



C'Nano 2017

The Nanoscience Meeting

5, 6 et 7 décembre 2017
INSA - Lyon



Presentation - Keynote Speakers

- Workshop Nanosciences for a sustainable world

Deborah Jones (ICGM – Montpellier, France)

Deborah Jones graduated from the King's College London where she obtained her PhD in Chemistry. She is now Director of Research at CNRS and Director of the CNRS Research Federation that assembles the Chemistry Institutes in the Languedoc-Roussillon region of France. She is also Associate Director of the Institute for Molecular Chemistry and Materials at Montpellier University. She has been working in the field of the development of membrane materials for proton exchange in fuel cells since the mid 1990's. She has been closely involved in research on fuel cell materials at European level for several years. Deborah Jones is Fellow of the Electrochemical Society (2015) and the recipient (2016) of the Sir William Grove award of the International Association for Hydrogen Energy.

Patrick Chaskiel (CERTOP Laboratory - Paul Sabatier University – Toulouse, France)

Patrick Chaskiel is Professor at the Paul Sabatier University (Toulouse, France). He teaches Communication Science since 1994. He is member of the Certop laboratory (Centre d'Etude et de Recherche Travail, Organisation, Pouvoir), jointly operated by the CNRS, Université Toulouse Jean Jaures and Université Paul Sabatier-Toulouse 3. His research topic is the technological risk, which he claims it must be treated as a communication issue. Since he is the responsible of the social aspects of the NanoInnov program in 2009, he has developed many research projects related to nanotechnologies. To this aim, he collaborates with various scientists (physics, chemistry or biology) on nano-applications. He considers nanotechnologies offer a new opportunity to enable inter-scientific cooperation as well as relations with civil society organizations, especially NGOs.

Kevin Sivula (Institute of Chemical Sciences and Engineering – Federal Polytechnic School of Lausanne, Suisse)

Professor Kevin Sivula studied at the University of Minnesota, where he obtained a Bachelor's degree in Chemical Engineering. He continued his studies in Chemical Engineering at the University of California (Berkeley), where he joined the research group of Prof. Jean Fréchet. During his thesis research he worked to develop strategies to control the morphology of conjugated polymer-based photovoltaic devices and gained his doctorate in 2007. Then he joined the Laboratory of Photonics and Interfaces (LPI, led by Professor Michael Grätzel) at the EPFL where he developed nanostructured films with iron oxide for hydrogen production using solar energy. He was promoted to research group leader in LPI in 2008 and in 2011 he accepted an appointment as tenure-track assistant professor at EPFL in the Institute of Chemical Science and Engineering. Currently he leads The Laboratory for Molecular Engineering of Optoelectronic Nanomaterials (LIMNO) and teaches courses on Transport Phenomena, Chemical Engineering Practicals, Product design, and solar energy conversion systems.

- **Workshop Nanophotonics**

Jérôme Wenger (Institut Fresnel – Marseille, France)

Dr. Jérôme Wenger graduated from the Paris Sud University where he obtained a PhD in Optics and Quantum Cryptography. Nowadays he works on Nanophotonics and Biophotonics at the Fresnel Institute (Marseille, France). He developed a project about designing and realizing plasmonic nano-antennas to exalt the fluorescence signal of biomolecules of interest. He also invented a device for the confinement of light by dielectric microspheres. He was awarded the Fabry de Gramont Prize delivered by the French Optical Society in 2015 and the Edouard Branly Prize by the Federation of French Scientific Societies in 2011.

Christian Seassal (Lyon Institute of Nanotechnology – Lyon, France)

Christian Seassal is Senior Researcher at the French CNRS, and Deputy Director of the Lyon Institute of Nanotechnology (INL). He graduated from INSA de Lyon (1993) and received his PhD from École Centrale de Lyon in 1997. His research activities concern photonic nanostructures and their applications for integrated photonics and solar photovoltaics. He has authored and co-authored about 110 research papers in international journals, and of over 50 invited conferences. He is member of the Optical Society (OSA), the Institute of Electrical and Electronics Engineers (IEEE) and the Materials Research Society (MRS). He is deputy editor of the OSA Optics Express Journal, and editor of its supplement Energy Express. He received the French CNRS bronze medal in 2002.

Christian Schneider (University of Würzburg - Germany)

- **Workshop Nanomaterials**

Elsje Alessandra Quadrelli (C2P2 – Lyon, France)

Dr. Elsje Alessandra Quadrelli did her undergraduate studies in Italy and then graduated in organometallic chemistry from the University of Maryland (USA), working on the Interaction of Cyclopentadienyl Derivatives of Mo(II) with electrophilic Reagents. She then worked on the chemistry of carbonylic clusters and on gold-lanthanides carbamic complexes synthesis, at the University of Cambridge and the University of Pisa, respectively. She currently works as a CNRS researcher at the C2P2 laboratory (Lyon - Villeurbanne) and addresses various scientific questions such as Silsesquioxanes and POSS based models for silica-supported species, N₂ splitting by surface metal hydrides, MOF modification by surface organometallic chemistry or 2D support modification.

Marie-Laure Bocquet (ENS – Paris, France)

Dr. Marie-Laure Bocquet studied Chemistry at the ENS Lyon between 1989 and 1993 and defended her PhD in 1996 on theoretical simulations of Scanning Probe Microscope (STM) images, supervised by Pr. Philippe Sautet. She entered the CNRS in 1997 as a senior researcher and has been promoted in 2011 as a research director. At the beginning of her career, she described complex reaction pathways on in-situ catalysts in collaboration with Angelos Michaelides (Cambridge, London) by means of ab initio methods. She has been developing a simulation project on inelastic spectroscopies related to STM in collaboration with Nicolas Lorente (Barcelone), aiming at reaching the chemical resolution. Since 2007, she has moved to the theoretical study of complex overlayers on surfaces like graphene monolayer grown on metallic surfaces in close collaboration with the STM group of Joost Winterlin in Munich. Such « metal route » is the alternative promising way of producing large-scale defect-free graphene sheet with respect to the genuine exfoliation method, called « scotch-tape » by the Nobel 2010 winners.

Alessandro Coati (Synchrotron SOLEIL – Gif-sur-Yvette, France)

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Dr. Alessandro Coati graduated from the University of Catalonia where he obtained a PhD in Material Science. He then worked as a post-doctoral fellow at LURE Synchrotron and is now a scientist at Synchrotron SOLEIL where he is in charge of the Surfaces and Interfaces X-ray Scattering (SixS) beamline, dedicated to the study of surfaces, interfaces and nano-objects by grazing incidence X-ray diffraction and small angle scattering and X ray reflectivity.

- Workshop Life Nanosciences and NanoBiotechnology

Ebbe Sloth Andersen (Aarhus University – Denmark)

After Molecular Biology and Genetics studies, Dr. Ebbe Sloth Andersen obtained his PhD in Nanotechnology from Aarhus University (Denmark). He then conducted a postdoc at the Center for DNA nanotechnology, before opening his own research group at the Interdisciplinary Nanoscience Center of Aarhus University, where he is currently Associate Professor. His work focuses on the design and analysis of nucleic acid origami structures. In 2014, he published with Cody Geary and Paul Wilhelm Karl Rothmund (Caltech) an article named: “RNA nanostructures. A single-stranded architecture for cotranscriptional folding of RNA nanostructures”.

François Treussart (Aimé Cotton Laboratory / ENS Cachan, France)

Dr. François Treussart is Professor at ENS Cachan and principal investigator at the Aimé Cotton Laboratory. His research team addresses various questions in neurocognition mechanisms and disorders using a combination of advanced optical microscopies, fluorescent and magnetically active diamond nanoparticles (nanodiamond), genetically encoded probes and transgenic animal models (drosophila and mouse). He is also involved in application of the nanodiamond as a delivery agent of therapeutics in cancer cell culture, and small animals