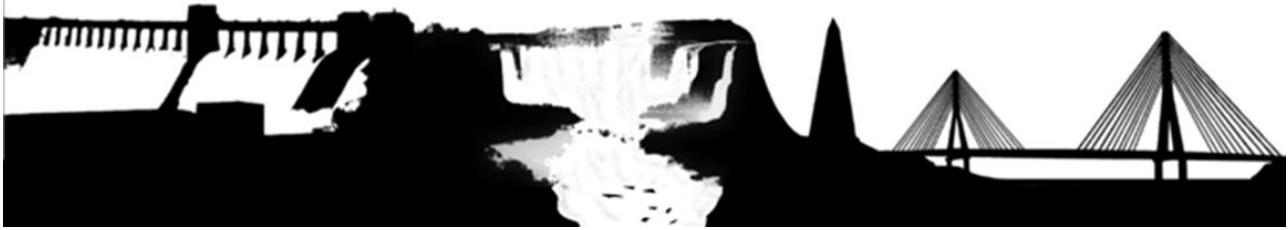


22nd ISBC & 20th ISLS

the luminous conferences by the falls

3rd-7th June, 2024

Foz do Iguaçu - Brazil



PROGRAM BOOK

ORGANIZED BY



Local symposium organizers

Vadim R. Viviani (CCTS, UFSCar)

Cassius V. Stevani (IQ-USP)

Iseli L. Nantes (CCNH-UFABC)

Oscar L. Malta (Departamento de Química Fundamental da UFPE)

Rogéria R. Gonçalves (Departamento de Química, FFCLRP-USP)

Secretariat: SBBq (sbbq@sbbq.org.br)

Welcome!

It is our great pleasure to welcome you to the joint meeting of the XXII International Symposium of Bioluminescence and Chemiluminescence (ISBC) and the XX International Symposium of Luminescence Spectroscopy (ISLS) in Foz do Iguaçu, Brazil, from June 3rd to 7th, 2024.

This is the first time the meeting has been held in Brazil, a multicultural country with the world's largest biodiversity of terrestrial luminescent organisms. For this reason, we selected the Foz de Iguaçu near the stunning Iguaçu Falls, a UNESCO natural heritage site and a biodiversity hotspot, to offer you a memorable experience.

It was challenging to organize such a meeting in Brazil during this challenging time of post-pandemics, with wars and dramatic climate changes, when the resources from public financial agencies were very short and sponsorships very few. But we are happy that, even considering such circumstances, more than 120 participants, including researchers and students from 30 different countries, will attend this unique Luminous conference!

This interdisciplinary event is a four-day conference, including plenary, invited lectures, and keynote sessions by internationally recognized speakers, alternated by poster sessions of selected contributors, expositions, and social activities. Selected oral speakers will present their most relevant results. The meeting is expected to promote the discussion and exchange of ideas among academic researchers and students and to foster interaction between industry and academy, substantially contributing to the dissemination of the most recent scientific and technological advances in electroluminescence, photoluminescence, chemiluminescence, and bioluminescence. Although many important questions need to be answered and studies remain regarding luminescent processes' physical, chemical, and biological fundamentals, an increasing shift toward its analytical applications was observed during the last ISBC/ISLS meetings. Nevertheless, the topic “Luminescence,” with its many facets, has an appealing potential to contribute to the so-needed sustainable development through new efficient light sources and the many analytical applications in different fields, including environment (bioindication, biosensing), biomedical (bioimaging, luminescent assays), safety and quality assessment in industry.

Our utmost interest is to develop a scientific event that strengthens and combines our knowledge and encourages us to continue developing our scientific activity.

We welcome you to this Luminous conference in Iguaçu Falls!

Vadim Viviani

Chairman

COMMITTEES

Organizing Committee

ISBC

Coordinator: Vadim Viviani (CCTS, UFSCar)

Vice-coordinator: Cassius V. Stevani (IQ-USP)

Secretary: Iseli L. Nantes (UFABC)

Treasurer: Brazilian Soc. Biochemistry and Molecular Biology (SBBq: sbbq@sbbq.org.br)

ISLS

Coordinator: Oscar L. Malta (Departamento de Química Fundamental da UFPE)

Vice-coordinator: Rogéria Rocha Gonçalves (Departamento de Química, FFCLRP-USP)

Local Scientific Committee

(ISBC)

Etelvino Bechara (IQ-USP)

Josef Wilhelm Baader (IQ-USP)

Fernando Bortoloni (IQ-USP)

(ISLS)

Alfredo Simas (Federal University of Pernambuco, Brazil)

Ana Pires (São Paulo State University, Brazil)

Antônio Borin (University of São Paulo, Brazil)

Beate Saegesser (Federal University of Pernambuco, Brazil)

Carlos Jacinto (Federal University of Alagoas, Brazil)

Cid Araújo (Federal University of Pernambuco, Brazil)

Cláudia Felinto (Nuclear and Energy Research Institute, Brazil)

Danilo Manzani (University of São Paulo, Brazil)

Ercules Teotonio (Federal University of Paraíba, Brazil)

Fernando Sigoli (University of Campinas, Brazil)

Hermi Brito (University of São Paulo, Brazil)

Ingrid Weber (University of Brasilia, Brazil)
José Carvalho (Federal University of ABC, Brazil)
José Maurício Caiut (University of São Paulo, Brazil)
Lucas Rodrigues (University of São Paulo, Brazil)
Marcelo Nalin (São Paulo State University, Brazil)
Marcelo Rodrigues (University of Brasilia, Brazil)
Marco Cremona (Pontifical Catholic University of Rio de Janeiro, Brazil)
Marian Davolos (São Paulo State University, Brazil)
Oscar Malta (Federal University of Pernambuco, Brazil)
Paulo de Souza (University of Campinas, Brazil)
Petrus Santa Cruz (Federal University of Pernambuco, Brazil)
Ricardo Freire (Federal University of Sergipe, Brazil)
Ricardo Longo (Federal University of Pernambuco, Brazil)
Rogéria Gonçalves (University of São Paulo, Brazil)
Severino Alves Junior (Federal University of Pernambuco, Brazil)
Sidney Ribeiro (São Paulo State University, Brazil)
Veronica Teixeira (Brazilian Synchrotron Light Laboratory, SIRIUS, Brazil)
Wagner Faustino (Federal University of Paraiba, Brazil)

International Scientific Committee

ISBC

Hua Cui (Univ. Science & Technology China)
Isabelle Navizet (Université Gustave Eiffel)
Jerôme Mallefet (Univ. Catholique Louvain, Be)
Mara Mirasoli (Univ. Bologna)
Saman Hosseinkhani (Tarbiat Modares University)
Shimison Belkin (Hebrew Univ. Jerusalem)
Yoshihiro Ohmiya (AIST, Tsukuba, Japan)
Pimchai Chaien Vidyasirimedhi Institute of Science and Technology (VISTEC, Rayong, Thailand)

ISLS

Alok Srivastava (Current Chemicals, Cleveland, USA)
Andréa Camargo (Friedrich-Schiller University, Germany)
Andries Meijerink (University of Utrecht, The Netherlands)
Claudia Wickleder (University of Siegen, Germany)
Daniel Jaque (Autonomous University of Madrid, Spain)
Dirk Poelman (Ghent University, Belgium)
Jean-Claude Bünzli (École Polytechnique de Lausanne, Switzerland).
Jorma Hölsä (University of the Free State, South Africa).
John Capobianco (Concordia University, Canada)
José M. Costa-Fernandez (University of Oviedo, Spain)
Ka-Leung Wong (The Hong Kong Polytechnic University, Hong Kong)
Luís Carlos (University of Aveiro, Portugal)
Luz Patricia Naranjo (Universidad de Ibagué, Colombia)
Marco Bettinelli (University of Verona, Italy)
Marina Popova (Russian Academy of Sciences, Russia)
Michael Reid (University of Canterbury, New Zealand)
Mikhail Brik (Institute of Physics, University of Tartu, Estonia)
Miroslav Dramićanin (University of Belgrade, Serbia)
Mundalapudi L. P. Reddy (National Institute for Interdisciplinary Science and Technology-NIIST-India)
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Volodymyr Amirkhanov (Taras Shevchenko National University of Kyiv, Ukraine)
Wiesław Stręk (Institute of Low Temperature and Structure Research, Poland)
Xiaogang Liu (National University of Singapore, Singapore)
Xueyuan Chen (Chinese Academy of Sciences, China)

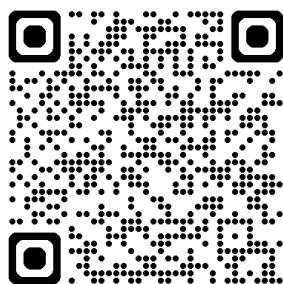
GENERAL INFORMATION

Conference Venue

The conference will take place at the Bourbon Hotel, which has comfortable meeting rooms and a 300-seat auditorium. It is adjacent to it, and there will be space for commercial exhibitions, poster sessions, and coffee breaks. Aside from all the amenities a hotel of this quality can provide. The exhibition area is situated adjacent to the main conference rooms at the Ivory complex (Conjunto Marfim, in yellow). Posters and coffee breaks will occur in the same area. Each exhibitor booth has 3×2 m² and will include a table, two chairs, and an electrical power supply (127 V single phase, 60Hz, 10A). Sponsors can also request double or triple booths. More options are available upon request.

Information about Bourbon Cataratas Resort

Site: <https://www.bourbon.com.br/en/hotel/bourbon-cataratas-do-iguacu>



SOCIAL EVENTS

June 4 (Tuesday) 19:30-22:00. Welcome cocktail.

June 6 (Thursday) 20:00: Brazilian Dinner

June 4,5 and 6 (Tuesday-Thursday) 12:30-14:00. Lunches at Rafain restaurant

Conference Dinner

Thursday, May 6th at 20:00. Rafain restaurant

Excursion

Friday, May 7 8:00-12:30. Excursion to the Iguçu Falls

USEFUL INFORMATION

Emergency Services:

SAMU (Health Emergency): 192

SIATE (Fire Department and Accidents in General): 193

Tourist Police Station: 197

Municipal Guard: 153

Military Police: 190

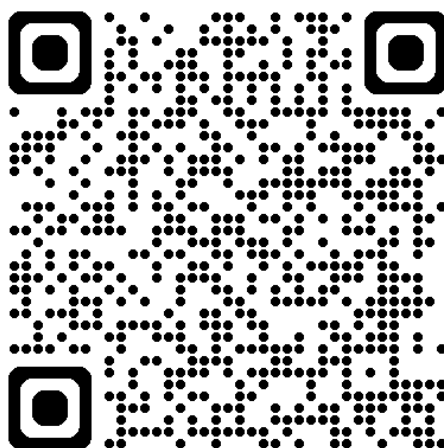
Federal Police: 194

Federal Highway Police: 191

Federal Revenue Office: (45) 3520-43002.

Here, you can find the most important information for your trip to Brazil. Learn about visas, documentation, climate, safety, vaccines, and much more.

[Visit Brasil | Essential Information for your Trip to Brazil](#)



Conference Secretariat: Brazilian Society for Biochemistry and Molecular Biology (SBBq)

SPONSORS



PROGRAM AT GLANCE

	MONDAY JUNE 3	TUESDAY JUNE 4			
08:30		8:00-8:30 OPENING CEREMONY			
10:00		9:00-10:00 Yoshihiro Ohmyia (50 min P + 10 min Q)			
10:30		10:00-10:30 Coffee break (poster stands and slots/booth for the sponsors)			
12:40		SECTION 1 (ISBC) Mechanims of chemiluminescence and bioluminescence Chair: A. Trofimov, Co-chair: W. J. Baader 10:30-11:00 Wilhelm J. Baader (30 min) 11:00-11:30 Alexei Trofimov (30 min)	SECTION 1 (ISLS) Quantum dots, nanocrystals, and nano-structured luminescent materials Chair: Oscar Malta 10:30-11:00 Jose Costa-Fernandez (30 min) 11:00-11:30 Sidney Ribeiro (30 min)		
		11:30-11:50 Fernando H. Bartoloni (20 min)	11:30-11:50 Eugeniusz Zych (20 min)		
		11:50-12:05 Dieter Weiss (15 min)	11:50-12:05 Jose Marques-Hueso (15 min)		
		12:05-12:20 Marcos P. O. Lemos (15 min)	12:05-12:20 Marta Quintanilla (15 min)		
		12:20-12:35 Henrique K. Watanabe (15 min)	12:20-12:35 Tamires Oliveira (15 min)		
		14:00		12:40-14:00 LUNCH	
16:00	REGISTRATION	SECTION 2 (ISBC) Luciferases: structure, function and evolution Chair: Y. Ohmyia 14:00-14:30 Vadim Viviani (30 min) 14:30-14:50 Yuki Ohmuro-Matsuyama (20 min) 14:50-15:10 Martin Marek (20 min) 15:10-15:25 W. M. Rabeh (15 min) 15:25-15:40 Douglas M. M. Soares (15 min) 15:40-15:55 Gabrielle Benites, Chadaporn Kantiwiyawanitch, Juliana C. Ferreira (3x5 min)	SECTION 2 (ISLS) Luminescent coordination compounds Chair: Oscar Malta 14:00-14:30 Paula Gawryszewska (30 min) 14:30-15:00 Fabio Piccinelli (30 min) 15:00-15:20 Sergio A. M. Lima (20 min) 15:20-15:35 Julio Corredoira-Vázquez (15 min) 15:35-15:50 Szymon Chorazy (15 min) 15:50-16:05 Dimitrije Mara (15 min)		
		16:00 - 17:00 Poster/Coffee Break (poster stands and slots/booth for the sponsors)			
		19:00		SECTION 3 (ISBC) Mechanims of chemiluminescence and bioluminescence Chair: W. J. Baader, Co-chair: I. Navizet 17:00-17:30 Isabelle Navizet (30 min) 17:30-18:00 A. Lippert (30 min) 18:00-18:20 Stefan Schramm (20 min) 18:20-18:35 Oleg S. Sutormin (15 min) 18:35-18:50 Aidan McFarland (15 min) 18:50-19:00 Alexander G. G. C. Pinto, Mariana Rocha (3x5 min)	SECTION 3 (ISLS) Optical spectroscopy of inorganic phosphors Chair: Andries Meijerink 17:00-17:30 Claudia Wickleder (30 min) 17:30-17:50 Stefan Lis (20 min) 17:50-18:10 Dariusz Hreniak (20 min) 18:10-18:25 Mariusz Stefanski (15 min) 18:25-18:40 Karol Bartosiewicz (15 min) 18:40-18:55 Talita Ramos (15 min)
				19:30-22:00 WELCOME COCKTAIL	

WEDNESDAY JUNE 5				
08:30	REGISTRATION			
10:00	9:00-10:00 Andries Meijerink (50 min P + 10 min Q)			
10:30	10:00-10:30 Coffe Break (poster stands and slots/booth for the sponsors)			
12:40	SECTION 4 (ISBC) Marine and Terrestrial Bioluminescence: Diversity, Ecology, Physiology Chair: J. Mallefet Co-chair: C. V. Stevani 10:30-11:00 Jérôme Mallefet Chair (30 min) 11:00-11:20 Jerome Delroisse (20 min) 11:20-11:40 Constance Coubris (20 min) 11:40-11:55 Laurent Duchatelet (15 min) 11:55-12:10 Wendy-Shirley Bayaert (15 min) 12:10-12:25 Jose Patio (15 min) 12:25-12:40 G. F. Andrade (15 min)	SECTION 4 (ISLS/ISBC) - Luminescent materials for bioimaging, sensors, theranostics, and displays; Chair: Dariusz Hreniak 10:30-11:00 Wieslaw Stręk (30 min) 11:00-11:20 Rogéria Gonçalves (20 min) 11:20-11:40 Marcin Runowski (20 min) 11:40-11:55 Przemysław Woźny (15 min) 11:55-12:10 Ana Soldado (15 min) 12:10-12:25 Nicol Caetano Zeballos (15 min) 12:25-12:40 Beatriz S. Cugnasca (15 min)		
	14:00 12:40-14:00 LUNCH			
	16:00	SECTION 5 (ISBC) Novel capabilities of luminescence (photodetection, biomaging, spectroscopy, biosensing) Chair: Shimshon Belkin 14:00-14:30 Aldo Roda (30 min) 14:30-14:50 Sullivan Joanneau (20 min) 14:50-15:10 Kazuki Niwa (20 min) 15:10-15:30 Anthony Assaf (20 min) 15:30-15:45 Ryo Nishihara (15 min)	SECTION 5 (ISLS) - Quantum dots, nanocrystals, and nano-structured luminescent materials Chair: Oscar Malta 14:00-14:20 Beate Saegesser 14:25-14:45 Verónica Teixeira 14:50-15:10 Lucas Rodrigues (20 min) 15:15-15:30 Paulo C. de Sousa Filho (15 min) 15:30-15:45 Robert Tomala (15 min) 15:45-16:00 Lucca Blois Guimarães	
		17:00 16:00- 17:00 Poster/Coffe Break (poster stands and slots/booth for the sponsors)		
		19:00	SECTION 6 (ISBC) Clinical and Medical Applications of Luminescence Chair: Aldo Roda, Co-chair: Sylvia Daunert 17:00-17:30 Sylvia Daunert (30 min) 17:30-17:50 Sapna Deo (20 min) 17:50-18:10 Cristiana Caliceti (20 min) 18:10-18:30 Saman Hosseinkhni (20 min) 18:30-18:45 F. G. Franceschi (15 min) 18:45-19:00 Maria M. Calabretta (15 min)	SECTION 6 (ISLS/ISBC) - Optical spectroscopy of inorganic phosphors and applications Chair: Hermi Brito 17:00-17:30 Mike Reid (30 min) 17:30-17:50 Ricardo Longo (20 min) 17:50-18:10 Mikhail Brik (20 min) 18:10-18:30 Flavia Artizzu (20 min) 18:30-18:45 Andrzej Suchocki (15 min) 18:45-19:00 Jorma Hölsä (15 min)
			22:00 19:00-20:30 ISBC & ISLS MEETING	
			FREE	

THURSDAY JUNE 6			
08:30	REGISTRATION		
10:00	9:00-10:00 Maria Rute Ferreira (50 min P + 10 min Q)		
10:30	10:00-10:30 Coffe Break (poster stands and slots/booth for the sponsors)		
12:40	SECTION 7 (ISBC) Terrestrial and marine bioluminescence: diversity, ecology and physiology Chair: J. H. Bechara, Co-chair: C. V. Stevani 10:30-11:00 Cassius V. Stevani (30 min) 11:00-11:30 Danilo Amaral (30 min) 11:30-12:00 Erick L. Bastos (30 min) 12:00-12:20 Cristiano Gallep (20 min)	SECTION 7 (ISBC/ISL) Quantum dots, nanocrystals, nano-structured and molecular luminescent materials Chair: Beate Saegesser 10:30-11:00 Iseli Nantes (30 min) 11:00-11:15 Patricia Targon Campana (15 min) 11:15-11:30 Roberta Silva Pugina (15 min) 11:30-11:45 Elena Bochamikova (15min) 11:45-12:00 Leonidas Brachas (15 min) 12:00-12:15 York Serge Correales, Rodolpho A. N. Silva, Nayara Serge (3x5 min) 12:15-12:25 Norma L. Zuluaga (2x5 min)	
	14:00	12:40-14:00 LUNCH	
	16:00	SECTION 8 (ISBC) Luminescent biosensors Chair: Elisa Michelini 15:00-15:30 Shimshon Belkin (30 min) 15:30-15:50 Elisa Michelini (20 min) 15:50-16:10 Mara Mirasoli (20 min)	SECTION 8 (ISBC) - Electroluminescence Chair: Valentina Utochnikova 15:00-15:30 Marco Cremona (30 min) 15:30-15:45 Neso Sojic (15 min) 15:45-16:00 William M. Oliva (HORIBA, 15 min)
		17:00	16:00-17:00 Poster/Coffe Break (poster stands and slots/booth for the sponsors)
		19:00	SECTION 9 (ISBC) Novel bioluminescent materials for imaging, sensors and theranostics Chair: Iseli Nantes, Co-chair: Vadim Viviani 17:00-17:30 Laura Mezzanotte (30 min) 17:30-17:50 N. Kitada (20 min) 17:50-18:10 V. Viviani (20 min) 18:10-18:25 P. Whatthaisong (15 min) 18:25-18:40 Gabriel Pelentir (15 min) 18:40-18:55 Donato Calabria (15 min)
	22:00		19:30-22:00 -CLOSING CEREMONY / BRAZILIAN DINNER

	FRIDAY JUNE 7
08:00	8:00-13:00 - FINAL REMARKS AND CONFERENCE EXCURSION
13:00	

Detailed program

Plenary Speakers

Tuesday 4 – 9:00 – 10:00

**Yoshihiro Ohmiya (Nat. Inst. Advanced Science & Technology,
Tsukuba, Japan)**

BIOLUMINESCENCE OF MARINE-FIREFLY, OSTRACODS – FROM BIOLOGY TO BIOTECHNOLOGY

Wednesday 5 – 9:00 – 10:00

Andries Meijerink (University of Utrecht, The Netherlands)

COOPERATIVE PROCESSES IN LANTHANIDE LUMINESCENCE

Thursday 6 – 9:00 – 10:00

Maria Rute Ferreira (University of Aveiro, Portugal)

LUMINESCENCE AS A TOOL FOR PHOTONICS ENABLING DIGITAL TRANSITION THROUGH LUMINESCENCE

Thursday 6 – 14:00 – 15:00

Pimchai Chaiyen (VISTEC, Thailand)

ENGINEERING AND BIOCATALYSIS OF LUCIFERASES AND RELATED SYSTEMS FOR SUSTAINABILITY APPLICATIONS

Invited Lectures, Keynote Lectures and Oral Presentations

ISBC

Tuesday 4

SECTION 1. MECHANISMS OF CHEMILUMINESCENCE AND BIOLUMINESCENCE

CHAIR: A. TROFIMOV, CO-CHAIR: J. W. BAADER

10:30-11:00

Josef W. Baader (Invited Lecture)

GENERAL CHEMIEXCITATION MECHANISM IN CYCLIC PEROXIDE
DECOMPOSITION: SINGLET EXCITATION EFFICIENCY

11:00-11:30

Alexei Trofimov (Invited Lecture)

OXY-CHEMILUMINESCENCE: NEW FACETS, MECHANISTIC INSIGHTS, AND
KINETIC INTRICACIES

11:30-11:50

Fernando H. Bartoloni (Keynote Lecture)

LINEAR FREE-ENERGY RELATIONSHIPS IN THE CONTEXT OF STUDYING
CHEMILUMINESCENCE MECHANISMS

11:50-12:05

Dieter Weiss (Oral Presentation)

CHEMILUMINESCENCE REACTIONS MODIFIED FOR CHILDREN

12:05-12:20

Marcos P.O. Lemos (Oral Presentation)

PEROXYOXALATE MECHANISM IN NEAR-NEUTRAL AQUEOUS MEDIA:
CONCOMITANCE OF SPECIFIC ACID AND BASIC CATALYSIS IN WATER

12:20-12:35

Henrique K. Watanabe (Oral Presentation)

USING THE NATURAL FLUORESCENCE DYE CURCUMIN AS A SUSTAINABLE
ACTIVATOR IN PEROXYOXALATE CHEMILUMINESCENCE

SECTION 2. LUCIFERASES: STRUCTURE, FUNCTION, AND EVOLUTION

CHAIR: Y. OHMIYA

14:00-14:30

Vadim R. Viviani (Invited Lecture)

FROM GREEN TO FAR RED: MECHANISMS OF BIOLUMINESCENCE COLOR
TUNING IN BEETLE LUCIFERASES, AND BEYOND

14:30-14:50

Yuki Ohmuro-Matsuyama (Keynote Lecture)

DEVELOPMENT AND IMPROVEMENT OF THE SMALLEST LUCIFERASE

14:50-15:10

MARTIN MAREK (Keynote Lecture)

ATOMISTIC VIEWS AND PROPOSED MECHANISM OF NANOLUC
LUCIFERASE ACTION

15:10-15:25

W. M. RABEH (Oral Presentation)

NEW INSIGHTS INTO COLOR EMISSION OF BEETLE LUCIFERASES

15:25-15:40

DOUGLAS M.M. SOARES (Oral Presentation)

AN INTRINSIC N-TERMINUS ALFA-HELIX MOTIF IS REQUIRED FOR THE
FUNCTION OF Ca^{2+} -REGULATED PHOTOPROTEINS IN BIOLUMINESCENT
CTENOPHORES

15:40-15:55 (PITCH PRESENTATIONS)

SECTION 3. MECHANISMS OF CHEMILUMINESCENCE AND BIOLUMINESCENCE

CHAIR: W. J. BAADER, CO-CHAIR: I. NAVIZET

17:00-17:30

Isabelle Navizet (Invited Lecture)

THE INFLUENCE OF THE ENVIRONMENT ON THE COLOR OF BIOLUMINESCENT SYSTEMS: A MODELING APPROACH

17:30-18:00

Alexander Lippert (Invited Lecture)

CHEMILUMINESCENT 1,2-DIOXETANES FOR MOLECULAR IMAGING IN CELLS AND WHOLE ANIMALS

18:00-18:20

Stefan Schramm (Keynote Lecture)

SOLID STATE CHEMILUMINESCENCE AND BIOLUMINESCENCE - CURRENT STATE AND FUTURE DIRECTIONS

18:20-18:35

Oleg O. Sutormin (Oral Presentation)

CONTRIBUTION OF NAD(P)H:FMN-OXIDOREDUCTASE ACTIVITY INTO VISCOUS MEDIUM EFFECTS ON KINETICS OF COUPLED ENZYME SYSTEM FROM LUMINOUS BACTERIA

18:35-18:50

Aidan McFarland (Oral Presentation)

RED TIDE ALGAE USE A GPCR MECHANISM TO MODULATE BIOLUMINESCENCE

18:50-19:00 (PITCH PRESENTATIONS)

Wednesday 5

SECTION 4. MARINE AND TERRESTRIAL BIOLUMINESCENCE: DIVERSITY, ECOLOGY, PHYSIOLOGY

CHAIR: J. MALLEFET CO-CHAIR: C. V. STEVANI

10:30-11:00

Jérôme Mallefet | Chair (Invited Lecture Lecture)

ALWAYS LOOK AT NEW LUMINOUS SPECIES; YOU NEVER KNOW WHAT TO FIND!

11:00-11:20

Jerome Delroisse (Keynote Lecture)

NEW GENOMIC INSIGHTS ILLUMINATE THE BIOLUMINESCENCE OF THE EUROPEAN BRITTLE STAR AMPHIURA FILIFORMIS

11:20-11:40

Constance Coubris (Keynote Lecture)

HOW LONG CAN AMPHIURA FILIFORMIS (OPHIUROIDEA, ECHINODERMATA) EMIT LIGHT? INSIGHTS INTO THE TROPHIC ACQUISITION OF BIOLUMINESCENCE THROUGH A LONG-TERM SEASONAL STUDY

11:40-11:55

Laurent Duchatelet (Oral Presentation)

CHRISTMAS LIGHTS AT THE BOTTOM OF THE FJORD

11:55-12:10

Wendy-Shirley Bayaert (Oral Presentation)

INVOLVEMENT OF SPINE SENSORY RECEPTORS AND PIGMENTED SHEATH IN THE BIOLUMINESCENCE OF THE BRITTLE STAR AMPHIURA FILIFORMIS

12:10-12:25

Jose Paitio (Oral Presentation)

FLUORESCENT FILTERS OF PHOTOPHORES IN DRAGONFISHES
STOMIIDAE (TELEOSTEI: STOMIIFORMES)

12:25-12:40

G.F. Andrade (Oral Presentation)

BIOLUMINESCENCE TESTS USING *PYROCYSTIS LUNULA* (SCHUTT, 1896)
UNDER EFFECT OF ANIONIC SURFACTANTS CONTAMINATION

**SECTION 5. NOVEL CAPABILITIES OF LUMINESCENCE
(PHOTODETECTION, BIOIMAGING, SPECTROSCOPY, BIOSENSING)**

CHAIR: SHIMSHON BELKIN

14:00-14:30

Aldo Roda (Invited Lecture)

THE NICHE ROLE OF ANALYTICAL BIO-CHEMILUMINESCENCE FOR
PLANETARY HEALTH

14:30-14:50

Sullivan Joanneau (Keynote Lecture)

FLUORESCENT MICROBIAL BIOSENSOR FOR ENVIRONMENTAL MONITORING

14:50-15:10

Kazuki Niwa (Keynote Lecture)

ABSOLUTE LIGHT MEASUREMENT FOR THE INVESTIGATION OF
BIOLUMINESCENCE QUANTUM YIELD AND STANDARDIZATION OF
BIOANALYSIS INSTRUMENTS

15:10-15:30

Anthony Assaf (Keynote Lecture)

RAMAN SPECTROSCOPY OF LIVING SAMPLES: FROM THE CELL TO FIELD
APPLICATIONS

15:30-15:45

Ryo Nishihara (Oral Presentation)

PSEUDOLUCIFERASE ACTIVITY OF THE SARS-COV-2 SPIKE PROTEIN FOR *CYPRIDINA* LUCIFERIN

SECTION 6. CLINICAL AND MEDICAL APPLICATIONS OF LUMINESCENCE

CHAIR: ALDO RODA, CO-CHAIR: SYLVIA DAUNERT

17:00-17:30

Sylvia Daunert (Invited Lecture Lecture)

HARNESSING BIOLUMINESCENCE AS A TOOL IN TRANSLATIONAL SCIENCE

17:30-17:50

Sapna Deo (Keynote Lecture)

BIOLUMINESCENCE IN POINT-OF-CARE DIAGNOSTICS

17:50-18:10

Cristiana Caliceti (Keynote Lecture)

BIOLUMINESCENCE FOR THE SCREENING OF COLON CANCER: THE ROLE OF NOTCH SIGNALING AND THE GUT MICROBIOTA

18:10-18:30

Saman Hosseinkhani (Keynote Lecture)

FIREFLY LUCIFERASE IMPLICATION IN DISCRIMINATION OF PROGRAMMED CELL DEATH MODALITIES

18:30-18:45

F. G. Franceschi (Oral Presentation)

DEVELOPMENT OF REPORTER RESISTANT BACTERIA STRAINS TO ASSESS *IN VIVO* AND *IN VITRO* INFECTION USING BIOLUMINESCENCE IMAGING

18:45-19:00

Maria M. Calabretta (Oral Presentation)

SMARTPHONE-BASED BIOLUMINESCENT TISSUE ON-A-CHIP FOR
MULTIPLEXED BIOSENSING

Thursday 6

SECTION 7. TERRESTRIAL AND MARINE BIOLUMINESCENCE: DIVERSITY, ECOLOGY AND PHYSIOLOGY

CHAIR: J. H. BECHARA, CO-CHAIR: C. V. STEVANI

10:30-11:00

Cassius V. Stevani | (Invited Lecture)

HISTORY, MECHANISM, BIOCHEMISTRY, AND APPLICATIONS OF FUNGAL
BIOLUMINESCENCE

11:00-11:30

Danilo T. Amaral (Invited Lecture)

UNVEILING THE RICHNESS AND ECOLOGICAL SIGNIFICANCE OF
BIOLUMINESCENT LIFEFORMS IN BRAZIL

11:30-12:00

Erik L. Bastos (Invited Lecture)

BIOINSPIRED FLUORESCENT DYES: LESSONS FROM BIOLUMINESCENT
PLANTS

12:00-12:20

Cristiano Gallep (Keynote Lecture)

AUTOLUMINESCENCE IN GERMINATION - APPLICATIONS

12:20-12:40 (PITCH PRESENTATIONS)

SECTION 8. LUMINESCENT BIOSENSORS

CHAIR: ELISA MICHELINI

15:00-15:30

Shimshon Belkin (Invited Lecture)

AN AUTONOMOUS BIOLUMINESCENT BACTERIAL BIOSENSOR MODULE FOR OUTDOOR SENSOR NETWORKS

15:30-15:50

Elisa Michelini (Keynote Lecture)

BIOLUMINESCENCE BIOSENSING PLATFORMS FOR ONE HEALTH: FROM PAPER SENSORS TO THREAD-BASED ANALYTICAL DEVICES

15:50-16:10

Mara Mirasoli (Keynote Lecture)

PORTABLE CHEMILUMINESCENCE BIOSENSORS FOR SPACE LIFESCIENCE AND ASTROBIOLOGY APPLICATIONS

SECTION 9. NOVEL BIOLUMINESCENT MATERIALS FOR IMAGING, SENSORS, AND THERANOSTICS

CHAIR: ISELI NANTES, CO-CHAIR: VADIM VIVIANI

17:00-17:30

Laura Mezzanotte (Invited Lecture)

MULTICOLOR BIOLUMINESCENCE IMAGING ACROSS SCALES: NOVEL TOOLS AND DEVELOPMENTS

17:30-17:50

Nobuo Kitada (Keynote Lecture)

INNOVATION OF NIR LUCIFERIN ANALOGUES USING FIREFLY BIOLUMINESCENCE FOR IN VIVO IMAGING

17:50-18:10

Vadim R. Viviani (Keynote Lecture)

SELECTION AND ENGINEERING COLOR TUNING LUCIFERASES: FROM MAMMALIAN CELL PH INDICATION TO SMARTPHONE BASED LUMINESCENT BIOSENSORS

18:10-18:25

P. Whatthaisong (Oral presentation)

NOVEL LUCIFERINS SYNTHESIS AND THEIR APPLICATIONS FOR PESTICIDE DETECTION

18:25-18:40

Gabriel F. Pelentir (Oral presentation)

DEVELOPMENT OF EFFICIENT FAR-RED EMITTING *PHRIXOTRIX* RAILROADWORM LUCIFERASE COMBINATIONS USING AMINO-LUCIFERIN ANALOGS

18:40-18:55

Donato Calabria (Oral presentation)

CHEMILUMINESCENCE BIOSENSORS FOR H₂O₂ AND OXIDASES SUBSTRATES QUANTIFICATION BASED ON PEROXIDASE-LIKE ACTIVITY
GUANOSINE SELF-ASSEMBLED HYDROGEL

ISLS

TUESDAY 4

SECTION 1. QUANTUM DOTS, NANOCRYSTALS, AND NANO-STRUCTURED LUMINESCENT MATERIALS

CHAIR: OSCAR MALTA

10:30-11:00

Jose Costa-Fernandez (Invited Lecture)

MULTIFUNCTIONAL METAL-DOPED PHOTOLUMINESCENT NANOPARTICLES AS PROMISING NANOTOOLS FOR TARGETED BIOIMAGING AND FOOD SAFETY CONTROL

11:00-11:30

Sidney Ribeiro (Invited Lecture)

ORGANIC-INORGANIC HYBRIDS. FROM DIRECTION-MODULATED PHOTOLUMINESCENCE TO IR PHOTOACTIVATED PROCESSES

11:30-11:50

Eugeniusz Zych (Keynote Lecture)

11:50-12:05

Jose Marques-Hueso (Oral presentation)

UPCONVERSION 3D PRINTING PRODUCTION OF MULTI-COLOR, RIGID/FLEXIBLE, AND DIELECTRIC/METALLIC PLATED SAMPLES

12:05-12:20

Marta Quintanilla (Oral presentation)

PLASMONIC HEATING MONITORED THROUGH LUMINESCENT NANOPARTICLES

12:20-12:35

Tamires Oliveira (Oral presentation)

SPECTROSCOPIC STUDIES OF NaYF_4 , YVO_4 , AND AUNRS/NPS FOR MULTIFUNCTIONAL SUPERPARTICLES

SECTION 2. LUMINESCENT COORDINATION COMPOUNDS

CHAIR: OSCAR MALTA

14:00-14:30

Paula Gawryszewska (Invited Lecture)

DIFFERENT EMISSION SENSITIZATION PATHWAYS IN Ln^{3+} CHELATES WITH O8 AND O8N2 CHEMICAL ENVIRONMENTS

14:30-15:00

Fabio Piccinelli (Invited Lecture)

THE CHARMING ROLE OF CHIRAL AND LUMINESCENT LANTHANIDE-BASED COMPLEXES IN BOTH TECHNOLOGICAL AND BIOMEDICAL FIELDS

15:00-15:20

Sergio A. M. Lima (Keynote Lecture)

HOW CAN WE PLAN THE COMPOSITION OF EUROPIUM COMPLEXES TO MODULATE THE SURFACE CHARGE, CYTOTOXICITY, AND LUMINESCENCE OF RED-EMITTING NANOPROBES?

15:20-15:35

Julio Corredoira-Vázquez (Oral Presentation)

BIFUNCTIONAL LANTHANOID-BASED MOLECULAR MATERIALS: EXPLORING OPTO-MAGNETIC PROPERTIES OF A MONONUCLEAR Yb COMPLEX

15:35-15:50

Szymon Chorazy (Oral Presentation)

CYANIDO IRIIDIUM AND RHENIUM COMPLEXES FOR NEXT-GENERATION MATERIALS DEMONSTRATING DIVERSE LUMINESCENT FUNCTIONALITIES

15:50-16:05

Dimitrije Mara (Oral Presentation)

INFLUENCE OF VIBRATIONAL QUENCHING ON NIR LANTHANIDE LUMINESCENCE AND STRATEGIES TO REDUCE IT IN LANTHANIDE MOLECULAR MATERIALS

SECTION 3. OPTICAL SPECTROSCOPY OF INORGANIC PHOSPHORS

CHAIR: ANDRIES MEIJERINK

17:00-17:30

Claudia Wickleder (Invited Lecture)

LUMINESCENT PROPERTIES OF UNCOMMON DIVALENT LANTHANIDES – INTERESTING SPECTROSCOPIC FEATURES AND PROMISING CANDIDATES FOR APPLICATIONS

17:30-17:50

Stefan Lis (Keynote Lecture)

LUMINESCENCE SPECTROSCOPY OF LANTHANIDES IN SELECTED INORGANIC NANOMATERIALS AND ITS INNOVATIVE APPLICATIONS

17:50-18:10

Dariusz Hreniak (Keynote Lecture)

LOW-TEMPERATURE INVESTIGATIONS OF LUMINESCENT TRANSPARENT GARNET CERAMICS DOPED WITH RARE EARTH IONS

18:10-18:25

Mariusz Stefanski (Oral presentation)

OPTICAL PROPERTIES OF INORGANIC OXIDE PEROVSKITES DOPED WITH NEODYMIUM(III) IONS UNDER HIGHLY CONCENTRATED INFRARED EXCITATION

18:25-18:40

Karol Bartosiewicz (Oral Presentation)

NOVEL SUB-EUTECTIC ENGINEERING FOR LUMINESCENCE AND
PHOTOCONVERSION CONTROL IN $Tb_3Al_5-xSc_xO_{12}:Ce$ CRYSTALS

18:40-18:55

Talita Ramos (Oral Presentation)

BROADBAND ANTI-STOKES WHITE EMISSION OF RARE EARTH–MANGANESE
PEROVSKITES NANOCRYSTALS INDUCED BY LASER IRRADIATION

Wednesday 5

SECTION 4. LUMINESCENT MATERIALS FOR BIOIMAGING, SENSORS, THERANOSTICS, AND DISPLAYS

CHAIR: DARIUSZ HRENIAK

10:30-11:00

Wieslaw Stręk (Invited Lecture)

THE IMPORTANCE OF MAGNETIC SPECTROSCOPY TO UNDERSTANDING THE
ELECTRONIC STRUCTURE OF RARE-EARTH IONS IN CRYSTALS AND
NANOPARTICLES

11:00-11:20

Rogéria Gonçalves (Keynote Lecture)

LANTHANIDE-DOPED NANOSTRUCTURED MATERIALS AS THERANOSTIC
PLATFORMS

11:20-11:40

Marcin Runowski (Keynote Lecture)

COMBINATION OF LANTHANIDES LUMINESCENCE WITH SECOND HARMONIC
GENERATION (SHG) IN POLYCRYSTALLINE MATERIALS FOR TEMPERATURE
SENSING, OPTICAL CODING, AND ANTI-COUNTERFEITING

11:40-11:55

Przemysław Woźny (Oral Presentation)

ADVANCEMENTS AND OUTCOMES IN OPTICAL PRESSURE SENSING:
STRATEGIES AND RESULTS

11:55-12:10

Ana Soldado (Oral Presentation)

FUNCTIONALIZED NITROGEN AND LANTHANIDES CO-DOPED CARBON DOTS
WITH STRONG PHOTOLUMINESCENCE FOR CELLULAR BIOIMAGING

12:10-12:25

Nicol Caetano Zeballos (Oral Presentation)

COMBINING LUMINESCENCE WITH INDIUM-TIN OXIDE NANOPARTICLES
FOR BIOMEDICAL APPLICATIONS AT THE THIRD BIOLOGICAL WINDOW

12:25-12:40

Beatriz S. Cugnasca (Oral Presentation)

SYNTHESIS AND APPLICATION OF NEW FLUORESCENT PROBES BASED ON
SELENO-BODIPYS FOR BIOIMAGING AND SELECTIVE DETECTION OF
BIOTHIOLS IN URINE SAMPLES

SECTION 5. QUANTUM DOTS, NANOCRYSTALS, AND NANO-STRUCTURED LUMINESCENT MATERIALS

CHAIR: OSCAR MALTA

14:00-14:30

Beate Saegesser (Keynote Lecture)

SEMICONDUCTOR QUANTUM DOTS, EXCELLENT TOOLS FOR BIOIMAGING

14:30-14:50

Verônica Teixeira (Keynote Lecture)

EXPLORING THE PROPERTIES OF LUMINESCENT MATERIALS USING FOURTH-
GENERATION SYNCHROTRON LIGHT AT SIRIUS

14:50-15:10

Lucas Rodrigues (Keynote Lecture)

NEW PERSISTENT LUMINESCENT GLASS COMPOSITES: VISCOUS SINTERING SYNTHESIS AND X-RAY NANOSCOPY CHARACTERIZATION

15:10-15:30

Paulo C. de Sousa Filho (Oral Presentation)

EXPLORING DOWNSHIFT AND UPCONVERSION OPTICAL RESPONSES TO DETAIL THE INTERNAL STRUCTURE OF VANADATE NANOCRYSTALS

15:30-15:45

ROBERT TOMALA (Oral Presentation)

EFFECT OF YTTERBIUM IONS ON BROADBAND ANTI-STOKES VISIBLE EMISSION

15:45-16:00

LUCCA BLOIS GUIMARÃES (Oral Presentation)

SECTION 6. OPTICAL SPECTROSCOPY OF INORGANIC PHOSPHORS AND APPLICATIONS

CHAIR: HERMI BRITO

17:00-17:30

Mike Reid (Invited Lecture)

LASER-INDUCED WHITE EMISSION - PHENOMENON AND APPLICATIONS

17:30-17:50

Ricardo Longo (Keynote Lecture)

NEW MATERIALS FOR CONTINUOUS BRIGHT WHITE LIGHT EMISSION BY UP-CONVERSION EXCITATION AT NEAR-INFRARED

17:50-18:10

Mikhail Brik (Keynote Lecture)

MODELING OF OPTICAL PROPERTIES OF IMPURITY IONS IN SOLIDS

18:10-18:30

Flavia Artizzu (Keynote Lecture)

LANTHANIDE-BASED MATERIALS EMITTING AT TELECOM WAVELENGTH:
CHALLENGES AND PERSPECTIVES FOR PHOTONIC AND QUANTUM
TECHNOLOGIES

18:30-18:45

Andrzej Suchocki (Oral Presentation)

HIGH-PRESSURE LUMINESCENCE STUDIES OF Fe^{3+} IN $LiGaO_2$
CRYSTALLINE POWDERS

18:45-19:00

Jorma Hölsä (Oral Presentation)

CHARGE COMPENSATION AND PERSISTENT LUMINESCENCE: MAKE A
VIRTUE OF NECESSITY

Thursday 6

**SECTION 7. QUANTUM DOTS, NANOCRYSTALS, AND NANO-STRUCTURED
LUMINESCENT MATERIALS**

CHAIR: BEATE SAEGESSER

10:30-11:00

Iseli L. Nantes (Invited Lecture)

PLASMON-INDUCED INCREASED ABSOLUTE ACTIVITY OF AMYDETES AND
CHIMERIC ZZ-AMY FIREFLY LUCIFERASES BOUND TO $PEG(SH)_2$ - AND CYS-
FUNCTIONALIZED GOLD NANOPARTICLES

11:00-11:15

Patricia T. Campana (Oral Presentation)

PHOTOPHYSICS STABILITY OF GOLD NANOPARTICLES AS MEMBRANE MARKERS.

11:15-11:30

Roberta Silva Pugina (Oral Presentation)

MODIFIED MATRICES OF GELLAN GUM DOPED WITH LANTHANIDE IONS FOR THE PRODUCTION OF PHOTONIC DEVICES

11:30-11:45

Elena Bocharnikova

SPECTROSCOPY AND CHEMOMETRICS ANALYSIS OF ANTIBIOTIC IN MILK SERUM

11:45-12:00

Leonidas Bachas (Oral Presentation)

LANMODULIN AS A NOVEL REAGENT FOR LANTHANIDE-BASED DIAGNOSTICS

12:00-12:20 (PITCH PRESENTATIONS)

York Serge Correales, Rodolpho A. N. Silva, Nayara Serge, Norma L. Zuluaga

SECTION 8. ELECTROLUMINESCENCE

CHAIR: VALENTINA UTOCHNIKOVA

15:00-15:30

Marco Cremona (Invited Lecture)

ORGANIC ELECTROLUMINESCENT DEVICES: OLEDs AND BEYOND

15:30-15:45

Neso Sojic (Oral Presentation)

LIGHT CONVERSION BY ELECTROCHEMILUMINESCENCE AT SEMICONDUCTOR SURFACES

15:45-16:00

William M. Oliva (HORIBA) (Oral Presentation)

SECTION 9. LUMINESCENT COORDINATION COMPOUNDS AND APPLICATIONS

CHAIR: MARCO CREMONA

17:00-17:30

Valentina Utochnikova (Invited Lecture)

HIGH-TEMPERATURE LUMINESCENT THERMOMETERS BASED ON LANTHANIDE COMPLEXES

17:30-17:50

Pablo Fuentealba Castro (Keynote Lecture)

NEODYMIUM(III) MOLECULAR SPECIES FOR THERMOMETRY IN THE NEAR-INFRARED REGION OPERATING IN THE PHYSIOLOGICAL TEMPERATURE RANGE.

17:50-18:05

Israel P. Assunção (Oral Presentation)

PRACTICAL APPLICATIONS OF VERSATILE HIGHLY LUMINESCENT BETA-DIKETONATE TETRAKIS Tb^{3+}/Eu^{3+} COMPLEX DOPED IN POLYMERIC MATRICES AS LIGHT-CONVERTING MOLECULAR DEVICES AND OPTICAL THERMOMETER

18:05-18:20

Jakub J. Zakrzewski (Oral Presentation)

NOVEL STRATEGIES TOWARDS OPTICAL THERMOMETERS BASED ON SINGLE-MOLECULE MAGNETS

18:20-18:35

Aleksander Hoffman (Oral Presentation)

DIPHOSPHINE-DIOXIDE-CONTAINING YB(III)/ER(III) MOLECULAR NANOMAGNETS IN EUROPIUM(III)-DICYANIDOMETALLATE(I) LUMINESCENT MATRICES

18:35-18:50

Leonardo F. Saraiva (Oral Presentation)

SHIFTING FOCUS TO BRIGHTER PROSPECTS: UNVEILING VIBRONIC COUPLING IN THE INTERSYSTEM CROSSING DYNAMICS OF Eu^{3+} COMPLEXES