic resonance spectroscopy in early tumor diagnostics</i> <b>Karen Belkić</b> , Karolinska Institute, Stockholm, Sweden	
18:30-19:00	<i>Measuring elementary plasma processes: Elastic scattering, vibrational and electronic excitation, dissociative attachment</i> <b>Michael Allan</b> , University of Fribourg, Switzerland	
19:00-19:30	<i>Future Studies on Electron Scattering; a Renaissance?</i> <b>Nigel Mason</b> , The Open University, Milton Keynes United Kingdom	
<b>19:30-22:00</b>	<b>Welcome party (Gallery of Science and Technology, SASA) – concert “Ca va” (Prague)</b>	

Wednesday 27<sup>th</sup> August 2014

SPIG 2014 (day 1)

(**PL** – Plenary lecture: 35+10 min; **TL** – Topical lecture: 25+5 min; **PR** – Progres Report: 15+5 min)

08:00-09:15	Registration	
09:15-09:45	<b>Opening, Chair: Zoran Mijatović</b>	
	<b>Plenary Session 1, Hall A, Chair: Zoran Lj. Petrović</b>	
09:45-10:30	<i>Plasma Medicine: Fundamentals and Applications</i> <b>Alexander Fridman</b> , Drexel University, Philadelphia, USA	
<b>10:30-11:00</b>	<b>Coffee break</b>	
	<b>Plenary Session 2, Hall A, Chair: Luka Popović</b>	
11:00-11:45	<i>What happens at the surface impact site of a slow highly charged ion?</i> <b>Friedrich Aumayr</b> , Vienna University of Technology (TU Wien), Vienna, Austria	
11:45-12:30	<i>Fifty Years of QUASARS: Physical Insights and Potential for Cosmology</i> <b>Jack Sulentic</b> , Instituto de Astrofísica de Andalucía – CSIC, Granada, Spain	
<b>12:30-14:30</b>	<b>Lunch break</b>	
	<b>Parallel session A1,</b> <b>Chair: Aleksandar Milosavljević</b>	<b>Parallel session B1,</b> <b>Chair: Bratislav Obradović</b>
14:30-15:00	<i>Positron interactions with atoms and molecules</i> <b>Stephen Buckman</b> , The Australian National University, Canberra, Australia	<i>A CCP-plasma source operation in the high-VHF to UHF frequencies and scalability to large-area applications</i> <b>Albert R. Ellingboe</b> , Dublin City University, Dublin, Ireland
15:00-15:30	<i>Chirality reveals electronic/nuclear motion couplings</i> <b>Gustavo Garcia</b> , Synchrotron SOLEIL, France	<i>Application of low temperature plasmas for restoration/conservation of archaeological objects</i> <b>František Krčma</b> , Brno University of Technology, Brno, Czech Republic
15:30-15:50	<i>Stability of nucleosides in the gas phase under ionizing radiation</i> <b>Sylvain Maclot</b> , Université de Caen Basse-Normandie, Caen, France	<i>Treatment effects and stability of metal substrates treated by cold surface DBD plasma</i> <b>Vadym Prysiaznyi</b> , Faculty of Engineering, UNESP, Guaratingueta, Brazil
<b>15:50-16:30</b>	<b>Coffee break</b>	
	<b>Parallel session A2,</b> <b>Chair: Dragana Marić</b>	<b>Parallel session B2,</b> <b>Chair: Vladimir Srečković</b>
16:30-17:00	<i>Liquid-phase reactions induced by atmospheric pressure glow discharge with liquid electrode</i> <b>Fumiyoshi Tochikubo</b> , Tokyo Metropolitan University, Tokyo, Japan	<i>Anion chemistry in Titan</i> <b>Janko Zabka</b> , J. Heyrovsky Institute of Physical Chemistry, Prague, Czech Republic
17:00-17:20	<i>Atmospheric Pressure Plasma Jet interactions with liquids</i> <b>Sylwia Ptasinska</b> , Notre Dame University, Notre Dame, USA	<i>Langmuir Waves in Interplanetary Plasma</i> <b>Sonja Vidojević</b> , IHIS – techno experts d.o.o, Belgrade, Serbia
17:20-17:40	<i>Low temperature plasma for medical applications</i> <b>Ita Junkar</b> , Jožef Stefan Institute, Ljubljana, Slovenia	<i>Studying the complex absorption profiles of Si IV in 21 HiBALQSO spectra</i> <b>Dimitrios Stathopoulos</b> , National and Kapodistrian University of Athens, Greece

17:40-18:00	<i>Monte Carlo modeling of positron transport in experimental devices and applications</i> <b>Srdan Marjanović</b> , Institute of Physics, University of Belgrade, Belgrade, Serbia	<i>Dynamic Effects in Excited Atomic Systems</i> <b>Andrei Klyucharev</b> , Saint-Petersburg University, St.-Petersburg, Russia
18:00-19:30	<b>Poster session (1) - Gallery of Science and Technology, SASA</b> <i>Posters: 1.20 – 1.33; 2.1 – 2.19; 3.1 – 3.24</i>	

Thursday 28 <sup>th</sup> August 2014		
SPIG 2014 (day 2)		
(PL – Plenary lecture: 35+10 min; TL – Topical lecture: 25+5 min; PR – Progres Report: 15+5 min)		
	<b>Plenary Session 3, Hall A, Chair: Nikola Konjević</b>	
09:00-09:45	<i>The role of high-energy ion-atom/molecule collisions in radiotherapy</i> <b>Dževad Belkić</b> , Department of Oncology and Pathology, Nobel Medical Institute, Karolinska Institute, Stockholm, Sweden	
09:45-10:30	<i>Study of a High-Performance Plasma in the Large Helical Device</i> <b>Akio Komori</b> , National Institute for Fusion Science, Gifu, Japan	
10:30-11:00	<b>Coffee break</b>	
	<b>Plenary Session 4, Hall A, Chair: Bratislav Marinković</b>	
11:00-11:45	<i>The two sides of the electron in FEBID: Fragmentation of molecules and molecular synthesis</i> <b>Petra Swiderek</b> , University of Bremen, Bremen, Germany	
11:45-12:30	<i>Recent Results for Electron Scattering from Atoms and Molecules</i> <b>Michael Brunger</b> , Flinders University, Adelaide, Australia	
12:30-14:30	<b>Lunch break</b>	
	<b>Parallel session A3,</b> <i>Chair: Stephen Buckman</i>	<b>Parallel session B3,</b> <i>Chair: Nevena Puač</i>
14:30-15:00	<i>Latest developments in low energy electron-molecule scattering: the R-matrix approach</i> <b>Jimena Gorfinkiel</b> , Open University, Milton Keynes, UK	<i>Deposition of innovative coatings by DBD at atmospheric-pressure</i> <b>David Duday</b> , CRP - Gabriel Lippmann, Belvaux, Luxembourg
15:00-15:30	<i>Low-energy electron-induced bond cleavage studied in DNA at a single-molecule level</i> <b>Ilko Bald</b> , Universität Potsdam, Potsdam-Golm, Germany	<i>The afterglow of a surface-wave microwave discharge as a tool for surface process studies</i> <b>Kinga Kutasi</b> , Hungarian academy of sciences, Budapest, Hungary
(A) 15:30-15:50 (B) 15:30-16:00	<i>Electron attachment to c-C<sub>4</sub>F<sub>8</sub>O: dynamics and implications for plasmas</i> <b>Radmila Janečkova</b> , Department of Chemistry, University of Fribourg, Fribourg, Switzerland	<i>Plasma synthesis and processing of carbon nanowalls and submicron metallic particles</i> <b>Gheorghe Dinescu</b> , National Institute for Laser, Plasma and Radiation Physics, Magurele, Romania
15:50-16:30	<b>Coffee break</b>	

	<b>Parallel session A4,</b> <i>Chair: Petra Swiderek</i>	<b>Parallel session B4,</b> <i>Chair: Saša Dujko</i>
(A) 16:30-16:50 (B) 16:30-17:00	<i>Molecular clusters: radiation induced processes and methods to control neutral beams</i> <b>Marcin Dampc</b> , The Open University, Milton Keynes, UK	<i>The IST-LISBON database on LXcat</i> <b>Luís Lemos Alves</b> , Instituto de Plasmas e Fusão Nuclear, Lisboa, Portugal
(A) 16:50-17:10 (B) 17:00-17:30	<i>Low energy electron interaction with typical focused electron beam induced deposition precursor</i> <b>Rachel Thorman</b> , University of Iceland, Reykjavik, Iceland	<i>Optical diagnostics of laboratory analogue of TLE discharges (Transient Luminous Events)</i> <b>Milan Šimek</b> , Academy of Sciences of the Czech Republic, Prague, Czech Republic
(A) 17:10-17:40 (B) 17:30-18:00	<b>COST CELINA lecture</b> <i>Event by event modelling procedure to simulate electron beam induced deposition</i> <b>Gustavo Garcia</b> , CSIC, Madrid, Spain	<i>canceled</i> Atsushi M. Ito, National Institute for Fusion Science, Gifu, Japan
17:40-18:00 (A)	<b>COST CELINA WG1 Meeting</b>	
<b>18:00-19:30</b>	<b>Poster session (2) - Gallery of Science and Technology, SASA</b> <i>Posters: 1.1 – 1.19, 1.34 and 1.35; 3.25 – 3.52; 4.1 – 4.9</i>	
<b>19:30-20:00</b>	<b>Concert (Gallery of Science and Technology, SASA): quartet “Full Harmony”</b>	

<b>Friday 29<sup>th</sup> August 2014</b>	
<b>SPIG 2014 (day 3)</b>	
<i>(PL – Plenary lecture: 35+10 min; TL – Topical lecture: 25+5 min; PR – Progres Report: 15+5 min)</i>	
	<b>Plenary Session 5, Hall A, Chair: Gordana Malović</b>
09:00-09:45	<i>Recent developments in positronium physics</i> <b>David Cassidy</b> , University College London, London, UK
09:45-10:30	<i>Laser ablation in liquids during nanoparticle production</i> <b>Alessandro De Giacomo</b> , University of Bari, Dipartimento di Chimica, Bari, Italy
<b>10:30-11:00</b>	<b>Coffee break</b>
	<b>Plenary Session 6, Hall A, Chair: Milorad Kuraica</b>
11:00-11:45	<i>Modelling of physical and chemical processes in cold atmospheric-pressure plasma jets</i> <b>George Naidis</b> , Institute for High Temperatures, RA S, Moscow, Russia
11:45-12:30	<i>Attosecond VUV Coherent Control of Molecular Dynamics and Perspectives For Using ELI-ALPS User Facility</i> <b>Predrag Ranitović</b> , Lawrence Berkeley National Laboratory, Berkeley, California, USA
<b>12:30-14:30</b>	<b>Lunch break / SPIG Committee meeting at 13h</b>

	<b>Parallel session A5,</b> <i>Chair: Goran Poparić</i>	<b>Parallel session B5,</b> <i>Chair: Milivoje Ivković</i>
14:30-14:50	<i>Electron transfer upon potassium collisions with biomolecules</i> <b>Filipe Ferreira da Silva</b> , Universidade Nova de Lisboa, Portugal	<i>Electrical breakdowns in air: new experiments and statistical and numerical models</i> <b>Aleksandar Jovanović</b> , University of Niš, Serbia
14:50-15:10	<i>Absolute differential cross sections for elastic electron scattering from small biomolecules</i> <b>Jelena Maljković</b> , Institute of Physics, University of Belgrade, Belgrade, Serbia	<i>Spectroscopic study of plasma during electrolytic oxidation of magnesium-aluminium alloys</i> <b>Jovica Jovović</b> , Faculty of Physics, University of Belgrade, Belgrade, Serbia
15:10-15:30	<i>Electron – Indium atom scattering and analysis of electron and optical spectra</i> <b>Maja Rabasović</b> , Institute of Physics, University of Belgrade, Belgrade, Serbia	<i>Measurements and models of transient and stationary regimes of glow discharge in argon</i> <b>Marjan Stankov</b> , University of Niš, Niš, Serbia
15:30-15:50	<i>Single electron capture in fast ion-atom collisions</i> <b>Nenad Milojević</b> , University of Niš, Serbia	<i>Diagnostics of Laser induced plasma by optical emission spectroscopy</i> <b>Marko Cvejić</b> , Institute of Physics, University of Belgrade, Belgrade, Serbia
<b>15:50-16:30</b>	<b>Coffee break</b>	
	<b>Parallel session A6,</b> <i>Chair: Zoltan Donkó</i>	<b>Parallel session B6,</b> <i>Chair: Nenad Simonović</i>
(A) 16:30-16:50 (B) 16:30-17:00	<i>Electron heating dynamics in multi-frequency capacitive RF discharges</i> <b>Aranka Derzsi</b> , Hungarian academy of sciences, Budapest, Hungary	<i>Electron excitation and autoionization cross sections for elements of chemically peculiar (CP) stars: Study of bismuth</i> <b>Branko Predojević</b> , University of Banja Luka, Banja Luka, Repubika Srpska, B&H
(A) 16:50-17:10 (B) 17:00-17:20	<i>Simulation and modeling of Resistive Plate Chambers</i> <b>Danko Bošnjaković</b> , Institute of Physics, University of Belgrade, Belgrade, Serbia	<i>Wake effect in graphene due to moving charged particles</i> <b>Ivan Radović</b> , VINCA Institute of Nuclear Sciences, Belgrade, Serbia
(A) 17:10-17:30 (B) 17:20-17:40	<i>The non-symmetric ion-atom absorption processes in the helium rich white dwarf atmospheres in UV and EUV region</i> <b>Vladimir Srećković</b> , Institute of Physics, University of Belgrade, Belgrade, Serbia	<i>Interaction of charged particles with capillaries</i> <b>Károly Tőkési</b> , Institute for Nuclear Research, Hungarian Academy of Sciences, Debrecen, Hungary
	<b>Free time</b>	
<b>20:00</b>	<b>Gathering and transport to Danube quay</b>	
<b>20:30 -</b>	<b>Conference dinner and Closing</b>	

**Saturday 30<sup>th</sup> August 2014**

<b>10:00-17:00</b>	<b>Excursions (optional, info at registration desk)</b>
<b>17:00</b>	<b>Departure</b>