

## UPCON2016 CONFERENCE PROGRAMME

Day 1 –23 <sup>rd</sup> May 2016				The programme of UPCON conference –Monday		Time [h:m]	Session chairs	
S	START	END		EVENT				
	8:00	9:00		Registration		Open		
	9:00	9:15		Welcome : <b>Hans Gorris, Tero Soukka, Artur Bednarkiewicz</b>		0:15		
Materials, materials characterisation & spectroscopy	1	9:15	<b>K1</b>	<i>EFFICIENT TAILORING OF UPCONVERSION ENERGY TRANSFER IN RARE EARTH NANOCRYSTALS BY ENGINEERING LOCAL STRUCTURE AND CORE/SHELL ARCHITECTURE</i> <b>Chun-Hua Yan</b>		0:45	Hans Gorris	
		10:00	<b>I1</b>	<i>SYNTHESIS AND PROPERTIES OF NaREF<sub>4</sub> CORE/SHELL NANOCRYSTALS</i> S. Dühnen, T. Rinkel, A. Naduviledathu Raj, <b>Markus Haase</b>		0:30		
		10:30	<b>I2</b>	<i>ENERGY-CASCADED UPCONVERSION IN LAYERED ONION-LIKE FLUORIDE NANOCRYSTALS</i> <b>Guanying Chen</b>		0:30		
		11:00	11:20		Coffee break (coffee/tea, cookies)		0:20	
	2	11:20	11:40	<b>O1</b>	<i>POWER-DEPENDENT CHARACTERIZATION OF UPCONVERSION NANOPARTICLES IN THE VIS AND IR SPECTRAL REGION: NEW SETUP FOR ABSOLUTE QUANTUM YIELD MEASUREMENTS</i> <b>Christian Würth, M. Kaiser, M. Kraft, V. Muhr, S. Wilhelm, T. Hirsch, Ute Resch-Genger</b>		0:20	Ute Resch Genger
		11:40	12:00	<b>O2</b>	<i>PARTICLE SIZE DEPENDENT ABSOLUTE PHOTOLUMINESCENCE QUANTUM YIELDS AND LIFETIMES OF HEXAGONAL β-NaYF<sub>4</sub>: 2% Er<sup>3+</sup>, 20% Yb<sup>3+</sup> UPCONVERSION NANOPARTICLES IN CYCLOHEXANE AND WATER</i> <b>Marco Kraft, Christian Würth, Martin Kaiser, Verena Muhr, Thomas Hirsch, Ute Resch-Genger</b>		0:20	
		12:00	12:20	<b>O3</b>	<i>Optimization of biofunctional upconversion nanoplatfom - role of the shell</i> <b>Hong Zhang</b>		0:20	
		12:20	12:40	<b>O4</b>	<i>THE ROLE OF Yb<sup>3+</sup> SENSITIZER IN WATER-BASED QUENCHING OF UPCONVERSION PHOTOLUMINESCENCE</i> <b>N. Perälä, Riikka Arppe, I. Hyppänen, M. Kaiser, C. Würth, U. Resch-Genger, M. Schäferling, T. Soukka</b>		0:20	
		12:40	13:00	<b>O5</b>	<i>ELECTROPHORETIC CHARACTERIZATION OF PHOTON UPCONVERTING NANOPARTICLES AND THEIR BIOCONJUGATES</i> <b>Antonín Hlaváček, J. Přikryl, F. Foret</b>		0:20	
		13:00	14:00		Lunch time		1:00	
Instrumentation, applications, characterisation	3	14:00	<b>K2</b>	<i>INTEGRATED ANALYTICAL DEVICES POWERED BY UPCONVERSION NANOTECHNOLOGY</i> <b>Dayong Jin</b>		0:45	Artur Bednarkiewicz	
		14:45	<b>I3</b>	<i>HIGH-THROUGHPUT DESIGN OF UPCONVERTING NANOPARTICLES FOR NEAR-INFRARED IMAGING IN HIGHLY SCATTERING MEDIA</i> <b>Emory M. Chan, E. S. Levy, C. Tajon, T. S. Bischof, A. Fernandez-Bravo, P. James Schuck, B. E. Cohen</b>		0:30		
		15:15	<b>I4</b>	<i>UPCONVERTING NANOPARTICLES PROVIDES MEANS FOR DEEP-TISSUE OPTICAL IMAGING AND PHOTOACTIVATION</i> <b>Stefan Andersson-Engels, Haichun Liu, Monirehalsadat Mousavi</b>		0:30		
		15:45	16:00		Coffee break (coffee/tea, cookies)		0:15	
	4	16:00	16:20	<b>O6</b>	<i>IN SITU SINGLE PARTICLE POLARIZED SPECTROSCOPY OF OPTICALLY TRAPPED UPCONVERTING NANORODS</i> <b>Paloma Rodríguez-Sevilla, L. Labrador-Páez, D. Wawrzyńczyk, M. Nyk, M. Samoć, A. Kumar Kar, M. D. Mackenzie, L. Paterson, D. Jaque, P. Haro-González</b>		0:20	Hans Tanke
		16:20	16:40	<b>O7</b>	<i>LANTHANIDE DOPED NANOPARTICLES - THE SOLUTION TO PHOTODYNAMIC HYBRIDOMA CELLS' SELECTION</i> A. Kowalczyk, M. Skowicki, S. Zelewski, K. Prorok, M. Misiak, <b>Tomasz Lipinski, Artur Bednarkiewicz</b>		0:20	
		16:40	17:00	<b>O8</b>	<i>1.39 μM EXCITED Tm<sup>3+</sup> DOPED NANOPARTICLES FOR SUBTISSUE THERMAL SENSING WITH DEEP PENETRATION AND HIGH CONTRAST</i> <b>Carlos Jacinto, A. F. Pereira, J. F. Silva, A. S. Gouveia-Neto, M. V. D. Vermelho</b>		0:20	
		17:00	19:30		COST Management meeting, free time for other participants		2:30	
	20:00	23:00		Joined conference dinner		3:00		

Day 2 –24 <sup>th</sup> May 2016				The programme of UPCON conference –Tuesday			
Materials, characterisation, spectroscopy, UC enhancement	5	9:00	9:45	<b>K3</b>	<i>ON UPCONVERTING Ln<sup>3+</sup> BASED NANOPARTICLES; A CRITICAL PERSPECTIVE ON SYNTHESIS, CHARACTERISATION, AND APPLICATIONS</i> <b>Frank C.J.M. van Veggel</b>	0:45	Tero Soukka
		9:45	10:15	<b>I5</b>	<i>OPTICAL TRAPPING FOR SINGLE UP-CONVERTING PARTICLE SPECTROSCOPY: FUNDAMENTALS AND BIO-APPLICATIONS</i> <b>Daniel Jaque</b> , P. Rodríguez-Sevilla, M. Pedroni, A. Speghini, M. Bettinelli, P. Haro-González, Yuhai Zhang, Liu Xiaogang and J. García Solé	0:30	
		10:15	10:35	<b>O9</b>	<i>ELECTROPHORESIS COMBINED WITH UPCONVERSION SCANNING AS A POWERFUL TOOL FOR THE SEPARATION, CHARACTERIZATION AND HIGHLY SENSITIVE DETECTION OF UCNPS</i> <b>Hans Gorris</b> , A. Hlaváček	0:20	
		10:45	11:00		Coffee break (coffee/tea, cookies)	0:15	
	6	11:00	11:20	<b>O10</b>	<i>SIZE DEPENDENT UPCONVERSION NANOTHERMOMETRY BASED ON (Sr,Yb,Er)F<sub>2</sub> NANOPARTICLES</i> <b>Sangeetha Balabhadra</b> , M. L. Debasu, J. Rocha, M. Bettinelli, L. D. Carlos	0:20	Jose Garcia Sole
		11:20	11:40	<b>O11</b>	<i>SYNTHESIS AND CHARACTERISATION OF VISIBLE/NEAR INFRARED LUMINESCENT ERBIUM COORDINATION COMPLEXES</i> <b>Bahman Golesorkhi</b> , Y. Suffren, L. Guénéé, H. Nozary, A. Hauser, C. Piguet	0:20	
		11:40	12:00	<b>O12</b>	<i>NANOPROBES FOR SENSING AND IMAGING OF INTRACELLULAR Ph BASED ON POLYETHYLENEIMINE-COATED PHOTON UPCONVERSION NANOPARTICLES CONJUGATED TO A Ph SENSITIVE RHODAMINE DYE</i> <b>Michael Schäferling</b> , T. Deguchi, S. Christ, R. Peltomaa, N. Prabhakar, J. Rosenholm, R. Arppe, T. Soukka, T. Näreoja	0:20	
		12:00	12:20	<b>O13</b>	<i>ENHANCED UP-CONVERSION EMISSION IN Yb<sup>3+</sup>/Tm<sup>3+</sup>, Yb<sup>3+</sup>/Er<sup>3+</sup> AND Yb<sup>3+</sup>/Ho<sup>3+</sup>-DOPED GDVO<sub>4</sub> BY Li<sup>+</sup> CO-DOPING</i> <b>Miroslav Dramicanin</b> , T. Gavrilović, D. Jovanović	0:20	
		12:20	12:40	<b>O14</b>	<i>FLUORESCENCE ENHANCEMENT AND ENERGY PROPAGATION IN PLASMONIC NETWORKS</i> <b>Sebastian Maćkowski</b> , K. Ciszak, A. Prymaczek, J. Grzelak, M. Nyk, D. Piatkowski	0:20	
		12:45	13:45		Lunch time	1:00	
Chemistry, Physics and modelling of LnNPs	7	13:45	14:30	<b>K4</b>	<i>REAL-TIME SPECTROSCOPIC MONITORING AND MATHEMATICAL MODELLING OF THE SYNTHESIS AND MODIFICATION OF NaYF<sub>4</sub> NANOCRYSTALS</i> P. Stanley May, P. B. May, <b>Mary T. Berry</b>	0:45	Frank C.J.M. van Veggel
		14:30	15:00	<b>I6</b>	<i>SOPHISTICATION IN LANTHANIDE COORDINATION CHEMISTRY: A PREREQUISITE FOR IMPLEMENTING UPCONVERSION AT THE MOLECULAR LEVEL</i> <b>Claude Piguet</b>	0:30	
		15:00	15:30	<b>I7</b>	<i>SPECTROSCOPIC IMAGING OF SURFACE PLASMON POLARITON ENHANCED ENERGY TRANSFER UPCONVERSION IN NaYF<sub>4</sub>:Yb<sup>3+</sup>, Ln<sup>3+</sup> NANOPARTICLES</i> <b>Steve Smith</b>	0:30	
		15:30	15:50	<b>O15</b>	<i>MODELLING THE NANOSCALE EFFECT ON THE UPCONVERSION OF β-NaYF<sub>4</sub>:Yb<sup>3+</sup>, Er<sup>3+</sup></i> <b>Stanley May</b> , Md Yeathad Hossan, A. Hor, S. Smith	0:20	
	15:50	16:10		Coffee break (coffee/tea, cookies)	0:20		
8	16:10	17:10		Future perspectives of UCNPs – panel discussion	1:00	AB,HG,TS	
	17:15			Poster session – poster shall be fixed to boards in the morning, 3 prizes for best posters will be granted and announced at the end of the conference			

Day 3 –25 <sup>th</sup> May 2016				The programme of UPCON conference – Wednesday			
	S						
Bioassays, bio-applications, toxicity, functional NPs	9	9:00	9:30	<b>18</b>	UPCONVERTING PHOSPHOR BASED LATERAL FLOW ASSAYS FOR MONITORING IMMUNOTHERAPY <b>Hans Tanke</b> , C. J. de Dood, E. M. Tjon Kon Fat, P. L.A.M. Corstjens	0:30	Dayong Jin
		9:30	10:00	<b>19</b>	UPCONVERSION LUMINESCENCE IN ULTRASENSITIVE SOLID-PHASE IMMUNOASSAY <b>N. Sirkka, A. Lyytikäinen, T. Savukoski, H. Pääkkilä, R. Arppe, Tero Soukka</b>	0:30	
		10:00	10:20	<b>O16</b>	SIZE-DEPENDENT CYTOTOXICITY OF BARE NaGdF <sub>4</sub> :Yb <sup>+3</sup> :Er <sup>+3</sup> NANOCRYSTALS ON MACROPHAGES <b>Edyta Wysockńska</b> , J. Cichos , E. Ziolo , L. Strządała , M. Karbowskiak , W. Kałas	0:20	
		10:20	10:40	<b>O17</b>	ENHANCING THE FUNCTIONALITY OF THE UPCONVERSION NANOPARTICLES <b>Julia Pérez-Prieto</b>	0:20	
		10:40	11:00		Coffee break (coffee/tea, cookies)	0:20	
Biosensing, biodetection, bioimaging, therapies, theranostics	10	11:00	11:20	<b>O18</b>	FRET AND PHOTOLUMINESCENCE LIFETIMES OF UPCONVERTING NANOPARTICLES: FROM PHOTOPHYSICAL PROPERTIES TO BIOSENSING <b>Niko Hildebrandt</b>	0:20	Chun- Hua Yan
		11:20	11:40	<b>O19</b>	HYBRID UPCONVERTING NANOCOMPOSITE FOR PHOTODYNAMIC THERAPY <b>Marta Maria Natile</b> , G. Sotgiu, G. Varchi, L. Armelao	0:20	
		11:40	12:00	<b>O20</b>	INCREASING PENETRATION DEPTH IN BIOLOGICAL TISSUE IMAGING USING 808-NM EXCITED Nd <sup>3+</sup> /Yb <sup>3+</sup> /Er <sup>3+</sup> -DOPED UPCONVERTING NANOPARTICLES <b>Monirehalsadat Mousavi</b> , G. Sotgiu, G. Varchi, L. Armelao	0:20	
		12:00	12:20	<b>O21</b>	OPTIMIZING UPCONVERTING NANOPARTICLES FOR FRET-BASED ASSAYS <b>Oleksii Dukhno</b> , F. Przybilla, Y. Arntz, M. Collot, A. Klymchenko, M. Buchner , V. Muhr, T. Hirsch, Y. Mely	0:20	
		12:20	12:40	<b>O22</b>	LIVE-CELL IMAGING WITH UPCONVERTING NANOPARTICLES: 2D AND 3D SINGLE-PARTICLE TRACKING Y. Han Song, H. Li Jo, J. Park, <b>Kang Taek Lee</b>	0:20	
		12:40	13:00	<b>O23</b>	MULTIFUNCTIONAL OPTO-MAGNETIC NANOPARTICLES FOR THERANOSTIC APPLICATIONS <b>Bożena Sikora</b> , P. Kowalik, J. Mikulski, K. Fronc, I. Kamińska, M. Szewczyk, G. Gruzel, A. Konopka, K. Zajdel, M. Naurecka, R. Minikayev, T. Wojciechowski, M. Parlińska-Wojtan, A. Sienkiewicz M. Łapiński, M. Kwaśny, A. Borodziuk, M. Duda, K. Łysiak, A. Gardias, J. Rybusinski, J. Szczytko, A. Twardowski, M. Frontczak-Baniewicz, P. Stępień, G. Wilczyński, W. Paszkowicz, and D. Elbaum	0:20	
		13:00	13:20	<b>O24</b>	LIPID ENCAPSULATION AND RUTHENIUM DECORATION OF UPCONVERTING NANOPARTICLES (UCNPs) FOR PHOTO-ACTIVATED CHEMOTHERAPY (PACT) <b>Michael Meijer</b> , MM. Natile, S. Bonnet	0:20	
		13:20	13:30		Closing of Conference, announcement of next UPCON conference and school	0:10	
		13:30	14:45		Lunch time	1:15	

# **LIST OF ABSTRACTS**

WITH PRESENTING AUTHORS

**Keynote and invited talks (chronological order)**

<b>Presentation No.</b>	<b>First Name</b>	<b>Last Name</b>	<b>Abstract title</b>
K 1	Chun-Hua	Yan	EFFICIENT TAILORING OF UPCONVERSION ENERGY TRANSFER IN RARE EARTH NANOCRYSTALS BY ENGINEERING LOCAL STRUCTURE AND CORE/SHELL ARCHITECTURE
K 2	Dayong	Jin	INTEGRATED ANALYTICAL DEVICES POWERED BY UPCONVERSION NANOTECHNOLOGY
K 3	Frank C.J.M.	van Veggel	ON UPCONVERTING Ln <sup>3+</sup> BASED NANOPARTICLES; A CRITICAL PERSPECTIVE ON SYNTHESIS, CHARACTERISATION, AND APPLICATIONS
K 4	Mary T.	Berry	REAL-TIME SPECTROSCOPIC MONITORING AND MATHEMATICAL MODELLING OF THE SYNTHESIS AND MODIFICATION OF NaYF <sub>4</sub> NANOCRYSTALS
I 1	Markus	Haase	SYNTHESIS AND PROPERTIES OF NaREF <sub>4</sub> CORE/SHELL NANOCRYSTALS
I 2	Guanying	Chen	ENERGY-CASCADED UPCONVERSION IN LAYERED ONION-LIKE FLUORIDE NANOCRYSTALS
I 3	Emory M.	Chan	HIGH-THROUGHPUT DESIGN OF UPCONVERTING NANOPARTICLES FOR NEAR-INFRARED IMAGING IN HIGHLY SCATTERING MEDIA
I 4	Stefan	Andersson-Engels	UPCONVERTING NANOPARTICLES PROVIDES MEANS FOR DEEP-TISSUE OPTICAL IMAGING AND PHOTOACTIVATION
I 5	Daniel	Jaque	OPTICAL TRAPPING FOR SINGLE UP-CONVERTING PARTICLE SPECTROSCOPY: FUNDAMENTALS AND BIO-APPLICATIONS
I 6	Claude	Piguet	SOPHISTICATION IN LANTHANIDE COORDINATION CHEMISTRY: A PREREQUISITE FOR IMPLEMENTING UPCONVERSION AT THE MOLECULAR LEVEL
I 7	Steve	Smith	SPECTROSCOPIC IMAGING OF SURFACE PLASMON POLARITON ENHANCED ENERGY TRANSFER UPCONVERSION IN NaYF <sub>4</sub> :Yb <sup>3+</sup> ,Ln <sup>3+</sup> NANOPARTICLES
I 8	Hans J.	Tanke	MONITORING OF IMMUNE THERAPY USING UCNP BASED LATERAL FLOW ASSAYS
I 9	Tero	Soukka	UPCONVERSION LUMINESCENCE IN ULTRASENSITIVE SOLID-PHASE IMMUNOASSAY

**Oral presentations (chronological order)**

<b>Presentation No.</b>	<b>First Name</b>	<b>Last Name</b>	<b>Abstract title</b>
O 1	Christian	Würth	POWER-DEPENDENT CHARACTERIZATION OF UPCONVERSION NANOPARTICLES IN THE VIS AND IR SPECTRAL REGION: NEW SETUP FOR ABSOLUTE QUANTUM YIELD MEASUREMENTS
O 2	Marco	Kraft	PARTICLE SIZE DEPENDENT ABSOLUTE PHOTOLUMINESCENCE QUANTUM YIELDS AND LIFETIMES OF HEXAGONAL β-

			NaYF <sub>4</sub> : 2 % Er <sup>3+</sup> , 20 % Yb <sup>3+</sup> UPCONVERSION NANOPARTICLES IN CYCLOHEXANE AND WATER
O 3	Hong	Zhang	OPTIMIZATION OF BIOFUNCTIONAL UPCONVERSION NANOPLATFORM - ROLE OF THE SHELL
O 4	Riikka	Arppe	THE ROLE OF Yb <sup>3+</sup> SENSITIZER IN WATER-BASED QUENCHING OF UPCONVERSION PHOTOLUMINESCENCE
O 5	Antonín	Hlaváček	ELECTROPHORETIC CHARACTERIZATION OF PHOTON UPCONVERTING NANOPARTICLES AND THEIR BIOCONJUGATES
O 6	Paloma	Rodríguez-Sevilla	IN SITU SINGLE PARTICLE POLARIZED SPECTROSCOPY OF OPTICALLY TRAPPED UPCONVERTING NANORODS
O 7	Artur	Bednarkiewicz	LANTHANIDE DOPED NANOPARTICLES – THE SOLUTION TO PHOTODYNAMIC HYBRIDOMA CELLS SELECTION
O 8	Carlos	Jacinto	1.39 μm EXCITED Tm <sup>3+</sup> DOPED NANOPARTICLES FOR SUBTISSUE THERMAL SENSING WITH DEEP PENETRATION AND HIGH CONTRAST
O 9	Hans Heiner	Gorris	ELECTROPHORESIS COMBINED WITH UPCONVERSION SCANNING AS A POWERFUL TOOL FOR THE SEPARATION, CHARACTERIZATION AND HIGHLY SENSITIVE DETECTION OF UCNPS
O 10	Sangeetha	Balabhadra	SIZE DEPENDENT UPCONVERSION NANOTHERMOMETRY BASED ON (Sr,Yb,Er) <sub>2</sub> F <sub>2</sub> NANOPARTICLES
O 11	Bahman	Golesorkhi	SYNTHESIS AND CHARACTERISATION OF VISIBLE/NEAR INFRARED LUMINESCENT ERBIUM COORDINATION COMPLEXES
O 12	Michael	Schäferling	NANOPROBES FOR SENSING AND IMAGING OF INTRACELLULAR PH BASED ON POLYETHYLENEIMINE-COATED PHOTON UPCONVERSION NANOPARTICLES CONJUGATED TO A PH SENSITIVE RHODAMINE DYE
O 13	Miroslav	Dramićanin	ENHANCED UP-CONVERSION EMISSION IN Yb <sup>3+</sup> /Tm <sup>3+</sup> , Yb <sup>3+</sup> /Er <sup>3+</sup> AND Yb <sup>3+</sup> /Ho <sup>3+</sup> -DOPED GdVO <sub>4</sub> BY Li <sup>+</sup> CO-DOPING
O 14	Sebastian	Maćkowski	FLUORESCENCE ENHANCEMENT AND ENERGY PROPAGATION IN PLASMONIC NETWORKS
O 15	Stanley	May	MODELLING THE NANOSCALE EFFECT ON THE UPCONVERSION OF β-NaYF <sub>4</sub> :Yb <sup>3+</sup> ,Er <sup>3+</sup>
O 16	Edyta	Wysokińska	SIZE-DEPENDENT CYTOTOXICITY OF BARE NaGdF <sub>4</sub> :Yb <sup>3+</sup> :Er <sup>3+</sup> NANOCRYSTALS ON MACROPHAGES
O 17	Julia	Pérez-Prieto	ENHANCING THE FUNCTIONALITY OF THE UPCONVERSION NANOPARTICLES
O 18	Niko	Hildebrandt	FRET AND PHOTOLUMINESCENCE LIFETIMES OF UPCONVERTING NANOPARTICLES: FROM PHOTOPHYSICAL PROPERTIES TO BIOSENSING
O 19	Marta Maria	Natile	HYBRID UPCONVERTING NANOCOMPOSITE FOR PHOTODYNAMIC THERAPY
O 20	Monirehalsadat	Mousavi	INCREASING PENETRATION DEPTH IN BIOLOGICAL TISSUE IMAGING USING 808-NM EXCITED Nd <sup>3+</sup> /Yb <sup>3+</sup> /Er <sup>3+</sup> -DOPED UPCONVERTING NANOPARTICLES
O 21	Oleksii	Dukhno	OPTIMIZING UPCONVERTING NANOPARTICLES FOR FRET-BASED ASSAYS
O 22	Kang Taek	Lee	LIVE-CELL IMAGING WITH UPCONVERTING NANOPARTICLES: 2D AND 3D SINGLE-PARTICLE TRACKING
O 23	Bozena	Sikora	MULTIFUNCTIONAL OPTO-MAGNETIC NANOPARTICLES FOR THERANOSTIC APPLICATIONS
O 24	Michael S.	Meijer	LIPID ENCAPSULATION AND RUTHENIUM DECORATION OF UPCONVERTING NANOPARTICLES (UCNPS) FOR PHOTO-ACTIVATED CHEMOTHERAPY (PACT)

Poster presentations

Presentation No.	First Name	Last Name	Abstract title
P 1	Alpan	Bek	UPCONVERSION BY FANO RESONANT ALL-PLASMONIC AND MOLECULAR-PLASMONIC HYBRID NANOSTRUCTURES
P 2	Anna	Borodziuk	LANTHANIDE-DOPED UPCONVERSION NaYF <sub>4</sub> NANOPARTICLES FOR PHOTODYNAMIC THERAPY
P 3	Dmitry	Busko	CHARACTERISATION OF UPCONVERTING MATERIALS: FROM MACRO TO NANOSCALE
P 4	Veronika	Čunderlová	PREPARATION OF AVIDIN MODIFIED PHOTON UPCONVERSION NANOPARTICLES
P 5	Bartłomiej	Czaban	UPCONVERSION QUANTUM YIELD MEASUREMENTS – INSTRUMENTATION, MEASUREMENTS AND ISSUES
P 6	Anna	Ekner-Grzyb	<i>IN VITRO</i> CYTOTOXICITY EVALUATION OF UPCONVERTING CaLuF <sub>5</sub> AND SrLuF <sub>5</sub> NANOPARTICLES DOPED BY Yb <sup>3+</sup> AND Ho <sup>3+</sup> , Tm <sup>3+</sup> OR Er <sup>3+</sup> IONS
P 7	Nestor	Estebanez	FUNCTIONAL POLYMER-CAPPED UPCONVERSION NANOPARTICLES
P 8	Srećko	Gajović	ASSESSING UPCONVERTING NANOPARTICLE BIOCOMPATIBILITY FOR NEURAL STEM CELL IMAGING
P 9	Maciej	Gawłowski	BIO-FUNCTIONALIZATION OF UCNP <sub>s</sub> WITH PROTEIN G NOVEL APPROACH FOR UNIVERSAL IMMUNODETECTING AGENT
P 10	María	González-Béjar	ASSEMBLY OF UPCONVERSION AND LUMINESCENT NANOPARTICLES
P 11	Justyna	Grzelak	ENERGY TRANSFER BETWEEN UP-CONVERTING NANOCRYSTAL AND ORGANIC POLYMER
P 12	Tomasz	Grzyb	SYNTHESIS, CHARACTERIZATION AND CYTOTOXICITY OF UPCONVERTING NANOFLUORIDES
P 13	Ricardas	Rotomskis	BIOCOMPATIBLE NaGdF:Yb,Er@NaGdF UPCONVERTING NANOPARTICLES FOR DUAL IMAGING
P 14	Daniel	Horák	SILICA-MODIFIED MONODISPERSE HEXAGONAL LANTHANIDE NANOCRYSTALS: SYNTHESIS AND BIOLOGICAL PROPERTIES
P 15	Dragana	Jovanović	LOW-TEMPERATURE SYNTHESIS OF MULTIFUNCTIONAL Tm <sup>3+</sup> /Yb <sup>3+</sup> , Er <sup>3+</sup> /Yb <sup>3+</sup> , Ho <sup>3+</sup> /Yb <sup>3+</sup> DOPED-REVO <sub>4</sub> (RE = Gd <sup>3+</sup> , Y <sup>3+</sup> , Lu <sup>3+</sup> ) ULTRASMALL COLLOIDAL UPCONVERTING NANOPARTICLES
P 16	Beatriz	Julián-López	NEW SYNTHETIC ROUTES TOWARDS RATIONAL DESIGN OF EFFICIENT UCNP <sub>s</sub>
P 17	Magdalena	Duda	ENERGY TRANSFER BETWEEN ORGANIC DYES ("ANTENNA") ATTACHED TO THE SURFACE OF UPCONVERTING NANOPARTICLES
P 18	Cynthia Elisabeth	Kembuan	STRUCTURED METAL NANOSHELL PARTICLES FOR CONTROLLED ENHANCEMENT OF PHOTON UP-CONVERSION AND Cu DETECTION
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