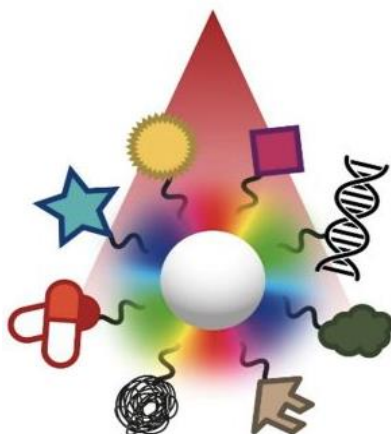


UPCON 2024 - CONFERENCE PROGRAM



UPCON 2024

April 7th to 12th 2024 – Montréal, Canada

Conference Chairs:

Fiorenzo Vetrone - Institut National de la Recherche Scientifique, Varennes, Canada

Niko Hildebrandt - McMaster University, Hamilton, Canada

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UPCON 2024 - CONFERENCE PROGRAM

PROGRAM OVERVIEW

MONTREAL Time		MONTREAL Time		MONTREAL Time		MONTREAL Time		MONTREAL Time		MONTREAL Time	
Sunday (07/04/24)		Monday (08/04/24)		Tuesday (09/04/24)		Wednesday (10/04/24)		Thursday (11/04/24)		Friday (12/04/24)	
<p>UPCON 2024</p>		8:15 - 8:50	REGISTRATION	8:45 - 9:00	REGISTRATION	8:45 - 9:00	REGISTRATION	8:45 - 9:00	REGISTRATION	8:45 - 9:00	REGISTRATION
		8:55 - 9:10	Welcome remarks	9:00 - 9:10	Welcome remarks	9:00 - 9:10	Welcome remarks	9:00 - 9:10	Welcome remarks	9:00 - 9:10	Welcome remarks
		9:15 - 9:55	Freddy Rabouw (IV1)	9:15 - 9:55	Carlos Brites (IV2)	9:15 - 9:55	Lingdong Sun (IV4)	9:15 - 9:55	Natalie Fardian-Melamed (IV6)	9:15 - 9:55	Damien Hudry (IV8)
		10:00 - 10:20	Luis Carlos (CB1)	10:00 - 10:20	Miao Liu (CB4)	10:00 - 10:20	Marta Maria Natile (CB13)	10:00 - 10:20	Sophia Baumann (CB18)	10:00 - 10:20	Federico Pini (CB26)
		10:25 - 10:45	Pablo Acosta-Mora (CB2)	10:25 - 10:45	Dorota Sklenárová (CB5)	10:25 - 10:45	Diego Mendez-Gonzalez (CB14)	10:25 - 10:45	Kirsti Raiko (CB19)	10:25 - 10:45	Artur Bednarkiewicz (CB27)
		10:50 - 11:20	Break	10:50 - 11:20	Break and poster mounting	10:50 - 11:20	Break and poster viewing	10:50 - 11:20	Break	10:50 - 11:20	Break
		11:25 - 12:20	Yung Doug Suh (KN1)	11:25 - 12:20	Won Park (KN2)	11:25 - 12:20	Aline Nonat (KN3)	11:25 - 12:20	María Gonzalez-Bejar (KN4)	11:25 - 12:20	María Gonzalez-Bejar (KN4)
		12:25 - 12:45	Andrea Pickel (CB3)	12:25 - 12:45	Eva Hemmer (CB6)	12:25 - 12:45	Emory Chan (CB15)	12:25 - 12:45	Anne Nsubuga (CB20)	12:25 - 12:45	Anne Nsubuga (CB20)
		12:50 - 13:00	UPCON community presentation	12:50 - 13:00	Edinburgh Instruments presentation	12:50 - 13:00	Unioigen presentation	12:50 - 13:00	UPCON presentation	12:50 - 13:00	UPCON presentation
		13:00 - 14:30	Lunch Break	13:00 - 14:30	Lunch Break and poster mounting	13:00 - 14:30	Lunch Break and poster viewing	13:00 - 14:30	Lunch Break	13:00 - 14:30	Lunch Break
15:27	Total solar eclipse	14:35 - 14:55	James Schuck (CB7)	14:35 - 14:55	Nan Liu (FT1)	14:35 - 14:47	Daniel Horák (CB21)	14:35 - 14:55	Daniel Horák (CB21)		
afternoon	free time	15:00 - 15:20	Christian Homann (CB8)	15:00 - 15:17	Oliver Bergmann (FT3)	15:00 - 15:20	Julian Brandmeier (CB22)	15:00 - 15:20	Julian Brandmeier (CB22)		
		15:25 - 15:45	Eduard Madirov (CB9)	15:20 - 15:32	Karolina Zajdel (FT4)	15:25 - 15:45	Ruth Abramson (CB23)	15:25 - 15:45	Ruth Abramson (CB23)		
		15:50 - 16:10	Terhi Riittämäki (CB10)	15:35 - 15:47	Hana Mirmajidi (FT5)	15:50 - 16:10	Naomi Weitzel (CB24)	15:50 - 16:10	Naomi Weitzel (CB24)		
		16:15 - 16:45	Break and poster mounting	15:50 - 16:02	Chizoba Duru (FT6)	16:15 - 16:45	Break	16:15 - 16:45	Break		
		16:45 - 17:25	Artiom Skripka (IV3)	16:05 - 16:17	Saara Kuusinen (FT7)	16:20 - 16:45	Break and poster viewing	16:45 - 17:25	Zdeněk Farka (IV7)		
		17:30 - 17:50	Sander Vonk (CB11)	16:45 - 17:25	Larissa Franca (IV5)	16:45 - 17:25	Alejandro Casillas-Rubio (CB16)	17:30 - 17:50	Rajesh Kombar (CB25)		
		17:55 - 18:15	Ziyang Ye (CB12)	17:30 - 17:50	Tracy Schloemer (CB17)	17:30 - 17:50	free time (transfer to dinner venue)	17:30 - 17:50	free time (transfer to dinner venue)		
			free time	17:55 - 18:15	Poster session / drinks / food	18:20 - 20:00	Conference dinner	19:30 - 23:00	Conference dinner		
19:00 - 21:00	Welcome reception										

April 7 - 12 2024

ABBREVIATIONS	
KN (Keynote):	45 min + 8 min discussion
IV (Invited):	30 min + 6 min discussion
CB (Contributed):	15 min + 3 min discussion
FT (Flash Talk):	10 min + 2 min discussion

Posters		Posters	
Poster 1	Fernando Arteaga-Cardona	Poster 11	Eduard Madirov
Poster 2	Alexandra Chomová	Poster 12	Stanislaw Okwiel
Poster 3	Chris Steve Conrad	Poster 13	Abigale Puccini
Poster 4	Ayla Dekker	Poster 14	Terhi Riittämäki
Poster 5	Jeremy Doucette	Poster 15	Chizoba Duru
Poster 6	Paula Gutierrez-Gonzalez	Poster 16	Hans-Heiner Gorris
Poster 7	Saara Kuusinen	Poster 17	María Tesa
Poster 8	Diego Mendez-Gonzalez	Poster 18	Sheila Torres-García
Poster 9	Miao Liu	Poster 19	Ziyang Ye
Poster 10	Jakub Máčala	Poster 20	Karolina Zajdel



UPCON 2024 - CONFERENCE PROGRAM

Monday April 8 th , 2024		
Time	Event	Session chair
8:55 - 9:10	Welcome remarks	
9:15 - 9:55	IV1- Excited-state dynamics in lanthanide-doped nanocrystals Freddy Rabouw	F. Vetrone
10:00 - 10:20	CB1- The Coming of Age of Luminescence Nanothermometry Luis Carlos	
10:25 - 10:45	CB2- “There is plenty of energy at the bottom”: infrared driven photo-electrochemical hydrogen generation for squeezing the sun via up-conversion Pablo Acosta-Mora	
10:50 - 11:20	Break	
11:25 - 12:20	KN1- Single Particle Nanospectroscopy of UCNP and ANP Yung Doug Suh	N. Hildebrandt
12:25 - 12:45	CB3- Optical Super-Resolution Nanothermometry via Stimulated Emission Depletion Imaging of Upconverting Nanoparticles Andrea Pickel	
12:50 - 13:00	UPCON Community presentation Niko Hildebrandt	
13:00 - 14:30	Lunch Break	
FREE TIME		
15:27 TOTAL SOLAR ECLIPSE		
FREE TIME		

UPCON 2024 - CONFERENCE PROGRAM

Tuesday April 9 th , 2024		
Time	Event	Session chair
8:55 - 9:10	Welcome remarks	
9:15 - 9:55	IV2- Upconverting Nanoparticles: a new era in concatenation of molecular logic gates Carlos Brites	A. Bednarkiewicz
10:00 - 10:20	CB4- Manipulating near infrared emission of rare-earth doped nanoparticles and application in nanothermometry Miao Liu	
10:25 - 10:45	CB5- Background-free detection of prostate-specific antigen utilizing an immunomagnetic assay with upconversion nanoparticles Dorota Sklenářová	
10:50 - 11:20	Break / Poster mounting	
11:25 - 12:20	KN2- Photonic engineering of upconversion luminescence Won Park	T. Soukka
12:25 - 12:45	CB6- Pushing the Limits of the Microwave-Assisted Synthesis towards Lanthanide-based Materials Eva Hemmer	
12:50 - 13:00	Edinburgh Instruments - Latest Developments in Upconversion Luminescence Spectroscopy Maria Tesa	
13:00 - 14:30	Lunch Break / Poster mounting	
14:35 - 14:55	CB7- 1000-fold enhancement of 1500 nm-band detection sensitivity enabled by new photon-avalanching nanomaterial designs James Schuck	M. Natile
15:00 - 15:20	CB8- Comparative Analysis of Synthesis Techniques for Optimized Upconverting Nanoparticles Christian Homann	
15:25 - 15:45	CB9- Critical Evaluation of Upconversion Efficiency in SrF₂:Tm³⁺,Yb³⁺ Nanoparticles and Single Crystals Eduard Madirov	
15:50 - 16:10	CB10- Sensitive and quantitative lateral flow immunoassays with upconverting nanoparticles Terhi Riuttamäki	
16:15 - 16:45	Break / Poster mounting	
16:45 - 17:25	IV3- Lanthanide Upconversion in Low-Phonon-Energy Hosts Artiom Skripka	H.-H. Gorris
17:30 - 17:50	CB11- Artifacts in luminescence thermometry Sander Vonk	
17:55 - 18:15	CB12- Dual-Mode Operando Raman Spectroscopy and Upconversion Thermometry for Probing Thermal Contributions to Plasmonic Photocatalysis Ziyang Ye	
FREE TIME		

UPCON 2024 - CONFERENCE PROGRAM

Wednesday April 10 th , 2024		
Time	Event	Session chair
8:55 - 9:10	Welcome remarks	
9:15 - 9:55	IV4- Low threshold highly concentrated frequency upconverters Lingdong Sun	Y.D. Suh
10:00 - 10:20	CB13- Modelling meets experiments: a clever optimization of upconverting nanocrystals for biomedical applications Marta Maria Natile	
10:25 - 10:45	CB14- Upconverting Nanoparticles in Aqueous Media: Not a Dead-End Road. Avoiding Degradation by Using Hydrophobic Polymer Shells Diego Mendez-Gonzalez	
10:50 - 11:20	Break / Poster mounting	
11:25 - 12:20	KN3- Molecular up-conversion in solution with heterometallic Ln-coordination complexes and molecular clusters Aline Nonat	W. Park
12:25 - 12:45	CB15- Accelerating the discovery of upconverting nanoparticles using high-throughput and machine-learning-guided approaches Emory Chan	
12:50 - 13:00	Uniogen - Readers and particles for UCNP measurements - Latest Developments in Upconversion Luminescence Spectroscopy Ida Erling	
13:00 - 14:30	Lunch Break / Poster mounting	
14:35 - 14:47	FT1 - Nan Liu: Core-Multi-Shell Design: Unlocking Multimodal Capabilities in Lanthanide-based Nanoparticles as Upconverting, T2-Weighted MRI and CT Probes	N. Hildebrandt
14:50 - 15:02	FT2 - Arohan Dutta: Enhancing Ultraviolet Emission Spectra of Upconverting Nanoparticles For More Efficient Drug Release	
15:05 - 15:17	FT3 - Oliver Bergmann: A systematic study on the doping of NaMnF₃: Yb³⁺, Er³⁺ its byproducts, and its ability to be used as a multifunctional MRI-agent	
15:20 - 15:32	FT4 - Karolina Zajdel: Radiolabeled NaYF₄ upconversion nanoparticles as theranostic agents for multimodal imaging and therapy	
15:35 - 15:47	FT5 - Hana Mirmajidi: Toxicity Aspects of Biopolymer-Stabilized Lanthanide-Based Nanoparticles	
15:50 - 16:02	FT6 - Chizoba Duru: Core/multishell upconverting nanoparticles for applications in luminescence thermometry	
16:05 - 16:17	FT7 - Saara Kuusinen: Ultrasensitive amplification-free assay for detection of short oligonucleotides using DNA complex transfer and upconverting nanoparticle reporters detection sensitivity enabled by new photon-avalanching nanomaterial designs	
16:20 - 16:45	Break / Poster mounting	
16:45 - 17:25	IV5- Towards solid-state triplet-triplet annihilation upconversion using organic-inorganic hybrid hosts Larissa Franca	F. Vetrone
17:30 - 17:50	CB16- What's going on with upconversion luminescence lifetime? Excitation pulse width effect Alejandro Casillas-Rubio	
17:55 - 18:15	CB17- Triplet-Triplet Annihilation Upconversion Nanocapsules for Volumetric 3D Printing Tracy Schloemer	
18:20 - 20:00	Poster session / drinks / food	

UPCON 2024 - CONFERENCE PROGRAM

POSTER SESSION

Poster	Presenter	Title
1	Fernando Arteaga-Cardona	Imaging into the SWIR region with different lanthanides based nanocrystals
2	Alexandra Chomová	Photon-upconversion nanoparticles as detection labels for digital assays in SimoA discs
3	Chris Steve Conrad	Predicting Upconversion Efficiency Using an Ab Initio Model
4	Ayla Dekker	Hybrid nanomaterials for highly efficient upconversion: seeking synergy between lanthanide ions and organic dyes
5	Jeremy Doucette	Near-Infrared Emission in Silica-Coated Lanthanide-Doped Nanoparticles?
6	Paula Gutierrez-Gonzaleza	Reaching the nucleus of the cell through the surface functionalization of UCNPs for absolute temperature measurements
7	Saara Kuusinen	Ultrasensitive amplification-free assay for detection of short oligonucleotides using DNA complex transfer and upconverting nanoparticle reporters
8	Diego Mendez-Gonzalez	Surface functionalization of upconverting nanoparticles for their transfer in aqueous media
9	Miao Liu	Manipulating near infrared emission of rare-earth doped nanoparticles and application in nanothermometry
10	Jakub Máčala	Dot-blot immunoassays with UCNPs as highly sensitive labels for quantitative biomarker detection
11	Eduard Madirov	Challenges and Solutions in UC PLQY Determination
12	Stanisław Okwiet	Custom confocal setup for single nanoparticle up conversion FRET measurements
13	Abigale Puccini	The Forgotten Lanthanide: Novel Praseodymium-doped Near-Infrared Emitters for Nanothermometry Applications
14	Terhi Riuttamäki	Freeze-drying of Upcon® conjugates provides an alternative way to store the product in powder form instead of aqueous suspension
15	Chizoba Duru	Core/multishell upconverting nanoparticles for applications in luminescence thermometry
16	Hans-Heiner Gorris	Background-free detection of prostate-specific antigen utilizing an immunomagnetic assay with upconversion nanoparticles
17	Maria Tesa	Photoluminescence of Upconversion Nanoparticles with a Compact, All-in-one Spectrometer
18	Sheila Torres-García	"The photonic cannon shot": simultaneous combined effect of up-conversion and down-shifting of light with a luminescent solar concentrator for ultra-broadband absorption of sun's radiation
19	Ziyang Ye	Dual-Mode Operando Raman Spectroscopy and Upconversion Thermometry for Probing Thermal Contributions to Plasmonic Photocatalysis
20	Karolina Zajdel	Radiolabeled NaYF ₄ upconversion nanoparticles as theranostic agents for multimodal imaging and therapy

UPCON 2024 - CONFERENCE PROGRAM

Thursday April 11 th , 2024		
Time	Event	Session chair
8:55 - 9:10	Welcome remarks	
9:15 - 9:55	IV6- Lumos Maxima Forcier: Remote Detection of Multiple Scales of Force by Photon-Avalanche Natalie Fardian-Melamed	A. Nonat
10:00 - 10:20	CB18- Role of the Alkaline-ion in Upconversion Nanoparticles: Photophysical Properties, Colloidal Stability, and Surface Functionalization Sophia Baumann	
10:25 - 10:45	CB19- High sensitivity automated multi-step upconversion lateral flow immunoassay Kirsti Raiko	
10:50 - 11:20	Break	
11:25 - 12:20	KN4- Photoactive molecules in upconversion nanohybrids Maria Gonzalez-Bejar	G. Tessitore
12:25 - 12:45	CB20- Ruthenium (II) loaded upconversion nanoparticles for nucleus targeted drug delivery Anne Nsubuga	
12:50 - 13:00	UPCON Community presentation Niko Hildebrandt	
13:00 - 14:30	Lunch Break	
14:35 - 14:55	CB21- Multifunctional upconversion nanoparticles for diabetes theranostics Daniel Horák	T. Soukka
15:00 - 15:20	CB22- Digital and analog upconversion-linked immunosorbent assay for the detection of SARS-CoV-2 Julian Brandmeier	
15:25 - 15:45	CB23- Development of an Fe ²⁺ sensing system based on the inner filter effect between upconverting nanoparticles and ferrozine Ruth Abramson	
15:50 - 16:10	CB24- Photophysical Studies on Yb,Tm-doped Core-Shell Upconversion Nanoparticles with Increased Sensitizer Content Naomi Weitzel	
16:15 - 16:45	Break	
16:45 - 17:25	IV7- Bioconjugates of photon-upconversion nanoparticles as background-free labels for immunochemical assays and imaging Zdeněk Farka	H.-H. Gorris
17:30 - 17:50	CB25- Upconversion Core Particles for High-Temperature Nanothermometric Applications Rajesh Kombar	
FREE TIME / TRANSFER TO DINNER VENUE		
19:30 - 23:00	Conference Dinner	

UPCON 2024 - CONFERENCE PROGRAM

Friday April 12 th , 2024		
Time	Event	Session chair
8:55 - 9:10	Welcome remarks	
9:15 - 9:55	IV8- Navigating through the complex world of materials combinations for true core-shell nanocrystals Damien Hudry	M. Gonzalez-Bejar
10:00 - 10:20	CB26- Live cell imaging with upconversion molecules – a nanomolecular approach Federico Pini	
10:25 - 10:45	CB27- Photon Avalanching Inorganic Luminescent Labels for Applications in (bio)technology Artur Bednarkiewicz	
10:50 - 11:20	Break	
11:25 - 12:20	KN5- Upconverting Core-Shell Nanomaterials: Challenges and Opportunities Gabriella Tessitore	F. Vetrone
13:00 - 14:30	Farewell remarks and announcement of next UPCON 2026 (H.-H. Gorris)	