

# The programme of Spring school

Day 1			
14:45	15:00	Welcome to UPCON Spring School	Time [h:m]
15:00	16:00	<b>Chun-Hua Yan - Controllable Synthesis of High-Quality Rare Earth-Based Nanocrystals</b>	1:00
16:15	17:15	<b>Dayong Jin - Controlling upconversion nanocrystals for emerging applications</b>	1:00
17:15	17:30	Coffee break (coffee/tea, cookies)	0:15
17:30	18:30	<b>Claude Piguet - Upconversion using linear optics in molecular lanthanide complexes: from dream to reality</b>	1:00
Day 2			
9:00	10:00	<b>Hans Tanke - Upconverting phosphors as labels for low cost lateral flow assays to monitor infectious diseases</b>	1:00
10:15	11:15	<b>Mary T. Berry - Development of Quantitative Mechanistic Models for Upconversion in Lanthanide-doped Nanomaterials</b>	1:00
11:15	11:30	Coffee break (coffee/tea, cookies)	0:15
11:30	12:30	<b>Frank C.J.M. van Veggel - On Ln<sup>3+</sup> based core-shell nanoparticles as a method to increase quantum yield of non-linear processes</b>	1:00
12:30	13:30	Lunch break	1:00
13:30	14:30	<b>Markus Haase - Growth mechanisms of NaREF<sub>4</sub> nanocrystals</b>	1:00
14:45	15:45	<b>Guanying Chen - Photon Upconversion Nanomaterials: Technologies and Biomedical Applications</b>	1:00
15:45	16:00	Coffee break	0:15
16:00	...	Short presentations from participants (max.5 min 1-2 slides per participant)	~3:00
20:00	22:00	Joined school dinner (Novocaina restaurant)	
Day 3			
9:00	10:00	<b>Emory M. Chan - Combinatorial and computational strategies for the high-throughput design of upconverting nanoparticles</b>	1:00
10:00	11:00	<b>Daniel Jaque – Luminescent nanoparticles for in vivo imaging</b>	1:00
11:00	11:15	Coffee break (coffee/tea, cookies)	0:15
11:15	12:15	<b>Steve Smith - Controlling Energy Transfer Upconversion by Engineering the Photonic Density of States</b>	1:00
12:15	13:15	<b>Tero Soukka - Upconverting nanophosphors as reporters in multiplexed immunoassay</b>	1:00
13:15	13:30	Discussion and End of School	
13:30	14:30	Lunch break	1:00
14:30	18:00	Trip to labs and experimental session	

# LIST OF ABSTRACTS

WITH PRESENTING AUTHORS

*School presentations (chronological order)*

Presentation No.	First Name	Last Name	Abstract title
SP1	Sangeetha	Balabhadra	OPTICAL THERMOMETRY BASED ON THE LANTHANIDE LUMINESCENCE OF INORGANIC NANOSYSTEMS
SP2	Alkit	Beqiraj	CO-DOPING UPCONVERSION NANOPARTICLES WITH TRANSITION METAL IONS
SP3	Shashi	Bhuckory	MORPHOLOGICAL AND OPTICAL CHARACTERIZATION OF PEGYLATED-Er <sup>3+</sup> ,Yb <sup>3+</sup> -DOPED NaGdF <sub>4</sub> UPCONVERSION NANOPARTICLES FOR FRET
SP4	Dmitry	Busko	SPECTROSCOPIC CHARACTERIZATION OF BROAD SPECTRUM OF UPCONVERSION MATERIALS
SP5	Oleksii	Dukhno	OPTIMIZING UPCONVERTING NANOPARTICLES FOR FRET-BASED ASSAYS
SP6	Zayakhuu	Gerelkhuu	INFLUENCE OF Cr <sup>3+</sup> CONCENTRATION ON LUMINESCENCE PROPERTIES OF NaLuGdF <sub>4</sub> :Cr <sup>3+</sup> /Er <sup>3+</sup> UPCONVERSION SYSTEM
SP7	Bahman	Golesorkhi	SYNTHESIS AND CHARACTERISATION OF VISIBLE/NEAR INFRARED LUMINESCENT ERBIUM COORDINATION COMPLEXES
SP8	Bettina	Grauel	Nd AS SENSITIZER IN NdYF <sub>4</sub> :Yb,Er,Nd TRI-DOPED UPCONVERSION NANOCRYSTALS
SP9	Justyna	Grzelak	ENERGY TRANSFER BETWEEN UP-CONVERTING NANOCRYSTAL AND ORGANIC POLYMER
SP10	Katarzyna	Zawisza	UP-CONVERTING Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> NANOPARTICLES ACTIVATED WITH Er <sup>3+</sup> AND Yb <sup>3+</sup> ION PAIRS FOR BIOAPPLICATIONS
SP11	Cynthia Elisabeth	Kembuan	CYTOTOXICITY OF BIOCOMPATIBLE FUNCTIONALIZED HYDROPHILIC UPCONVERSION NANO-PARTICLES IN IN VITRO EXPERIMENTS
SP12	Uliana	Kostiv	SILICA-COATED UPCONVERSION LANTHANIDE NANOPARTICLES: THE EFFECT OF CRYSTAL DESIGN ON MORPHOLOGY, STRUCTURE AND OPTICAL PROPERTIES
SP13	Agnieszka	Kowalczyk	RATIOMETRIC DETECTION OF MONOCLONAL ANTIBODIES WITH LIPOPOLYSACCHARIDE FUNCTIONALIZED UPCONVERTING NANOPARTICLES
SP14	Sergey	Kuznetsov	UP-CONVERSION LUMINESCENCE OF DIAMOND FILMS WITH INTEGRATED La <sub>0.895</sub> Yb <sub>0.0875</sub> Er <sub>0.0175</sub> F <sub>3</sub> NANOPARTICLES
SP15	Tero	Laihin	NaYF <sub>4</sub> :Yb <sup>3+</sup> ,R <sup>3+</sup> UP-CONVERSION LUMINESCENCE MATERIALS

SP16	Giacomo	Lucchini	ALKALINE-EARTH FLUORIDE NANOPARTICLES ACTIVATED WITH Ln <sup>3+</sup> IONS FOR MULTIMODAL BIOIMAGING
SP17	Sebastian	Mackowski	FLUORESCENCE ENHANCEMENT AND ENERGY PROPAGATION IN PLASMONIC NETWORKS
SP18	Manoj Kumar	Mahata	REMOTE TEMPERATURE SENSING BELOW 300 K BY YVO <sub>4</sub> :Er <sup>3+</sup> /Yb <sup>3+</sup> UPCONVERTING PARTICLES
SP19	Łukasz	Marciniak	UP-CONVERTING RARE EARTH DOPED PHOSPHATES FOR NON-CONTACT TEMPERATURE SENSING
SP20	Michael	Meijer	LIPID ENCAPSULATION AND RUTHENIUM DECORATION OF UPCONVERTING NANOPARTICLES (UCNPS) FOR PHOTO-ACTIVATED CHEMOTHERAPY (PACT)
SP21	Diego	Mendez-Gonzalez	DENGUE miRNA BIOSENSOR BASED ON UCNPS AND GO
SP22	Matthias	Mickert	HIGHLY SENSITIVE LASER SCANNING OF PHOTON-UPCONVERTING NANOPARTICLES ON A MACROSCOPIC SCALE
SP23	Małgorzata	Misiak	ENHANCEMENT OF UP-CONVERSION LUMINESCENCE IN Yb <sup>3+</sup> Tb <sup>3+</sup> CO-DOPED CaF <sub>2</sub> NANOCRYSTALS BY SYNTHESIS MODULATION
SP24	Melissa-Jane	Monks	SPECTROSCOPIC STUDY OF LANTHANIDE-DOPED ALKALINE FLUORIDE UPCONVERSION NANOPARTICLES PREPARED VIA SOL GEL SYNTHESIS
SP25	Monirehalsadat	Mousavi	IMPROVED BACKSCATTERED LIGHT REJECTION IN UPCONVERTING NANOPARTICLE-BASED BIOIMAGING
SP26	Emilia	Palo	UP-CONVERSION MATERIALS TO ENHANCE SOLAR CELL CONVERSION
SP27	Aleksandra	Pilch	ENERGY TRANSFER UPCONVERSION ENHANCEMENT IN HETEROGENOUSLY RARE EARTH DOPED ACTIVE-CORE @ ACTIVE-SHELL (ACAS) NANOPARTICLES
SP28	Daria	Pominova	THEORETICAL MODELING OF UPCONVERSION LUMINESCENCE PLASMON ENHANCEMENT
SP29	Surya	Prakash Tiwari	APPLICATION OF UPCONVERTING Nd/Yb CO-DOPED YPO <sub>4</sub> NANOPARTICLES FOR SECURITY FUNCTION
SP30	Aleksander	Zięcina	UP-CONVERSION PROCESS IN BLUE EMITTING SrTiO <sub>3</sub> :Tm <sup>3+</sup> /Yb <sup>3+</sup> NANOPARTICLES
SP31	Katarzyna	Prorok	UP- AND DOWN-CONVERSION LUMINESCENCE OF Tb <sup>3+</sup> /Yb <sup>3+</sup> CODOPED Y <sub>2</sub> O <sub>3</sub> NANOPARTICLES
SP32	Dominika	Przybylska	FLUORIDE MATRICES DOPED BY LANTHANIDE IONS SHOWING UP - CONVERSION PHENOMENA
SP33	Benjamin	Ritter	NOVEL FLUOROLYTIC SOL-GEL SYNTHESIS OF RARE EARTH DOPED ALKALINE EARTH METAL FLUORIDE NANOPARTICLES

SP34	Paloma	Rodríguez-Sevilla	IN SITU SINGLE PARTICLE POLARIZED SPECTROSCOPY OF OPTICALLY TRAPPED UPCONVERTING NANORODS
SP35	Jarosław	Rybusiński	MAGNETIC PROPERTIES OF UP-CONVERTING RARE-EARTH ORTHOVANADATES RELATED TO PARTICLE SIZE AND DOPANT CONCENTRATION
SP36	Maysoon	Saleh	UCNP AS FLUORESCENT DETECTORS FOR THE SENSITIVE AND SELECTIVE DETECTION OF TRANSITION METAL IONS IN AQUEOUS SOLUTIONS
SP37	Mirkomil	Sharipov	FUNCTIONALIZATION OF LANTHANIDES-DOPED UPCONVERSION NANOPARTICLES FOR BIOIMAGING
SP38	Artur	Tymiński	RARE EARTH PHOSPHATE NANOCRYSTALS (RE = Y <sup>3+</sup> , La <sup>3+</sup> , Gd <sup>3+</sup> , Lu <sup>3+</sup> ) DOPED BY Ln <sup>3+</sup> IONS SHOWING UP-CONVERSION LUMINESCENCE
SP39	Edyta	Wysokińska	CYTOTOXICITY OF BARE NaGdF <sub>4</sub> :Yb <sup>3+</sup> :Er <sup>3+</sup> NANOCRYSTALS ON MACROPHAGES
SP40	Nestor	Estebanez	FUNCTIONAL POLYMER-CAPPED UPCONVERSION NANOPARTICLES
SP41	Sebastian	Radunz	EFFECT OF THE DISSOLUTION OF FLUORIDE UCNPS ON THEIR OPTICAL PROPERTIES
SP42	Magdalena	Duda	ENERGY TRANSFER BETWEEN ORGANIC DYES ("ANTENNA") ATTACHED TO THE SURFACE OF UPCONVERTING NANOPARTICLES
SP43	Robert	Tomala	THE STUDY OF UP-CONVERSION EMISSION OF Y <sub>2</sub> Si <sub>2</sub> O <sub>7</sub> :Nd <sup>3+</sup> NANOCRYSTALS