PROGRAM SUMMARY

Sunday, October 14

- Registration
- Social Event : NICE City and Museum Tour

Location :
Negresco Hotel
37 Promenade des Anglais - 06000 Nice

Monday, October 15

- Welcome Remarks/Opening Ceremony
- Plenary session
- Conference session
- Poster session

Location :
Negresco Hotel
37 Promenade des Anglais - 06000 Nice

Tuesday, October 16

- Plenary session
- Conference session
- Workshops
- Social Event : Conference Gala Dinner

Location :
Negresco Hotel
37 Promenade des Anglais - 06000 Nice

Wednesday, October 17

- Plenary session
- Conference session
- Closing and Award Ceremony

Location :
Negresco Hotel
37 Promenade des Anglais - 06000 Nice

CONFERENCE PROGRAM

Sunday, October 14

Opening registration: 13:00 – 18:00

Social Event – Nice City and Museum Tour: 13:00-18:00

CONFERENCE PROGRAM

Monday, October 15

8:00 – 8:45: **Welcome Remarks and Opening Ceremony (Salon Royal)**

Plenary Lectures (Salon Royal):

Session Chair: Frédéric GUITTARD

8:45 – 9:30 : **Xiang ZHANG –** *Soft metamaterials: Self-gauged assembly, non-equilibrium matters, and 3D super-resolution imaging* **(PL01)**

Abstract:

Metamaterials are artificial composite structures that lead to many exciting applications beyond nature such as imaging objects below the diffraction limit, optical clocking, sensing and communications. Traditional metamaterials are considered as "hard" materials that structural units cannot be tailored after their formation which limits their material responses and applications. It remains a critical and unsolved problem to design "soft metamaterials" that can spontaneously self-adapt to changes in the source wavelength or the environment.

We explore "soft metamaterials" with building blocks that have a strong propensity for self-assembly/re-assembly. In this regards, the structure units can be artificially evolving during the formation of soft metamaterials. Particularly, we explore the self-feedback mechanism between structures and properties for self-selective assembly of complex metamaterial nanoarchitectures with tailored symmetries. We expand structural design using soft metamaterial approach to achieve isotropic negative index metamaterials and Brownian optical imaging. We also explore approach for realizing bandgap materials that reside far from equilibrium and emerge enslaved to an external drive. Experimental results are providing supports as well as new insights into such new type of soft metamaterials that facilitate self-responsive material applications.

9:30 – 10:15 : **Josep SAMITIER –** *Mimicking spleen organ in vitro* **(PL02)**

Abstract:

The spleen is a secondary lymphoid organ specialized in the filtration of senescent, damaged, or infected red blood cells, facilitating the recognition and posterior destruction of unhealthy Red Blood Cells by specialized macrophages.

Through a complex organizational architecture, the spleen is perfectly adapted to selectively filter and eliminate senescent Red Blood Cells as well as blood-borne infectious organisms. Such complex architecture includes the splenic white pulp, red

pulp, and the marginal zone. The filtering capacity of the spleen is inherently linked to the complex vasculature of the organ, controlling events such as blood passage through the reticular meshwork of the red pulp; entry into the marginal sinuses or the marginal zone; drainage through perimarginal cavernous sinuses or capillary branches; or entry into the white pulp.

With the aim of studying RBCs filtration in the spleen, here it is presented a multilayered microengineered device of the human splenon-on-a-chip. With this device, engineered to mimic the splenic closed-fast and open-slow microcirculations, the reticular meshwork and the Interendothelial slits filtering capacity, hopefully it would be possible to advance in the knowledge of the spleen's function in malaria and other haematological disorders.

Moreover, another goal is to demonstrate the practicality of the platform for both structure-function studies. Some 3D culture models fail to reconstitute features of living organs that are crucial for their function, such as blood–tissue interfaces. In this regard, the proposed system takes advantage of co-flow phenomena, in order to properly coat and culture the different sections of the device, when needed, with splenic human cells.

To complete the system, it is introduced an autonomous closed-loop pumping machinery, connected to the splenon-on-a-chip to simulate human blood flowing with physiological conditions.

Coffee Break: 10:15 – 10:30

Exhibitor Set-up (Salon Royal): 12:30 - 14:30

Poster Set-up (Salon Royal): 12:30 - 14:30

Coffee Break: 16:00 - 16:15

Poster Session (Salon Royal): 16:00 - 18:00

Monday, October 15

BIOTECH SESSION

	BIOTECH 1 – Masséna Room Session Chair: Thomas Scheibel
10:30	**Thomas Scheibel** Biofabrication with bioinks made of rekombinant spider silk **BIOTECH-KN06**
10:55	**Emmanuel Belamie** Biosourced polysaccharide nanocrystals to template hybrid materials **BIOTECH-KN10**
11:20	**Alyssa Panitch** Development of a Glycocalyx Mimetic **BIOTECH-KN05**
11:45	**Aad Lansbergen** Renewable alkyds based on Citraconic anhydride Diels Alder adducts **BIOTECH-OR17**
12:00	**Giulia Scoponi** Tuning the properties of poly(lactic acid)-based biomaterials by green blending of linear PLLA and star-shaped PDLLA **BIOTECH-OR32**
12:15	**Samira Benali** Processable and fully biodegradable Poly(ε-caprolactone)/Laccase materials for food packaging application **BIOTECH-OR04**
12:30	**Guillaume Riviere** Structure-Property Relationship for Fabricating Colloidal Lignin Particles from Various Sources for Biomedical Applications **BIOTECH-OR23**
12:45	**Lunch Break** (poster set-up for presenters in Salon Royal)
14:30	

	BIOTECH 2 – Masséna Room Session Chair: Dean Webster
14:30	**Dean Webster** Thermosets from Highly Functionalized Bio-Based Resins **BIOTECH-KN09**
14:55	**Acerina Trejo-Machin** Synthesis of fully bio-based polybenzoxazine resins by solvent-free method **BIOTECH-OR37**
15:10	**Jozef Kollár** Betaine-based materials – preparation and their tunable properties **BIOTECH-OR30**
15:25	**Claudio Gioia** Tunable Thermosetting Epoxies Based on Fractionated and Well Characterized Lignins **BIOTECH-OR11**
15:40	Free Time
16:00 **16:15**	**Coffee break** **Salon Royal room**
16:00	**Poster session** **Salon Royal room**

	BIOTECH 3 – Masséna Room Session Chair: Nathaniel S. Hwang
18:00	**Mikhael Bechelany** Engineering of bionanomaterials and biointerfaces: design, properties and applications **BIOTECH-KN08**
18:25	**Nathaniel S. Hwang** Bioinspired Inorganic Nanoparticles for Bone Remodeling Control **BIOTECH-KN13**
18:50	**Sanghoon Kim** Sustainable polysaccharide-derived mesoporous carbons (Starbon®) as additives for negative electrodes of lithium-ion batteries **BIOTECH-OR14**
19:05	**Giuseppina Luciani** Ceramic templated melanin nanostructures: a biomimetic synthesis approach to bio-functional hybrid materials **BIOTECH-OR22**
19:20	**Naresh D. Sanandiya** 3D bioprinting of stimuli-responsive cell-laden cellulosic hydrogel **BIOTECH-OR40**
19:35	

NANOTECH SESSION

	NANOTECH 1 – Baie des Anges A Room Session Chair – Federica Lo Verso
10:30	**Federica Lo Verso** Computational Investigation of Microgels: Effect of the Microstructure on the Deswelling Behavior **NANOTECH-KN12**
10:55	**Solene Fleutot** Versatile capped superparamagnetic iron oxide nanoparticles **NANOTECH-OR10**
11:10	**Sara Kawrani** Studying $CaCu_3Ti_4O_{12}$ behavior after adding the boron nitride nanosheets **NANOTECH-OR18**
11:25	**Radek Bombera** Characterisation of functional layers and biomolecular interactions using Multi-Parametric Surface Plasmon Resonance (MP-SPR) **NANOTECH-OR32**
11:40	**Lunch Break** (poster set-up for presenters in Salon Royal)

	NANOTECH 2 – Baie des Anges A Room Session Chair: Caroline Szczepanski
14:30	**Thierry Darmanin** Homogeneous and templateless growth of conducting polymer nanotubes with special wetting properties **NANOTECH-KN05**
14:55	**Caroline Szczepanski** Design of biomimetic polymer interfaces: using photopolymerization techniques to simultaneously control surface chemistry and topography **NANOTECH-KN19**
15:20	**Eui-Sung Yoon** Correlation studies of nanoscale adhesion and friction using mushroom-shaped and cylindrical pillar patterns of varying physico-chemical characteristics **NANOTECH-OR22**
15:35	**Jérôme Fresnais** Making superhydrophobic surfaces with magnetic elastomer: towards controlled droplet movement **NANOTECH-OR03**
15:50	**Jimmy Faivre** Towards the Fabrication of a Bioinspired Fluid for Biotriblogical Applications **NANOTECH-OR02**

16:05 **16:15**	**Coffee Break** **Salon Royal Room**
16:00	**Poster Session** **Salon Royal Room**
	NANOTECH 3 – Baie des Anges A Room **Session Chair: Christoph Neinhuis**
18:00	**Christoph Neinhuis** Plant Biomimetics - From basic principles to applications **NANOTECH-KN08**
18:25	**Yongmei Zheng** Bioinspired surfaces with wettability from design to functions **NANOTECH-KN23**
18:50	**Xuan Chen** Effect of Air Contamination on The Wettability of Mono and Few-layered InSe Films **NANOTECH-OR06**
19:05	

SMARTTECH SESSION

	SMARTTECH 1 – Versailles Room Session Chair: Atsushi Hozumi
10:30	**Atsushi Hozumi** Bio-inspired Surfaces Showing Reversible/Repeatable Thermo-responsive Anti-icing/Snow Properties **SMARTTECH-KN07**
10:55	**Dominique Hourdet** Sol-Gel transitions of modified polysaccharides under temperature and salt control **SMARTTECH-KN06**
11:20	**Masayoshi Higuchi** Metallo-Supramolecular Polymer: Stimuli-Responsive Properties and Smart Window Device Application **SMARTTECH-OR10**
11:35	**Julien Dupré de Baubigny** Redox triggered peel-off of antifouling polymer layers for on demand activation of surface patterns. **SMARTTECH-OR07**
11:50	**Emmanuelle Marie** Mixed AD Layers of Poly(Lysine)-Based Copolymers to Dynamically Control Cell Adhesion/Migration **SMARTTECH-OR17**
12:05	**Dasom Jeon** Tailored Assembly of Biomimetic Nacre-like Catalytic Multilayers for Artificial Photosynthesis **SMARTTECH-OR24**
12:20	**Lunch Break** (poster set-up for presenters in Salon Royal)

	SMARTTECH 2 – Versailles Room Session Chair: Dominique Hourdet
14:30	**Sophie Groult** Pectin aerogels: structure-properties correlations and use for drug controlled-release **SMARTTECH-OR22**
14:45	**Albane Birault** pH-Responsive Mesoporous Silica Nanoparticles for Combination Cancer Therapy **SMARTTECH-OR12**
15:00	**Mihai Lomora** Mussel-bioinspired polydopamine coated coccoliths as novel therapeutic carriers **SMARTTECH-OR16**
15:15	**Eda Cagli** Antibiotic Releasing Multilayers of Poly(2-isopropyl 2-oxazoline) and Tannic Acid **SMARTTECH-OR04**

15:30 16:00	**Free Time**
16:15	**Coffee break** **“Salon Royal” room**
16:00	**Poster Session** **"Salon Royal" room**

	SMARTTECH 3 – Versailles Room **Session Chair: Nathalie Steunou**
18:00	**Nathalie Steunou** Design of Hybrid Materials based on Metal Organic Frameworks for bioimaging and biodetection applications **SMARTTECH-KN08**
18:25	**Remi Merindol** Combining DNA phase transition and hybridization to form all-DNA colloids and superstructures **SMARTTECH-OR27**
18:40	**Aude Falcimaigne-Cordin** New delivery system for crop protection based on biosourced molecularly imprinted polymers **SMARTTECH-OR18**
18:55	**Habib Belaid** Development of a 3D printed scaffold allowing multiple drug delivery for the treatment of bone metastasis in breast cancers **SMARTTECH-OR01**
19:10	

HUGS SESSION

	HUGS 1 – Baie des Anges B Room Session Chair: Nathanaël Guigo
10:30	**Symposium on Biomass Valorization: Catalysis, New Materials, and Applications** **Welcome Remarks – Nathanaël Guigo (Chair)**
10:35	**Amar Mohanty** Going Green: Circular Economy in Exploring Innovation of Biobased Materials **HUGS-KN08**
11:00	**Rajender Varma** Biomass Bounty: Carbonaceous Magnetic Materials in Sustainable Chemical Transformations **HUGS-KN12**
11:25	**Anupama Sharma** Comprehensive Utilization of various Lignocellulosic biomass as a sustainable precursor for high performance materials **HUGS-KN13**
11:50	**Layla Filiciotto** Catalytic approaches for biorefinery's waste valorization: The humins challenge **HUGS-OR07**
12:05	**Daniele Padovan** Preventing the deactivation of Sn-containing zeolites during continuous biomass processing **HUGS-OR09**
12:20	**Shi Jiang** Unveiling the role of choline chloride on furfural synthesis from a highly concentrated xylose **HUGS-OR12**
12:35	**Robin White** Is Doping Performance Enhancing? Hydrothermal Carbons in Catalyst Development. **HUGS-OR24**
12:50	**Lunch Break** (poster set-up for presenters in Salon Royal)

	HUGS 2 – Baie des Anges B Room Session Chair: Katalin Barta
14:30	**Katalin Barta** Cleave and Couple: Catalytic Pathways to Value Added Products from Renewables **HUGS-KN02**

14:55	**Christophe M. Thomas** Polymerization of Heterocycles using Organometallic Complexes: A Simple Approach to Sequence Control in Polymer Synthesis **HUGS-KN10**
15:20	**Fatima El Ouahabi** Caprolactam precursors from biomass-derived levulinic acid **HUGS-OR06**
15:35	**François Jérôme** Selective conversion of concentrated feeds of furfuryl alcohol to alkyl levulinates catalyzed by metal triflates **HUGS-OR11**
15:50	**Sergey Tin** Synthesis of HHD and HHD-derived chemicals from HMF **HUGS-OR21**
16:05 16:15	**Coffee break** **Salon Royal Room**
16:00	**Poster Session** **Salon Royal Room**

	HUGS 3 – Baie des Anges B Room **Session Chair: Marc Dubois**
18:00	**Marc Dubois** From hydrophilic to hydrophobic wood using direct fluorination **HUGS-KN05**
18:25	**Yury Shchipunov** Cellulose Functionalization through its Mineralization **HUGS-KN09**
18:50	**Feng Chen** From Cellulose Fibers Dissolution and Swelling toward Manufacturing All Cellulose Composites **HUGS-OR03**
19:05	**Eero Kontturi** Solid State Assembly of Cellulose Nanocrystals in the Template of a Fiber Cell Wall **HUGS-OR14**
19:20	**Lifeng Yan** Fluorescent/Transparent Wood based Composite Materials **HUGS-OR25**
19:35	

ENERGY SESSION

	ENERGY 1 – Nations Room Session Chair: Valentine Vullev
10:30	**Symposium on Bioinspired Chemistry and Materials for Sustainable Energy** **Welcome Remarks – Valentine Vullev (Chair)**
10:35	**Ksenija Glusac** Metal-free Electro- and Photocatalysis **ENERGY-KN08**
11:00	**Dorota Gryko** Bioinspired catalysis with porphyrinoids **ENERGY-KN09**
11:25	**Gary F. Moore** Nature Inspired Surface Coatings for Applications in Photoelectrosynthesis **ENERGY-KN12**
11:50	**Jungki Ryu** Enabling Solar-Fuel Production with Biomimetic Architectures **ENERGY-OR07**
12:05	**Thierry Tron** Photocatalytic O_2 Reduction at a Laccase **ENERGY-OR08**
12:20	**Lunch Break** (poster set-up for presenters in Salon Royal)

	ENERGY 2 – Nations Room Session Chair: Oleg Poluektov
14:30	**Maria Abrahamsson** Solar Energy Conversion Materials: Charge and Energy Transfer Approaches to High(er) Efficiencies **ENERGY-KN01**
14:55	**Tao Deng** Bioinspired Solar Thermal Conversion at Interface and in Bulk **ENERGY-KN06**
15:20	**Oleg Poluektov** Bioinspired Systems for Solar Fuel Production: Advanced EPR/DFT Biohybrid Characterization **ENERGY-KN13**
15:45	**Lin Wang** Cross-Species Inspired Patterned Slippery Surfaces for Fog Harvesting **ENERGY-OR10**
16:00 16:15	**Coffee break** **Salon Royal room**
16:00	**Poster Session** **Salon Royal room**

	ENERGY 3 – Nations Room Session Chair: Frank Quina
18:00	**Angel Martí** Light-Driven Processes in Nanomaterials of Multiple Dimensions **ENERGY-KN11**
18:25	**Frank Quina** Nature-Inspired Fruit and Flower Chromophores for Collection and Dissipation of the Energy of Absorbed Light **ENERGY-KN14**
18:50	

2D3D SESSION

	2D3D 1 – Louis XVI Room Session Chair: Anne Gaucher
10:30	**Symposium on Bioinspired 2D and 3D Molecular and Hybrid Architecture** **Welcome Remarks – Anne Gaucher (Chair)**
10:35	**Carole Perry** Experimental and Computational Studies of (Nano)particle-biotic interfaces **2D3D-KN07**
11:00	**Carole Chaix** Stimuli-responsive DNA structures grafted on biosensing surfaces **2D3D-KN01**
11:25	**Maya Abdallah** Controlling the Stiffness and Porosity of Polyacrylamide Hydrogel Matrices and Evaluating their Effect on Podocyte-Behavior **2D3D-OR01**
11:40	**Eduardo Anaya-Plaza** Electrostatic protein-phthalocyanine assemblies towards biohybrid photoactive materials **2D3D-OR02**
11:55	**Lunch Break** (poster set-up for presenters in Salon Royal)
14:30	

PLASMAT SESSION

	PLASMAT 1 – Louis XVI Room Session Chair: Hernando S. Salapare III
14:30	**Symposium on Plasma and Laser Processing of Bioinspired and Biobased Materials (PLASMAT 2018)** **Welcome Remarks – Hernando S. Salapare III (Chair)**
14:35	**Anne-Marie Kietzig** Engineering nature-inspired surfaces by femtosecond laser micromachining **PLASMAT-KN01**
15:00	**Kesong Liu** Bio-Inspired Superwetting Materials **PLASMAT-KN02**
15:25	**Po-Yu Chen** Synthesis of Transparent, Omniphobic, Self-cleaning Surfaces by Silanization and Atmospheric Plasma-assisted Metal-oxide Coatings Inspired from Lotus Leaves **PLASMAT-OR01**
15:40	**Sameer F. Hamad** Low Voltage-SEM insights into Nanoscale Surface Modification of Ramie Plant Fibers by Plasma Treatment **PLASMAT-OR02**
15:45	**Free Time**
16:00 16:15	**Coffee break** **Salon Royal Room**
16:00	**Poster Session** **Salon Royal Room**

3D SESSION

	3D 1 – Louis XVI Room Session Chair: Ralph Nuzzo
18:00	**Symposium on 3D Printing of Bioinspired Materials** **Welcome Remarks – Arnaud Zenerino (Chair)**
18:05	**Ralph Nuzzo** Printing 4D Gradient Hydrogel Scaffolds for Programmable Cellular Dynamics and Patterned Biogenic Mineralization **3D-KN01**
18:30	**Angelo Accardo** 3D hydrogel neuronal microenvironments fabricated by two-photon lithography **3D-OR01**
18:45	**Leonid Ionov** 4D Biofabrication by Shape-Morphing Polymers **3D-OR02**
19:00	

CONFERENCE PROGRAM

Tuesday, October 16

Coffee Break and Group Photo: 9:15 – 9:30

Plenary Lecture (Masséna Room)

Session Chair: Felix N. Castellano

9:30 – 10:15 : **Valentine VULLEV –** *From Biomimetics to Biological Inspiration: Path to Discovery Beyond What Nature Offers* **(PL03)**

Abstract

Life on Earth offers an amazing diversity of paradigms and lessons that have withstood the test of time for 3.8 billion years of evolution. Biomimetic and bioinspired approaches, therefore, are profoundly important for advancing science and engineering [1]. While the terms “biomimetic” and “bioinspired” appear interchangeable, they carry different denotations and truly different connotations, and as such, their implications for science and engineering also differ. ***Biomimicry*** involves sheer imitation of biological systems where resemblance of structural feature does not necessarily ensure attainment of functionality [1,2]. ***Biomimesis*** takes the process of mimicking biology to the next level. In addition to perfecting the structural imitations, biomimesis also aims at attaining functionalities comparable to those of the natural systems [1,2]. ***Bioinspiraton*** goes beyond what nature offers, by taking concepts found in biology and employing them in manners optimal for the targeted applications without necessarily resembling the living systems [1,2]. As such, biomimetics (encompassing biomimicry and biomimesis) takes the first steps toward taking lessons from Nature. Mimicking Nature with the aim to attain functionality based on structural resemblance of biology is invaluable for testing our knowledge of how living systems work [1]. Biomimentics, therefore, proves crucial for basic science. Conversely, bioinspiration provides paths for taking biomimetic advances to applied science and engineering. Bioinspiration can also reveal the emergence of new properties leading to unprecedented scientific discoveries. The development of charge-transfer (CT) molecular electrets illustrates perfectly the evolution from biomimicry, through biomimesis, to bioinspiration [1]. (Electrets are systems with ordered electric dipoles, i.e., they are the electrostatic analogues of magnets.) Electric dipoles are everywhere, and the importance of understanding how they affect chemical, physical and biological processes cannot be overstated. CT is essential for sustaining life and for making energy conversion possible. Molecular dipoles present important, but underutilized, paradigms for guiding CT processes. Protein helices are the best-known molecular electrets with immensely large macrodipoles. Using synthetic biomimetic polypeptide helices to guide long-range electron transfer (ET)

has proven the feasibility of the idea for using molecular dipoles for guiding CT. Polypeptides, however, mediate ET via tunneling with limited efficiency to about 2 nm, rendering such biological and biomimetic helices impractical for electronic applications. Therefore, we develop bioinspired molecular electrets that like the protein helices possess enormous macrodipoles, but unlike the biological and biomimetic polypeptides, the bioinspired electrets can efficiently mediate long-range CT via electron or hole hopping [3-6]. In addition to their promise for electronic applications, the bioinspired molecular electrets reveal the emergence of new properties, such as the synergy between electronic-coupling and the Franck-Condon contribution to ET kinetics [4]. The bioinspired electrets provide the first evidence that molecular dipoles can profoundly affect the donor-acceptor electronic coupling and the ET rates. These discoveries illustrate how the evolution from biomimetics to biological inspiration can profoundly impact science and engineering.

Coffee Break: 14:45 – 15:00

Workshops :

15:00 – 17:45 : **Interactive Session on Wetting** – Abraham Marmur

16:05 – 17:45 : **HUGS - Industrial Sustainable Development –** Nathanaël Guigo

Social Event :

20:00 – 23:00 : **Conference Gala Dinner** (Salon Royal Room)

Tuesday, October 16

BIOTECH SESSION

	BIOTECH 4 – Masséna Room Session Chair: Soon Hyung Hong
08:00	**Jean-Marie Nedelec** Cationic substitutions in calcium phosphate bioceramics: toward mimicking natural bone and beyond **BIOTECH-KN04**
08:25	**Soon Hyung Hong** Bioinspired BNNS/Gelatin Nanocomposite with Nacre-mimetic Structure for Bone Substitute Application **BIOTECH-KN12**
08:50	**Franck Cleymand** New free standing "green" biomembranes for tissue engineering **BIOTECH-OR31**
09:05	**Free Time**
09:15 09:30	**Coffee Break & Group Photo** **Salon Royal Room**

	BIOTECH 5 – Masséna Room Session Chair: Insung Choi
10:15	**Insung Choi** Artificial Spores: Chemical Sporulation and Germination **BIOTECH-KN02**
10:40	**Louis Gangolphe** Absorbable and bio-inspired materials dedicated to soft-tissue reconstruction **BIOTECH-OR09**
10:55	**Audrey Tourrette** Biopolymer based smart wound dressing for surgical application **BIOTECH-OR26**
11:10	**Lunch Break**

	BIOTECH 6 – Masséna Room Session Chair: Vladimir Tsukruk
13:30	**Vladimir Tsukruk** Flexible Bioenabled Nanocomposites **BIOTECH-KN16**
13:55	**Claudio Gioia** Valorization of ferulic acid from wheat bran to obtain bio-based polymers for packaging applications **BIOTECH-OR10**
14:10	**Maria Elena Antinori** Mycelium-based materials: a broad spectrum of tunable properties **BIOTECH-OR01**
14:25	**Ana Isabel Quilez** One-Pot Fabrication and Characterization of Antioxidant Polymers from Tea Waste Extracts **BIOTECH-OR29**
14:45	**Coffee Break** **Salon Royal Room**

	BIOTECH 7 – Masséna Room Session Chairs: Ilker S. Bayer and Laurent Billon
15:00	**Ilker S. Bayer** Engineering Bio-based Composites for Intelligent and Functional Applications **BIOTECH-KN03**
15:25	**Laurent Billon** Bio-inspired polymer materials: From the monomer chemical nature to hierarchically structured functional films **BIOTECH-KN11**
15:50	**Lucile Druel** New aerogel-like materials: lightweight and mesoporous cellulose xerogels **BIOTECH-OR05**
16:05	**Oona Korhonen** All-Cellulose Composites via Short-Fiber Distribution Approach **BIOTECH-OR16**
16:20	**Anna Laromaine** From novel structuration to functional composites of bacterial cellulose **BIOTECH-OR18**
16:35	**Claude Grison** Putting Waste to Work through a Bio-inspired Approach **BIOTECH-OR13**
16:50	**Giacomo Tedeschi** Bioinspired sodium alginate-tomato peel composites with enhanced hydrodynamic properties **BIOTECH-OR36**
17:05	**Annie Chimphango** Sequential fractionation of mango peels for anthocyanins, polyphenols and pectin **BIOTECH-OR24**
17:20	**Fawzi Banat** Exploitation of waste date seeds as sustainable source of high quality bio-oil **BIOTECH-OR02**
17:35	

SMARTTECH SESSION

	SMARTTECH 4 – Versailles Room Session Chair: Karsten Haupt
08:00	**Karsten Haupt** Molecularly Imprinted Polymer Nanocomposites as Synthetic Antibody Mimics for Biomedicine **SMARTTECH-KN02**
08:25	**Vaishakh Nair** Selective Photooxidation of Lignin Model Compound- Benzyl Alcohol in a ZnO Coated Microfluidic Reactor **SMARTTECH-OR30**
08:40	**Remi Merindol** Macroscopic DNA hydrogels that sense mechanical strain **SMARTTECH-OR28**
08:55	**Alejandra Mier Gonzalez** Application of Molecularly Imprinted Polymers in Cosmetics: A New Deodorant Principle **SMARTTECH-OR29**
09:15	**Coffee Break & Group Photo** **Salon Royal Room**
09:30	

	SMARTTECH 5 – Versailles Room Session Chair: Martine Largeron
10:15	**Martine Largeron** Aerobic Catalytic Systems Inspired by Copper Amine Oxidases **SMARTTECH-KN05**
10:40	**Nuno Basílio** Stimuli-Responsive Supramolecular Systems Bio-Inspired in Anthocyanins **SMARTTECH-KN14**
11:05	**Juyoung Yoon** Recent Progress Activatable Photosensitizers and Fluorescent Probes **SMARTTECH-KN10**
11:30	**Andrea Belluati** Compartments and cascades: a model reaction for complex nanoscale systems **SMARTTECH-OR09**
11:45	**Lunch Break**

	SMARTTECH 6 – Versailles Room Session Chair: Feng Zhou
13:30	**Feng Zhou** Bioinspired wet-lubricious materials **SMARTTECH-KN11**
13:55	**Omar Chaalal** Novel Surfactant made of plants from the United Arab Emirates to remove zinc from wastewater **SMARTTECH-OR13**
14:10	**Annie Chimphango** Enzymatic transformation of biopolymers to produce nanohydrogels as surface modifiers and slow release devices for bioactive substances **SMARTTECH-OR15**
14:25	**Emilie Forestier** Stretching of biosourced polyethylene 2,5-furandicarboxylate above its glass transition and associated microstructural development **SMARTTECH-OR20**
14:45	**Coffee Break** **Salon Royal Room**

	SMARTTECH 7 – Versailles Room Session Chair: Juyoung Yoon and Gabriela Ramos Chagas
15:00	**Jorge Royes Mir** Nanocapsules with functional (T switchable) polymer corona produced by microbial cell factories **SMARTTECH-OR34**
15:15	**Sagana Thamboo** Biomimetic Assemblies based on Subcompartmentalized Giant Polymersomes **SMARTTECH-OR36**
15:30	**Lilia Clima** Polymeric supramolecular transporters for nucleic acids delivery **SMARTTECH-OR06**
15:45	**Shengchang Zhang** The structural and morphological controlling of Polycaprolactone microspheres via electrospraying and selecting green solvent **SMARTTECH-OR23**
16:00	**Christian Sproncken** PVA-based polymer micelles for ice recrystallization inhibition **SMARTTECH-OR19**

16:15	**Isis Castro-Cabrera** The role of interface functionalization on self-healing and relaxation properties of vitrimer nanocomposites **SMARTTECH-OR05**
16:30	**Florent Malloggi** Self-rolled polymeric thin film: toward fully functionalized microsystems **SMARTTECH-OR25**
16:45	**Elena Orlenko** Effect of the Space Dimension upon the Spin Magnetic Ordering in the Electron Fermi-Gas **SMARTTECH-OR31**
17:00	

NANOTECH SESSION

	NANOTECH 4 – Baie des Anges A Room Session Chair: Chang-Hwan Choi
08:00	**Chang-Hwan Choi** Bioinspired Slippery Surfaces: Oil-Impregnated Nanoporous Alumina Coating for Anticorrosion and Antibiofouling **NANOTECH-KN03**
08:25	**Glen McHale** Droplets on Smart Slippery Surfaces **NANOTECH-KN07**
08:50	**Alla Synytska** Bio-inspired Strategies for Design of Ice-Resistant Materials based on Polymeric Janus Colloids **NANOTECH-OR15**
09:05	**Federico Veronesi** Liquid-repellent coatings for friction and drag reduction in industrial applications **NANOTECH-OR16**
09:20	**Coffee Break & Group Photo** **Salon Royal Room**
09:30	

	NANOTECH 5 – Baie des Anges A Room Session Chair: Catarina Esteves
10:15	**Catarina Esteves** Tailor-made hydrophilic polymer networks with biomimetic functions: anti-fouling, self-healing and low-friction **NANOTECH-KN01**
10:40	**Zhiguang Guo** Bionic Materials of Tribology **NANOTECH-KN02**
11:05	**Himanshu Mishra** Coatings-free Desalination Membranes from Bio-inspiration **NANOTECH-OR13**
11:20	**Olivier Felix** Engineering the properties of self-assembled bio-inspired nanocomposite materials **NANOTECH-OR09**
11:35	**Lunch Break**

	NANOTECH 6 – Baie des Anges A Room Session Chair: Jonathan Wilker
13:30	**Jonathan Wilker** How Far Can We Push the Performance of Polymers Mimicking Mussel Adhesive Proteins? **NANOTECH-KN20**
13:55	**Marleen Kamperman** Bioinspired Ionic Adhesives **NANOTECH-KN04**
14:20	**Charlotte Vendrely** Identification of the molecular bases of arthropod natural glues **NANOTECH-OR29**
14:35	**Seethalakshmi Chandramouli** Wettability assisted selective deposition of nanoparticles on patterned glass fibers **NANOTECH-OR05**
14:50	**Coffee Break** **Salon Royal Room**

	NANOTECH 7 – Baie des Anges A Room Session Chair: Richard Spontak
15:00	**Richard Spontak** Block Copolymer Hierarchical Morphologies and Customized Functionality Inspired by Nature **NANOTECH-KN11**
15:25	**Philippe Miele** Nanostructured materials based on boron nitride for energy, environmental and health applications **NANOTECH-KN14**
15:50	**Celine Pochat-Bohatier** Emulsion templating to prepare porous polymeric membrane **NANOTECH-KN16**
16:15	**Pola Goldberg Oppenheimer** Hierarchical Electrohydrodynamic Lithography for Advanced Micro-Engendered Devices **NANOTECH-KN06**
16:40	**Hyunjung Shin** Stable New Polymorph Gold and Silver Nanowires Fabricated in Nanoscale Confinement **NANOTECH-OR25**
16:55	**Luxiao Chai** Rapid Access to Functional Oil-Filled poly(vinyl alcohol)-based Glyconanocapsules through Nanoprecipitation **NANOTECH-OR04**
17:10	

HUGS SESSION

	HUGS 4 – Baie des Anges B Room Session Chair: Magdalena Titirici
08:00	**Magdalena Titirici** The green black: Sustainable Carbon Materials for Renewable Energy Applications **HUGS-KN11**
08:25	**Wahiba Ramdani** Catalytic glycosylation of glucose with alkyl alcohols over sulfonated mesoporous carbons **HUGS-OR10**
08:40	**Ana Belen Jorge-Sobrido** Biomass-derived electrodes for flexible supercapacitors **HUGS-OR13**
08:55	**Pierluigi Tosi** New rigid foams based on industrial humins **HUGS-OR22**
09:15	**Coffee Break & Group Photo** **Salon Royal Room**
09:30	

	HUGS 5 – Baie des Anges B Room Session Chair: Chaobin He
10:15	**Chaobin He** Lignin as Useful Biomass for Composites and Carbon Materials **HUGS-KN07**
10:40	**Manju Misra** Opportunity of Biocarbon in Next Generation Materials Application **HUGS-KN14**
11:05	**Remo Merijs Meri** On the oat husks modified polypropylene composite for injection molding applications **HUGS-OR15**
11:20	**Anna Sangregorio** Fully biobased composites by humins valorization **HUGS-OR20**
11:35	**Gianni Girotti** Platform technology for a guayule biorefinery **HUGS-OR26**
11:50	**Lunch Break**

	HUGS 6 – Baie des Anges B Room Session Chair: Guy Marlair
13:30	**Guy Marlair** Alternative solvents such as ionic liquids or deep eutectic solvents: are they green or not? **HUGS-KN06**
13:55	**Sylvain Brohez** Flame retardant behavior of PLA containing phosphorus and nitrogen chemically modified lignin **HUGS-OR01**
14:10	**Anitha Muralidhara** Importance of safety considerations of furanics compounds and their side streams in advanced biorefineries **HUGS-OR17**
14:25	**Alexis Vignes** Nanomaterials and biorefineries: inspiring some safety thoughts **HUGS-OR23**
14:45	**Coffee Break** **Salon Royal Room**

	HUGS 7 – Baie des Anges B Room Session Chair: Florent Allais
15:00	**Florent Allais** Chemo-enzymatic synthesis, biological properties, functionalizations and polymerizations of biobased bisphenols derived from ferulic and sinapic acids **HUGS-KN01**
15:25	**Sylvain Caillol** Synthesis of biobased building blocks from cashew nutshell liquid: a chemical platform approach for polymer synthesis **HUGS-KN03**
15:50	**Alain Graillot** Biobased Building-Blocks for Thermosets Epoxy Resins **HUGS-OR08**
16:05	

PLASMAT SESSION

	PLASMAT 2 – Louis XVI Room Session Chair: Maryline Moreno
08:00	**Maryline Moreno** Pulsed atmospheric pressure plasma: An elegant route for the deposition of tunable bioinspired and smart thin polymer films **PLASMAT-KN04**
08:25	**Sidi Bencherif** Injectable cryogels for biomedical applications **PLASMAT-KN03**
08:50	**Yong-lai Zhang** Laser processing of biomimetic graphene surfaces **PLASMAT-KN05**
09:15	**Coffee Break & Group Photo** **Salon Royal Room**
09:30	

3D SESSION

	3D 2 – Louis XVI Room Session Chair: Liqun Zhang
10:15	**Liqun Zhang** Novel Bio-based Elastomers with tunable properties **3D-KN02**
10:40	**Elena Martínez** Dynamic polymerization photolithography yields 3D biomimetic models of small intestine in a simple fabrication process **3D-OR03**
10:55	**Laurine Valot** 3D-bioprinting of peptide based hybrid organic-inorganic hydrogels : Encapsulation of mesenchymal stem cells for cartilage repair **3D-OR04**
11:10	**Lunch Break**
13:30	

BIOADHESION SESSION

	BIOADHESION 1 – Louis XVI Room Session Chair: Laura Magro
13:30	**Symposium on Bio-inspired Adhesion** **Welcome Remarks – Laura Magro (Chair)**
13:35	**Patrick Flammang** In the footsteps of sea stars: Proteins for temporary adhesion **BIOADH-KN02**
14:00	**Amanda Andersen** Metal Ion Interactions in Protein- and Protein-Inspired Materials **BIOADH-OR01**
14:15	**Alessandra Griffo** Adhesive and elastic fusion proteins toward nanocomposites materials: a single molecule study **BIOADH-OR02**
14:30	**Free Time**
14:45	**Coffee Break** **Salon Royal Room**

	BIOADHESION 2 – Louis XVI Room Session Chair: Tristan Gilet
15:00	**Tristan Gilet** The hairy adhesive pads: wet and compliant **BIOADH-KN03**
15:25	**Vincent Bels** Lingual adhesion in Tetrapods: Why and how in lizards? **BIOADH-KN01**
15:50	**Pascal-Jean Lopez** Tube formation in polychaetes: a proteomic and genomic perspective **BIOADH-KN05**
16:15	**Dong Woog Lee** Bio-inspired adhesives triggered by polyelectrolyte complexation and surface priming **BIOADH-OR03**
16:30	**Kathrina Lois Taaca** Development and evaluation on the surface properties of polyaniline – chitosan bio-inspired adhesive: Experimental study and numerical molecular dynamics simulation **BIOADH-OR04**
16:45	

2D3D SESSION

	2D3D 2 – Nations Room Session Chair: Masato Ikeda
08:00	**Masato Ikeda** Bioinspired supramolecular nanofiber **2D3D-KN03**
08:25	**Christian Hamm** Nanostructures of diatom silica: how biominerals adapt to high- performance lightweight geometries **2D3D-OR04**
08:40	**Free Time**
09:15	**Coffee Break & Group Photo** **Salon Royal Room**
09:30	

ENERGY SESSION

	ENERGY 4 – Nations Room Session Chair: Erick L. Bastos
10:15	**Erick L. Bastos** Advances in betalain chemistry: from fluorescent flowers to technological applications **ENERGY-KN04**
10:40	**Felix N. Castellano** Triplet Energy Transfer Across Quantum Dot – Molecular Interfaces **ENERGY-KN05**
11:05	**Lunch Break**

	ENERGY 5 – Nations Room Session Chair: Igor Alabugin
13:30	**Igor Alabugin** From Carbon-Rich Molecules to Carbon-Rich Materials **ENERGY-KN02**
13:55	**Marc Robert** Solar fuels production from CO_2 Catalytic Reduction with Bioinspired Fe Molecular Complexes **ENERGY-KN15**
14:20	**Jieun Choi** Mussel-inspired hydrophilic polymer binder for cathode in seawater batteries **ENERGY-OR02**
14:35	**Free Time**
14:45	**Coffee Break** **Salon Royal Room**
15:00	

CONFERENCE PROGRAM

Wednesday, October 17

Plenary Lecture (Masséna Room)

Session Chair: Julia Ortony

10:15 – 11:00 : **Stephen WEINER –** *Minerals and Crystals in Biology: Inspirations for New Materials* **(PL04)**

Abstract

Organisms produce many minerals and crystals, but the choice of minerals is based on their evolutionary history. As organisms need to constantly adapt to a changing environment, they also need to adapt the minerals they form, and this leads to interesting solutions to challenging problems.

One “unconventional” approach adopted by many different invertebrate taxa as well as vertebrates that produce mineralized materials, is to first form a highly disordered precursor phase inside vesicles within cells, and then to extrude these minerals into the extracellular space and induce them to crystallize to greater or lesser extents. In fact control over the extent of atomic disorder is the hallmark of many biogenic minerals. We have developed a valuable and relatively simple technique for assessing atomic disorder using infrared spectrometry. Bone mineral is also formed via a disordered precursor mineral phase, and the pathway of mineral formation in bone is relatively well documented.

A variety of organisms produce minerals for light manipulation. The most commonly documented example is the organic crystal guanine. Guanine has an unusually high refractive index in one direction and this is exploited by organisms for producing structural colors, including both the silvery iridescence of fish scales, and the bright colors in various marine copepods. The latter can be tuned to the local environment in which they live. Guanine crystals are also used in vision, such as in the eyes of scallops where they produce a back reflecting mirror for focusing light. A recently discovered additional function of guanine crystals is to enhance photosynthesis in the marine protozoans called dinoflagellates by the back scattering of light.

Many of the minerals and crystals produced by organisms have shapes and mechanical properties that are adapted to their functions. Some of the mechanisms used for their formation and function may well be applicable to synthetic materials.

Coffee Break : 10:00 – 10:15

Coffee Break : 16:00 – 16:15

16:15 – 17:00 : **Closing and Awards Ceremony –** *Masséna Room*

Wednesday, October 17

BIOTECH SESSION

	BIOTECH 8 – Masséna Room Session Chair: Thierry Darmanin
08:00	**Tamaki Naganuma** The Correlation between Cell Adhesion Force Activation on Nano/Micro-Topographical PLLA Surfaces and Temporal Dependence of Cell Morphology **BIOTECH-OR25**
08:15	**Virginie Sottile** Live quantitative monitoring of mineral deposition in human stem cells using an antibiotic molecule **BIOTECH-OR33**
08:30	**Franck Cleymand** New free standing "green" biomembranes for tissue engineering **BIOTECH-OR38**
08:45	**Yuya Tachibana** Bio-based poly(Schiff-base) comprising bifurfural **BIOTECH-OR35**
09:00	**Viktor Kochkodan** Surface Coating of Polymer Membranes for Water Treatment: a New Approach to Mitigate Biofouling **BIOTECH-OR41**
09:15	**Free Time**
10:00	**Coffee Break** **Salon Royal Room**
10:15	

	BIOTECH 9 – Masséna Room SessionChair: Pascal Jonkheijm
11:00	**Pascal Jonkheijm** Dynamic cell-instructive coatings **BIOTECH-KN14**
11:25	**Francisco Fernandes** Freeze casting biopolymers for 3D cell culture systems **BIOTECH-OR08**
11:40	**Kankan Qin** Freezing living cells: understanding the impact of the physical cell environment on survival **BIOTECH-OR28**

11:55	**Paulina Ximena Medina Rangel** Molecularly Imprinted Polymer Nanoparticles as Synthetic Antibody Mimics for Cell Targeting and Imaging **BIOTECH-OR19**
12:10	**Lunch Break**

	BIOTECH 10 – Masséna Room Session Chair: Béatrice Labat	BIOTECH 11- Versailles Room Session Chair: João Mano	
14:30	**Béatrice Labat** Versatile biomimetic chondroitin-sulfate-based matrix for tissue repair and mechanobiology **BIOTECH-KN15**	**Thierry Delair** From chitosan to biomaterials **BIOTECH-KN17**	14:30
14:55	**Kathrina Lois Taaca** In vitro anti-diabetic activity of Philippine Mulberry leaves (*Morus alba Linn.*) extract **BIOTECH-OR34**	**João Mano** Bioinspired methodologies for the preparation and fixation of soft spherical polymeric devices for the encapsulation of cells and therapeutic molecules **BIOTECH-KN18**	14:55
15:10	**Tristan Baumberger** Complex, flow-induced organization of dense collagen solutions during microfluidic fibre extrusion **BIOTECH-OR03**	**Samir Bkhaït** Antibiofouling surface modifications using bioactive molecules **BIOTECH-OR27**	15:20
15:25	**Free Time**		15:35 16:00
16:00	**Coffe Break** **Salon Royal Room**		

NANOTECH SESSION

	NANOTECH 8 – Baie des Anges A Room Session Chair: Rein V. Ulijn
08:00	**Rein V. Ulijn** Guiding principles for peptide-based, life-like nanotechnology **NANOTECH-KN21**
08:25	**Julia Ortony** Molecular motion in self-assembled nanostructures **NANOTECH-KN15**
08:50	**Mondem Sudhakara Reddy** Microbial concrete provides resistance to concrete structures exposed to severe sulfate attacks **NANOTECH-OR14**
09:05	**Habib Belaid** Development of an injectable cement allowing multiple drug delivery for the treatment of breast cancer bone metastasis **NANOTECH-OR31**
09:20	**Free Time**
10:00	**Coffe Break** **“Salon Royal” Room**
10:15	

	NANOTECH 9 – Baie des Anges A Room Session Chair: Isabelle Michaud-Soret
11:00	**Isabelle Michaud-Soret** Ecoconception of metallic nanoparticles with bioinspired coatings: a safer-by-design approach **NANOTECH-KN24**
11:25	**Yingying Liu** Hydrophobin-polymer bioconjugate for antifouling and low non-specific binding surfaces **NANOTECH-OR12**
11:40	**Antje Clasen** Microstructural surface properties of drifting seeds – a model for non-toxic antifouling agents **NANOTECH-OR01**
11:55	**Solenne Fleutot** Facile one-step synthesis of polyoxazoline coated iron oxide nanoparticles **NANOTECH-OR11**
12:10	**Lunch Break**
14:30	

SMARTTECH SESSION

	SMARTTECH 8 – Versailles Room Session Chair: Hugues Brisset
08:00	**Hugues Brisset** Advanced molecularly imprinted polymer as electrochemical sensor interfaces **SMARTTECH-KN03**
08:25	**Nofar Pinker** Porous Silicon Optical Biosensors for Detection of Subclinical Mastitis Biomarkers in Bovine Milk **SMARTTECH-OR32**
08:40	**Mike Bismuth** Porous Silicon Optical Biosensors for Rapid Environmental Monitoring of Trace Heavy Metals **SMARTTECH-OR03**
08:55	**Volkan Kilinc** Supported lipid monolayer with unprecedented mechanical and dielectric properties: Application to ISFET sensors **SMARTTECH-OR11**
09:10	**Iryna Polishchuk** A Biological Strategy for Presstressing Crystalline Calcite Lenses **SMARTTECH-OR33**
09:25	**Free Time**
10:00	**Coffee Break** **Salon Royal Room**
10:15	

	SMARTECH 9 – Versailles Room Session Chair: Tuan Vo-Dinh
11:00	**Tuan Vo-Dinh** Nanoplasmonic Bioprobes: Golden Prospects for Biosensing, Diagnostics and Immunotherapy **SMARTTECH-KN09**
11:25	**Vadim Kessler** Molecular mechanisms in mineral nanoparticle interactions with proteins **SMARTTECH-KN04**
11:50	**Gulaim A. Seisenbaeva** Specific functionalization of the surface –key for molecular recognition approach **SMARTTECH-OR35**
12:05	**Octavio Graniel** Atomic layer deposition for biosensing applications **SMARTTECH-OR37**
12:20	**Lunch Break**

ENERGY SESSION

	ENERGY 6 – Baie des Anges B Room Session Chair: Malcom Forbes
08:00	**Malcolm Forbes** Light-Responsive Iron(III)–Polysaccharide Coordination Hydrogels: Evidence for a Radical Mechanism **ENERGY-KN07**
08:25	**Alan Le Goff** From enzymes to bioinspired catalysts for noble-metal-free hydrogen fuel cells **ENERGY-KN10**
08:50	**Sang-Yup Lee** Self-assembly of Amino Acidic Bolaamphiphiles for Building Enzyme-mimetic Catalysts **ENERGY-OR05**
09:05	**Free Time**
10:00	**Coffee Break** **Salon Royal Room**
10:15	

	ENERGY 7 – Baie des Anges B Room Session Chair: Michael Therien
11:00	**Michael Therien** U-Turn Electron Transfers in Chemistry and Biology **ENERGY-KN16**
11:25	**Laura Puchot** From biophenols to fully biobased thermosets: focus on benzoxazine resins **ENERGY-OR09**
11:40	**Zhao Wang** Design, synthesis, and properties of several new bio-based elastomers **ENERGY-OR11**
11:55	**Lunch Break**

2D3D SESSION

	2D3D 3 – Louis XVI Room Session Chair: Xuehong Lu
08:00	**Xuehong Lu** Mussel-Inspired Approaches to Core-Shell and Dual Metal-Doped Hybrid Nanospheres for Energy and Environmental Applications **2D3D-KN04**
08:25	**Masanobu Sagisaka** Dynamic Aggregation Behavior of Hybrid Surfactants to Generate Quasi Ion-Channels for Bioinspired Bilayers **2D3D-KN08**
08:50	**María Luisa Ferrer** Bioinspired Features of Three-Dimensional Porous Carbon Structures **2D3D-KN11**
09:15	**Patrick Di Martino** Identification of amyloid motifs in the protein TasA of Bacillus subtilis **2D3D-OR03**
09:30	**Katja Heise** Janus-type nanorods by surface-initiated polymer grafting from the reducing end-groups of cellulose nanocrystals **2D3D-OR05**
09:45	**Free Time**
10:00	**Coffee Break** **“Salon Royal” Room**
10:15	

	2D3D 4 – Louis XVI Room Session Chair: Wendel A. Alves
11:00	**Wendel A. Alves** Supramolecular Engineering of Peptides for Aldol Reactions **2D3D-KN10**
11:25	**Kwang Hui Jung** Robust Superhydrophobic Surfaces via Concave pillar **2D3D-OR06**
11:40	**Laureen Moreaud** Artificial repeat protein as in-situ capping agents of 2D gold nanocrystals for a single particle sensing platform **2D3D-OR07**
11:55	**Lunch Break**

	2D3D 5 – Louis XVI Room Session Chair: Damien Prim
14:30	**Cornelia Palivan** Bioinspired molecular factories with architecture and in vivo functionality as cell mimics **2D3D-KN06**
14:55	**Sakthivel Nagarajan** 2D nanosheets; novel candidate to improve the mechanical property of polymer fiber for tissue engineering application **2D3D-OR08**
15:10	**Katsiaryna Prudnikova** Biomimetic Proteoglycans Enhance Type I Collagen Fibrillogenesis **2D3D-OR09**
15:25	**Free Time**
16:00	**Coffee Break** **Salon Royal Room**
16:15	

WORKSHOP PROGRAMS

WORKSHOP – HUGS Industrial Sustainable Development

Date: Tuesday, October 16
Room : Baie des Anges B Room
Scheduled time : 16:15 – 17:45

Moderator: Nathanaël Guigo

Industrial Speakers: Paul Mines, CEO - Biome Technologies; Gianni Girotti, Green Chemistry R&D Manager - ENI Versalis; Peter Mangnus, VP Partnering & Commercialization – Synvina; Ed de Jong, VP Development – Avantium

This session is dedicated to the industrial panel and workshop. Key exponents of leading chemical companies involved in innovation and sustainability will give their opinion on challenges, hopes, and controversies on the biomass conversion strategies, as well as address the public's doubts and concerns. The focus will be on the way different companies are engaged in topics as biomass conversion and valorization, catalysis for green chemistry, development of new building blocks for biobased materials and clean technologies. Each industrial speaker would have the possibility to give a short introduction about the sustainability commitment of their own company followed by an open discussion involving the audience, a moderator and the industrial speakers.

WORKSHOP –The simple but complicated world of wetting: from fundamentals to applications

Date: Tuesday, October 16
Room : Nations Room
Scheduled time : 15:00 – 17:45

Organizers: Alidad Amirfazli, York University, Canada; Abraham Marmur, Technion, Israel Institute of Technology; and Anish Tuteja, University of Michigan, USA

This session is intended to present an overview of wetting and nonwetting in a systematic way, from fundamentals to applications. This is an attempt to develop an interactive session, where the audience actively participates in the discussion.

Three general themes are planned: Fundamentals of wetting and non-wetting, contact angle measurement, and design of super-hydrophobic surfaces. The first theme will include discussion of questions such as the definition of surface tension, calculations of interfacial tension, wetting on rough and heterogeneous surfaces. The second theme will comprise discussions of the difficulties in measuring contact angles and ways to solve them. The last theme will consist of presentations and discussions of the biomimetics of super-hydrophobicity and beyond.