



## Microsymposium IPC PAS 15-17 January 2019

### Oral presentations - 15 January 2019 – Auditorium of IPC

#### Session I

Chair: Adam Kubas

Time	Speaker	Title presentation
9:30	Ostapko Jakub	Two Macrocycles in One Shot: Synthesis, Spectroscopy, Photophysics, and Tautomerism of 23-Oxahemiporphycene and 21-Oxacorrole-5-carbaldehyde
9:55	Postek Witold	Microfluidic screening of antibiotic susceptibility at a single-cell level shows inoculum effect of cefotaxime in <i>E. coli</i>
10:20	Podrażka Marta	Paper-Based System for Ion Transfer Across the Liquid-Liquid Interface
10:45	Coffee break	

#### Session II

Chair: Evelin Witkowska

Time	Speaker	Title presentation
11:15	Prochowicz Daniel	Formation of stable mixed guanidinium-methylammonium phases with exceptionally long carrier lifetimes for high efficiency lead iodide-based perovskite photovoltaics
11:40	Pękalski Jakub	Orientational ordering of lamellar structures on closed surfaces
12.05	Roguska Agata	Metal TiO <sub>2</sub> Nanotube Layers for the Treatment of Dental Implant Infections
12:30	Lunch break	



### Session III

**Chair: Krzysztof Sozański**

Time	Speaker	Title presentation
13:30	Borycki Dawid	Correlation gating quantifies the optical properties of dynamic media in transmission
13:55	Krzyżewska Klaudyna	Supramolecular organization of liquid-crystal dimers – bis-cyanobiphenyl alkanes on HOPG by scanning tunneling microscopy
14:20	Zienkiewicz-Machnik Małgorzata	Tuning nano-nickel selectivity with tin in flow hydrogenation of 6-methyl-5-hepten-2-one by surface organometallic chemistry modification
14:45	Kardaś Tomasz	Nonlinear polarization evolution of ultrashort pulses in polarization maintaining fibers



## Poster Sessions: 16-17 January – Main Lobby of IPC

Wednesday – 16 January 2019

L.P.	Numer Zespołu	Lista Autorów	Angielski tytuł Posteru	Publikacja online TAK/NIE
1.	Z2	Kamila Łępicka, Piotr Pieta, Włodzimierz Kutner,	Structure-Reactivity Requirements with respect to Nickel-Salen Based Polymers for Energy Storage Application	NIE
2.	Z2	Paulina Materska-Wilczyńska, Jyoti, Renata Rybakiewicz, Teresa Żołek, Dorota Maciejewska, Krzysztof Noworyta, Włodzimierz Kutner	Imatinib Determination Using a Chemosensor with Carbazole-based Molecularly Imprinted Polymer Film as the Recognition Unit	NIE
3.	Z2	Viknasvarri Ayerdurai, Maciej Cieplak, Piyush Sindhu Sharma, Francis D'Souza, and Włodzimierz Kutner	Molecularly Imprinted Polymers for Determination of Chosen Food Toxins	NIE
4.	Z2	Jyoti, Renata Rybakiewicz, and Włodzimierz Kutner	Carbazole functional monomers for molecularly imprinted polymers. Design, synthesis, and characterization	NIE
5.	Z3	K. Karnowski, J. SolarSKI, A. Consejo, M. Wojtkowski	Towards volumetric imaging of air-induced corneal deformation	NIE
6.	Z3	P. Stremplewski, P. Ciągła, J. Bogusławski, Ł. Kornaszewski, G. Palczewska, K. Palczewski, M. Wojtkowski	Two-photon in vivo retinal imaging	NIE



7.	Z3	P. Stremplewski, E. Aukorius, P. Wnuk, Ł. Koźoń, P. Garstecki, M. Wojtkowski	Cross-talk-free imaging in Fourier domain full-field optical coherence tomography	NIE
8.	Z4	M. Janczuk-Richter, M. Dominik, W. J. Bock, M. Łoś, B. Gromadzka, S. Maćkowski, M. Śmietana, J. Niedziółka-Jönsson	Label-free detection of viruses using long-period fiber grating immunosensors	TAK
9.	Z4	M. Janczuk-Richter, M. Piestrzyńska, D. Burnat, P. Sezemsky, V. Stranak, W. J. Bock, R. Bogdanowicz, J. Niedziółka-Jönsson, M. Śmietana	Optical monitoring of electrochemical processes with ITO-coated long-period fiber grating	TAK
10.	Z4	I. Olszowska, A. Leśniewski, A. Kelm. I. Pięta, A. Siejca, J. Niedziółka-Jönsson	The use of composite particles, emitting long-lasting luminescence, for latent fingerprint detection	TAK
11.	6	<u>Fatih Celal Alcicek</u> , Marcin Hołdyński, Agata Roguska, Magdalena Michalak, Marcin Opałło, Wojciech Nogala	Simultaneous mapping of topography and activity with single scanning electrochemical microscope probe	NIE
12.	Z7	S. Iskorościńska, H. Butkiewicz, B. Rosa, T. Boinski, M. Szymański, A. Szumna, O. Danylyuk, V. Sashuk	"Pillar[n]pyridiniums: a new family of electrically-charged macrocyclic hosts"	NIE
13.	Z9	Marcin Sasaki, Daniel Prochowicz, Janusz Lewiński	Mechanosynthesis of organolead perovskites for photovoltaics. Road from MAPbI <sub>3</sub> to Guanidine-doped perovskites.	TAK
14.	Z9	Jan Nawrocki, Daniel Prochowicz, Andrzej Wiśniewski, Janusz Lewiński	One-step mechanochemical strategy for drug-loaded MOF	NIE



15.	Z10	K. Bielec, K. Sozański, G. Bubak, R. Hołyst	Complex formation reactions observed within femtoliter volumes.	NIE
16.	Z10	A. <u>Agasty</u> , A. <u>Jelinska</u> , K. <u>Sozanski</u> , K. <u>Bielec</u> , T. <u>Andryszewski</u> , M. <u>Iwan T. Kalwarczyk</u> , R. <u>Holyst</u>	Calibration of FCS technique based on TDA	NIE
17.	Z10	Ying Zhou, Xuzhu Zhang, Karina Kwapiszewska, Krzysztof Bielec, Krzysztof Sozański, Grzegorz Bubak, Robert Holyst.	Determine the concentration of DNA interacting with Doxorubicin <i>in vivo</i> .	NIE
18.	Z10	Grzegorz Bubak, Karina Kwapiszewska, Tomasz Kalwarczyk, Krzysztof Szczepański, Łukasz Richter, Krzysztof Sozański, Robert Hołyst	A comparative study of size effects on the diffusion of nano-objects within cytoplasm and nucleus of living cells	NIE
19.	Z11	M. Costantini, J. Guzowski, W. Świążkowski, C. Gargioli	Engineering skeletal muscle tissue with innovative 3D bioprinting approaches	TAK
20.	Z11	M. Costantini, J. Guzowski, P. Żuk, M. Heljak, A. Barbetta, P. Garstecki	Electric-field assisted microfluidic synthesis of porous microbeads for tissue engineering	TAK



21.	Z12	Bartłomiej Bończak, Wojciech Lisowski, Agnieszka Kamińska, Marcin Hołdyński, Marcin Fiałkowski	Gold nanoparticles functionalized with fully conjugated fullerene C <sub>60</sub> derivatives as a material with exceptional capability of absorbing electrons	NIE
22.	Z12	Tomasz Andryszewski, Michalina Iwan, Marcin Fiałkowski, Robert Hołyst	Non-toxic fluorescent silica nanoparticles for observation of the living cell	TAK
23.	Z13	Horacio Serna, Wojciech Gózdź, Eva González Noya	Self-assembled structures in systems with competing interactions confined into nanochannels: influence of cross-section geometry	NIE
24.	Z13	Jeel Raval Wojciech Gózdź	Effect of adhesion on the shape transformations of vesicles	NIE
25.	Z13	Jakub Pękalski, Eldar Bildanov	Confinement effects on a two-dimensional stripe forming system	NIE
26.	Z13	Svyatoslav Kondrat, O. Vasilyev, S. Dietrich	Probing localization-delocalization transitions by colloids	NIE
27.	Z14	Marta Podrażka, Emilia Witkowska-Nery, Damien Arrigan, Martin Jönsson-Niedziółka	Ion Transfer Processes in Paper-Based Three Phase Electrode Systems	TAK
28.	Z14	Emilia Witkowska Nery, Marta Podrażka, Lauro Kubota, Martin Jönsson-Niedziółka	Paper sensors -there's more to prototyping than meets the eye	NIE
29.	Z14	Paulina S. Jeleń, Magdalena Kundys, Emilia Witkowska-Nery, Martin Jönsson-Niedziółka	Enzyme inhibition in continuous flow measurements in microfluidic device	NIE



30.	Z14	Magdalena Kundys-Siedlecka, Martin Jönsson-Niedziółka	Detection of Multiple Neurotransmitters Using Nanoparticles in a Rotating Droplet System	NIE
31.	Z14	Baczynska E., Witkowska Nery E., Jonsson-Niedziółka M., Wlodarczyk J.	Electrochemical glutamate biosensor - tool for in vitro neuroplasticity studies	NIE
32.	Z15	W. Błachucki, J. Czapla – Masztafiak, J. Szlachetko, J. Sa	Double von Hamos spectrometer for in-house X-ray absorption and X-ray emission spectroscopy studies	TAK
33.	Z15	W. Błachucki, Y. Kayser, J. Czapla-Masztafiak, M. Guo, P. Juranič, M. Kavčič, E. Källman, G. Knopp, M. Lundberg, C. Milne, J. Rehanek, J. Sa, J. Szlachetko	Creation of high valency iron molecule with high intensity ultrashort X-ray pulse	TAK
34.	Z15	E. Kowalewski, A. Śrębowata	Selective flow hydrogenation of nitrocyclohexane	NIE
35.	Z15	A. Śrębowata, E. Kowalewski, M. Zienkiewicz-Machnik, D. Lisovytskiy, K. Nikiforov, K. Matus, W. Raróg-Pilecka, J. Sá	Catalytic purification of water from chloroorganic compounds	NIE
36.	Z15	D.Giziński, W. Błachucki, D. Lisovystkiy, K. Matus, A. Śrębowata, J. Sa	Continuous-flow accretion-reaction protocol for catalyst optimization	NIE



37.	Z15	A. Kubas	Theoretical solid-state chemistry with embedded cluster approaches	NIE
38.	Z15	M. Bonarowska, M. Zieliński, T. Szumełda, K. Matus, J. Sa	Microwave-assisted synthesis of mono- and bimetallic catalysts and their application for hydrodechlorination of tetrachloromethane	TAK
39.	Z16	B. Lesiak , N. Rangam ,, P. Jiricek, I. Gordeev , J. Tóth, M. Mohai, L. Kövér	Surface study of Fe <sub>3</sub> O <sub>4</sub> nanoparticles functionalised with biocompatible admolecules.	TAK
40.	Z16	M. Zieliński, W. Juszczuk, Z.Kaszkur	CO oxidation by changing morphology gold nanocrystals.	NIE





Thursday – 17 January 2019

L.P.	Numer Zespołu	Lista Autorów	Angielski tytuł Posteru	Publikacja online
41.	Z17	K. Nestorowicz, K. J. Rudziński, W. Danikiewicz and R. Szmigielski	Aqueous phase reaction of 2-methyl-3-buten-2-ol (MBO): implications for secondary organic aerosol (SOA) formation	TAK
42.	Z17	M. Asztemborska, K. J. Rudziński, L. Sukovata, D. Staszek, M. Cieślak, K. Nestorowicz and R. Szmigielski	Uwalnianie składników feromonu barczatki sosnowki z dyspenserów różnego typu	TAK
43.	Z17	K. J. Rudziński, M. Asztemborska, L. Sukovata, D. Staszek and R. Szmigielski	Badanie emisji składników feromonu samic barczatki sosnowki ( <i>Dendrolimus pini</i> , L.)	TAK
44.	Z17	M. Asztemborska, K. J. Rudziński, L. Sukovata, K. Nestorowicz and R. Szmigielski	Skład olejków eterycznych otrzymanych z klonów sosny <i>Pinus sylvestris</i> z plantacji nasiennej w Dąbrowie, Nadleśnictwo Pniewy	TAK
45.	Z17	F. Khan, K. Kwapiszewska, N. Jalal, J. Surrat, K.J. Rudzinski and R.Szmigielski	Air quality monitoring through the impact of aerosol components on human health	TAK
46.	Z18	<u>Patrycja Lach</u> , Maciej Cieplak, Piyush S. Sharma, Marta Sosnowska, Francis D'Souza, Włodzimierz Kutner	Self-reporting molecularly imprinted polymer for label-free selective electrochemical sensing of <i>p</i> -synephrine	NIE
47.	Z18	Renata Rybakiewicz, <u>Maciej Cieplak</u> , Marianna Gajda, Paula Materska-	Molecularly imprinted polymer film based on polycarbazole for selective chemical sensing	NIE

		Wilczyńska, Jyoti, Krzysztof Noworyta, Włodzimierz Kutner		
48.	Z18	<u>Marianna Gajda, Maciej Cieplak, Renata Rybakiewicz, Teresa Żolek, Dorota Maciejewska, Edyta Gilant, Piotr Rudzki, Andrzej Kutner, Jyoti Yadav, Paulina Wilczynska-Materska, Włodzimierz Kutner, Krzysztof Noworyta</u>	Zastosowanie polimeru wdrukowanego molekularnie arypiprazolem jako elementu rozpoznającego chemoczuJNIka do selektywnego oznaczania tego leku	NIE
49.	Z16	<u>B. Lesiak,* N. Rangam, P. Jiricek, I. Gordeev, J. Tóth, M. Mohai, L. Kövér</u>	Surface study of Fe <sub>3</sub> O <sub>4</sub> nanoparticles functionalised with biocompatible admolecules	
50.	Z21	I.S. Pieta, A. Rathi, A. Lewarska-Graczyk, P. Pieta, R. Nowakowski, M. B. Gawande, R. Zboril, G. Busca	Nanostructured CN supported catalyst for electrocatalytic methanol oxidation	TAK
51.	Z21	I.S. Pieta, M.Cortes-Reyes, L. J. Alemany, R. Nowakowski, W.S. Epling	NO reduction by NH <sub>3</sub> over Pt-Ba/g-Al <sub>2</sub> O <sub>3</sub> LNT	TAK
52.	Z22	Helena Butkiewicz, Oksana Danylyuk, Sandra Kosiorek, Volodymyr Sashuk	Badania strukturalne kompleksów pillar[5]arenu modyfikowanego grupami karboksylowymi	TAK
53.	Z23	M. Pisarek, P. Kędzierzawski, M. Andrzejczuk, M. Hołdyński, A. Mikołajczuk-Zychora, A. Borodziński, M. Janik-Czachor	TiO <sub>2</sub> nanotubes supported Pt and Pd nanoparticles as catalysts for electrooxidation of formic acid.	NIE
54.	Z23	M. Holdynski, J. Dolinska, M. Opallo	Electrochemical behavior of suspended ABTS modified carbon nanotubes at rotating disc electrode	NIE

55.	Z24	Jan Stępień, Janusz Stafiej	Oscillatory behavior in a cellular automaton based model of metal passivation	TAK
56.	Z24	Richard Löffler, Jerzy Gorecki, Martin Hanczyc	Better red than dead: On the influence of Oil Red O dye on complexity of evolution of a camphor-paraffin droplet on the water surface	TAK
57.	Z24	Carolina Cruz, Alina Ciach, Enrique Lomba, Svyatoslav Kondrat	Electrical double layer close to ionic liquid-solvent demixing	
58.	Z25	Joanna Zapała, Thomas Custer, and Marcin Gronowski	Absolute intensities and photolytic behaviour of methyl mercaptan ( $\text{CH}_3\text{SH}$ ), ethyl mercaptan ( $\text{C}_2\text{H}_5\text{SH}$ ) and dimethyl sulfide ( $(\text{CH}_3)_2\text{S}$ ) in Ar and in CO.	NIE
59.	Z25	Arunlibertsen Lawzer, Thomas Custer, and Robert Kołos	Phosphapropyne ( $\text{CH}_3\text{CP}$ ) photochemistry in solid argon.	NIE
60.	Z27	Jan Szczepanek, Tomasz M. Kardaś, Czesław Radzewicz and Yuriy Stepanenko	Optimized environmentally stable all-PM-fiber oscillator mode-locked using Nonlinear Polarization Evolution in Polarization Maintaining fibers	TAK
61.	Z28	Juan Carlos Colmenares, Vaishakh Nair, Tomasz Danko	High Value Chemicals from Lignin Model Compounds in a Photocatalytic Microfluidic Reactor: $\text{TiO}_2$ vs $\text{ZnO}$	NIE
62.	Z28	Ayesha Khan, Juan Carlos Colmenares, Roger Gläser	Selective oxidation of 5-hydroxymethyl-2-furaldehyde via photocatalysis	NIE
63.	Z28	Dimitrios A. Giannakoudakis, Vaishakh Nair, Ayesha Khan, Eleni A. Deliyanni, Juan Carlos Colmenares, Konstantinos Triantafyllidis	Valorization of bio-oriented furans: Selective additive-free photo-assisted heterogeneous catalytic oxidation at ambient conditions by Manganese oxide nano-rods	NIE
64.	Z28	Dimitrios A. Giannakoudakis, Bartosz	Selective conversion of lignin-based model molecules	NIE



		Zawadzki, Dariusz Lomot, Juan Carlos Colmenares	via ultrasound-assisted heterogeneous photocatalysis: The first SonoPhotoReactor and evaluation of the synergistic effects	
65.	Z29	<u>J. Dobkowski</u> , S. Gawinkowski, A. Gorski, E. Karpiuk, M. Kijak, M. Pietrzak, I.V. Sazanovich, J. Waluk	Tunneling or thermally activated proton transfer? The case of 2,5-bis-(6-methyl-2-benzoxazolyl)phenol	NIE
66.	Z29	<u>W. Wałęcki</u> , A. Listkowski, J. Sepioł, M. Gil, J. Waluk	Spectroscopy of 2-(2'-pyridyl)pyrrole and its derivatives	NIE
67.	Z29	<u>J. Buczyńska</u> , K. Nawara, J. Waluk	Photostability of porphycene	NIE
68.	Z29	<u>A. Kelm</u> , J. Ostapko, J. Waluk	Plasmonic-assisted generation of reactive oxygen species	NIE
69.	Z29	<u>B. Golec</u> , K. Nawara, A. Gorski, R.P. Thummel, J. Herbich, J. Waluk	Combined effect of hydrogen bonding interactions and freezing of rotameric equilibrium on the enhancement of photostability	NIE
70.	Z29	<u>B. Golec</u> , K. Nawara, M. Kijak, R.P. Thummel, J. Waluk	Light-induced oxidative dehydrogenation of 12,13-dihydro-5H-indolo[3,2-c]acridine."	NIE
71.	Z29	<u>N. Masiera</u> , A. Bojarska, I. Gawryszewska, J. Waluk	Porphycenes as photodynamic inactivation agents. Structure and activity	NIE
72.	Z29	<u>W. Mersha Takele</u> , Ł. Piątkowski, F. Wackenhut, A. J. Meixner, J. Waluk	Strong light-matter coupling in excited states of intramolecular proton transfer chromophores	NIE
73.	Z29	<u>A. Jamrozik</u> , J. Buczyńska, B. Leśniewska, K. B. Manjappa, M. Pietrzak, D.-Y. Yang, J. Waluk	Photo- and thermochromism in hydroxycoumarin-based compounds	NIE
74.	Z29	<u>M. Koźbiał</u> , M. Gil, A. Kyrychenko, M. Ceborska, J. Waluk	Fluorescence spectroscopy study of cyclodextrin inclusion complexes with bifunctional heteroazaaromatic molecules	NIE



75.	Z29	<u>K. Niciński</u> , J. Krajczewski, A. Kudelski, E. Witkowska, J. Trzcińska-Danielewicz, A. Girstun, A. Kamińska	Detection of circulating tumor cells in blood by shell-isolated nanoparticle – enhanced Raman spectroscopy (SHINERS) in microfluidic device	NIE
76.	Z29	<u>E. Witkowska</u> , K. Niciński, D. Korsak, B. Dominiak, A. Kamińska	Taxonomic identification of Campylobacter spp. by Surface-enhanced Raman Scattering - towards novel microbial method in food industry	NIE
77.	Z29	<u>A. A. Kowalska</u> , S. Berus, T. Szymborski, Ł. Szleszkowski, R. Jankowski, A. Kamińska	Brain tumors analyzed by Surface-Enhanced Raman spectroscopy: discrimination among healthy and cancer cells	NIE
78.	Z29	<u>A. Gorski</u> , V. Knyukshto, A. Starukhin, M. Kijak, J. Waluk	Phosphorescence at room temperature - an effect of oxygen depletion in solution	NIE
79.	Z29	<u>I. Kaminska</u> , J. Bohlen, C. Vietz, G. P. Acuna, P. Tinnefeld	DNA Origami-based nanoantennas and nanopositioners for single-molecule studies"	NIE
80.	Z29	<u>B. Golec</u> , <u>A. Gajewska</u> , J. Ostapko, J. Waluk	Development of porphyrin-based highly photostable fluorophores	NIE
81.	Z29	<u>J. Ostapko</u> , A. Gorski, M. Ceborska, M. Pietrzak, G. Orzanowska, J. Waluk	1,3,5,7-cyclooctatetraene functionalized porphyrins as ultrabright and photostable emitters. Synthesis and spectroscopy	NIE
82.	Z30	A. Mames, P. Szkudlarek, Z. Puzio, T. Ratajczyk	New iridium catalysts based on asymmetric N-heterocyclic carbene ligands for NMR Signal Amplification By Reversible Exchange	NIE
83.	Z30	<u>Mariusz Pietrzak</u> , Jacek Dobkowski, Alexandr Gorski	Manipulation of proton relaxation times of anthrone, naphthalene and porphyrin derivatives by light irradiation	NIE



84.	Z31	Jakub Jędrak, Anna Ochab -Marcinek	What is the simplest model capable of describing protein expression noise in proliferating cell population?	NIE
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