



Molecules and Light 2017

IV Autumn Meeting of the Polish Photochemistry Group
Zakopane, 25-29 September 2017



Conference Program

Monday, 25 September, 2017

Monday, 25 September, 2017:	
14.00-19.00	Registration
Monday, 25 September 2017 Evening Session: 19.00-23.00	Light-molecule interactions - lessons learned from Nature Chair: Jerzy Karpiuk
19.00-19.15	Welcome address and conference opening
19.15-20.15 OL	Opening lecture Wiesław Gruszecki , Faculty of Mathematics, Physics and Information Science, Maria Curie-Skłodowska University, Lublin <i>Regulation of light harvesting and excitation energy transfer in the photosynthetic apparatus of plants</i>
20.15-23.00	Welcome dinner

Tuesday, 26 September 2017

Tuesday, 26 September 2017 Morning Session: 9.00-13.00	Water, light and photocatalysis Chair: Marek Sikorski
9.00-10.00 PL1	Andrzej Sobolewski , Institute of Physics, Polish Academy of Sciences, Warsaw <i>Burning water with sunlight: insights from computational chemistry</i>
10.00-10.30 OC1	Olaf Morawski , Institute of Physics, Polish Academy of Sciences, Warsaw <i>Photocatalytic water oxidation – the new approach to water splitting</i>
10.30-11.00	Coffee break
11.00-11.30 OC2	Wojciech Macyk , Faculty of Chemistry, Jagiellonian University, Kraków <i>Self-sensitized photocatalytic degradation of colorless organic pollutants forming surface $ti(iv)$ complexes</i>
11.30-12.00 OC3	Marcin Kobielski , Faculty of Chemistry, Jagiellonian University, Kraków <i>Spectroelectrochemical method of surface states characterization and DOS determination for titanium dioxide</i>
12.00-12.20 OC4	Magdalena Mikrut , Faculty of Chemistry, Jagiellonian University, Kraków <i>Photoinduced reactive oxygen species generation by particulate matter standard material SRM1648a</i>
12.20-12.50 OC5	Joanna Kunczewicz , Faculty of Chemistry, Jagiellonian University, Kraków <i>Spectroelectrochemical approach to estimation of bands position and density of introduced electronic states in rhodium-doped titania</i>
13.00-14.30	Lunch

Tuesday, 26 September 2017

Tuesday, 26 September 2017		Photochemistry and information processing with light
Afternoon Session: 14.30-19.00		Chair: Wojciech Macyk
14.30-15.30 PL2	Radek Cibulka , University of Chemistry and Technology, Prague <i>Flavins: from yellow cofactors to useful tools in photocatalysis</i>	
15.30-16.00 OC6	Konrad Szaciłowski , AGH University of Science and Technology, Kraków <i>Photoelectrochemical sensors, neuromimetic devices and reservoir computers</i>	
16.00-16.30 OC7	Karol Krzymiński , Faculty of Chemistry, University of Gdańsk, Gdańsk <i>Acridinium chemiluminescent salts – physicochemistry and examples of application</i>	
16.30-17.00	Coffee break	
19.00-20.00	Dinner	
Tuesday, 26 September 2017		Poster session
Evening Session: 20.00-21.00		

Wednesday, 27 September 2017

Wednesday, 27 September 2017		Photophysics in various time and space scales
Afternoon Session: 9.00-13.00		Chair: Gotard Burdziński
9.00-10.00 PL3	Michel Sliwa , University of Lille, CNRS <i>Synergy between serial femtosecond crystallography & transient absorption spectroscopy to reveal the dynamics of photo-switchable fluorescent proteins</i>	
10.00-10.30 OC8	Marek Sikorski , Faculty of Chemistry, Adam Mickiewicz University, Poznań <i>Fluorescence excitation-emission spectroscopy: principles and applications</i>	
10.30-11.00	Coffee break	
11.00-11.45 IL1	Michał Gil , Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw <i>Supersonic jet spectroscopy of aza-aromatic molecules with intra- and intermolecular hydrogen bonds</i>	
11.45-12.15 OC9	Bolesław Kozankiewicz , Institute of Physics, Polish Academy of Sciences, Warsaw <i>Vibronic structure of single terrylene molecules in crystalline matrices</i>	
12.15-12.45 OC10	Marcin Andrzejak , Faculty of Chemistry, Jagiellonian University, Kraków <i>Missing states and irregularities in excited states manifold of 2,2'-bithiophene – what basis set is large enough?</i>	
13.00-14.00	Lunch	

Wednesday, 27 September 2017		Excursion
14.00-19.00		
19.00-20.30	Dinner	

Thursday, 28 September 2017

Thursday, 28 September 2017 Morning Session: 9.00-13.00		Photodynamics and electrons Chair: Piotr Skurski
9.00-10.00 PL4	Stefan Lochbrunner , Institute of Physics, University of Rostock, Rostock <i>Electron transfer pathways from time resolved spectroscopy</i>	
10.00-10.45 IL2	Janina Kopyra , Faculty of Sciences, Siedlce University, Siedlce <i>Decomposition of biologically relevant molecules by electron impact</i>	
10.45-11.15	Coffee break	
11.15-11.45 OC11	Gotard Burdziński , Faculty of Physics, Adam Mickiewicz University, Poznań <i>Photochromic reactions of 3H-naphthopyrans</i>	
11.45-12.15 OC12	Michał Rode , Institute of Physics, Polish Academy of Sciences, Warsaw <i>Excited state relaxation pathways in substituted phthalides</i>	
12.15-12.45 OC13	Iwona Grądzka , Faculty of Physics, Adam Mickiewicz University, Poznań <i>Photodynamics of ruthenium dyes interacting with titania nanoparticles for solar cells and water splitting systems</i>	
13.00-14.30	Lunch	

Thursday, 28 September 2017 Afternoon Session: 15.00-18.00		Panel Discussion: Problems, dilemmas and predictions - the future of science on Molecules and Light
15.00-16.15 Part 1	Jerzy Karpiuk , Institute of Physics, Polish Academy of Sciences, Warsaw <i>Chair and Introduction</i>	
	Andrzej Sobolewski , Institute of Physics, Polish Academy of Sciences, Warsaw <i>Organic photovoltaics with p-f-n junctions: A computational suggestion</i>	
	Stefan Lochbrunner , Institute of Physics, University of Rostock, Rostock <i>Molecular nanostructures for photonics: some challenges</i>	
	Wojciech Macyk , Faculty of Chemistry, Jagiellonian University, Kraków <i>Bandgap determination: shall we rely on DRS measurements?</i>	
	Open discussion	
16.15-16.45	Coffee break	
16.45-18.00 Part 2	Marek Sikorski , Faculty of Chemistry, Adam Mickiewicz University, Poznań <i>Between success and failure: The history of Singlet Oxygen</i>	
	Piotr Skurski , Faculty of Chemistry, University of Gdańsk, Gdańsk <i>Novel aspects of the key process in the Fischer-Tropsch synthesis: transition-metal-free catalysis of carbon monoxide hydrogenation reaction</i>	
	Jerzy Karpiuk , Institute of Physics, Polish Academy of Sciences, Warsaw <i>Charge transfer triplet states - still elusive or yet promising?</i>	
	Open discussion	

Thursday, 28 September 2017 Evening, 19.00 – 23.00		Conference Dinner
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Friday, 29 September 2017

Friday, 29 September 2017		Proton and electron transfer	
Morning Session: 9.00-12.00		Chair: Andrzej Sobolewski	
9.30-10.15 IL3	Leszek Łapiński , Institute of Physics, Polish Academy of Sciences, Warsaw <i>Solid H₂ versus solid noble-gases: Matrix-environment effect on photoinduced hydrogen-atom transfer in heterocyclic compounds</i>		
10.15-10.45 OC14	Cristina Barboza , Institute of Physics, Polish Academy of Sciences, Warsaw <i>Revealing the dynamics of the excited proton transfer of a π-conjugated salicylidene compound</i>		
10.45-11.15	Coffee break		
11.15-11.45 OC15	Jerzy Karpiuk , Institute of Physics, Polish Academy of Sciences, Warsaw <i>Intramolecular electron transfer in solid hosts</i>		
11.45-12.00	Closing remarks		
12.30-13.30	Lunch		

Posters:

P1	Iwona Anusiewicz, Piotr Skurski , Faculty of Chemistry, University of Gdańsk, Gdańsk <i>Formation of H₃O⁺ cations due to aluminum fluoride</i>
P2	Paweł Gawryś , Institute of Physics, Polish Academy of Sciences, Warsaw <i>Synthesis and photophysics of phthalide-based white fluorophores</i>
P3	Hanna Grajek , Department of Physics and Biophysics, University of Warmia and Mazury in Olsztyn, Olsztyn <i>The effect of temperature and light on tetracycline degradation by Na[Fe(EDTA)] and Fe(III)citrate</i>
P4	Agnieszka Jarosz , Faculty of Chemistry, Jagiellonian University, Kraków <i>Two synthetic approaches for the preparation of core-shell upconverting nanoparticles</i>
P5	Paulina Majewska , Faculty of Chemistry, Jagiellonian University, Kraków <i>Core-shell upconverting nanoparticles coated with surface-modified titania for photocatalytic applications</i>
P6	Paweł Mikrut , Faculty of Chemistry, Jagiellonian University, Kraków <i>Photocatalysis at shaped TiO₂ crystals</i>
P7	Dorota Prukala , Faculty of Chemistry, Adam Mickiewicz University, Poznań <i>Photophysical properties of E-hydroxystilbazols in dependence of pH</i>
P8	Mateusz Trochowski , Faculty of Chemistry, Jagiellonian University, Kraków <i>Hydroxy derivatives of anthraquinone as TiO₂ sensitizers</i>
P9	Olena Vakuliuk , Institute of Organic Chemistry, Polish Academy of Sciences, Warsaw <i>Isoindolo[5,8]diones - structurally unique fluorescent dyes</i>
P10	Jacek Wierzchowski , Department of Physics and Biophysics, University of Warmia and Mazury in Olsztyn, Olsztyn <i>Excited-state proton transfer in purine analogues: kinetic analysis</i>