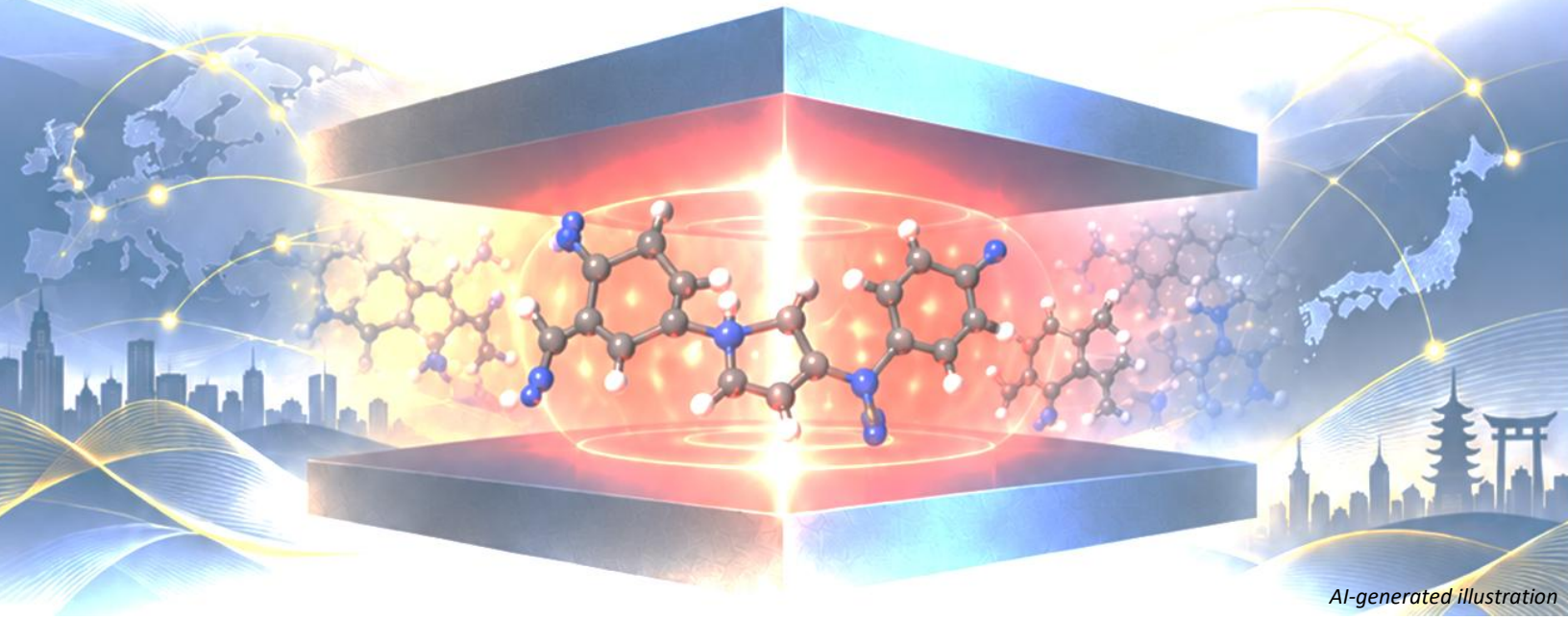
IRN OSCAR

Organic Semiconductor Research:

Beyond OLEDs, designing and harnessing organic light-emitting materials towards quantum technologies

Joint meeting with SNSF-JSPS symposium on organic semiconductor lasers



AI-generated illustration

Université de Versailles-Saint-Quentin-en-Yvelines,

November 25 – 27, 2026

UVSQ université PARIS-SACLAY | UNIVERSITÉ SORBONNE PARIS NORD | cnrs | KYUSHU UNIVERSITY | ETH zürich

BSSS | JSPS JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE 日本学術振興会 | SNSF Swiss National Science Foundation

What is OSCAR ?

IRN on Organic Semiconductors in (micro)-Cavities for Advanced Researches (OSCAR): *Beyond OLEDs, designing and harnessing organic light-emitting materials towards quantum technologies*

OSCAR is an International Research Network supported by CNRS. It is funded for 5 years (2026- end of 2030).

For nearly 30 years, Organic Semiconductors (OSCs) have played a pivotal role in photonics and electronics, delivering exceptional performance in organic light-emitting diodes (OLEDs). Nearly all optoelectronic devices have been successfully implemented in the organic world, but some transfers have proven significantly more challenging than anticipated—most notably, the realization of the ***organic laser diode***. But it has now become clear that OSCs are more than just color-tunable, flexible, or "low-cost" alternatives to traditional inorganic semiconductors. Beyond the challenge of translating existing concepts to the organic world, but it is also possible to create novel structures that are just impossible with inorganic materials. Indeed, organic pi-conjugated molecules inherently exhibit high exciton binding energies at room temperature, a feature that opened the door to the exploration of **strong light–matter coupling regime under ambient conditions**. As polaritonic states involve hybridized states of light and matter, OSCs have fully entered the world of quantum technologies.

Looking ahead, considerable opportunities remain to develop organic light-emitting materials and device architectures that harness the emissive properties of organic semiconductors beyond conventional large-area OLEDs operating in the visible range. This ambition lies at the heart of OSCAR. Achieving it requires close collaboration between physicists and chemists to guide the design and development of materials tailored to these emerging applications.

IRN board members :



David Kréher, Institut Lavoisier de Versailles (ILV), Université de Versailles-Saint-Quentin en Yvelines (UVSQ) and CNRS, France. Personal page : https://www.ilv.uvsq.fr/m-david-kreher



Sébastien Chénais, Laser Physics Laboratory (LPL), Institut Galilée, Université Sorbonne Paris Nord and CNRS, France. Group website : Organic Photonics And Lasers (OPAL)



Jan-Patrick Calupitan, Institut Parisien de Chimie Moléculaire (IPCM), Sorbonne Université and CNRS, France. Personal page : https://ipcm.fr/en/en-research/en-presentation-ecp-group/en-ecp-group-members/en-jan-patrick-calupitan/



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Chihaya ADACHI, Center for Organic Photonics and Electronics Research (OPERA), Kyushu University, Japan. Group website : https://www.cstf.kyushu-u.ac.jp/~adachilab/lab/



Fabrice MATHEVET, OPHELIA (Organic Photonics and Electronics International Laboratory), CNRS and Kyushu Univerity, Japan. IRL website under construction, see https://ipcm.fr/en/ophelia-a-new-franco-japanese-cnrs-laboratory-for-optoelectronics/

Scientific Program

	Wednesday, November 25	Hall D, amphi B
Time	**Title**	**Speaker**
13:00 - 13h45	Welcoming of participants	
13:45	Opening remarks, presentation of the IRN and of the SNSF-JSPS symposium	David Kréher, Sébastien Chénais ; Chihaya Adachi, Chih-Jen Shih, Fabrice Mathevet
14:00-14:35	Organic Semiconductor Lasers : Advances in Molecular Design and DFB Architectures	**keynote speaker 1 : Chihaya Adachi**
14:35-14:55	Novel materials for laser applications	**Fabrice Mathevet**
14:55-15:15	Application of Lasing Boron Difluoride Dyes in Organic Light-Emitting Diodes	**Mykhaylo Potopnyk**
15:15-15:35	Tuning optical, optomechanical and optoelectronic properties of π-conjugated molecules/oligomers	**Cyprien Lemouchi**
15:35-15:55	Design and Synthesis of Supra-Macro-Molecular Emitting Materials	**Jan-Patrick Calupitan**
15:55-16:40	coffee break	
16:40-17:00	Quantitative comparison of the empiric methods to determine the Amplified Spontaneous Emission threshold in active waveguides	**Marco Anni**
17:00-17:20	Latest advances on solution-processed organic lasers	**Maria Diaz-Garcia**
17:20-17:40	Coherence and threshold properties of organic semiconductor Amplified Spontaneous Emission sources	**Sébastien Chénais**
17:40-18:00	Top-surface nano-stencil gratings for organic DFB lasers	**Tharindu Rajakaruna**
18:00-18:30	Break	
18:30-21:00	poster session with welcome reception and buffet / Pavillon Panhard	

	Thursday, November 26	Hall D, amphi C
Time	**Title**	**Speaker**
9:00-9:35	Polaritons, Loss and Near-Unity Efficiency in OLEDs	**keynote speaker 2 : Malte Gather**
9:35-9:55	Engineering Organic Exciton–Polariton Lasers: From Device Stability to Spatial Confinement	**Xiao Tan**
9:55-10:15	Organic polaritonics from OLED photophysics to fully solution processed lasers	**Konstantinos Dasladakis**
10:15-10:35	Engineering Optical Dispersion through Ultrastrong Light-Matter Coupling in Organic Microcavities	**Andreas Mischok**

10:35-11:05	coffee break	
11:05-11:25	Pure Hydrocarbon Hosts for High Performance Phosphorescent OLEDs: a molecular concept for Organic Electronics	**Cyril Poriel**
11:25-11:45	Modulation of the thiophenol derivative: impact on molecular heptazines properties	**Lucas Frederic**
11:45-12:05	Unsymmetrical dithienopyran-based NIR emitters: synthesis, optical properties, OLEDs and photostability	**Maxime Rémond**
12:05-12:25	Photoemission and related techniques to bridge surface chemistry and optoelectronic properties	**Mathieu Frégnaux**
12:30 - 14h00	Lunch / Buffet with poster session, Pavillon Panhard	
15:00 - 17:00	Visit of the palace of Versailles	
19:30	Conference dinner at "CHAPEAU" restaurant	

	Friday, November 27	**Hall F, amphi H**
Time	**Title**	**Speaker**
9:00-9:35	Nanoscale Integration of Solvent-Sensitive Semiconductor Devices	**keynote speaker 3 : Chih-Jen SHIH**
9:35-9:55	Trajectory-controlled Nanostencil Lithography for Full-Color Nano OLED Metasurfaces	**Jiwoo Oh**
9:55-10:15	High-Efficiency Perovskite Nanocrystal LEDs with Nanosecond Switching for Optical Communication	**Gerrit Stemmler**
10:15-10:45	coffee break	
10:45-11:05	Biosensing inside live cells with organic microlasers	**Marcel Schubert**
11:05-11:25	Organic solid-state lasers dynamics in transient regimes: toward controlled sub-nanosecond laser emission	**Isabelle Hantonne**
11:25-11:45	Exploration of functional photoresists for OLED miniaturization using controlled polymerization	**Shao-Wei Lo**
11:45-12:05	To be announced	**David Kréher**
12:05-12:15	Conclusion of the symposium	David Kréher, Sébastien Chénais, Chihaya Adachi, Chih-Jen Shih, Fabrice Mathevet
12:15-14:00	Lunch box + optional visit of CEFS2 platform	

Poster presentations

Poster display hours :

Pavillon Panhard Wednesday, 18:30-21:00
Thursday 12:30-14:00

Name of presenter	*Title of poster*	*Affiliation*
Takuma SAEKI	Development of Highly Durable Organic Semiconductor Laser Materials with a Twisted Conjugated Structure	OPERA, KU, Japan
Donato Maria CARRETTA	Deterministic On-Site Self-Assembly of Perovskite Nanocrystals Superlattice Arrays and Their Integration Into Nano-Pixelated Light-Emitting Diodes	ETH Zurich, Switzerland
Asbjoern RASMUSSEN	Beaming to Batwing: Scalable Angular Emission Control for Narrow Band Top Emission OLEDs	ETH Zurich, Switzerland
Zhan Hong LIN	Momentum-Resolved Excited-State Lifetime Spectroscopy (MRELS)	ETH Zurich, Switzerland
Kais DHBAIBI	High brightness in bis(tri-isopropylsilyl)ethynyl-functionalized polycyclic aromatic hydrocarbons: localized representation versus Clar's model	ILV, UVSQ, France
Jonathan LONG	Organic Nanostructures for on surface Self-assembled Photoreticulation	ILV, UVSQ, France
Alexandre CHEMIN	Chiral Saddle-shaped organics molecules for optoelectronics	ILV, UVSQ, France
Tristan GUEZENNEC	Diode-pumped vertical external-cavity organic laser emitting at 800 nm	LPL, USPN, France
Arnaud JOLLIVET	Continuous-Wave Lasing conditions in organic semiconductors: the role of the resonator	LPL, USPN, France
Felix MIGUIM-SIPEWO	Contribution to the Study of Mixed-Order DFB Cavity for Organic Laser Diode	LPL, USPN, France
Enzo JEAN-WOLDEMAR	Measurement of triplet related constants of organic molecules with a single-laser pump-probe setup	LPL, USPN, France
Georg MERKLIN	What is the Amplified Spontaneous Emission threshold?	LPL, USPN, France
Quentin MARTIN	High-PLQY Color-Tunable Exciplexes for OLED Applications	IPCM, SU, France
Lilian COLIN	π-Conjugated molecular liquids for electronics: demonstration of an OLED with a TADF emissive liquid layer	IPCM, SU, France
Mélanie LEBENTAL	3D microlasers for non-Euclidean photonics	ENS Paris-Saclay, France

KU = Kyushu University, ILV = Institut Lavoisier de Versailles ; UVSQ = Université de Versailles-Saint-Quentin-en-Yvelines, IPCM = Institut Parisien de Chimie Moléculaire, SU= Sorbonne Université, USPN = Université Sorbonne Paris Nord, ETH = Eidgenössische Technische Hochschule, ENS = Ecole Normale Supérieure

Practical information

Location : Université de Versailles Saint-Quentin en Yvelines, 45 avenue des Etats-Unis, 78000 Versailles

https://maps.app.goo.gl/noGVPigrJ5hJis5Y6

If you directly head to the conference, the nearest station is **Montreuil** on the L line (be careful that Montreuil is also the name of a city in the eastern suburb of Paris, on the opposite side !). We suggest using Google maps or Citymapper to find the best route from your starting point.

To head to the hotels, the restaurant for the conference dinner or to the palace of Versailles, the nearest station is **RER C Versailles Chateau Rive Gauche**. From Charles de Gaulle airport, it is 1h30 with RER B and C. From Orly airport, slightly less with Metro line 14 and RER C. From Paris Gare de l'Est, around 1 hour.

The conference venue is a 25-minute walk or about 15 minutes by bus from the hotels. We will try to arrange rides from the hotels to the venue in the mornings and evenings (details later).

If you need assistance for reaching the hotel or the conference venue, write an e-mail to David or myself, or call us at :

Sebastien : +336 88 91 95 16

David : +336 77 98 31 13

Conference details

- Wednesday 25/11 pm : Descartes(D) building, **amphitheater B**

- Thursday 26/11 am : Descartes (D) building, **amphitheater C**

- Friday 27/11 am : Fermat (F) building, **amphitheater H**

The poster sessions, welcome reception on Wednesday night and lunch on Thursday will take place at **Pavillon Panhard (P building)**

Hall D : Wednesday afternoon talks (amphi B) and Thursday morning talks (amphi C)



Pavillon Panhard : poster sessions, Wednesday evening and Thursday lunch buffets

Hall F : Friday morning talks (amphi H)

Campus entrance

Hotels

If you are staying at one of the hotels reserved for the conference, you should have received an individual email confirming which hotel you have been assigned to.

- Hôtel des Roys : 14, Avenue de Paris - 78000 Versailles
  Voir la carte
  +33 1 39 50 56 00

- Hôtel d'Angleterre : 2bis Rue de Fontenay, 78000 Versailles
  Voir la carte
  +331 39 51 43 50

Conference Dinner

Thursday, November 26, at 19:30
https://chapeau1874.fr/versailles/

Adress: CHAPEAU, 7 rue Hoche, 78000 VERSAILLES