

**NanoPol « Nanostructured Polymers: from precision synthesis to physical properties »
September 04-08, 2023, Orléans, France**



Monday 04 September 2023

12h00 – 13h30 *Registration & Light Lunch*

13h30 – 14h00 *Conference Opening*

Session 1 : Physical properties, Advanced processing and characterization techniques

14h00 – 14h45 **I1** *Aggregation States and Thermal motion of Polymer Chains Adsorbed onto Solid Surfaces*
Keiji Tanaka, Kyushu University, Japan

14h45 – 15h30 **I2** *Block copolymer templating as a nanofabrication tool for metamaterials and metasurfaces*,
Virginie Ponsinet, CRPP, Pessac, France

15h30 – 16h00 *Break*

16h00 – 16h20 **O1** *Impact of confinement effect in polymer multilayer structure on gas barrier properties*
Guillaume Le Cras, PBS, INSA Rouen, France

16h20 – 16h40 **O2** *In Situ Annealing Studies of Microstructural Evolution of Conjugated Systems*
Grigorian Souren, Department of Physics, University of Siegen, Germany

16h40 – 17h00 **O3** *Tuning the topology and degradability of PEG gels using mixtures of mono- and multifunctional thiols in thiol-acrylate photopolymerization*
Anna Kharlamova, MCM, ESPCI Paris, France

17h00 – 17h20 **O4** *Fabrication of tough and strain-stiffening elastomer via the module-assembly strategy*
Shintaro Nakagawa, Institute of Industrial Science, University of Tokyo, Japan

17h20 – 17h40 **O5** *Multimodal porous carbons synthesized using an approach combining soft-template, sol-gel and hydrothermal steps: characterization and regeneration after phenol adsorption*
Sébastien Schaefer, ICMN Orléans, France

17h40 – 18h00 **O6** *Working with enzyme for low temperature processing of vitrimers. Phase separation versus denaturation dilemma*
Paolo Edera, C3M lab, ESPCI Paris, France

18h00 – 20h00 *Welcome cocktail*

Tuesday 05 September 2023

Session 2 : Supramolecular and block-copolymer self-assembly

08h30 – 09h15 I3 *Block Copolymer Self-assembly based on PS-b-PMMA Derivatives to Address Fundamental Study and Applications*
Teruaki Hayakawa, Tokyo Institute of Technology, Japan

09h15 – 10h00 I4 *Synthesis of polymeric nanofibers by templated polymerization-induced self-assembly*
Jutta Rieger, IPCM, Polymer Chemistry Team, Paris, France

10h00 – 10h20 O7 *Carbohydrate-Based Supramolecular Gels: From Synthesis to Applications*
Sami Halila, CERMAV, CNRS, Univ. Grenoble Alpes – France

10h20 – 10h40 O8 *Characterization of polymers at surfaces and interfaces on the beamline SIRIUS (SOLEIL synchrotron)*
Arnaud Hemmerle, Synchrotron SOLEIL, Saint-Aubin, France

10h40 – 11h00 O9 *Engineering polymer-based nanoarchitectures for enhanced immunodetection of extracellular vesicles by quartz crystal microbalance*
Alberto Alvarez-Fernandez, Department of Chemical Engineering, University College London, UK - AMBER Research Centre, Dublin, Ireland

11h00 – 11h30 *Coffee Break*

11h30 – 11h50 O10 *Microphase separation of block copolymers: theory and modeling*
Elena Govorun Gulliver, ESPCI-PSL University, Paris, France

11h50 – 12h10 O11 *Hybrid mesoporous silica powders and films structured by polyion complex micelles: influence of the block copolymer on the nanotexture*
Gauthier Rydzek, Institut Charles Gerhardt, ENSCM, Montpellier, France

12h10 – 12h30 O12 *Iterative self-assembly of block-copolymer layers*
Guillaume Fleury, LCPO, Pessac, France

12h30 – 14h00 *Lunch Break*

Session 3 : Precision and green approaches to polymer synthesis

14h00 – 14h45 I5 *Precision Syntheses of Sequence-Controlled Polymers for Sequence-Derived Functions*
Makoto Ouchi, Department of Polymer Chemistry, Kyoto University, Japan

14h45 – 15h30 I6 *Enzymatic catalysis in polymer chemistry*
Frédéric Peruch, LCPO, PESSAC, France

15h30 – 15h50 O13 *Direct Radical Copolymerizations of Thioamides for Novel Vinyl Polymers Containing Degradable C-S Backbones*
Hironobu Watanabe, Department of Molecular and Macromolecular Chemistry, Nagoya University, Japan

15h50 – 16h10 **O14** *From Problematic Asphaltenes towards Hyper-crosslinked Polymeric Structures*
Salim Ok, Kuwait Institute for Scientific Research, Kuwait

16h10 – 16h30 **O15** *Telescoped CO₂-based functionalization of polymers under microfluidic conditions*
Daniela Vuluga, INSA Rouen, France

16h30 – 19h00 *Wine & Cheese Party - Poster Session 1*

Wednesday 06 September 2023

Session 4 : Supramolecular and block-copolymer self-assembly

08h30 – 09h15 **I7** *Quasicrystalline and Crystalline Tilings with Complexity in Microphase-Separated Pentablock Polymers of the AB₁CB₂D Type*
Yushu Matsushita, Toyota Physical and Chemical Research Institute, Japan

09h15 – 10h00 **I8** *Directed self-assembly of block copolymers: from lab to fab*
Raluca Tiron, CEA, LETI, Grenoble, France

10h00 – 10h20 **O16** *Amphiphilic UV-sensitive polyoxazoline as promising coating for marine antifouling,*
L. Vasilica Arsenie, ICGM, Montpellier, France

10h20 – 10h40 **O17** *Network-Forming Block Copolymer Membranes for Ultrafiltration Application*
Karim Aissou, Institut Européen des Membranes, ENSCM, Montpellier, France

10h40 – 11h00 **O18** *Precise control of solvent vapor annealing of block copolymer thin films by local laser heating*
Pawel Majewski, Department of Chemistry, University of Warsaw, Poland

11h00 – 12h30 *Lunch Break*

12h30 – 19h00 *« Château de la Loire » Tour*

Thursday 07 September 2023

Session 5 : Chemistry and physics of nanostructured polymers

08h30 – 09h15 **I9** *Synergistic Advances in Living Cationic and Radical Polymerizations for Precision Polymer Synthesis*
Masami Kamigaito, Department of Molecular and Macromolecular Chemistry, Nagoya University, Japan

09h15 – 10h00 **I10** *Some recent progress on filler structure and interfacial layer dynamics of polymer nanocomposites*
Anne-Caroline Genix, L2C Montpellier, France

10h00 – 10h20 **O19** *In situ and one-step formation of bimetallic nanoparticle@polymer nanocomposite through a photoinduced process*
Joachim Haemers, CEMHTI, Orléans, France

10h20 – 10h40 **O20** *Formulation of a polymer-based carbon ink for the electrochemical detection of micro pollutants*
Valérie Bertagna, ICMN, Orléans, France

10h40 – 11h00 **O21** *Self-healable epoxidised soybean oil based thermosetting systems modified with photo-switchable nematic liquid crystal*
Agnieszka Tercjak, Department of Chemical and Environmental Engineering, University of the Basque Country Donostia-San Sebastian

11h00 – 11h30 *Coffee Break*

11h30 – 11h50 **O22** *Synthesis of polymer/MoS₂ nanocomposites for the preparation of electrodes of sodium-ion batteries*
Patrick Lacroix-Desmazes, Institut Charles Gerhardt, Montpellier, France

11h50 – 12h10 **O23** *Tuning Structural Properties with Gold Nanoparticles/P3HT based blends*
Ilaria Fratoddi, Department of Chemistry, Sapienza University of Rome, Italy

12h10 – 12h30 **O24** *Photo-design of functional QD/polymer composites for 2D/3D printing*,
Jessica Plé, CEMHTI, Orléans, France

12h30 – 14h00 *Lunch Break*

Session 6 : Supramolecular and block-copolymer self-assembly

14h00 – 14h45 **I11** *Unique Behavior of Flexible Multiple Hydrogen Bonds in Polymers*
Naoko Yoshie, Institute of Industrial Science, The University of Tokyo, Japan

14h45 – 15h30 **I12** *Self-assembly of Carbohydrate Block Copolymers: From glyconanoparticles to thin films to photonic crystals*
Redouane Borsali, CERMAV, Grenoble, France

15h30 – 15h50 **O25** *Stretchable High χ -Low N oligosaccharide-based Block Copolymers to Confine Perovskite in Photonics*
Ping Jui Yu, Department of Chemical Engineering, National Taiwan University, Taiwan.

15h50 – 16h10 **O26** *Supramolecular Janus nanocylinders: controlling their characteristics through the process or chemistry*
Sandra Kalem, IMMM, Le Mans, France

16h10 – 16h30 **O27** *Switchable pH-responsive morphologies of supramolecular water soluble self-assembled nucleobase copolymers*
Sylvain Catrouillet, ICGM, Montpellier, France

16h30 – 18h00 *Coffee - Poster Session 2*
20h00 *Gala Dinner*

Friday 08 September 2023

Session 7 : Synthesis and properties of smart polymer materials

08h30 – 09h15 **I13** *Synthesis and Properties of Dendritic Hyperbranched Polymers*
Shigeru Yamago, Institute for Chemical Research, Kyoto University, Japan

09h15 – 09h35 **O28** *Precise formation of porous silicon through a polymeric perforated thin film*
Lisa Monnier, ICMN Orléans - GREMAN Tours, France

09h35 – 09h55 **O29** *Polyurethane-based polymer electrolyte*
Chalal Tachouaft, PCM2E, Tours, France

09h55 – 10h15 **O30** *Synthesis of an original dual-sensitive polyoxazoline and investigation of its properties*
Louise Hespel, PBS, INSA Rouen, France

10h15 – 10h45 *Coffee Break*

10h45 – 11h05 **O31** *Synthesis of UCST polymers for fabrication of microcages used in microfluidic biotechnologies*
Thi Phuong Thu Nguyen, Soft Matter Sciences and Engineering Laboratory, ESPCI Paris, France

11h05 – 11h25 **O32** *Self-organized conjugated metallooligomers for solar cells*
Cyprien Lemouchi, LCMT, ENSICAEN, Caen, France

11h25 – 11h45 **O33** *Unusual Actuation of Precisely Designable Two-Layer Gel Films Composed with Asymmetrically Aligned Liquid Crystalline Nanosheets*
Nobuyoshi Miyamoto, Graduate School of Engineering, Fukuoka Institute of Technology, Fukuoka, Japan

11h45 – 12h30 *Best Oral and Poster Awards*
Conference Closure

Poster Session

- P1** *Affordable and Sustainable Packaging Solutions: News ways to promote cellulosic fiber from *Typha domingensis* and *Phragmites australis* into paper and bioplastics for food packaging purposes*, M. N. Senghor, J. Bassama and E H. Babacar Ly, Université Gaston Berger de Saint-Louis, Saint-Louis, Sénégal.
- P2** *Carbohydrate-based Bottlebrushes and Their Self-assembly: Colored Biomaterials and Photonic Crystal features*, H. Li, M. Mumtaz and R. Borsali, CERMAV, Grenoble.
- P3** *Thermo-responsive hydrogels reinforced by nanosheets as embedding matrices for yeast bio-organisms*, R. Guégan, R. Tamate, B. Žunar, B. Vallée and Y. Sugahara, GCSE, Tokyo, Japan – ICMN, Orléans.
- P4** *Evaluation of the electrical and thermal properties of composite materials based on natural polymers*, M. Manga, B. Diouf, M. Lo, E H. Babacar Ly, R. Khiari and N. Blgacem, Université Gaston Berger de Saint-Louis, Saint-Louis, Sénégal.
- P5** *Reorientation of microphase-separated patterns in thin block copolymer films using in-plane electric field*, Y. V. Kudryavtsev, ESPCI, Paris - Topchiev Institute of Petrochemical Synthesis, Moscow.
- P6** *Relation between Crystalline Morphology and Mechanical Properties of Random Carboxyl Substituted Polyethylene*, J. Zhou, S. Nakagawa, K. Takahashi, K. Nozaki and N. Yoshie, Institute of Industrial Science, Tokyo.
- P7** *AFM characterization of individual and network of polymeric supramolecular nanostructures prepared by hydrogen bonding in solution*, M. Chevereau, M. Vayer, F. Warmont, J. Rieger, L. Bouteiller and C. Sinturel, ICMN, Orléans.
- P8** *Isocyanate Free Synthesis of Tris-Urea Terminated Polymers for Janus Nanorods Self-Assembly*, D. Siefker, S. Kalem, S. Pensec, J. Rieger, P. Legeay, M. Vayer, C. Sinturel, O. Colombani and L. Bouteiller, Sorbonne Université, Paris.
- P9** *Nanocomposite material made of graphene oxide sheets decorated with octahedral molybdenum cluster complexes for enhanced photoinactivation of *Staphylococcus aureus**, R. Guégan and K. Kirakci, GCSE, Tokyo, Japan – ICMN, Orléans.
- P10** *Stereospecific Living Anionic Polymerization of Methacrylates Based on Reversible Chain Transfer to C-H Bonds*, K. Sagawa, M. Uchiyama, H. Watanabe and M. Kamigaito, Department of Molecular and Macromolecular Chemistry, Nagoya University.
- P11** *Efficiency of micropollutants recovery by alginate-lipid emulsions matrices*, A. Gagner, S. Guillot, F. Méducin, S. Delpeux and Louis Hennet, ICMN, Orléans.
- P12** *Studying of the electropolymerisation on CVD graphene and epitaxial graphene on silicon carbide*, Y. Pain, C. Coillot, P. Landois, J. Nicolle, M.-Ramzi Ammar, M. Vayer, J.-M. Decams, V. Astié, S. Contreras and C. Vautrin-UI, ICMN, Orléans.

- P13** *Tuning Properties of a Fluorinated Terpolymer in Thin Films at Solid Interphases*, D. R. Cole, S. Welch and S. Ok, School of Earth Sciences, The Ohio State University, Ohio 43210, U.S.A.
- P14** *Block Copolymers Containing Carbohydrates: Prospect for Self-healing Applications*, D. Ovurevu, N. El-Kissi, F. Tournilhac and R. Borsali, CERMAV, Grenoble.
- P15** *Dip coating deposition of nanocomposite thin films based on water-soluble polymer and silica nanoparticles : Towards hydrophobic properties*, S. Jebali, M. Vayer, K. Belal, F. Mahut and C. Sinturel, ICMN, Orléans.
- P16** *Synthesis of Fluorosilicones via Organocatalyzed Anionic Ring Opening Polymerization*, A. Corfa, V. Ladmiral, S. Caillol and J. Pinaud, ICGM, Montpellier, France.
- P17** *Coupling of Microphase Separation and Dewetting in Symmetric Diblock Copolymer Thin Films*, E. Saad, F. Restagno, S. Roland and G. Miquelard Garnier, Laboratoire PIMM, Paris, France.
- P18** *Sol/gel transition of a thermosensitive macroporous hydrogel*, L. Pommier, P.-A. Dang, S. Norvez, S. Aime, L. Corté and M. Cloître, Molecular, Macromolecular Chemistry and Materials, ESPCI Paris, France.
- P19** *Mechanics of hydrogel fibers and their assemblies for the design of high fatigue strength tissue substitutes*, D. Andrea, T. Yannick and C. Laurent, Mines Paris, France.
- P20** *Impact of external agent on C-ON bond homolysis in alkoxyamines*, S. Kouider, M. Nechab and A.-D. Manick, Institut de Chimie Radicalaire, Aix-Marseille Univ., France.
- P21** *Structure-morphology relationship of P3HT blends in thin films*, M. Stremel, M. Vayer, S. Grigorian and C. Sinturel, Interfaces, Confinement, Matériaux et Nanostructures (ICMN), Orléans, France.
- P22** *Experimental Investigation of Heat Transfer through Rectangular and Cylindrical Fins*, F. Khelil, F. Benaoum, K. Mokhtar and M. Madjid, Mechanical engineering, Faculty of science and technology, University of Mascara, Algeria.
- P23** *Imide-Linked Porous Organic Polymers for CO₂ adsorption*, J. Samuel and M. Al-Saleh, Petroleum Research Center, Kuwait Institute for Scientific Research, Safat, Kuwait.