

C'Nano 2020

The Nanoscience Meeting

TOULOUSE

Centre des congrès Pierre Baudis

POSTPONED



**NEW
DATES**

**November
23, 24, 25
2021**

Tuesday, November 23th

8:00 Registration

9:00 **OPENING SESSION**

Corinne CHANEAC, Director of C'Nano

Constantin VAHLAS, Chief scientific officer of CNRS Institute of chemistry

9:30 **PLENARY SESSION**

Julie GROLIER (CNRS – UMPy Laboratory, France)

10:30 Coffee break

10:50

THEMATIC SESSIONS

Nanophotonics
& nano-optics

Peter WIECHA
CNRS - LAAS, France

Nano: health,
environment & risks

Bernd NOWACK
EMPA - St. Gallen, Switzerland

1D & 2D
Nanomaterials

Hélène BOUCHIAT
CNRS - LPS, France

Nano Gold by
young researchers

Nathalie LIDGI-GUIGUI
Sorbonne Paris Nord
Univ. – LSPM, France

13:00 Lunch & Posters session

13:15- 14:15 *Art & Science Roundtable** Latécoère room

15:00

THEMATIC SESSIONS

Nano for Imaging,
diagnosis and therapy

Multifunctional
nanocomposites

Normand MOUSSEAU
Univ. Montréal - Dpt of Physics,
Canada

Françoise MASSINES
CNRS - PROMES, France

1D & 2D
Nanomaterials

Erik BAKKERS
Eindhoven Univ. of
Technology- Dpt of Applied
Physics, Netherlands

Nano Gold by
young researchers

Didier BOURISSOU
CNRS - LHFA, France

17:10 Coffee break

17:30 **PLENARY SESSION**

Francesca MORESCO (TU Dresden - CFAED, Germany)

18:00 **PRESENTATION BY THE 8 TEAMS OFFICIALLY REGISTERED TO NANOCAR RACE II**

Chairperson: **Christian JOACHIM** (CNRS - CEMES, France)



19:00 **PLENARY SESSION**

Jean-Marc CHOMAZ (CNRS - LadHyX, France)

19:30 **WELCOME COCKTAIL, POSTER SESSION & EXHIBITION**

* special session

Saint-Exupéry
Amphitheater

Spot
room

Cassiopee
room

Saint-Exupéry
foyer

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NEW DATES

**November
23, 24, 25
2021**

Wednesday, November 24th

8:30 **PLENARY SESSION**
Jacqueline **BLOCH** (CNRS, C2N, France)

9:30 **PLENARY SESSION**
Fernand **DORIDOT** (ICAM of Lille – CETS, France)

10:00 **SPONSORS PRESENTATIONS**

10:30 Coffee break

10:50 **THEMATIC SESSIONS**

Nanophotonics & nano-optics Patrice GENEVET CNRS - CRHEA, France	1D & 2D nanomaterials Bernard GIL CNRS - L2C, France	Nanochemistry & nanoparticles Jong-Wook KIM Ecole Polytechnique - LPMC, France	Nanomaterials for Energy David MUNOZ-ROJAS CNRS - LMGP, France	<i>Innovation in nanoscience*</i> <i>Latécoère room</i>
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13:00 Lunch & Posters session

13:15- 14:15 *Art & Science Roundtable** *Latécoère room*

15:00 **PLENARY SESSION**
Suzanne **GIASSON** (Univ. of Montréal - CRMMA & GRUM, Canada)

16:00 **THEMATIC SESSIONS**

Nanophotonics & nano-optics Gérard COLAS-DES-FRANCS Univ. Bourgogne - ICB, France	Multifunctional nanocomposites Milo SHAFFER Imperial College London – Dpt of Chemistry, UK	Nanochemistry & nanoparticles	Nano for Imaging, diagnosis and therapy Carmen Isabel ALVAREZ LORENZO USC – Pharmaceutical Technology, Santiago de Compostela, Spain
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17:00 Coffee break

17:20 **THEMATIC SESSIONS**

Nanophotonics & nano-optics	Multifunctional nanocomposites	Nanochemistry & nanoparticles	Nano for Imaging, diagnosis and therapy
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18:30 **C'NANO & RENATECH PhD AWARDS 2021**

20:30 **GALA DINNER**

* *special session*

Saint-Exupéry Amphitheater

Spot room

Cassiopée room

Saint-Exupéry foyer

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The Nanoscience Meeting

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**NEW
DATES**

**November
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2021**

Thursday, November 25th

9:00

PLENARY SESSION

Teresa PELLEGRINO (ITT – Central Research Labs Genova, Italy)

10:00

Coffee break

10:20

THEMATIC SESSIONS

Nano for Imaging, diagnosis
and therapy

Laurent COGNET
CNRS - LP2N, France

Nanoscale heat transfer
- Measurement

Stefan DILHAIRE
Bordeaux Univ. - LOMA, France

Nanochemistry &
nanoparticles

Gaël DE PAEPE
CEA - CIRIG, France

Nanomaterials for
Energy

Evelyne MARTIN
CNRS - ICube, France

12:30

Lunch & Posters session

14:00

THEMATIC SESSIONS

Nano for Imaging, diagnosis
and therapy

Pierre-Olivier CHAPUIS
CNRS - CETHIL, France

Nanoscale heat transfer
- Measurement

Nanochemistry &
nanoparticles

Nanomaterials for
Energy

15:10

Coffee break

15:30

BEST TALKS & POSTERS & SCIENCES IMAGES AWARDS CEREMONY

16:00

CLOSING SESSION

* special session

Saint-Exupéry
Amphitheater

Spot
room

Cassiopee
room

Saint-Exupéry
foyer

**DISCOVER THE SATELLITE
EVENTS BELOW**



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**SATELLITE
EVENT**

**Workshop
MEMO**

WORKSHOP MEMO

Monday, November 22th & Tuesday, November 23th, 2021

Nanocar Race II – Remote control testing

Remote control connection trial for LT-UHV STM manipulations from CEMES – CNRS Laboratory to the officially registered team's lab.

Location: CEMES – CNRS Laboratory in Toulouse (Saouzelong Subway station)

Tuesday, November 23th, 2021

17:30 – 18:00: Plenary lecture

Francesca MORESCO (TU Dresden - CFAED, Germany), Coordinator of FET OPEN MEMO Project
Presentation entitled "*Mechanics with molecules: motors and gears working under the STM tip*"

18:00 – 19:00: NanoCar Race II official Presentation

Presentation by the 8 teams officially registered to Nanocar Race II (5 to 8 mn each)

Chairperson: Christian JOACHIM (CNRS – CEMES, France)

Location: Pierre Baudis congress center

19:30: MEMO Dinner among nanocar Race II teams

Location: central Toulouse (*location to be determined*)

Wednesday, November 24th & Thursday, November 25th 2021

Conférence on Single molecule mechanics on a surface: gears, motors and cars

Location: Pierre Baudis congress center - Diamant Room



WORKSHOP MEMO

Location: Pierre Baudis congress center - Diamant Room

Wednesday, November 24th

Conférence on Single molecule mechanics on a surface: gears, motors and cars

9:00 - 9:45 - R. Berndt (Kiel) (Invited)

Molecular spin switches and rotors on surfaces

9:45 - 10:15 - K.H. Au-Yeung (TU Dresden)*

Voltage-pulse manipulation of azulene-based single molecules and dimers: the role of the dipole moment

Coffee break

10:45 - 11:15 - W.H Soe (CEMES Toulouse)

Single molecule-gear Mechanics and train on a surface

11:15 - 12:00 - R. Gutierrez. (TU Dresden)

Atomistic Modelling of Nanoscale Molecular and Solid-State Gears

12:00 - 12:45 - L. Grill (Uni Graz)*

How to move single molecules: From the nanocar race to molecular telegraphy

Lunch at Pierre Baudis center

14:00 - 14:30 - Henri Pierre (Strasbourg)*

Trypticene, sub-phthalocyanine and Ir(III) complexes acting as Molecular Wheels

14:30 - 15:00 - Y. Gisbert (CEMES Toulouse)*

Synthesis of organometallic molecular winch prototype

Break

15:30 - 16:00 - F. Lissel (Dresden)*

DMBI - from molecular rotors to nanocars

16:00- 16:30 - E. Masson (Ohio)* *Visio*

Self-assembling molecular Lego: showcasing the Cucurbituril kit

17:00 - Open to one contribution

20:00 - C'Nano dinner at Pierre Baudis center

* *Nanocar Race team*



WORKSHOP MEMO

Location: Pierre Baudis congress center - Diamant Room

Thursday, November 25th

Conférence on Single molecule mechanics on a surface: gears, motors and cars

9:00 - 9:45 - H. Fuchs (Munster) (Invited)

From chemical bonds to molecular assemblers

9:45 - 10:30 - G. Simpson (Uni Graz)*

Controlling the rotation and translation of a single molecule?

10:30 - 11:00 - R. Robles (DIPC San Sebastian)*

Assembly, diffusion and rotation of organic molecules on a gold surface

Break

11:30 - 12:00 - T. Wang (DIPC San Sebastian)*

Synthesis, manipulation and theoretical modeling of corannulene-based molecules on surfaces

12:00 - 12:45 - R. Widmer (EMPA) (Invited)

Atomistic Modelling of Nanoscale Molecular and Solid-State Gears

12:00 - 12:45 - L. Grill (Uni Graz)*

Molecular motor at the frontier of classical motion and quantum tunneling

Lunch at Pierre Baudis center

13:45 - 14:15 - M. Van Hove (Hong Kong Baptist Uni.) *Visio*

Mechanisms of molecular machines

14:15 - 14:45 - X. Lin (Liege)

Probing the motion of a molecular rotor by single-molecule force spectroscopy

Coffee break

15:15 - 15:45 - K. Houtsam (Gröningen) (Invited)

Towards 2D molecular templates on coinage metals and graphene for single molecule mechanics

15:45- 16:30 - S. Hla (Ohio)* *Visio*

Quantum Molecular Machines

16:30 - Workshop conclusions

** Nanocar Race team*

GdR NACRE PLENARY

Location: Pierre Baudis congress center - Diamant Room

Tuesday November 23rd, 2021

13:00 - 15:00: Poster session

This session is specifically dedicated to PhD students and post-doctorants.

15:00 - 19:00: Invited conferences and discussion

15:00 - 15:05 - Fabrice GOURBILLEAU (CNRS - CIMAP, Caen) - From GdR NACRE to GdR Nano-impact

15:05 - 15:30 - Corinne CHAMPEAUX (Univ. Limoges - IRCER, Limoges)

Nanoparticles Source and Nanocomposites Deposition towards Multifunctional Tunable Materials

15:30 - 15:55 - Ignazio ROPPOLO (Politecnico di Torino- Department of Applied Sciences & Technology, Italy)
Functional nanocomposites obtained via light-activated 3D printing

15:55 - 16:20 - Thierry TALIERCIO (Univ. Montpellier - IEM, Montpellier)

Heavily doped semiconductor for bio-sensing and active plasmonics

16:20 - 16:45 - Jérôme LABILLE (CNRS - CEREGE, Aix en Provence)

Anticipate risk at each stage of the life cycle to design a safe-by-design nanomaterials

16:45 - 17:10 - Thierry BARON (CNRS- LTM, Grenoble)

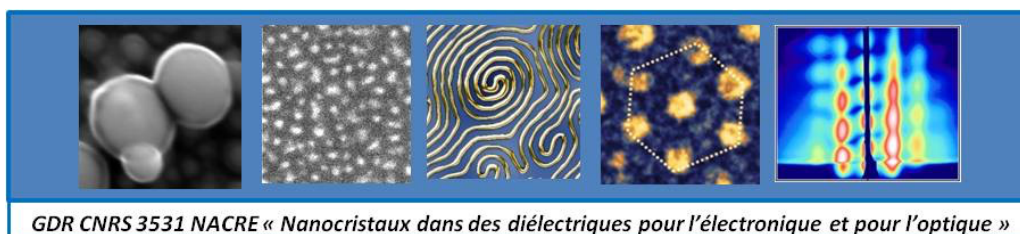
Sustainable approaches in IoT devices NEED for IoT

17:10 - 17:30: Coffee Break

17:30 - 17:55 - Patrick CHASKIEL (Univ. Toulouse Jean Jaurès- CERTOP, Toulouse)

Innovating Risks. Characterization or Standardization of Occupational Risks of Nanomaterials?

18:00 - 19:00 - Open Discussion on the project of new GdR Nano-impact



GdR NANOSCIENCES EN CHAMP PROCHE SOUS ULTRA VIDE

Location: Pierre Baudis congress center - Argos Room

	Tuesday, November 23 rd	Wednesday, November 24 th	Thursday, November 25 th
9:00		Axis 3	Axis 5
9:30		Axis 4	Axis 1
10:00		Axis 5	Axis 2
10:30		Break	
11:00		Axis 1	Axis 3
11:30		Industrial partners session	Axis 4
12:00			Closing session
12:30 - 14:00		Arrival	Lunch
14:00	GdR Presentation	Axe 4	Departure
14:30	Axis 1	Axe 5	
15:00	Axis 2	Axe 1	
15:30	Axis 3	Axis 2	
16:00	Break		
16:30	Axis 4	Axis 3	
17:00	Flash poster presentation	Axis 4	
17:30	Plenary session Francesca MORESCO	CEMES - PicoLab Visit	
18:00	Presentation by the 8 teams of the Nanocar Race II		
18:30			
19:00	Cocktail dinner & posters	Gala dinner*	

Axis 1 - Electronic and vibrational structure of individual nanostructures and nano-objects

Axis 2 - Light-matter interactions at the nanoscale

Axis 3 - Study of local magnetism and of quantum states

Axis 4 - Electronic and electrostatic properties and charge transfer

Transversal axis - Historical concepts and numerical tools

