C'Nano

THE NANOSCIENCE MEETING

Weelcome Booklet

2025

C'NANO

cnrs

In partnership with:

cnrs GDR Groupement de recherche

FRANCE 2030 PROGRAMME DE RECHERCHE ÉLECTRONIQUE

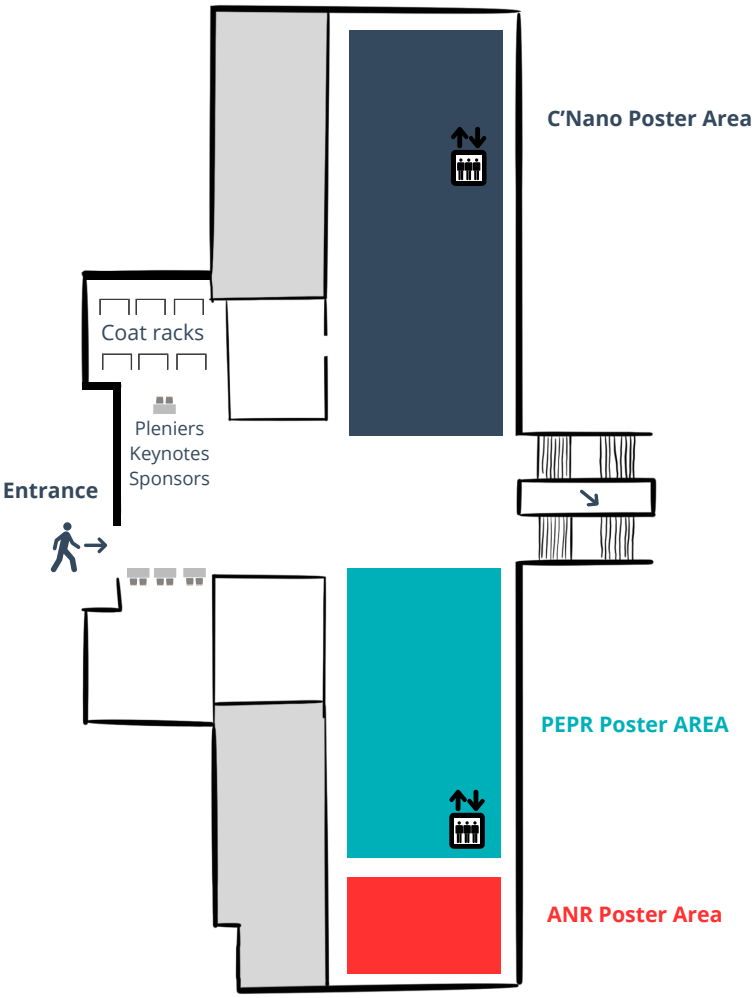
anr

https://cnano2025.sciencesconf.org

WIFI

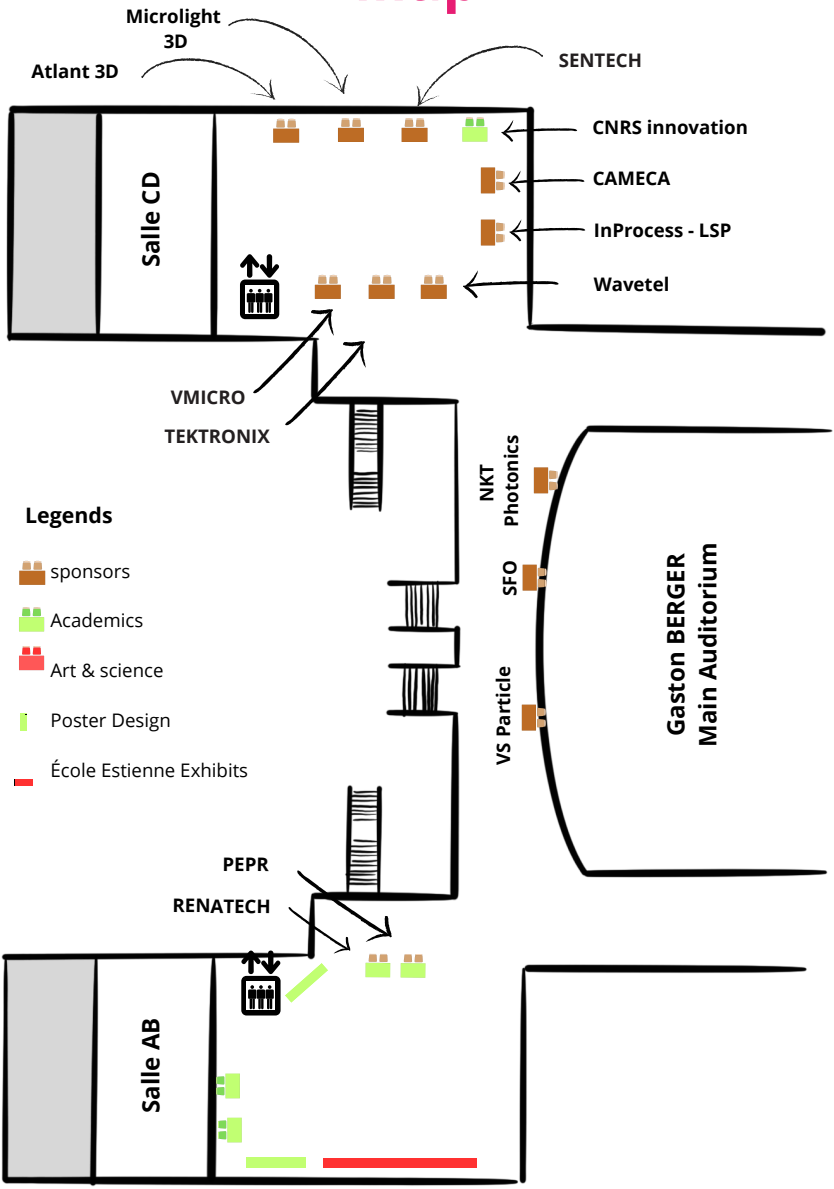
SSID : NANO2025
MDP : Nanoscience-2025

Map

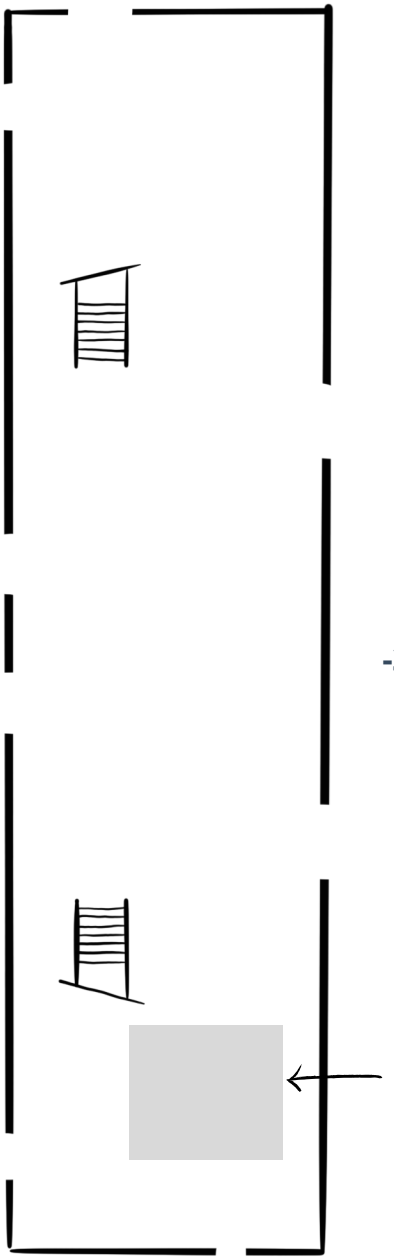


-1 Badges and Posters Floor

Map



-2 Meals and Main Auditorium Floor



-3 Louis Armand Auditorium and Room 1 to 4

Discover the serious game on clean rooms by Nathalie Lidgi Guigui

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C’Nano in short

MISSION ET FUTURE

After seven years at the head of C'Nano, the CNRS research support unit, Corinne Chaneac is handing over the reins to Sébastien Bidault. Her dedication has strengthened and structured our community. Sébastien will continue this momentum with the ambition of forging new connections and further supporting C'Nano's missions.

1 **RESEARCH**

Support for nanoscience research through the organization of conferences, thematic days, and multidisciplinary workshops...

2 **INNOVATION**

Building research-industry connections to foster partnerships, innovation, and the integration of young PhDs.

3 **EDUCATION**

Promoting nanoscience education, science-society dialogue, and public outreach.

4 **FORESIGHT**

Foresight and strategic monitoring to guide the development of nanoscience and nanotechnology.

Partners & sponsors

A special thank you to our academic partners and sponsors who have supported this event financially and/or scientifically.

You will find them every day during the conference at the stands in the West Patio, level -2!

Talk Wednesday - 3:40 PM
Inherently Selective Atomic Layer Deposition for Optical and Sensor Applications: Microreactor Direct Atomic Layer Processing (DALP™)

Talk Wednesday - 3:50 PM
10 years of innovation | VSParticle's impact on material discovery

Erfolg durch Leistung

Scientific Organizing Committee

Nanochemistry & Nanoparticles Session
Lise-Marie LACROIX (INSA Toulouse – LCPNO, Toulouse / C'Nano GSO)*
David PORTEHAULT (CNRS – LCMCP, Paris/ GDR NINO)*
Laëticia DUBAU (CNRS – LEPMI, Grenoble)
Sandrine ITHURRIA (ESPCI – LPEM, Paris/ C'Nano IDF)
Myrtil KAHN (CNRS – LCC, Toulouse / C'Nano GSO/ GDR NINO)

Session Nanobiosciences & Nanomedecine
Nadine MILLOT (Univ. Bourgogne – ICB / C'Nano EST, Dijon)*
Stéphane MORNET (CNRS – ICMCB / C'Nano GSO, Bordeaux)*
Thomas PONS (INSERM – LPEM, Paris)*
Gaetan BELLOT (INSERM – CBS, Montpellier)
Fouzia BOULMEDAIS (CNRS – ICS, Strasbourg)
Andreas REISCH (Univ. Strasbourg – LBP, Strasbourg)

Nanophotonics & Nanooptics session
Erik DUJARDIN (CNRS – ICB, Dijon)*
Maria TCHERNYCHEVA (CNRS – C2N, Palaiseau)*
Jean-Luc DUVAIL (Université de Nantes – IMN / C'Nano NO, Nantes)
Valentina KRACHMALNICOFF (CNRS – Inst. Langevin, Paris)
Jean-Baptiste TREBBIA (CNRS – LP2N, Talence)
Christelle MONAT (Ecole Centrale de Lyon – INL, Lyon)
Antoine MOREAU (Univ. Clermont Auvergne – IP, Aubière)

Functional thin films, Nanostructures & 2D materials session
David BABONNEAU (CNRS – Pprime, Poitiers / C'Nano NO)*
Guillaume COLAS (CNRS – FEMTO-ST, Besançon / GDR CarMANano)
Rémi LAZZARI (CNRS – INSP, Paris)*
Anthony SZYMCZYK (Univ. de Rennes – ISCR, Rennes / GDR CarMANano)

Nanomaterials for energy session
Lionel SANTINACCI (CNRS – CINaM / C'Nano PACA, Marseille)*
Sophie CASSAIGNON (SU - LCMCP, Paris),
Valérie KELLER (CNRS – ICPEES, Strasbourg)*

*session coordinators

Nanoscale characterization session
Brice GAUTIER (INSA Lyon – INL, Lyon / GDR CarMANano)*
Rosine COQ GERMANICUS (UNICAEN – CRISMAT, Caen / GDR CarMANano)
Céline ÉLIE CAILLE (Univ. Bourgogne Franche Comté – FEMTO-ST, Besançon / GDR CarMANano)
Séverine GOMES (CNRS – CETHIL, Lyon / GDR CarMANano)

Sustainable development
Corinne CHANEAC (SU - LCMCP, Paris)*
Emmanuel FLAHAUT (CNRS - CIRIMAT, Toulouse / GDR NaMasTE)*

*session coordinators

Organizing Committee

Comité d'organisation national

Corinne CHANEAC, Directrice du C'Nano (Sorbonne Université – LCMCP)
Christophe DECILAP, Gestionnaire Administratif & Comptable (CNRS – C'Nano)
Maéva LUBIN, Chargée de Communication & Evènementiel (CNRS – C'Nano)
Sébastien BIDAULT (CNRS – Ins. Langevin, C'Nano)

Comité d'organisation local

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Aurélie LATTRON, Chargée de Communication PEPR Réseaux du futur (CNRS Ingénierie)
Isabelle SAGNES, Directrice de Recherche (CNRS/C2N - PEPR électronique)

Program

TUESDAY MARCH 18TH

11:30 - 13:30	Registration	-1
13:30 - 14:00	Opening session S. BIDAULT (CNRS – Ins. Langevin, C'Nano) & C. CHANEAC (Sorbonne Université – LCMCP)	-2 Main Auditorium (Gaston Berger)
14:00 - 15:00	Plenary Session Emiliano CORTÉS, Univ. of Munich, Nanoinstitute Munich	-2 Main Auditorium (Gaston Berger)
15:00 - 15:15	Break	
15:15 - 16:30	Parallel sessions	

Nanophotonics & Nanooptics 1st Session (room LA ouest)	**Nanochemistry, Nanoparticles, Nanocatalysis** 1st Session (Main Auditorium)	**Nanoscale characterization** 1st Session (room AB)	**Nanobiosciences & Nanomedecine** 1st Session (room CD)	**Spintronics & PEPR** (room LA est)
Hai-Son NGUYEN École Centrale de Lyon – INL	**Christophe PETIT Sorbonne Univ. - MONARIS**	**Myriam TAVERNA Univ. Paris Saclay - Inst. Galien Paris-Saclay**	**Valérie MARCHI CNRS - ISCR**	**Lisa MICHEZ Aix-Marseille Univ. CiNAM**

16:30 - 17:00	Coffee Break	-2

Nanophotonics & Nanooptics 1st Session (room LA ouest)	**Nanochemistry, Nanoparticles, Nanocatalysis** 1st Session (Main Auditorium)	**Nanoscale characterization** 1st Session (room AB)	**Nanobiosciences & Nanomedecine** 1st Session (room CD)	**Spintronics & PEPR** (room LA est)

18:30 - 18:40	Break	
18:40 - 19:30	Art & science exhibition	Main Auditorium
19:30 - 21:00	Welcome cocktail dinner	-2

WEDNESDAY MARCH 19TH

8:30 - 9:00	Welcome of participants	-1
9:00 - 10:00	Plenary session Sara BALS, Univ. of Antwerp EMAT	-2 Main Auditorium (Gaston Berger)
10:00 - 10:30	Coffee Break	-2
10:30 - 12:30	Parallel sessions	

Functional thin films, Nanostructures & 2D material 1st Session (room LA ouest)	**Nanochemistry, Nanoparticles, Nanocatalysis** 2nd Session (Main Auditorium)	**Nanomaterials for energy** 1st Session (room AB)	**Sustainability and eco design of nanomaterials** 1st Session (room CD)	**Nanobiosciences & Nanomedecine** 2nd Session (room LA est)
Emilie GAUDRY **Univ. Lorraine - IJL**	**Emilie POUGET** **CNRS – CBMN**	**Fréderic SAUVAGE** **CNRS - LRCS**	**Simon CLAVAGUERA** **CEA - LITEN**	**Damien MERTZ** **CNRS - IPCMS**

12:30 - 13:20	Lunch	-2
13:20 - 14:40	Poster and exhibition stands session	-1 & -2
14:40 - 15:40	Plenary session Aristide LEMAITRE, C2N, CNRS	-2, Main Auditorium
15:40 - 16:00	Presentations from our sponsors	-2, Main Auditorium
16:00 - 16:30	Coffee Break	-2
16:30 - 18:30	Parallel sessions	

Nanophotonics & Nanooptics 2nd Session (room LA est)	**Nanochemistry, Nanoparticles, Nanocatalysis** 3rd Session (Main Auditorium)	**Nanomaterials for energy** 2nd Session (room AB)	**Innovation & technology transfer** (room CD)	**Functional thin films, Nanostructures & 2D materials** 2nd Session (room LA ouest)
Juliette MANGENEY **CNRS – LPENS**	**Mona TREGUER** **Univ. Bordeaux – ICMCB**	**Gabriel LOGET** **CNRS - ISM**		**Aimeric OUVRARD** **CNRS - ISMO**

THURSDAY MARCH 20TH

8:30 - 9:00	Welcome of participants	-1
9:00 -10:00	Plenary session Florence GAZEAU, NABI, CNRS	-2 Main Auditorium (Gaston Berger)
10:00 - 10:30	Coffee Break	-2

10:30 - 12:30 — Parallel sessions

ANR 1st Session (room AB)	**Nanochemistry, Nanoparticles, Nanocatalysis** 4th Session (Main Auditorium)	**Nanobiosciences & Nanomedecine** 3rd Session (room LA ouest)	**Nanoscale characterization** 2nd Session (room CD)	**PEPR electronic** 2nd Session (room LA est)
	Damien VOIRY **CNRS – IEM**	**Ariane BOUDIER** **Univ. Lorraine - CITHEFOR**	**François PIQUEMAL** **LNE**	

12:30 - 14:00	Lunch	-2

14:00 - 16:30 — Parallel sessions

ANR 2nd Session (room AB)	**Nanochemistry, Nanoparticles, Nanocatalysis** 5th Session (Main Auditorium)	**Nanobiosciences & Nanomedecine** 4st Session (room CD)	**Nanophotonics & Nanooptics** 3rd Session (room LA est)	**Functional thin films, Nanostructures & 2D materials** 3rd Session (room LA ouest)
	Benjamin ABECASSIS **CNRS - Lab. de Chimie ENS**	**Nesrine AISSAOUI** **Univ. Paris-Cité - CiTCoM**	**Aloyse DEGIRON** **CNRS – MPQ**	**Matteo GHIDELLI** **CNRS - LSPM**

16:30 - 17:00	Coffee break	-2
17:00 - 18:00	NANOPITCHS C'Nano PhD Awards	-2 Main Auditorium
18:00 - 19:30	C'Nano exhibition - Industrial sponsors / Free access to a part of the Cité des Sciences & de l'Industrie Museum	
19:30 - 23:30	Gala dinner in the Cité des Sciences & de l'Industrie Museum	

FRIDAY MARCH 21TH

8:30 - 9:00	Welcome of participants	-1
9:00 -10:00	Plenary session David J. NORRIS, ETH Zurich	-2 Main Auditorium (Gaston Berger)
10:00 - 10:30	Coffee Break	-2
10:30 - 12:30	Parallel sessions	

Nanophotonics & Nanooptics 4th Session (room LA est)	**Nanochemistry, Nanoparticles, Nanocatalysis** 6th Session (Main Auditorium)	**Nanomaterials for energy** 3rd Session (room AB)	**Nanobiosciences & Nanomedecine** 4th Session (room LA ouest)
Davy GERARD **UTT - L2N**	**Damien BOYER** **Sigma Clermont – ICCF**	**Ally AUKAULOO** **Univ. Paris Saclay - ICMMO**	**Chloé GRAZON** **CNRS - ISM**

12:30 - 13:00	Best Posters Award Ceremony & Concluding Remarks	-2 Main Auditorium
13:00 - 14:30	Snacks	-2

TUESDAY MARCH 18TH

The CEA and CNRS organize the annual PEPR électronique scientific days, which are held in conjunction with the C'Nano 2025 conference. All industrial and academic partners interested in discovering or monitoring PEPR's scientific and technological activities are invited
(sessions in French).

LEARN MORE

FRANCE 2030

PROGRAMME DE RECHERCHE *ÉLECTRONIQUE*

Journées scientifiques du PEPR ÉLECTRONIQUE

18-21 mars 2025
Cité des sciences et de l'industrie de la Villette
Paris

Programme du mardi 18 mars 2025

08h00 – 08h30	Accueil badges
08h30 – 09h00	Accueil café
09h00 – 09h45	Introduction de la journée : Amandine Reix - DGE - Hervé Martin - MESR, Sebastien Dauvé - CEA-Leti, Lionel Buchaillot - CNRS Ingénierie, Jean-Philippe Bourgoin - Agence ASIC-CEA
09h45 – 10h15	Synthèse des activités du PEPR : Isabelle Sagnes - CNRS et Thomas Ernst - CEA
10H15 – 10H45	L'électronique pour le numérique : RESISTE & COMPTERA
10h45 – 11h15	Pause
11h15 – 12h30	L'électronique pour les télécommunications : T-REX-6G, OROR L'électronique pour la convertion : FUN-TERA Action transverse : PAC
12h30 – 13h30	Déjeuner
13h30 – 15h15	Ouverture congrès C'Nano / Session du jeu «La fabrique du Nano»
15h15 – 15h45	Keynote speaker : Lisa Michez - Aix Marseille Université "Les altermagnets, une nouvelle opportunité pour la spintronique"
15h45 – 16h00	Présentation du PEPR SPIN : Vincent Cros - CNRS, Lucian Prejbeanu - CEA
16h00 – 16h30	L'électronique pour le calcul : EMCOM Action transverse : ADICT
16h30 – 17h00	Pause
17h00 – 18h30	L'électronique pour le calcul : BEP, CHOOSE, FERROFUTURES L'électronique pour la conversion : VERTIGO, GOTEN, FRENCHDIAM
19h30– 21h00	Cocktail dinatoire musical

cea cnrs anr©

THURSDAY MARCH 20TH

The French National Research Agency - ANR is organizing a project review during an event session dedicated to projects funded under the committees 'CE09 - Nanomaterials and Nanotechnologies for Future Products' and 'CE42 - Sensors, Imagers, and Instrumentation' from the generic calls of 2020 and 2021

10:30 A.M. - 12:30 A.M.

HOUR	COORDINATOR	TITLE
09:00 10:00	**Poster Session - ANR**	
10:00 10:30	**Coffee break / exhibition stands session**	
10:30	Gwénolé JACOPIN	Imaging carrier dynamics at the nanoscale thanks to light- and electron-matter interactions
10:45	Yan PICARD/ Clelia BASTELICA	Focused Ion Beam with correlated electron feeback: sub-nm resolution
11:00	Ludovic DESPLANQUE	In-plane nanowires with strong spin-orbit coupling for scalable mesoscopic devices
11:15	Thomas PONS	Nanowhispers – Bio-sensing using energy transfer from nanocrystal-doped whispering gallery mode microcavities
11:30	Yannick MUGNIER	Design of multifunctional lithium niobate (LiNbO3) nanoparticles for multimodal imaging and theranostic applications
11:45	Sylvie BEGIN	Phosphate capture enhancement in peritoneal dialysis process using designed iron oxide nanostructures
12:00	Estelle LEBEGUE	Electrochemistry of redox liposome nano-impacts for bacterial toxins sensing
12:15	Antoine THILL	Hybrid imogolites as tunable reactors

SESSION ANR

THURSDAY MARCH 20TH

12:30 A.M. - 16:30 P.M.

HOUR	COORDINATOR	TITLE
12:30 14:00	Lunch	
14:00	Guillaume VIAU	Nucleation, Growth and Integration of Magnetic Nanorods
14:15	Vincent GARCIA	Tailoring topological states in multiferroics
14:30	Pascal RUELLO	THz dynamics in MUltiFerroIc Nanostructures and Superlattices
14:45	Jonathan AMODEO	SASHA: Surface state and mechanics of nano-objects
15:00	David BABONNEAU	Intelligent real-time manipulation of metal nanostructure growth
15:15	Vincent FOURNEE	New ultrathin oxide films on metal substrates
15:30	Rodrigue LESCOUEZEC	Electronically-Active Thin Films for New Concept of Nano-Devices
15:45	Jerome LAGOUTE	Defect engineering in 2D materials
16:00	Beniamino SCIACCA	Designer metasurfaces from colloidal building blocks
16:15	Damien VOIRY	2D nanolaminate - nanofluidic ionic diodes hybrid membranes for desalination and water purification (2D-MEMBA)
16:30 17:00	Coffee break / exhibition stands session	
17:00 18:00	Poster Session - ANR	

Innovation & technology transfer

SESSION IN FRENCH

WEDNESDAY MARCH 19TH

Join us on Wednesday, March 19, 2025,
from 4:30 PM to 6:30 PM, room CD

📌 **Introduction to CNRS Innovation (5-10 min)**

- Overview of the innovation landscape and ecosystem
- Goal: Familiarize the audience with key terms

📌 **Inspiring Testimonials (15-20 min)** 🎤

- Feedback from researchers who have successfully transferred their work into innovation
- Showcasing different career paths and levels of project maturity

👥 Speakers:

- **Alexis Jonville (LumiSync)**
- **Rémy BRAIVE (C2n - LumiSync)**

📌 **Panel Discussion: The Innovation Ecosystem and Career Opportunities (45 + 15 min audience Q&A)**

- Exploring careers in technology transfer and innovation
- Highlighting support structures and funding opportunities for researchers

The session will conclude with an interactive discussion with the audience.

👥 Panelists:

- **Nils Balgobin,** Head of the Deeptech Department at Matrice
- **Marzena Baron,** Technology Transfer Engineer, CNRS
- **Iliass FENDI** Start-up manager (Physique / Sciences de l'ingénieur)
- **Eric Langrognet,** CEO of LIMPIDEA & Head of Centrake Entrepreneurs

Plenary speakers

Emiliano CORTÉS, Univ. of Munich, Nanoinstitute Munich

www.nano-energy.org

Emiliano.Cortes@lmu.de

Short biography

Emiliano is a Professor of Experimental Physics and Energy Conversion at the University of Munich (LMU), Germany, and leads the Nanomaterials for Energy group. He is also a visiting researcher at the Materials Departments of Tianjin University, China, and Imperial College London, UK. Since 2024, he is also Associate Researcher at the TUM Catalysis Research Center in Munich.

His research, bridging chemistry and physics, focuses on developing novel nanomaterials and techniques for energy conversion. Emiliano has published over 150 scientific articles, one book, and four patents.

He is a PI in the German excellence research cluster e-conversion, coordinator of its graduate program, and serves on the scientific board of the Center for NanoScience (CeNS) in Munich. He is also a member of the Bavarian Solar Technologies go Hybrid (SolTech) program, fellow of the Young Academy of Europe (YAE), and CSO of INSyT Technologies, a start-up from his group.

He has received multiple awards, including ERC grants and the Royal Society of Chemistry "Emerging Investigator in Materials Science" award. He sits on the editorial boards of several journals, including ACS Nano and ACS Energy Letters.

Light-driven nanomaterials and technologies for energy conversion and storage

Thin perovskite films, made of a few-layer thick nano-sheets, have attracted considerable attention due to their extensive structural and electronic variability, linked to the huge number of conceivable unique chemical compositions. The combination of the low dimension with the structural flexibility of this class of crystals opened the door to a rich spectrum of applications in many fields, such as energy transition and catalysis, correlated materials and electronic devices.Decreasing the thickness of two-dimensional (2D) perovskites down to the mono-layer limit is expected to deeply alter their structures and modify the physical and chemical properties. This has recently led to the emergence of novel structures with aperiodic ordering, i.e. dodecagonal oxide quasicrystal interfaces [1,2]. The driving force for these unique structural modifications, resulting from thickness reduction, are far from being fully unveiled [3]. Reduced bonding coordinations, possible strong surface polarizations, support effects and experimental conditions are supposed to play a role, but no clear picture has yet been drawn. In this talk I will show how two-dimensional complex oxide structures can be identified, while also questioning several descriptors that contribute to their stability. This work is a first step towards establishing structure-property relationships for this class of materials, which is crucial not only for advancing fundamental understanding of their unique characteristics but also for optimizing their performance in practical applications.

Keywords

nanomaterials, energy, plasmonics, microscopy, catalysis

Acknowledgement

Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) under Germany´s Excellence Strategy – EXC 2089/1 – 390776260 e-conversion, the Bavarian program Solar Technologies Go Hybrid (SolTech), the Center for NanoScience (CeNS) and the European Commission through the ERC Grants CATALIGHT (802989) and SURFLIGHT (101156725).

References

[1] Nature Photonics 18 (9), 879-882, 2024
[2] Nature 614, 230-232, 2023
[3] Nature Physics 20, 1065–1077, 2024
[4] Nature Catalysis 6, 1205–1214, 2023
[5] Nature Comm. 15 (1), 3923, 2024
[6] Nature Comm. 14 (1), 3813, 2023
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[8] ACS Energy Letters 7 (2), 778-815, 2022
[9] Chemical Reviews 122 (19), 15082–15176, 2022
[10] Nature Reviews Chemistry 6, 259–274, 2022
[11] Nature 630, 872–877, 2024
[12] INSyT Technologies.

Sara BALS, Univ. of Antwerp, EMAT Antwerpen

https://www.uantwerpen.be/en/staff/sara-bals/personal-website/

sara.bals@uantwerpen.be

Short biography

Sara Bals was born in Antwerp (Belgium) and studied Physics at the University of Antwerp. She obtained her PhD in 2003. In 2003-2004, she did postdoctoral work at the National Center of Electron Microscopy in Berkeley, USA. The focus of her work was the development of electron tomography for materials science. After returning to Antwerp, she became Full Professor in 2018 and she is the spokesperson of EMAT. She is the coordinator of the “Nanolight” Centre of Excellence at the host institution. Sara is an expert in the application and development of electron tomography for functional nanomaterials. She was awarded an ERC Starting grant in 2012, an ERC Consolidator grant in 2018 and recently an ERC Synergy grant. She received the award "Laureate of the Academy for Natural Sciences" by the Royal Flemish Academy in 2016, became Francqui research professor in 2017 and was elected as member of the Royal Flemish Academy of Belgium for Science and the Arts in 2020. She received the European Microscopy Award in 2020 and the ACS Nano Lectureship award in 2021.

3D Characterization of Nanomaterials under Relevant Conditions by Electron Tomography

Electron tomography enables one to measure the morphology and composition of nanostructures in three dimensions (3D), even at atomic resolution. An emerging challenge is to fully understand the connection between the 3D structure and properties under realistic conditions, including high temperatures as well as in the presence of liquids and gases. Under such conditions, rapid reshaping of nanoparticles can be expected. Although in situ transmission electron microscopy provides an elegant platform to directly visualize nanoparticles changes, it is challenging to investigate nanoparticle transformations in 3D. In this presentation, I will discuss existing possibilities to obtain 3D information using either tomographic methods or the so-called atom counting technique, which utilizes single projection images. Next, I will show how these techniques can be combined with in situ holders to quantify structural and chemical transformations on a single nanoparticle level. By combining fast tomography with in situ heating, we were able to perform a dynamic characterization of shape changes of metal nanoparticles at high temperatures. Moreover, we measured the elemental diffusion dynamics of individual anisotropic bimetallic nanoparticles in 3D and determined the effect of parameters such as type of interfacial facets, aspect ratio, shape and presence of defects. By atom counting, it became possible to monitor the evolution of crystalline facets of metal nanoparticles under gas and heat treatments, a change that influences catalytic properties. Next to in situ processes, we demonstrate the value of electron tomography to assess external laser-induced NP transformations, making it viable to detect structural changes with atomic resolution.

Keywords

Electron microscopy, tomography, nanomaterials

Aristide LEMAÎTRE, CNRS, C2N

https://www.c2n.universite-paris-saclay.fr/fr/

aristide.lemaitre@c2n.upsaclay.fr

Short biography

Aristide Lemaître received his Ph.D degree in 1999 at the University of Paris 6, for his study of the magneto-optical properties of II-VI diluted magnetic semiconductor heterostructures. He was then granted an individual Marie-Curie fellowship to investigate the optical properties of InAs quantum dots at the University of Sheffield (UK). He joined the CNRS-LPN, now C2N, in 2001 as a permanent researcher. His research activities are focused on III-V heterostructure epitaxial growth and physics. For the last 15 years, he has conducted research on ferromagnetic semiconductors. He now investigates the growth and physics of topological insulators. He has a well-recognized expertise in high finesse microcavity epitaxy for quantum optics applications, as polariton manipulation, single photon and photon pair generation. His structures are at the state of art, yielding numerous collaborations with research groups in France and abroad. He is the coauthors of more than 360 publications in peer-reviewed journals.

Building quantum, layer by layer

In the 1960s, a major technological breakthrough revolutionized the development of nanomaterials for quantum applications: molecular beam epitaxy. This technique enables the fabrication of complex crystalline structures composed of stacked layers with nanometric thickness. The exceptional quality of these heterostructures now allows quantum phase coherence lengths to reach several microns, bringing us into the realm of mesoscopic physics, where purely quantum phenomena persist on a large scale. Today, these structures are at the heart of many quantum devices.

I will present this technique through the contributions of its pioneers before exploring some research directions in quantum optics made possible by these advances: single-photon generation, quantum simulation, nonlinear optics...

Keywords

Semiconductor Spintronics, MBE Heterostructures for Wave Engineering

References

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Florence GAZEAU, CNRS, NABI

https://nabi.u-paris-sciences.fr/

https://nabi.u-paris-sciences.fr/

Short biography

Florence Gazeau, PhD (Université Paris Diderot, 1997) is a Senior Scientist (DRCE1) at CNRS. She is the director of NABI (Nanomedicine, Extracellular Biology, Integration, and Innovations for Health), a research lab launched in 2025 by Université Paris Cité, CNRS, and INSERM to advance translational research and innovation in nanomedicine and subcellular biotherapies. NABI hosts IVETh (https://iveth.u-paris.fr), the first national integrator dedicated to bioproduction and biotherapy, focusing on the production, characterization, and engineering of extracellular vesicles and nanovectors for diagnostics and personalized therapies. Florence Gazeau is also involved in the EVerZom spin-off, which specializes in the industrial-scale bioproduction of therapeutic extracellular vesicles using a proprietary turbulence-based technology. Recognized for her pioneering work in nanomagnetism and nanotechnology applied to medicine and in the life cycle of nanoparticles in the body, she has authored approximately 200 publications. She was awarded the CNRS Silver Medal in 2024 and was elected to the French Academy of Sciences the same year.

Bioproduction and engineering of extracellular nanovesicles for new generation of biotherapies

The clinical use of extracellular vesicles (EVs) is rapidly advancing, with numerous trials exploring their potential in tissue healing, inflammation resolution (notably in COVID-19 patients), vaccination, drug delivery, and cancer therapies. EVs, including exosomes, ectosomes, microvesicles, and bacterial OMVs, are released by all cell types and circulate in body fluids, playing a key role in immune response, tissue regeneration, and disease progression. They mediate intercellular communication by delivering nucleic acids, proteins, and lipids, making them promising cell-free biotherapeutics, particularly for stem cell-derived EVs. Despite their potential, clinical translation faces major challenges: scalable GMP-compliant bioproduction, batch reproducibility, efficient isolation of potent EV subfractions, and advanced engineering for targeted delivery. This presentation will highlight breakthrough high-throughput bioproduction, engineering, and AI-assisted characterization technologies developed in our lab, leading to the creation of EVerZom. Our physics-powered approaches, including turbulence-based EV production, EV encapsulation in carrier gels, and multimodal analysis, are available to industrial and academic partners through IVETh (https://iveth.u-paris.fr/), designated as a national biotherapy-bioproduction integrator in 2022.

Keywords

extracellular vesicles, nanomedicine, drug delivery, bioproduction

References

https://scholar.google.fr/citations?hl=fr&user=shPWptkAAAAJ&view_op=list_works&sortby=pubdate

David J. NORRIS, ETH Zürich, OMEL

omel.ethz.ch

dnorris@ethz.ch

Short biography

David J. Norris received his Ph.D. in physical chemistry at MIT in 1995 under the guidance of Moungi Bawendi (Nobel Laureate, Chemistry 2023). After an NSF postdoctoral fellowship at the University of California, San Diego with W. E. Moerner (Nobel Laureate, Chemistry 2014), he started his own research group at the NEC Research Institute in Princeton (1997). He then became an Associate Professor (2001–2006) and Professor (2006–2010) of Chemical Engineering and Materials Science at the University of Minnesota. In 2010 he moved to ETH Zurich, where he is currently Professor of Materials Engineering. From 2016 to 2019, he served as the Head of the Department of Mechanical and Process Engineering. He has received the Credit Suisse Award for Best Teacher at ETH, twice the Golden Owl Award for Best Teacher in his department, the Max Rössler Research Prize, an ERC Advanced Grant, and the ACS Nano Lectureship Award. He is a Fellow of the AAAS, APS, and Optica, and an editorial board member for ACS Applied Optical Materials, ACS Photonics, and Nano Letters.

Better Quantum Dots through Magic Sizes and Bright Excitons?

Semiconductor quantum dots now provide versatile color-tunable fluorescent materials for a variety of light-emitting devices, including flat-panel televisions. However, despite decades of research, they still suffer from two issues. First, even the best quantum-dot syntheses yield samples with distributions in particle size and shape. This polydispersity reduces optical performance by broadening the absorption and emission linewidths. Second, quantum dots suffer from the “dark exciton,” an optically inactive state in which an excited quantum dot gets stuck before emitting. Here, we will discuss our efforts to address these two issues. First, we will review magic-sized clusters, molecular-scale arrangements of atoms with a structure that is more stable than particles slightly smaller or larger. Magic-sized clusters grow by jumping between a series of discrete “magic” sizes, which are, in principle, uniform in size and shape. Interestingly, experiments have tracked the discrete evolution of magic sizes into the quantum-dot regime. After describing a proposed growth mechanism for these magic-sized nanocrystals, we will probe whether this understanding can lead to more uniform quantum dots for applications. Second, we will review the discovery of the dark exciton in the 1990s, unsuccessful efforts to avoid its impact over two decades, and finally our recent identification of “bright-exciton” quantum dots. Specifically, a theoretical mechanism was discovered in 2018 that can overcome the dark exciton. We have exploited our understanding of this mechanism to search through 500,000 inorganic solids to identify materials with the proper physical properties. We then produce a list of potentially super-bright quantum dots, providing a roadmap for experimental investigation of new quantum-dot materials for applications.

Keywords

quantum dot, semiconductor nanocrystal, magic-sized cluster, dark exciton, bright exciton

Parallel sessions

Tuesday March 18th

3:15 P.M. - 6:30 P.M.

AMPHITHEATRE LOUIS ARMAND OUEST

Program of the session :

Chairs: Maria TCHERNYCHEVA & Erik DUJARDIN

HOUR	NAME	TITLE
15:15	**Hai-Son NGUYEN** **INL - Ecole CentraLe de Lyon**	**Engineering on-demand Band Structures and Non-Hermitian State of Light in Photonic Crystal**
15:45	Nordin FELIDJ ITODYS - Université Paris Cité	Aluminum Plasmonics : Overcoming Strong Damping for High-Performance Applications in the Near-Infrared
16:00	Pascale NASR, INSP - CNRS	Harvesting the Magnetic Field of Light at the Nanoscale
16:15	Benedict S. MORRIS LuMIn, Université Paris-Saclay	Strong coupling in plasmonic-photonic hybrid microcavities
17:00	Benoît REYNIER INSP - Sorbonne Université	Photon-avalanche manipulation of Tm^{3+} doped nanoparticles using a gold nanomirror
17:15	Alban GASSENQ ILM - UCBL	Rare Earth doped microstructures made by pulse laser deposition
17:30	Kevin KIM L2n - Univ. Reims Champagne Ardenne	Surface functional group and contaminant mapping in MXene materials via photo-induced force microscopy
17:45	Chang ZHOU institut Langevin - CNRS	Single-molecule fluorescence lifetime imaging nanoscopy to study plasmonic and biomimetic materials
18:00	Simon VASSANT SPEC - CEA	Optical characterization of a single molecule complete spatial orientation using intra-molecular triplet–triplet absorption
18:15	Vadim ZAKOMIRNYI L2n - UTT	Surprisingly large fluorescence enhancement via all-dielectric spherical mesoparticles

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Tuesday March 18th

3:30 P.M. - 6:45 P.M.

AMPHITHEATRE GASTON BERGER

Program of the session :

HOUR	NAME	TITLE
15:15	**Christophe PETIT MONARIS - Sorbonne. Univ**	**Oleylamine and low valency organic precursor : a facile route to metallic and multicomponent N**
15:45	Fadoua SALLEM GET - CNRS	Controlled synthesis of copper-based nanoparticles
16:00	Jean IRLE BELMONT LCC - Univ. Toulouse 3	Towards predictive copper nanoparticles of mastered size and shape
16:15	Guillaume BONIFAS LPCNO - INSA Toulouse	Unraveling the Facet-Dependent Surface Chemistry of Indium Phosphide Nanocrystals
17:00	Marina DESCOUBES LCT - Sorbonne Univ.	Multi-scale modeling of the dissolution/growth dynamics of metallic copper clusters during synthesis or catalysis processes
17:15	Abdennour BENABBAS IC2MP - CNRS	Novel Green Method for the Preparation of Supported Sub-10 nm Non-Noble Metal (Cu, Sn and Ga) Nanoparticles
17:30	David RIASSETTO LMGP - Inst Polytechnique de Grenoble	Growth Mechanism of Ultra-thin, Long and Flexible CuO2 Nanowires for Photocatalytic Membranes Applications
17:45	Lamyae BENHAMOU GEMTEX - ENSAIT	Morphological Control of 3D Hierarchical ZnO Microspheres via Citrate-Assisted Hydrothermal Synthesis
18:00	Michel FERON Institut de Chimie de Toulouse - Univ. Toulouse 3	Following zinc oxide nanoparticles formation
18:15	Brandon AZEREDO LPCNO - INSA Toulouse	Topochemical reactions of P with Co nanorods

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Tuesday March 18th

3:15 P.M. - 6:45 P.M.

ROOM AB

Program of the session :

Chairs: P1 Céline ELIE-CAILLE
P2 Séverine GOMEZ et Guillaume COLAS

HOUR	NAME	TITLE
15:15	Brice GAUTIER INL - INSA	Présentation du GDR Carmanano
15:30	**Myriam TAVERNA Inst. Galien Paris - Univ. Paris Saclay**	**Advancing Extracellular Vesicle Characterization with Capillary Electrophoresis**
16:00	James BEHAN ISCR - CNRS	Characterisation of Biogenic Nanomaterials Produced by Electroactive Bacteria using Differential Centrifugal Sedimentation
16:15	Lisa ROYER InProcess-LSP	Non-invasive and sterile nanoparticle size measurement in a broad range of containers using spatially resolved dynamic light scattering
17:00	Matias FELDMAN INSP - Sorbonne. Univ	Nanoscale control of heat flux in self-assembled ordered nanocrystal solids
17:15	François HENN L2C - Université de Montpellier	Engineering Individual SWCNT Nanofluidic Device for Enhanced Signal-to-Noise Ratio
17:30	Florant EXERTIER GPM - CNRS	Atomic scale microscopy of different materials by ultrashort THz-driven Atom Probe Tomography
17:45	Francois TREUSSART LuMIn - ENS Paris-Saclay	Polarization texture and sensing application of ferroelectric nanocrystals
18:00	Max GERIN ESRF	High pressure study of exotic hexagonal phase of Ge grown by molecular beam epitaxy on self-assisted GaAs nanowires

S1

Tuesday March 18th

3:15 P.M. - 6:30 P.M.

ROOM CD

Program of the session :

Chairs: Andreas REISCH

HOUR	NAME	TITLE
15:15	**Valérie MARCHI** **ISCR - CNRS**	**Luminescent metal nanoclusters for nanosensing in living environment**
15:45	Regina CHIECHIO Dipartimento di Fisica e Astronomia - Università degli Studi di Catania	Gold Nanoclusters for Ultrasensitive and Label-Free DNA Sensing and Biomolecular Detection
16:00	Zied FERJAOUI UTCBS - CNRS	Improved Sensibility in IgG Detection through Signal Amplification of Persistent Luminescence Nanoparticles
16:15	Ester BUTERA MAcSE, UNIVERSITE DE RENNES	Luminescent metal nanoclusters for labelling of biological vesicles
17:00	Marcelina CARDOSO DOS SANTOS I2BC - CEA	Quantum Dot-Based FRET nanosensors to quantify molecular assembly within focal adhesion
17:15	Omar EL-DAHSHAN LCBM/SyMMES - CEA Grenoble	Synthesis and Advanced Characterization of Silver Sulphide Quantum Dots for Bio-Imaging
17:30	Celina MATUSZEWSKA LCMCP - Sorbonne Université	The study of the mechanism of persistent luminescence enhancement in $ZnGa_2O_4$: Cr^{3+} nanoparticles under H_2O_2
17:45	Guanyu CAI IRCP	ZGSO persistent nanophosphors for bioimaging in NIR
18:00	Baptiste GRIMAUD LuMIn - École Normale Supérieure Paris-Saclay	Measuring axonal transport using neurotropic fluorescent nanodiamonds
18:15	Kariné HEUZÉ ISM - CNRS	Functionalization of Magnetic Nanoparticle Surfaces for Bio-Immobilization, Detection, and Biocatalysis

Tuesday March 18th

3:15 P.M. - 6:30 P.M.

LOUIS ARMAND EST

HOUR	NAME
15:15	**Lisa MICHEZ** **CiNAM - Aix-Marseille Univ.** *Altermagnets: new opportunities for spintronics*
15:45	PEPR SPIN
16:00	Projet EMCOM
16:15	Projet ADICT
17:00	Projet BEP
17:15	Projet CHOOSE
17:30	Projet FERROFUTURES
17:45	Projet VERTIGO
18:00	Projet GOTEN
18:15	Projet FRENVHDIAM

Wednesday March 19th

10:30 A.M. - 12:30 A.M.

AMPHITHEATRE LOUIS ARMAND OUEST

Program of the session :

Chairs: David BABONNEAU & Rémi LAZZARI

HOUR	NAME	TITLE
10:30	**Emilie GAUDRY** **IJL - Univ. Nancy**	**Theoretical insights into ultrathin oxide films on metals and alloys: unraveling structures and stabilities**
11:00	Swayam SAHOO INL - ECL	Interface engineering for integration of VO2 on silicon for thermotronics
11:15	Jérémy BARBE IMN - Nantes Université	Sputtered La0.33NbO3 perovskite thin films for high-power Li-ions micro-batteries
11:30	Bertrand VILQUIN INL - Centrale lyon	Structural and electrical properties of ferroelectric HfZrO2-based nano-capacitors for non-volatile memories
11:45	Léa MEYNIER CINam - CNRS	Ferroelectric structure, crystallography and morphology of GeTe thin films grown on Si(111) : the key role of atomic steps
12:00	Qiang YU C2N - Université Paris-Saclay	Electric-field-assisted phase switching in GaAs nanowires
12:15	Chen WEI C2N - CNRS	In-Situ TEM Observation of III-V Nanowire Nucleation on Si

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Wednesday March 19th

10:30 A.M. - 12:30 A.M.

AMPHITHEATRE GASTON BERGER

Program of the session :

Chairs:

HOUR	NAME	TITLE
10:30	**Emilie POUGET CBMN - CNRS**	**Design of functional nanostructures via chirality induction**
11:00	Rahul NAG ITODYS - Univ. Paris Cité	Polarization-Sensitive Phototransformation of Chiral Plasmonic Assemblies
11:15	Caroline SALZEMANN MONARIS - Sorbonne Univ.	The intriguing role of L-cysteine on the modulation of chiroplasmonic properties of chiral gold nano-arrows
11:30	Henri LE HOUELLEUR LPEM/ESPCI - PSL	Self-assembly of tartrate ligands on 2D semiconductor nanoplatelets for strong chiro-optical features
11:45	Azadeh EDALAT LCC/CEMES - INSA Toulouse	In situ study of Fe nanoparticles in H2 atmosphere: surface reconstruction and reactivity
12:00	Ritika WADHWA PMC - CNRS	Understanding microstructural evolution in rare earth vanadate nanoparticles upon protected thermal annealing
12:15	Jade RAIMBAULT NIMBE/LIONS - CEA	Dense liquid precursor in mineral crystallization: spinodal morphology and high viscosity evidenced by electron imaging

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Wednesday March 19th

10:30 A.M. - 12:30 A.M.

ROOM AB

Program of the session :

Chairs: Sophie CASSAIGNON

HOUR	NAME	TITLE
10:30	**Frederic SAUVAGE LRCS - CNRS**	**In situ characterization techniques for understanding degradation in hybrid halide perovskites**
11:00	Grégoire MAGAGNIN INL - CNRS	Antiferroelectric fluorite-based capacitors for ultra-high energy storage density applications
11:15	Kazimova NARGIZ LCC CNRS	Nanostructured catalysts for active and sustainable fuel cell cathodes
11:30	Fenzi LUIGI CINaM - CNRS	Towards monocrystalline nanowire transparent electrodes for photovoltaics
11:45	Odilon WAMBA-TCHIO LCPME - CNRS	Vertically oriented mesoporous silica film as host of a new polymeric material based on hybrid polyoxometalate for electrocatalytic application
12:00	Eugenie PARIENTE ICMCB/LOMA - Univ. Bordeaux	Design of metal-semiconductor heteronanostructures by laser photodeposition: Elaboration, growth control and modeling

Wednesday March 19th

10:30 A.M. - 12:30 A.M.

LOUIS ARMAND EST

Program of the session :

Chairs: Nadine MILLOT

HOUR	NAME	TITLE
10:30	**Damien MERTZ** **IPCMS - CNRS**	**Chemical engineering of activable core@shell mesoporous silica nanocomposites for theranostic applications**
11:00	Theo LUCANTE ICPEES - CNRS	Design of surfactant-coated iron oxide nanoparticles for enhancing phosphate removal in the peritoneal dialysis process
11:15	Halima ALEM IJL - Université de Lorraine	Folate-Functionalized Superparamagnetic Core/Shell Nanoparticles for Targeted Drug Delivery and Stealth Behavior Study
11:30	Rafael Gabriel PORRAS GUERRERO ICPEES - UNISTRA	Functionalized Iron Oxide Nanoparticles for targeted imaging of Alzheimer's Disease: Î²-amyloid peptide detection and interaction
11:45	Pierre SARFATI LVTS/INSERM - Université Paris Cité	Hybrid particles for the physical treatment of thrombotic diseases
12:00	Xilling SONG IMAP - ESPCI	MOF-Based Microneedles for Synergistic NO/Â·OH Antibacterial Therapy
12:15	Yang ZHANG LCBPT - Université Paris Cité	Innovative surface functionalization strategy for the design of antioxidant coated-Gold nanoparticles for biomedical applications

Wednesday March 19th

10:30 A.M. - 12:30 A.M.

ROOM CD

Program of the session :

Chair: Emmanuel FLAHAUT

HOUR	NAME	TITLE
10:30	**Simon CLAVAGUERA LITEN - CEA**	**Operationalization of Safe- and Sustainable-by-Design Approaches for Advanced Materials: A Journey from Nanomaterials to Plastics**
11:00	Jamie SILK LMGP - Grenoble INP	Life Cycle Assessment of Metal Oxide Nanowires for Applications in Passive Atmospheric Water Collection
11:15	Gustavo Vinicios MUNHOZ GARCIA GET - CNRS	Glyphosate-based nanosystems: from design using natural polymers to toxicity in target and nontarget organisms
11:30	Chiddharth MUTHURAJ LCMCP - Soronne Univ.	Solvent free sol-gel strategy: The road to sustainability for the synthesis of oxides and mixed oxides based heterogeneous catalysts
11:45	Lucas NOLANN LERMaB - Univ. Lorrainne	Nanolignins for innovative materials
12:00	Gaëlle CHARRON MSC - Univ. Paris Cité	Surface enhanced Raman Scattering: the winding road from a fundamental phenomenon to action research
12:15	-	-

Poster Session

NANOPHOTONICS & NANOOPTICS

13:20 - 14:40

N° POSTER	TITLE	NOM	Prénom
1	Plasmon-induced thermo-polymerization of PETA in presence of various thermal initiators	BASTIDE	Mathieu
2	Twin-photon generation and manipulation in thin film lithium niobate on insulator waveguides	BENCHEIKH	Kamel
3	24 mode universal photonic processor in a femto second laser writing platform	BENEFICE	Maelle
4	Tomographic Shearmetry of Flows at Cell Surfaces using Nanoprobes	BONETTI	Marcello
5	Thousand-fold Purcell factors for single molecules in DNA origami-assembled gold nanocube dimers	CAPUZZO	Marco
6	Bright, large and flexible structural colors	CHOUITER	Manele
7	SMARTLIGHT PLATFORM: a french key facility for smart photonics	CLUZEL	Benoit
8	GaAs Schottky diodes with sub-micron anode for THz applications	CUVELLIER	Jean-Baptiste
9	Ultrasensitive Label-Free Optical Detection Based on Functionalized Plasmonic Nanofilms and Enhanced Phase Singularity	DU	Fusheng
10	Optimized Electron Beam Lithography for the Fabrication of Resonant Waveguide Gratings	DUSSARD	Antoine
11	Controlling fluorescence of perovskite quantum dots with nanostructured aluminum	GARCELON	Eloïse
12	Mapping of Surface Acoustic Waves for Mid-Infrared Integrated Acousto-Optics	GÉRODOU	Thomas
13	High sensitivity Grating-SPR based sensor using Low-Loss Surface Plasmon modes coupling for the detection of H2	MEYER	Arnaud
14	Enhancement of quadratic nonlinear responses from resonant Gallium Phosphide nanospheres	GUENGARD-MORINEAU	Lola
15	Optically magnetizing gold nanoantennas through the Inverse Faraday effect	HAREAU	Chantal
16	Molecular photoactuators at the nanoscale	ISHOW	Eléna
17	All-optical, interconnect-free Arithmetic and Logic Units (ALU): design by hybrid AI, nanofabrication and experimental demonstration	KHITOUS	Amine
18	Nonlinear generation of orbital angular momentum in metasurfaces	LECASBLE	Célestin
19	Microscope stabilization for single particle tracking in thick biological tissues using phase imaging	MANKO	Hanna
20	Skyrmion Generation in a Plasmonic Nanoantenna through the Inverse Faraday Effect	MIVELLE	Mathieu
21	Compact Light Projector Metalens	OUSSAID	Ziad
22	ZnO nanowire-based gratings for light extraction enhancement	RÉVERET	François
23	Photonic crystal nanostructures for strong atom-photon interaction in a quantum network	SAUTEL	Valère
24	Thermalization of photons in disordered scattering media	SONCIN	Lorenzo
25	From optically-pumped towards electrically-pumped ridge polariton laser	SOUISSI	Hassen
26	Photoluminescence enhancement based on multi-material metasurfaces	SRAJ	Ali
27	In-rich InGaN/GaN nanowires for red light emitting diodes	TCHOULAYEU POSSIE	Nidel Dilan
28	Optimization of thermochromic perovskites (RENiO3) radiative properties for thermal screening application	TOSTIVINT	Pierre-Antoine
29	Enhanced Near-Infrared Plasmonic Sensing Chips with Ultra-Thin Optical Absorption Nanolayer Fabricated by Cross-beam Pulsed Laser Deposition	ZAKIROV	Nurzad
30	Composites nanoparticles/liquid crystals, structure and electro-optical properties	ZHOU	Muyan

C'Nano Poster Session

NANOCHEMISTRY & NANOPARTICLES/NANOBIOSCIENCES & NANOMEDECINE /NANOMATERIALS FOR ENERGY/ SUSTAINABILITY AND ECO DESIGN OF NANOMATERIALS

13:20 - 14:40

N° POSTER	TITLE	NOM	Prénom
31	Plasmon-induced thermo-polymerization of PETA in presence of various thermal initiators	BASTIDE	Mathieu
32	Green synthesis of curcumin based nanoparticle	BASU	Surita
33	Synthesis of Polyvinylpyrrolidone nanocomposite with palygorskite for application in water-based drilling fluids	DALMONEKI	Anna Clara
34	Carbon supported metal oxides nanoparticles and their applications in biomass valorization	DJELLALI	Ali
35	Synthesis of Polyacrylamide/Palygorskite Nanocomposites for Application in Water-Based Drilling Fluids	GOMES	Ana Beatriz
36	Re(CO)-based silica-nanoparticles as multimodal probes for bio-imaging	KAUFFELD	Willem
37	Chiral CdSe/CdS Nanonails	KUZNETSOVA	Vera
38	Towards large-scale production of Cobalt nanorods	LISOIR	Emma
39	Synthesis and Evaluation of PAMAM G0.5 Dendrimer as a Swelling Inhibitor Additive for Clays in Water-Based Drilling Fluids	LOPES/SPINELLI	Grazielle/Luciana
40	Plasmonic nanoclusters synthesized by a multi-step colloidal approach	ROMANUS	Martin
41	Influence of CuInS2 crystalline structure on the synthesis of CuIn1-xFexS2 quantum dot by cation exchange	ROUX-BYL	Céline
42	Chirality in Zinc Oxide nanoparticle synthesis	SARTOR	Valerie
43	Application and evaluation of core-shell nanocomposite using silica nanoparticles and AM/AMPS/DMDAAC/AAC tetrapolymer	SPINELLI	Luciana
44	Design of efficient nanocatalysts for H2 release from boranes and silanes	THIBAULT	Maxime
45	Influence of crystalline structure on the acoustic vibrations of elongated nano-objects	VERNIER	Charles
46	Chemistry and biological effects of germanium oxide nanoparticles	VIKRAMAN	Haribaskar
47	From laser-synthesized nanoparticles to innovative medical devices	AL KATTAN	Ahmed
48	Ultra-small Superparamagnetic Iron Oxide Coated Phosphonate-based Ligand for MRI Application	CHE DJI	Lyns Verel
49	Magnetic hyperthermia tumor ablation and tumor microenvironment modulation monitored by optical imaging	COSTE	Henri
50	Synthesis of iron oxide nanoparticles and magnetic properties tuning by temperature cycling: towards fine control of crystal phase and size distribution	HUEZ	Cecile
51	Hybrid plasmon-semiconductor nanoparticles for charge or resonant energy transfer based dynamic phototherapy	JEFFRIES	Beatrice
52	Re(CO)-based silica-nanoparticles as multimodal probes for bio-imaging	KAUFELD	Willem
53	Force nanosensor development for measuring mechanical stress exerted by living cells	LACROIX	Noemie
54	Combination therapy using nanoheaters and CAR-T immunotherapy on 3D tumor models	LEINEBO	Charlotte Amalie
55	Red-blood-cell-membrane-coated polymer micelles/vesicles as biomimetic nanoassemblies for potential photocatalytic cancer therapy under hypoxia	MA	Yandong
56	Vivoptic, a preclinical optical imaging platform for the evaluation of diagnostic and therapeutic strategies	MORNET	Stéphane
57	On the Roles of Polymer Chemistry, Kinetics, and Mixing in the Assembly of Loaded Polymer Nanoparticles	REISCH	Andreas
58	Digital colorimetric biosensing on gold-DNA origami nanostructures	ZHANG	Zixiao
59	Cu Isotopic Fractionation Following Foliar uptake	CALAS	Aude
60	New process "Multi-Dip Coating" applied for biological statistical analysis of Antimicrobial Surfaces	CHARLIAC	Jérôme
61	One step synthesis using laser pyrolysis of nanostructured carbides molybdenum catalysts for hydrogen production	RIO	Simon
62	Study of the reactivity of Fe(0) nanoparticles towards ammonia	ZAMBLE	Christian Irie
63	Chemical Passivation of GaN Nanowires for the Development of Innovative Photocatalysts	ZORAI	Amel

Poster Session

FUNCTIONAL THIN FILMS, NANOSTRUCTURES & 2D MATERIALS/ NANOSCALE CHARACTERIZATION

13:20 - 14:40

N° POSTER	TITLE	NOM	Prénom
64	OVERCOMING SAMPLE PREPARATION CHALLENGES IN NANOPARTICLE CHARACTERIZATION BY SEM	AMBERT	Stéphane
65	THE HREELM Project – The High Resolution Electron Energy Loss Microscope is coming to probe the surface vibrations at the microscopic scale	AMIAUD	Lionel
66	Development of measuring protocols and data processing methods for reference samples designed to calibrate electrical measurements at nanoscale	CHRETIEN/PIQUEMAL/HOUZE/MORAN-MEZA/HAROURI	Pascal/François/Frédéric/josé/Abdelmounaim
67	AI-Machine Learning models for conductive electrical modes on AFM: maps prediction and material clustering	COQ GERMANICUS	Rosine
68	Unravelling complex mixtures at the nanoscale: the power of coupling field flow fractionation and electron microscopy (FFF-EM)	CROUZIER	Loïc
69	Boron Phosphide Nanocrystals from the Viewpoint of Pair Distribution Function Analysis	DOISNEAU	Clara
70	Combined Study of Casimir-Polder Interactions and Patch Potentials on SiNx Nanogratings	FABRE	Nathalie
71	Nano-architecture of mixed organic layers on a silver surface	GUAN	Yimin
72	CARBON NANOTUBE MECHANICAL MASS SENSOR WITH SUB-YOCTOGRAM SENSITIVITY AT ROOM TEMPERATURE	HENN	François
73	Nanoscale characterization of ZnS:Cu Phosphor Powder	HERNANDEZ	Roberto
74	Fluorescence properties of mixed-dimension heterostructures	LE BALLE	Juliette
75	In-rich InGaN/GaN nanowires for red light emitting diodes	TCHOULAYEU POSSIE	Nidel Dilan
76	Design of efficient nanocatalysts for H2 release from boranes and silanes	THIBAULT	Maxime
77	THE HREELM Project – The High Resolution Electron Energy Loss Microscope is coming to probe the surface vibrations at the microscopic scale	AMIAUD	Lionel
78	Enhanced Light Absorption through Nanostructuring of Titanium Nitride (TiN)	BEN MOUSSA	Nizar
79	Study of physical properties of antiphase boundaries in III-V epitaxial layer on silicon with conductive tip atomic force microscopy (C-AFM) and with Kelvin Probe Force Microscopy (KPFM) techniques.	BERNARD	Rozenn
80	Interfacial self-assembly of polydiacetylene and graphene oxide for organic photovoltaics	BISTINTZANOS	Alexia
81	TMD Engineering of 2D-Magnetic Tunnel Junctions – From Barriers to Electrodes	DANIEL	Jane
82	Study and Characterization of TzDA Langmuir Films for Polydiacetylene-Based Sensors	KANDYLI	Maria
83	Charge transfer between plasmonic PdAg nanoparticles and C60 molecules	LI	Xingtong
84	Développement et caractérisation de cristaux magnoniques sur substrats flexibles pour la straintronique	MNASRI	Walid
85	Direct CVD graphene integration for Spintronics	PERRIN	Jérémy
86	Design and Synthesis of Bioactive Materials Using Two-Photon Polymerization and Thiol-Ene Click Chemistry	PINON VASQUEZ	Ana Karen
87	Engineering Spin Wave dispersion and Surface Acoustic Wave-driven FMR in Fe thin films by N-implantation	SHARMA	Anupam

Wednesday March 19th

4:30 P.M. - 6:30 P.M.

AMPHITHEATRE LOUIS ARMAND EST

Program of the session :

Chairs: Jean-Luc DUVAIL

HOUR	NAME	TITLE
16:30	**Juliette MANGENEY** **LPENS - CNRS**	**Two-level system in graphene double quantum dots and Tamm resonators for THz quantum technology**
17:00	Diana SINGH ICB - UBFC	Understanding the early-stage formation of electron traps responsible for light emission in memristive artificial neurons
17:15	Adrià MEDEIROS GARAY C2n - Université Paris Saclay	Heralding of a single spin via giant polarization rotations in a QD-based spin-photon interface
17:30	Roméo ZAPATA INSP - Sorbonne Université	All-optical generation of drift currents through inverse Faraday effect
17:45	Francesco TALENTI C2n - Paris Cité	AlGaAs microrings with mixed optical nonlinearities
18:00	PEPR - OFCOC	-
18:15	PEPR NANOFILN	-

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Wednesday March 19th

4:30 P.M. - 6:30 P.M.

AMPHITHEATRE GASTON BERGER

Program of the session :

HOUR	NAME	TITLE
16:30	**Mona TREGUER-DELAPIERRE ICMCB - Univ. Bordeaux**	**Matter and materials made from metallic nanoparticles**
17:00	Aurore LARQUEY ICGM - CNRS	Heater@luminescent nanoplatforms based on Prussian blue core@silica shell nanoparticles for photothermia and thermometry
17:15	Jens KRARUP NIMBE/LIONS - CEA	High-throughput synthesis and characterization of magnetic iron oxides
17:30	Farah ABDEL-SATER ICGM - CNRS	Iron oxide multifunctional nanoplatforms: towards temperature control in photothermia and magnetothermia
17:45	Naoures HMILI LRS - Sorbonne Univ	Mixed manganese and zinc ferrite magnetic nanoparticles for magnetocuring of adhesives
18:00	Thomas NAILLON LCMCP - Sorbonne Univ.	Synthesis of luminescent oxides nanoparticles for nanothermometry measurements in magneto-induced processes
18:15	Amine KHITOUS ICB - CNRS	Ultrafine TiO_2-Coated Gold Nanoparticles: A Robust Platform for Raman Thermometry

S3

Wednesday March 19th

4:30 P.M. - 6:30 P.M.

ROOM AB

Program of the session :

Chairs: Valérie KELLER

HOUR	NAME	TITLE
16:30	**Gabriel LOGET** **ISM - CNRS**	**Matter and materials made from metallic nanoparticles**
17:00	Ali DABBOUS CINaM - CNRS	Bipolar Membranes Electrolyzers with Controlled Nanoparticles Assembly for a Well Compact and Thickness-Controlled Catalytic Layer.
17:15	Olivier DURUPHTY LCMCP - Sorbonne Univ.	Design and comparison of different oxide based photoanodes for water oxidation using various sol-gel approaches
17:30	Leila HAMMOUD LPCNO - Univ. Toulouse	Size-controlled Au and Pt nanoparticles for enhanced CO2, photoreduction with water under visible light
17:45	Soline BEITONE LMGP - UGA	Self-Supported Cu2O Nanowire Heterojunction Membranes for Photocatalysis and CO2, Reduction
18:00	Liudmila TRATSIUK UTT - Univ Troyes	Effects of heat and hot electron generations in ultrafast regime in plasmon-driven chemical reaction
18:15		

S2

Wednesday March 19th

4:30 P.M. - 6:30 P.M.

AMPHITHEATRE LOUIS ARMAND OUEST

Program of the session :

Chairs: Guillaume COLAS

HOUR	NAME	TITLE
16:30	**Aimeric OUVRARD** **ISMO - CNRS**	**Charge transfer and atomic interdiffusion in ordered plasmonic nanoparticles in interaction with molecules.**
17:00	Abeer FAHES ICMN - CNRS	Polymer-Integrated AgPt Bimetallic Nanoparticles for Durable Plasmonics
17:15	Christina VILLENEUVE-FAURE Laplace - Univ. Toulouse	A nanoscale investigation of plasma deposited AgNPs-based nanocomposites electrical properties for nanoelectronic applications
17:30	Lionel PATRONE IM2NP - CNRS	Self-assembled monolayer of push-pull chromophores towards the polarization modulation for controlled detection of biomolecules
17:45	Federico ZIZZI CEISAM/IMN - Nantes Univ.	Coupling of Nanomechanics and Photochromism in Azo Soft Materials: From Thin Films to Nanoparticles
18:00	Julien CASTETS ICMCB - Univ. Bordeaux	Fabrication of correlated disordered structures in thin films to tune the visual appearance of surfaces
18:15	Simon DELACROIX LPMC - Ecole Polytechnique	Synthesis of colored glasses by an original sol-gel/laser coupled approach

S2

Thursday March 20th

10:30 A.M. - 12:30 A.M.

AMPHITHEATRE GASTON BERGER

Program of the session :

HOUR	NAME	TITLE
10:30	**Damien VOIRY IEM - CNRS**	**Engineering Low-Dimensional Materials for Electrocatalytic Conversion Reactions and Nanofluidics**
11:00	Tatiana STRAISTARI LCC - CNRS	Nanoscale NiCu electrocatalyst for the hydrogen evolution reaction
11:15	Seema SHAFIQ LCC - CNRS	Interfacial ionic liquid based nanocatalysts for low temperature CO2 reduction
11:30	Noa DE CRISTOFARO LCMCP - Stellantis Auto	High Entropy Alloys: from new syntheses to energy conversion
11:45	Felipe QUIROGA SUAVITA LPCNO - INSA Toulouse	Icosahedra like CoPd bimetallic nanoparticles for magnetically induced aromatic ketone hydrodeoxygenation
12:00	Gizem KARACAOGLAN ICMUB _ UBFC	Innovative Organometallic Nanocatalysts for the delivery of H2 from a Safe Solid Storage Source
12:15	Alexis AUSSONNE LCC - CNRS	Colloidal MoS2 nanoparticles by organometallic synthesis as improved catalyst

S4

Thursday March 20th

10:30 A.M. - 12:30 A.M.

LOUIS ARMAND OUEST

Program of the session :

Chairs: Stéphane MORNET

HOUR	NAME	TITLE
10:30	**Ariane BOUDIER** **CITHEFOR - Univ. Lorraine**	**Copper nanoclusters : the 1st treatment for menkes disease**
11:00	Henri COSTE ICMCB - CNRS	Tailoring the surface chemistry of nanoparticles to modulate their Protein Corona
11:15	Udara Bimendra Gunatilake KEKULUPOLAGE ICGM - Université de Montpellier	Peroxidase Mimicking Activity of Polyethyleneimine-mediated Prussian Blue Nanoparticles
11:30	Marine SAGASTUY PHENIX - Sorbonne Université	Fusion of Magnetic Liposomes with Model and Plasma Membranes: Towards Cytoplasmic Delivery
11:45	Mustafa GHARIB LVTS - Université Sorbonne Paris Nord	Replicating Nanoparticles-Based Cytosolic Sensing: Challenges and Key Insights from the 1st Replication Initiative in NanoBioscience
12:00	Naseer Haziq KHAN ITODYS - Université Paris Cite	Functionalization of Tobacco Mosaic Virus with Plasmonic Nanoparticles For In-Solution Sensing Applications
12:15	Min-Hui LI IRCP - CNRS	Heavy-metal-free photocatalysts by polymer micelles/vesicles in photobiocatalysis: under aerobic condition in combination with native enzymes and under anaerobic condition for potential hypoxia cancer therapy

S3

Thursday March 20th

10:30 A.M. - 12:30 A.M.

ROOM CD

Program of the session :

Chairs: Brice GAUTIER et Rosine COQ GERMANICUS

HOUR	NAME	TITLE
10:30	**François PIQUEMAL**	**ELENA project – electrical nanoscale metrology in industry: Review of the main results**
11:00	Jose MORAN LNE	Calibrated measurements of dopant concentration on vertical nanowires by scanning microwave microscopy
11:15	José ALVAREZ GeePS - CNRS	Understanding and Optimizing Local Electrical Measurements on Cross-Sectional devices Using Conductive Atomic Force Microscopy (C-AFM)
11:30	Hugues GIRARD NIMBE - CEA	In situ photoemission spectroscopies to reveal surface transfer doping on hydrogenated milled nanodiamonds
11:45	Emma AOUSTIN Lab. Albert Fert - CNRS	Towards switchable magnetic tunnel junctions based on polyoxometalates monolayer.
12:00	Anthony SZYMCZYK ISCR - Rennes	Electrokinetic Leakage: Danger and Opportunity for Advanced Materials Characterization
12:15	Bertrand BOUDART GREYC - Univ. Caen Normandie	Time-resolved self-heating temperature measurements of GaN-based HEMTs using nanoparticles as Raman thermometers

Thursday March 20th

2:00 P.M. - 4:30 P.M.

AMPHITHEATRE GASTON BERGER

Program of the session :

Chairs:

HOUR	NAME	TITLE
14:00	**Benjamin ABECASSIS** **Lab. de Chimie ENS - CNRS**	**Synthesis, twisting and self-assembly of semiconducting colloidal nanoplatelets**
14:30	Gregoire HERZOG LCPME - CNRS	Au nanoparticle assemblies at polarized liquid-liquid interfaces for SERS applications
14:45	Florent CARN MSC - Univ. Paris Cité	Towards a new family of ionic colloidal crystals composed of long-chain polyelectrolytes and small spherical nanoparticles.
15:00	Matias FELDMAN INSP - Sorbonne Univ.	Nanoscale control of heat flux in self-assembled ordered nanocrystal solids
15:15	Jisoo OH LPEM - ESPCI	Understanding the Growth Kinetics of Plasmonic CsxWO3-d Nanocrystals for Shape Control and Polarized LSPR
15:30	Miguel COMESANA-HERMO ITODYS - CNRS	Faceted 3D Supercrystals for Plasmonic Photocatalysis: Design, Reactivity and Operando Studies
15:45	Charles VERNIER CINaM - CNRS	Influence of crystalline structure on the acoustic vibrations of elongated nano-objects
16:00	Sajana SEMI ICB - CNRS	Raman Scattering study of Ligand Exchange Effects on the CdS Nanoplatelets
16:15	Safa KHADDAD ICMCB - Aquitaine Science Transfert	Redox reaction between a silicide and coordination complexes for size-tunable silicon particles

S5

Thursday March 20th

2:00 P.M. - 4:30 P.M.

ROOM CD

Program of the session :

Chairs: Gaetan BELLOT & Nesrine AISSAOUI

HOUR	NAME	TITLE
14:00	**Nesrine AISSAOUI** **Univ. Paris-Cité - CiTCoM**	**DNA Origami-based protein manipulation systems : From structural biology to mechanical regulation**
14:30	Marine LE GOAS Institut Galien Paris-Saclay - CNRS	Demonstration of the impact of flow on protein adsorption on nanoparticles via in situ flow-DDM
14:45	François HENN L2C - Université de Montpellier	Confinement of a Biological Ionic Chanel in a SWCNT
15:00	Julie FINKEL Centre de Biologie Structurale - CNRS	DNA origami self-assembly with complex curved surfaces defined in 3D space
15:15	Manon ROCHEDY ISCR - CNRS	Internal structure evolution of lipoplexes in the presence of surfactants and biological media for nucleic acids delivery
15:30	Olivier SANDRE LCPO - CNRS	Magnetic Polymersome Deformation by a Static Magnetic Field
15:45	Adrien NICOLAÏ ICB - Université Bourgogne	MoS2 Solid-State Nanopores as Single-BioMolecule Sensors
16:00	Marc ZELSMANN LTM - CNRS	On-chip photonic crystal tweezers for bacteria and bacteriophage viruses trapping and susceptibility testing
16:15	Silvia PERAZA KU ISCR - CONACYT	Understanding the spontaneous formation of toroids and other handle topologies in polypeptides self-assembly

Thursday March 20th

2:00 P.M. - 4:30 P.M.

AMPHITHEATRE LOUIS ARMAND EST

Program of the session :

Chairs: Valentina KRACHMALNICOFF & Jean-Baptiste TREBBIA

HOUR	NAME	TITLE
14:00	**Aloyse DEGIRON** **MPQ - CNRS**	**Hybridizing colloidal quantum dots with structured photonic environments reveals unintuitive optoelectronic properties**
14:30	Benjamin ROUSSEAUX FEMTO-ST - Université Marie et Louis Pasteur	Semiclassical theory of strong coupling between emitters and optical resonators
14:45	Marius GAUCHET ILM - UCBL	Exploring Chiroplasmonic Effects on Single Metallic Nano-Objects
15:00	Matthias PAULY MdC, Institut Charles Sadron, ENS de Lyon	Chiral assembled thin films of plasmonic nanowires
15:15	Guillaume LAGUE INSP - Sorbonne université	Pump-probe investigation of charge carrier spin dynamics and dynamic nuclear polarization in FAPbI3 polycrystalline films
15:30	Thomas PONS LPEM - INSERM	Sub-monoexcitonic lasing of semiconductor nanocrystals in polymeric parabolic microcavities
15:45	Alban GASSENQ ILM - UCBL	CdSe Quantum dots integrated into micro-lenses made by photolithography
16:00	Kaouther TLILI INSP - Sorbonne Univ.	Exciton in Halide Perovskite Nanoplatelets: Finite Confinement and Dielectric Effect in Effective Mass Approximation
16:15	Arjun BABU ICCF - Université Clermont Auvergne	Comparative Study of Luminescent Coatings Containing YVO4:Eu3+ Nanoparticles of Different Sizes

S3

Thursday March 20th

2:00 P.M. - 4:30 P.M.

AMPHITHEATRE GASTON BERGER

Program of the session :

Chairs: Anthony SZYMCZYK

HOUR	NAME	TITLE
14:00	**Matteo GHIDELLI** **LSPM - CNRS**	**Boosting mechanical properties of metallic thin films through advanced nanoengineered design strategies**
14:30	Catherine DE VILLENEUVE PMC - CNRS	Fe-based MOF layers on silicon surfaces
14:45	Kenza JOYEN ICGM - Univ. Montpellier	Molecular sieving membrane for selective hydrogen sensing
15:00	Vincent JOURDAIN LCC - Univ. Montpellier	In situ optical microscopy studies of the catalytic growth and shrinkage of individual carbon nanotubes
15:15	Aude SIMON LCPQ - CNRS	Growth of large carbon molecules and mixed metal-carbon nanoparticles driven by organometallic clusters: interdisciplinary studies
15:30	Alexia BISTINTZANOS INSP - Sorbonne Univ.	pH influence on the structure of metal-organic thin films at the air/water interface
15:45	Ana Karen PIÑON-VASQUEZ MIM2 - Chimie ParisTech	Design and Synthesis of Bioactive Materials Using Two-Photon Polymerization and Thiol-Ene Click Chemistry
16:00	Guillaume COLAS Institut FEMTO-ST - CNRS	Lubrication by self-assembled multilayer enabled through tribochemical transformation into nanometric thick C-based solid material
16:15	Rémi LAZZARI INSP - CNRS	Interface and grain boundary contributions to electron transport in thin films: an application to silver based low e-coatings

S3

Friday March 21th

10:30 A.M. - 12:30 A.M.

AMPHITHEATRE LOUIS ARMAND EST

Program of the session :

Chairs: Maria TCHERNYCHEVA & Erik DUJARDIN

HOUR	NAME	TITLE
10:30	**Davy GERARD** **L2n - UTT**	**Self-hybridization and hot electron generation in aluminum nanoantennas**
11:00	Jean-François BRYCHE L2n - CNRS	Control of heat anisotropy by pump-probe spectroscopy and imaging method of photodegradation at the nanoscale
11:15	Céline MOLINARO IS2M - CNRS	Macro to nanoscale polymerization induced through controlled heat generation by thermoplasmonics
11:30	Sugi KORATH SHIVAN CINAM - Aix Marseille University	Engineering metasurfaces by plasmon-assisted nanoreactors
11:45	Emmanuel O. IDOWU ICMCB - CNRS	Synthesis of Si@Au core-shell particles for directional light scattering
12:00	Karmel de Oliveira LIMA LCIM - CEA	Nanocomposite scintillators: enhancing nanoparticle incorporation and optical stabilization
12:15	Valentin ALLARD	Optical Nearfield characterization of Nb2O5 and SiO2 dielectric thin films for quantitative measurement in the visible spectral range

Friday March 21th

10:30 A.M. - 12:30 A.M.

AMPHITHEATRE GASTON BERGER

Program of the session :

HOUR	NAME	TITLE
10:30	**Damien BOYER** **L2n - UTT**	**Nanosized inorganic and hybrid phosphors for optical applications**
11:00	Leandro SACCO Vs Particle	Automated print technology based on spark ablation for deposition of nanoparticles and nanoporous layers
11:15	Melik MAKSEM LPCNO - INSA TOULOUSE	Integration of soft magnetic materials for RF applications
11:30	Ester BUTERA MAcSE Univ-Rennes	Photochemical synthesis of emissive and photothermal gold-nanoclusters: effect of electron-rich ligand on optical properties.
11:45	Arthur REYMOND L2CM - Univ. Lorraine	Impact of Nanoparticle Shape and Coating Thickness on the Plasmonic Behavior of Au@MnO2.
12:00	Clémence CHINAUD-CHAIX ICMCB - CNRS	Tunable optical properties of silica beads via optimal sequestration of lanthanide ions within it
12:15	Joana VAZ RAMOS ICPEES - CNRS	Magnetic graphene/iron oxide nano-adsorbents for the environmental depollution of polycyclic aromatic hydrocarbons and other relevant pollutants

Friday March 21th

10:30 A.M. - 12:30 A.M.

ROOM AB

Program of the session :

Chairs: Lionel SANTINACCI

HOUR	NAME	TITLE
10:30	**Ally AUKAULOO** **ICMMO - Univ. Paris Saclay**	**Nanostructured Organic Semiconductors for the Photocatalytic Water Splitting**
11:00	Mathieu DELOM LRS - Sorbonne Univ.	Cyclable and cheap catalysts for hydrogen storage and release by organic liquids
11:15	Heliam KLEIN LCC - CNRS	Solid hydrogen storage: innovative materials for the solvolysis of amine boranes
11:30	Gaëlle KHALIL ITODYS - Paris Cité	Synthesis of Ni-based Heterofunctional Catalysts with Ultra-Low PGM content for the Alkaline Hydrogen Evolution Reaction
11:45	Juliana SOUZA Photoactive Nanomaterials - Universidade Federal do ABC	Enhanced (W)BiVO4/g-C3N4 systems for solar-driven photocatalysis
12:00	Marouane BOUREMAH LPCNO-INSA Toulouse	Homogeneous and Heterogeneous Photocatalysis using InP/ZnS Quantum Dots
12:15	Jean-Charles ARNAULT NIMBE - CEA	Nanodiamonds: an alternative for photocatalysis under solar light?

S3

Friday March 21th

10:30 A.M. - 12:30 A.M.

LOUIS ARMAND OUEST

Program of the session :

Chairs: Thomas PONS & Chloé GRAZON

HOUR	NAME	TITLE
10:30	**Chloé GRAZON** **ISM - CNRS**	**From Quantum Dots to Fluorescent Organic Nanoparticles: bright nanotools for biosensing**
11:00	Eleonore KUREK ISM - Université de Bordeaux	3D Real-Time Single Particle Tracking using two-photon fluorescence from bright dye-based organic nanoparticles
11:15	Riccardo OSSANNA ISMO - CNRS	Control of the optical absorption properties of nanovectors for photoacoustic imaging (CAP-PHOTOAC)
11:30	Mariah HARRIS ISMO - Université Paris-Saclay	Optical Biosensors for the Detection of Bacteria
11:45	Limeng RUAN LP2N - China Scholarship Council	Polarization sensitive single nanoparticle tracking in the near-infrared
12:00	Qilin ZOU LPMC - Ecole Polytechnique	CsxWO3-Î´@NaYF4:Yb,Er heterogeneous nanocrystals for local temperature monitoring during photothermal heating
12:15	Tristan PELLUAU i-CLeHS - ChimieParisTech	Design and Synthesis of Iron-Doped Carbon Dots for Enhanced MRI Imaging Applications

PhD awards
C’Nano 2024

Kangkang GE

PRIX DE THÈSE EN RECHERCHE FONDAMENTALE

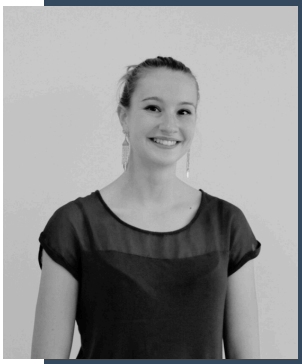
Etude du mécanisme de stockage de charges dans les électrodes à base de carbone pour le stockage capacitif de l'énergie

Direction : Patrice SIMON et Pierre-Louis TABERNA

Labo : CIRIMAT

Discipline : Sciences et génie des matériaux

https://theses.fr/28086633X



Fanny THORIMBERT

PRIX DE THÈSE EN RECHERCHE FONDAMENTALE

Texturation de surface par auto-assemblage de fissures pour des applications en photonique: d'une curiosité de laboratoire vers une technologie

Direction : Marco FAUSTINI

Labo : LCMCP

Discipline : Physique et chimie des matériaux

https://theses.fr/277373204

Maëlle BENEFICE

PRIX DE THÈSE EN RECHERCHE INTERDISCIPLINAIRE

La vie à haute température: Etude des micro-organismes thermophiles par microscopie de front d'onde sous chauffage plasmonique

Direction : Guillaume BAFFOU

Labo : Institut Fresnel

Discipline : Physique et sciences de la matière

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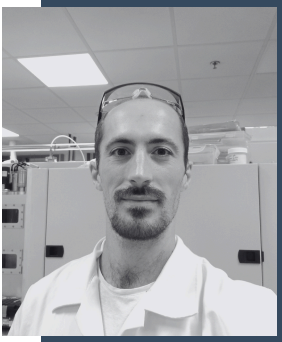

Corentin DABARD

PRIX DE THÈSE EN RECHERCHE INTERDISCIPLINAIRE

Synthèse et caractérisation de nanoplaquettes bi-émittrice

Direction : Emmanuel LHUILLIER, Sandrine ITHURRIA-LHUILLIER

Labo : INSP

Discipline : Physique et chimie des matériaux

https://theses.fr/2023SORUS487

Amine KHITOUS

PRIX DE THÈSE EN RECHERCHE INTERDISCIPLINAIRE ET FINALISÉE

Etude des phénomènes photoinduits par resonance plasmonique par des approches de nanochimie

Direction : Olivier SOPPERA

Labo : IS2M

Discipline : Chimie physique

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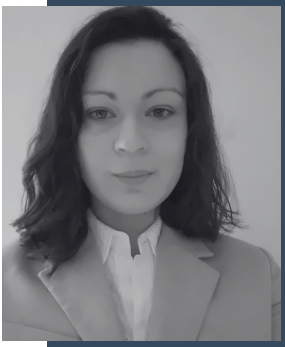

Elodie CARNEIRO

PRIX DE THÈSE EN RECHERCHE FINALISÉE

Optimisation de la technologie GaN sur Silicium pour les applications de puissance RF

Direction : Farid MEDJDOUB, Fabrice SEMOND

Labo : IEMN

Discipline : Electronique, microélectronique, nanoélectronique et micro-ondes

https://theses.fr/2024ULILN013

Notes

Notes

Notes

Développer une culture interdisciplinaire et acquérir les compétences nécessaire à la recherche en nanosciences et nanotechnologies

Chercheur.es jeunes entrant.es, post-doctorant.es, ingénieur.es et doctorant.es

Cours, ateliers et séminaires sur les concepts fondamentaux et expérimentaux

Nanobiologie, Nanochimie, Nanoélectronique, Nanomagnétisme Nanophotonique, Nano-écotoxicologie, Nanométrologie

C'NANO FORMATION