



# Telluride 2024

July 1-5, 2024 - Biarritz (France)

## PROGRAM

### MONDAY JULY 1<sup>ST</sup>

17:30 – 19:00 Registration and installation in “Domaine de Françon” VTF

19:30 DINER ON SITE

### TUESDAY JULY 2<sup>ND</sup>

08:20-08:30 INTRODUCTION

08:30-09:05 **Cyril Aymonier**

ICMCB, CNRS Bordeaux University, Pessac (France)

*“Synthesis, shaping and recycling of materials in sub- and supercritical fluids”*

09:05-09:40 **David Grosso**

Institut Matériaux Microélectronique Nanosciences de Provence, Toulon (France)

*“Direct NIL patterning of sol-gel based metal oxides etasurfaces with controlled optical properties; applications in optics, photonics, and sensing”*

09:40-10:35 **Nora Ventosa**

Institute of material science of Barcelona (ICMAB) CSIC (Spain)

*“CO<sub>2</sub>-based processing: key enabling technology to bring metal-free nanoparticles from the bench towards the bedside”*

10:15-10:35 COFFEE BREAK

10:35-11:10 **Maria-Letizia De Marco**

IPCMS, Strasbourg University (France)

*“Electrochemical synthesis of shape-controlled multi-metallic nano-particles for energy conversion applications”*

11:10-11:45 **Jaehoon Kim**

Green Energy Material and Process Lab. (GEMP), Sungkyunkwan University (South Korea)

*“Design of nanoparticles for direct CO<sub>2</sub> hydrogenation”*

11:45-12:10 **Nikolaos A. I. Nemet**

Aarhus University (Denmark)

*“Commissioning Custom Built Flow Reactors to Meet the Demands of Advanced Nanomaterial Synthesis”*

12:10-14:00 LUNCH ON SITE

14:00-14:35 **Benjamin Abecassis**

Chemistry laboratory – ENS Lyon (France)

*“Ultrathin Colloidal Nanoplatelets as Soft Matter”*

14:35-15:10	<b>John Watt</b> Los Alamos National Laboratory – Center of Integrated Nanotechnologies (USA) <i>“Controlling and Investigating Materials and their Interfaces with In-situ and Cryogenic Electron Microscopy”</i>
15:10-15:45	<b>Dorota Koziej</b> Universität Hamburg - Nanostructure & solid state physics (Germany) <i>“From nonaqueous synthesis of nanoparticles to photo- and photo-electro-chemically active thin films and 3D-printed aerogels”</i>
15:45-16:20	<b>Brian Korgel</b> McKetta Department of Chemical Engineering, The University of Texas at Austin (USA) <i>“Spanning the Color Gamut from the UV to the Far Infrared with Semiconductor Nanocrystal Quantum Dots”</i>
16:20-16:40	COFFEE BREAK
16:40-17:20	<b>Kirill Kovnir</b> Iowa State University (USA) <i>“Intercalation, Oxidation, and Doping in Hybrid Chalcogenide Materials”</i>
17:20-17h55	<b>Jon G. C Veinot</b> University of Alberta, College of Natural and Applied Sciences - Edmonton (Canada) <i>“Synthesis of high-entropy germanides and an investigation of their formation”</i>
17:55-19:30	FREE TIME
19:30	DINER ON SITE

### WEDNESDAY JULY 3<sup>RD</sup>

08:30-09:05	<b>Tadafumi Adschiri</b> AIMR Tohoku University (Japan) <i>“How to design the nanoparticle synthesis process by supercritical hydrothermal synthesis”</i>
09:05-09:40	<b>Emilie Pouget</b> Laboratory « Chimie et biologie des membranes et des nanoobjets » CBMN, Pessac (France) <i>“Design of functional nanostructures via chirality induction”</i>
09:40-10:35	<b>Magali Putero</b> IM2NP, Aix-Marseille University (France) <i>“Phase change materials: from emerging memories to switchable optics and metasurfaces”</i>
10:15-10:35	COFFEE BREAK
10:35-11:10	<b>Bo Brummerstedt-Iversen</b> AARHUS University (Denmark) <i>“Using in situ X-ray scattering to develop novel solvothermal nanoparticle synthesis routes”</i>
11:10-11:45	<b>Mariana Kober</b> Institute of Materials Science of Barcelona (Spain) <i>“Highly stable and bright fluorescent nanovesicles for biomedical applications”</i>
11:45-12:10	<b>Lars Klemeyer</b> University of Hamburg (Germany) <i>“Watching the emergence of electronic- and atomic structure of colloidal ZnS nanostructures by X-ray spectroscopy and total scattering.”</i>

12:10-14:00	LUNCH ON SITE
14:00-16:30	<b>DEPARTURE BY BUS TO ANGLET BASQUE PELOTA COURT</b> (Discovery and initiation to <a href="#">Basque pelota</a> supervised by 2 Cesta Punta world champions) - Return by bus from 16:00 to Domaine de Françon VTF
17:00-19:30	<b>FREE TIME</b>
20:00	<b>DINER IN A TRADITIONAL BASQUE RESTAURANT IN BIARRITZ</b> ("Bar Jean") Return by bus at 22:30

THURSDAY JULY 4 <sup>TH</sup>	
08:30-09:05	<b>Jim Watkins</b> University of Massachusetts Amherst - Department of Polymer Science and Engineering (USA) <b><i>"Additive Approaches to High Performance Metaoptics and Energy Devices"</i></b>
09:05-09:40	<b>Cyrille Hamon</b> Laboratoire de Physique des Solides, Orsay (France) <b><i>"Assembly of plasmonic nanoparticles into supercrystals with unusual symmetries"</i></b>
09:40-10:35	<b>Naomi S. Ginsberg</b> University of California, Berkeley (USA) <b><i>"Following and controlling formation and function of bottom-up assembled nanomaterials"</i></b>
10:15-10:35	COFFEE BREAK
10:35-11:10	<b>Alexis Bordet</b> Max Planck Institute MPI CEC (Germany) Title: <b><i>"Transition Metal Phosphide Nanoparticles: Low-Temperature Synthesis, Characterization, and Application in Catalysis"</i></b>
11:10-11:45	<b>Cara Doherty</b> CSIRO Materials Science & Engineering (Australia) Title: <b><i>"Fabrication of Metal-Organic Framework Based Sensors and Energy Devices"</i></b>
11:45-12:10	<b>Cecilia Zito</b> University of Hamburg – Center for Hybrid Nanostructures (Germany) <b><i>"Combining in situ X-ray methods to study the formation of nanoparticles in solution"</i></b>
12:10-14:00	LUNCH ON SITE
14:00-14:35	<b>Lise-Marie Lacroix</b> LPCNO - UPS - Institut Universitaire de France (France) <b><i>"From the organometallic synthesis of nanoparticles to integrated magnets"</i></b>
14:35-15:10	<b>Akira Yoko</b> WPI-AIMR Tohoku University - T. Adschiri Laboratory (Japan) <b><i>"Extraordinary Atomic Distortion in Ultrasmall Metal Oxide Nanoparticles: Advances in continuous flow hydrothermal synthesis"</i></b>
15:10-15:45	<b>Dale Huber</b> CINT, Sandia National Laboratories (USA) <b><i>"Precisely Controlling Nanoparticle Syntheses: From Molten Metal Baths to Microfluidics and Artificial Intelligence"</i></b>
15:45-16:20	<b>Lucian Roiban</b> MatéIS Laboratory, INSA Lyon (France) <b><i>"2D and 3D Environmental Electron Microscopy in Gas, Liquid and Temperature"</i></b>

16:20-16:40	COFFEE BREAK
16:40-17:20	<b>David Portehault</b> Laboratory of Condensed Matter of Paris (LCMCP), Sorbonne University, Paris (France) <b><i>"Reaction mechanisms in molten salts for the design of solid-state materials at the nanoscale"</i></b>
17:20-17h55	<b>Gilles Philippot</b> ICMCB, Bordeaux University (France) <b><i>"Mastering ZrO2 nanocrystals polymorphism using an original continuous flow supercritical sol-gel like synthesis."</i></b>
17:55-18:30	<b>Jiye Fang</b> Materials Science and Engineering Program (MSE), State University of New York at Binghamton (USA) <b><i>"Synthesis of Platinum-Based Nano-Octahedra and Their Electrocatalytic Performance in Oxygen Reduction"</i></b>
18:30-19:30	FREE TIME
19:30	DINER ON SITE

FRIDAY JULY 5 <sup>TH</sup>	
08:30-09:05	<b>Richard Tilley</b> UNSW Sydney (Australia) <b><i>"Nanoparticles and Electron Microscopy"</i></b>
09:05-09:40	<b>Lucy Gloag</b> Australian National University (Australia) <b><i>"Hierarchical nanostructures for high performance electrocatalysis"</i></b>
09:40-10:35	<b>Eric Hill</b> University of Hamburg (Germany) <b><i>"Optically-directed approaches to colloidal assembly at interfaces"</i></b>
10:15-10:35	COFFEE BREAK
10:35-11:10	<b>Wiktor Lewandoski</b> Warszawski University - Laboratory of organic nanomaterials and biomolecules (Poland) <b><i>"Engineering Chirality in Nanomaterials Using Liquid-Crystal"</i></b>
11:10-11:45	<b>Marius V. B. Brix</b> Aarhus University (Denmark) <b><i>"Utilizing Supercritical Flow Reactors for Studying the Physical Properties of Advanced Nanomaterials"</i></b>
11:45-12:10	<b>Glenna L. Drisko</b> ICMCB, CNRS Bordeaux University (France) <b><i>"From the redox synthesis of silicon particles to the formation of optically resonant core-shell particles"</i></b>
12:10-14:00	LUNCH ON SITE AND DEPARTURE