

List of Oral Presentations

Wednesday March 15th

08:00 Registration

09:00 **OPENING SESSION** MAIN AMPHITHEATER

Corinne CHANÉAC, Head of C'Nano (Sorbonne University – C'Nano)

David BABONNEAU, Local Coordinator & C'Nano North-Western board member (CNRS – Pprime)

Pascal BAIN, Head of the ANR SPICE department

09:30 **PLENARY SESSION** MAIN AMPHITHEATER

Laura NA LIU, University of Stuttgart – 2nd Physics Institute,
Functional DNA-based cytoskeletons for synthetic cell

10:30 Coffee & tea break

11:00

THEMATIC SESSIONS

NANOPHOTONICS & NANO-OPTICS

11:00 Engineering Quantum States in 2D semiconductors

Bernhard URBASZEK • IPKM, Darmstadt – Germany

11:30 Complete design of a fully integrated graphene-based compact plasmon coupler for the infrared

Gilles RENVERSEZ • AMU - Inst. Fresnel, France

11:45 A Chiral Inverse Faraday Effect Mediated by an Inverse-designed Plasmonic Antenna

Ye MOU • Sorbonne Univ. - INSP, France

12:00 Light Confinement in photonic moiré

Chirine SAADI • EC Lyon - INL, France

12:15 Digital harmonic holographic microscope for the study of nanostructures in nonlinear regime

Serena GOLDMANN • CNRS - Inst. Langevin, France

12:30 Excitation of a magnetic dipole transition through a plasmonic nano-antenna

Benoit REYNIER • Sorbonne Univ. - INSP, France

12:45 Super-resolution imaging of the formation of emitting sites for exciton localization in carbon nanotubes

Benjamin LAMBERT • CNRS - LP2N, France

13:00 Lunch, Posters session & Stand exhibition

NANOCHEMISTRY, NANOPARTICLES, NANOCATALYSIS

11:00 Surface redox reactions for tuning the surface composition of bimetallic nanoparticles and their catalytic properties: the contribution of Poitiers catalysis laboratory

Catherine ESPECEL • Univ. Poitiers – IC2MP, Poitiers – France

11:30 Cerium as a co-catalyst in nanostructured PGMs-based materials for glycerol oxidation in alkaline media: value-added products generation

Fabiano DOS SANTOS CURSI • Univ. Sao Paulo - IC2MP, France

11:45 Understanding the mechanisms involved in the formation of silicon particles from the thermal decomposition of hydrogen silsesquioxane: an in situ study by ETEM

Cynthia CIBAKA NDAYA • CNRS - ICMCB, France

12:00 Synthesis of nickel nanoparticles via an organometallic pathway

Dimitri ROUBERT • Univ. Paul Sabatier Toulouse - LCC, France

12:15 Green Synthesis of Water Splitting Electrocatalysts: IrO₂ Nanocages via Pearson's Chemistry

Jennifer PERON • Univ Paris Cité - ITODYS, France

12:30 Nanostructured catalysts for the selective electro-conversion of bio-sourced molecules into value-added compound

Thibault RAFAIDEEN • CNRS - IC2MP, France

12:45 Core@Shell Co@CoS Nanorods on the Way to Magneto-Plasmonic Probes

Thi Thiet VU • INSA Toulouse - LPCNO, France

13:00 Lunch, Posters session & Stand exhibition

List of Oral Presentations

11:00

THEMATIC SESSIONS

FUNCTIONAL THIN FILMS & NANOSTRUCTURES: GROWTH & PROPERTIES

11:00	Origin of the roughness of grain boundaries in 2D materials	Olivier PIERRE-LOUIS • CNRS – ILM, Lyon – France
11:30	Kinetic Monte Carlo 3d model for Cu on Cu(001) homoepitaxy: from mounding at normal incidence to ripples orientation transition under GLAD conditions	Florin NITA • Univ. Poitiers - Inst. Pprime, France
11:45	Atomic scale investigation of deposition of low (W,Mo) vs. high (Ag,Cu) adatom mobility during first stages of silicide interface formation	Cédric MASTAIL • Univ. Poitiers - Inst. Pprime, France
12:00	Adatom thermomigration on a crystalline surface	Nicolas COMBE • Univ. Paul Sabatier Toulouse - CEMES, France
12:15	Growth and ferroelectricity of GeTe thin films on Si(111)	Frédéric LEROY • AMU - CINaM, France
12:30	Two-dimensional dynamic ordering of perylene on Ag(110)	Laurent GUILLEMOT • CNRS - ISMO, France
12:45	Topological Defects in Smectic A Liquid Crystal Thin Films studied by synchrotron GISAXS measurements	Jean DE DIEU NIYONZIMA • Sorbonne Univ. - INSP, France

13:00 Lunch, Posters session & Stand exhibition

2D MATERIALS

11:00	2D Materials revealed by Angle-Resolved Photoemission Spectroscopy	Yannick FAGOT-REVURAT • Univ. Lorraine – IJL, Nancy – France
11:30	Molecular adsorption on Dumbbell Silicene	Laurita FLOREAN • Ye MOU • Sorbonne Univ. - INSP & LCPMR, France
11:45	Visualizing In-Plane Junctions in Nitrogen-Doped Graphene	Cyril CHACON • Univ Paris Cité - MPQ, France
12:00	Propane/hydrogen CVD growth of graphene on SiC for applications	Adrien MICHON • CNRS - CRHEA, France
12:15	Quantum nanophotonics with 2D crystals	Antoine RESERBAT-PLANTEY • CNRS - CRHEA, France
12:30	Mechanical behavior and stability of 2D-Materials	Michel DROUET • CNRS - Inst. Pprime
12:45	Complete determination of thermoelectric and thermal properties of supported few layers 2D materials	Mehrdad RAHIMI • Univ Paris Cité - MPQ, France

13:00 Lunch, Posters session & Stand exhibition

14:30 **PLENARY SESSION** LARGE AMPHITHEATER

Guillaume SCHULL, CNRS – IPCMS, Strasbourg (France)-
Sub-molecular fluorescence microscopy with STM

List of Oral Presentations

15:30

THEMATIC SESSIONS

NANOPHOTONICS & NANO-OPTICS

15:30	Playing with plasmons, molecules or dielectric nanoparticles to control light emission at the nanoscale	Celine FIORINI • CEA – SPEC, Saclay – France
16:00	FRET-mediated collective blinking of self-assembled stacks of semiconducting nanoplatelets	Laurent COOLEN • Sorbonne Univ. - INSP, France
16:15	Nanophotonic structures by photopolymerization of functional inks	Ludovic BELHOMME • Univ. Bordeaux - ICMCB/CRPP, France
16:30	Towards an electrically injected optical parametric oscillator	Andrea GERINI • Univ Paris Cité - MPQ, France
17:15	Excitability in a PhC nanolaser with an integrated saturable absorber	Bruno GARBIN • C2N, France
17:30	Time-Scale Dependent Thermo-Optical Coefficient in Titanium Dioxide Waveguides	Jean-Claude WEEBER • Univ. Bourgogne - ICB, France
17:45	Plasmo-electronic effects in self-organised gold nanoparticles	Jérémie GRISOLIA • INSA Toulouse - LPCNO, France

18:30 Nanopitch Main Amphitheater

19:30 Cocktail Dinner, Posters & Stands Exhibition

NANOMECHANICS

15:30	Nanomechanics: Playing the nanoguitar to explore the dynamics of harmonic oscillators and two-level systems	Eva Maria WEIG • Technical University of Munich – Chair of Nano & Quantum Sensors, Munich – Germany
16:00	Multifrequency-AFM platform for chemical and local property analysis	Eric LESNIEWSKA • Univ. Bourgogne - ICB, France
16:15	Elastic study of self-suspended nanowires by pump-probe spectroscopy	Laurent BELLIARD • Sorbonne Univ. - INSP, France
16:30	Plasmo-electronic effects in self-organised gold nanoparticles strain gauges	Jérémie GRISOLIA • INSA Toulouse - LPCNO, France
16:45	Coffee & tea break	
17:15	Nanomechanical characterization by AFM of a composite material: method and analysis	Rosine COQ GERMANICUS • Univ. Caen Normandie - CRISMAT, France
17:30	Small-scale experimental techniques to study thin film delamination	Alice LASSNIG • Austrian Academy of Sciences. - ESI, Austrian

18:30 Nanopitch Main Amphitheater

19:30 Cocktail Dinner, Posters & Stands Exhibition

List of Oral Presentations

15:30

THEMATIC SESSIONS

NANOBIOSCIENCES

15:30	Bio-inspired compartments based on liquid-liquid phase separation	Nicolas MARTIN • CNRS – CRPP, Bordeaux – France
16:00	From the “Ouzo effect” to the chemoradiotherapy : elaboration of hybrid nanocapsules for encapsulation and therapy	Déborah IGLICKI • Univ. Rennes - ISCR, France
16:15	Lipid-based nanodrugs in complex biological media: structure, corona formation and disassembly mechanisms	Frédéric GOBEAUX • CNRS - NIMBE, France
16:30	Organization of collagen I fibers and tissue hardening: markers of fibrotic scarring after spinal cord injury in mice revealed by multiphoton-atomic force microscopy imaging	Oscar SAAVEDRA-VILLANUEVA • Univ. Montpellier - L2C, France
16:45	Coffee break	
17:15	Self-assembly of shape-complementary DNA origamis for lithographic applications	Nicolas TRIOMPHE • CEA - CBS, France
17:30	Tissue / Organ-Selective Non-Viral Intracellular Drug-Delivery	Peter DALKO • CNRS - LCBPT, France
17:45	Aryl diazonium salts encoded plasmonic nanoparticles for multiplex color Raman imaging	Da LI • Univ. Paris Cité - LCBPT, France

18:30 **Nanopitch**

19:30 **Cocktail Dinner, Posters & Stands Exhib**

NANOELECTRONICS

15:30	Enabling full fault tolerant quantum computing with silicon based VLSI technologies	Maud VINET • SiQuance, Grenoble – France)
16:00	Leveraging Physics for Energy-Efficient Artificial Intelligence	Damien QUERLIOZ* • CNRS - C2N, France
16:45	Coffee & tea break	
17:15	Localised growth of Vertical GaN devices on large diameter silicon substrates	Matthew CHARLES* • CEA - LETI, France
17:45	Large Scale Integration of 2D material for RF switches	Clotilde LIGAUD* • CEA - LETI, France

* Invited speakers

18:30 **Nanopitch** **Main Amphitheater**

19:30 **Cocktail Dinner, Posters & Stands Exhibition**

List of Oral Presentations

Thursday March 16th

08:30 **PLENARY SESSION** MAIN AMPHITHEATER

Chantal PICHON, University of Orléans – CBM, Orléans (France),
Messenger RNA, a game changer in biomedicine: current status, opportunities and challenges

09:30 Sponsors & Partners presentation

- Renatech + PEPR Electronics
- EUR Nano-PHOT
- EUR INTree
- NKT Photonics

10:00 Coffee & tea break

10:30 **THEMATIC SESSIONS**

NANOMECHANICS

10:30	Single and multilayer electro-mechanical behavior studied with in-situ methods	Megan CORDILL • ESI – ÖAW, Leoben – Autriche
11:00	Mechanical properties of a thickness controlled multi-layered copper thin film	Sylvia KALACSKA • CNRS - LGF, France
11:15	Nanoengineering the glassy state: toward novel thin film metallic glasses with outstanding combination of mechanical properties	Matteo GHIDELLI • CNRS - LSPM, France
11:30	Influence of ALD interlayers on mechanical and interfacial properties of Al thin films on polyimide	Johanna BYLOFF • ETH Zurich - EMPA, Suisse
11:45	Link between cracking mechanisms of trilayer films on flexible substrates and electro-mechanical reliability under biaxial loading	Shuhel ALTAF HUSAIN • CNRS - LSPM, France
12:00	Mechanical properties of realistic nanoporous gold ultra-thin film for flexible electronics, investigated by Molecular dynamics simulations	Gwénaél MASSE • Univ.Poitiers - Inst. Pprime, France
12:15	Nanoparticle morphology and stress evolution in metallic nanocomposite thin films produced by combined gas phase aggregation and magnetron sputtering	Barbara PUTZ • ETH Zurich - EMPA, Suisse

12:30 Lunch, Posters session & Stands Exhibition

NANOCHEMISTRY, NANOPARTICLES, NANOCATALYSIS

10:30	Predicting realistic shape and structure of nano-catalysts under working conditions: Are we there ?	Hazar GUESMI • CNRS – ICGM, Montpellier – France
11:00	Ab-initio study of the properties of metal-oxide nanoparticles: the case of ZrO ₂	Ravikant KUMAR • Univ. Limoges - IRCER, France
11:15	Towards DNA-coated patchy silica nanoparticles for programmable self-assembly	Auriane BAGUR • Univ. Bordeaux - ICMCB/CRPP, France
11:30	Elaboration of plasmonic enantiomorphs	Nada KHALFAOUI HASSANI • Sorbonne Univ. - MONARIS, France
11:45	Rate-limiting chemical reactions as the origin of non-classical nucleation in some co-precipitated compounds: the case of YbVO ₄	David CARRIERE • CEA - NIMBE, France
12:00	Chemical nanowelding of Cu@Ni bimetallic nanowires for transparent electrodes in room conditions	Andela KRIZAN • Univ.Bordeaux - ICMCB, France
12:15	Copper, Silicon, Phosphorus: new ternary nanocrystals for electrocatalysis	Anissa GHORIDI • CNRS - LCMCP, France

12:30 Lunch, Posters session & Stands Exhibition

List of Oral Presentations

10:30

THEMATIC SESSIONS

NANOBIOSCIENCES

10:30	Nanodroplets to study crystallization and jellification phenomena using dropletbased microfluidics	Nadine CANDONI • AMU – CINaM, Marseille – France
11:00	Design and performances of a 3D designed microfluidic cell for LSPR biosensing: A proof of concept study toward rapid bio-detection of pathogen targets	Walid AIT MAMMAR • Sorbonne Univ. - LRS, France
11:15	Nanoscale dynamic localization of single nanoparticles over an extended thickness at depth in complex (bio)environments	Quentin GRESIL • CNRS - LP2N, France
11:30	QD vs. organic dye in FRET biosensors: which one would you chose?	Chloé GRAZON • CNRS - ISM, France
11:45	Synthesis of hybrid nanoparticles to target extracellular vesicles	Mélanie ROMAIN • Univ. Bourgogne - ICB, France
12:00	Quantum dots micropatterning: towards biofunctionalization and nano-imaging	Cyrille VEZY • UTT - L2n, France
12:15	Use of core-satellite polymer-metal nanocomposites to remodel the tumor microenvironment of pancreatic cancer via combined therapies	Jordan ROBERT • Univ. Montréal - GRSTB, Montréal

12:30 Lunch, Posters session & Stands Exhibition

2D MATERIALS

10:30	Order-disorder in water confined in natural swelling clays	Eric FERRAGE • CNRS – IC2MP, Poitiers – France
11:00	Controlled friction at the solid-liquid interface in graphene-based nanochannels	Sandra VASILJEVIĆ • CNRS - LPENS, France
11:15	From Biomass Wastes toward Gram-Scale Luminescent Graphene Quantum Dots	Jean-Jacques GAUMET • Univ. Lorraine - LCP/A2MC, France
11:30	On-surface assemblies of DNA-decorated functional nano-objects by supramolecular recognition	Zohreh SAFARZADEH • Sorbonne Univ. - MONARIS, France
11:45	Synthesis, characterization and surface chemistry of 2D Mo/Ti solid solution based MXene. Application to hydrogen evolution reaction in alkaline media	Lola LOUPIAS • Univ. Poitiers - IC2MP, France
12:00	Probing in situ the reactivity in molten salts of carbides and borides: synthesis of layered compounds, etching, and tuning of their composition	David PORTEHAULT • CNRS - LCMCP, France
12:15	Tuning the optical and electrical properties of 2D Ti3C2Tx MXenes: an ion implantation approach	Ayoub BENMOUMEN • Univ. Poitiers - Inst. Pprime, France

12:30 Lunch, Posters session & Stand exhibition

14:30 **PLENARY SESSION** MAIN AMPHITHEATER

Sarah BENCHABANE-GAIFFE, CNRS – FEMTO-ST, Besançon (France)-
Surface acoustic wave-driven mechanical resonators for phononic circuitry

List of Oral Presentations

15:30

THEMATIC SESSIONS

NANOPHOTONICS & NANO-OPTICS

15:30	Predicting and designing the visual appearance of macroscopic nanostructured surfaces	Kevin VYNCK • CNRS – ILM, Lyon – France
16:00	Mechanisms and applications of laser-induced self-organization in plasmonic quasi-random metasurfaces	Nathalie DESTOUCHES • Univ. Jean MONNET - LabHC, France
16:15	The iridescence of disordered resonant metasurfaces	Adrian AGREDA • Univ. Bordeaux- LP2N, France
16:30	Multiresonant behavior and strong coupling in aluminum optical antennas	Davy GÉRARD • UTT - L2n, France
16:45	Nanostructuring of Hybrid Organic-Inorganic Perovskite to tailor light-matter interactions for optoelectronic devices	Nguyen Ha My DANG • CNRS - INL, France
17:00	Coffee & tea break	
17:30	Fine structure of excitons and their interactions with phonons in single CsPbCl ₃ nanocrystals	Victor GUILLOUX • Sorbonne Univ.- INSP, France
17:45	Controlling giant polarisation rotation in the Poincaré sphere with a single quantum dot spin	Elham MEHDI • Univ. Paris Cité - C2N, France
18:00	Thermopolymerization induced by thermoplasmonics	Olivier SOPPERA • CNRS - IS2M, France
18:15	Local and Deterministic Integration of Luminescent Nanostructures on Photonic integrated circuits	Abdelrahman ABDELAAL • UTT - L2n, France

19:00 PhD Awards Ceremony **Main amphitheater**

NANOCHEMISTRY, NANOPARTICLES, NANOCATALYSIS

15:30	Engineering Nanodiamonds from Gas Phase or Solution: Applications in Ammonia and Dihydrogen Sensing and Catalysis	Jean-Cyrille HIERSO • Univ. Bourgogne – ICMUB, Dijon – France
16:00	Green synthesis of Gd ³⁺ -doped ultrasmall carbon-based nano hybrids from coffee wastes	Kostiantyn PALIIENKO • Univ. Kyiv- ILM, France
16:15	Elaboration of new hybrid perovskite@graphite composites and mixed 2D perovskites with enhanced stability for X-ray detection via a solvent-free mechanochemical approach	Yihui CAI • Univ. Strasbourg - ICPEES, France
16:30	Emulsions de Pickering stabilisées par un nanotubes aluminosilicaté Janus : propagation d'un front d'huile dans un réseau gelifié d'imogolites hybrides	Estelle PUEL • CEA - NIMBE, France
16:45	Coffee & tea break	
17:15	Ultra-small colloidal rare-earth aluminium/gallium garnet nanoparticles that are seed-mediate-grown beyond the surface of the YAG seed nanoparticles	Yige YAN • ENS Lyon - LCH, France
17:30	The effect of metallic precursors in the synthesis of metal nanoparticles at the liquid/liquid interface in Ouzo emulsions towards their use in catalytic hydrolysis of amine-boranes	Olivier GAZIL • Polytechnique Montréal - ISCR, France
17:45	Role of water in self-assembly of colloidal CdSe nanoplatelets	Benoit WAGNON • CNRS - Lab. Chemistry, France
18:00	Phosphate ions interactions with TiO ₂ nanoparticles: effect of the shape, crystallinity and oxidative stress	Rémi BÉRARD • CEA - NIMBE, France
18:15	Continuous Anisotropic Growth of NIR-Plasmonic Cs _x WO _{3-γ} Nanocrystals	Jisoo OH • Ecole Polytechnique - PMC, France

19:00 PhD Awards Ceremony **Main amphitheater**

List of Oral Presentations

15:30

THEMATIC SESSIONS

NANOBIOSCIENCES

15:30	Translation to the clinic of an ultrasmall nanoparticle for treatment of cancer in combination with radiotherapy	François LUX • Univ. Claude Bernard – ILM, Lyon – France
16:00	Biocompatible oily ferrofluid for better thermal tumor ablation efficiency	Clément VECCO GARDA • CNRS - ICMCB, France
16:15	Design of Iron Oxide Nanoparticles for imaging and active targeting: theranostic in one formulation	Maria DE LOS ANGELES RAMIREZ • Univ. Strasbourg - IPCMS, France
16:30	Enhancement of Phosphate Removal in Peritoneal Dialysis using designed magnetic Iron Oxide Nanostructures.	Theo LUCANTE • CNRS - IPCMS, France
16:45	Synthesis, Characterization and Cellular Internalization of Anisotropic Magnetic Nanoparticles	Jean-Michel SIAUGUE • Sorbonne Univ. - PHENIX, France
17:00	Coffee & tea break	
17:30	Targeted thermal or mechanical Nanotherapy of pancreatic adenocarcinoma: efficacy and mechanisms	Loubna LAIB • INSA Toulouse - LPCNO, France
17:45	Bioimaging with persistent luminescence nanoparticles	Cyrille RICHARD • CNRS. - UTCBS, France
18:00	Luminescence nanothermometry for the control and understanding of heat-induced process and the fate of nanothermometers in vitro and in vivo	Mahshid HASHEMKHANI • Univ. Paris Cité - MSC, France
18:15	Synthesis & Functionalization of Hybrid Plasmon-semiconductor Nanoparticles for Cancer Photodynamic Therapy	Thomas PONS • INSERM - LPEM, France

19:00 PhD Awards Ceremony **Main amphitheater**

FUNCTIONAL THIN FILMS & NANOSTRUCTURES: GROWTH & PROPERTIES

15:30	Unveiling the growth pathways of manganese germanides and silicides	Lisa MICHEZ • AMU – CINaM, Marseille – France
16:00	Effect of O ₂ addition on the film growth mechanism of sputtered Ag thin films	Ramiro ZAPATA • SGPM RECHERCHES - INSP/SVI, France
16:15	Real-time study of ultrathin Ag growth: role of additives	Grégory ABADIAS • Univ. Poitiers - Inst. Pprime, France
16:30	Microstructure behavior of nitride-based multilayer coatings under He ion irradiation	Nicolas SÉNICOURT • Univ. Poitiers - Inst. Pprime, France
16:45	Innovative process of micro-nanostructure of titanium nitride (TiN) by association of a photostructurable titanium oxide (TiO ₂) and a rapid thermal annealing (RTA)	Victor VALLEJO-OTERO • Univ. Jean Monnet - LabHC, France
17:00	Coffee & tea break	
17:30	Growth of Metallic Nanostructures Embedded in Dielectrics for Quantitative Surface-Enhanced Raman Spectroscopy	Emmanuel DE LOS SANTOS VAZQUEZ • Univ. Nantes - IMN, France
17:45	From Chemical Solution Processes to Transparent Nanostructured Thin Films: Oxide Nanocrystals or Octahedral Metal Atom Clusters	Fabien GRASSET • CNRS - ISCR, France
18:00	TiO ₂ and Ti-Cu-O thin films deposited by aa-mocvd for marine antibiofouling applications	Lisa DEBLOCK • CNRS - LMGP, France
18:15	Recrystallization of thin 4H-SiC films deposited by PVD techniques, a way for new emerging fields	Enora VUILLERMET • UTT - L2n, France

19:00 PhD Awards Ceremony **Main amphitheater**

Main amphitheater

Room 13/14

Room 11/12