



Colloids and Complex fluids for Energies – C²E

*Systems understanding:
From preparation to process design*

IFPEN, Rueil-Malmaison, 4-6 December 2017

Final Program

Monday 4 December - Tutorial session on interfacial properties

- 13.30 Opening of the welcome desk
- 14.00 Welcome address
- 14.15 **Surfactants at interfaces**
N. Denkov (Univ. of Sofia, Bulgaria)
- 15.15 **Particles at interfaces**
B. Binks (Univ. of Hull, United Kingdom)
- 16.15 Break
- 16.45 **Interface-driven phenomena in dispersed systems**
W. Drenckhan (Institut Charles Sadron, France)
- 17.45 Q&A Session
- 18.15 End of the Tutorial session
- 18.30 **Departure for the Happy Hour, Café Leffe in Rueil-Malmaison**
2 passage d'Arcole (10mn walk from IFPEN) - Access map available at the reception desk

Tuesday 5 December – Scientific sessions

8.00 Opening of the welcome desk

Session 1 - Dynamic interfaces and complex fluids

- 8.45 **Keynote lecture by D. Langevin (University of Orsay, France)**
Microemulsions, emulsions and foams. Relation with interfacial layers properties
- 9.30 [O/1] Particle stabilized emulsions via “ouzo emulsification”
V. Sötz¹, J.Causse¹, W. Kunz², T. Zemb¹ (1 Institut de Chimie Séparative, France, 2 Univ. Regensburg, Germany)
- 9.50 [O/28] Hydrophobization of silica nanoparticles in water: nanostructure and response to drying stress
S. Moro, C. Parneix, B. Cabane, J-B d’Espinose, N. Sanson (ESPCI, UPMC, Saint-Gobain Recherche, France)
- 10.10 Break and Poster Session
- 10.50 [O/5] Zwitterionic Supraparticles as novel pickering emulsifiers
M. Maas, K. Rezwani (Univ. of Bremen, Germany)
- 11.10 [O/11] Gravity driven phase separation in foamed emulsions
M. Schneider, Z. Zou, D. Langevin, A. Salonen (Univ. Paris-Sud, Lab. Physique des Solides, France)
- 11.30 [O/34] Multi-scale approach to understand complex interaction involved in produced water treatment by flotation, in EOR context
H. Chakibi, I. Henaut, J-F Argillier (IFPEN, France)
- 11.50 [O/7] Attachment of colloidal particles to a fluidic interface application to the flotation process
G. Lecrivain^{1,2}, U. Hampel,^{1,3} R. Yamamoto², T. Taniguchi² (1 Institut für Fluidynamic, Germany ; 2 Kyoto Univ., Japon ; 3 TU Dresden, Germany)
- 12.10 Lunch

Session 2 - Colloids synthesis, characterization behavior and modeling (part 1)

- 14.00 **Keynote lecture by E. Duguet (University of Bordeaux, France)**
Seed-growth and site-specific modification strategies to obtain nanoparticles of unconventional morphology or self-assembly ability.
- 14.45 [O/12] Combination of emulsion polymerization, sonochemistry and sol-gel process for the synthesis of Pt/SiO₂ supported catalyst with hierarchical porosity
A.F Sierra-Salazar^{1,2}, T. Chave³, A. Ayrat⁴, S-I Nikitenko³, V. Hulea¹, P-J Kooyman⁵, F. D Tichelaar⁶, WS-J Li¹, S. Perathoner², P. Lacroix-Desmazes¹ (1 Institut Charles Gerhardt, France ; 2 Univ. di Messina, Italy ; 3 ICSM, 4 Institut Européen des Membranes, France ; 5 Univ. of Cape Town, South Africa ; 6 Kavli Institute of Nanoscience of Delft, The Netherlands)

- 15.05 [O/25] Electrochemically-active microgel systems
F. Plamper (RWTH Aachen Univ. Germany)
- 15.25 [O/2] Time resolved boehmite particles synthesis and characterization using small angle X-Ray scattering
B. Guoze, L. Barre, E. Lécolier, V. Lecocq, A. Chaumonot (IFPEN, France)
- 15.45 Break and Poster Session
- 16.25 **Equipment suppliers teasing session**
- 17.00 End of the Equipment suppliers teasing Session
- 19.00 **Departure of the shuttle bus from IFPEN for the Dinner Cruise in Paris**
- Or appointment on site. Boarding 20.00 – Departure 20.30
Alma Bridge, right bank – Boat “Le Zouave” - Metro Alma-Marceau.
- Return to Rueil-Malmaison with a stop in Place Paris-Charles de Gaulle-Etoile and a few stops near the hotels in Rueil-Malmaison

Wednesday 6 December – Scientific sessions

- 8.00 Opening of the welcome desk

Session 2 - Colloids synthesis, characterization behavior and modeling (part 2)

- 8.50 [O/36] Rheology of adsorption layers from the protein hydrophobin and its mixtures with other proteins: experiment and theoretical model
G. Radulova (Sofia Univ. Bulgaria)
- 9.10 [O/15] A comprehensive simulation study of application of polymer gels for enhancing oil recovery
A. Jahanbani Ghahfarokhi, J. Kleppe, O. Torsaeter (Norwegian Univ. of Science and Technology, Norway)
- 9.30 [O/21] Pore filling events in single junction micro-models with corresponding lattice-Boltzmann simulations
I. Zacharoudiou, E. Chapman, E. Boek, J. Crawhaw (Imperial College of London, United Kingdom)
- 9.50 [O/18] Molecular theory of solvation for supramolecular structures and nanomaterials
A. Kovalenko^{1,2} (1 National Institute for Nanotechnology, 2 Univ. of Alberta, Canada)
- 10.10 Break and Poster Session

Session 3 - Confined systems and applications

- 10.40 **Keynote Lecture by M. Ferno (University of Bergen, Norway)**
Use of CO₂ as CCUS – Technologies that Combine CO₂ Storage and Efficient Energy Production
- 11.25 [O/4] Foam's flow in porous media: In-situ texture characterization by small angle neutron scattering and X-ray tomography experiments
C. Ouali, E. Rosenberg, L. Barré (IFPEN, France)

- 11.45 [O/37] **Clogging of model pores with a Brownian suspension**
O. Liot^{1,5}, P. Duru², P. Bacchin³, J. Morris⁴, P. Joseph¹ (1 LAAS-CNRS, 2 IMFT, 3 LGC, France ; 4 Lehigh Institute, USA ; 5 Fédération Fermat, France)
- 12.05 [O/19] **Thermoelectric energy conversion in ferrofluids**
T. J. Salez^{1,2}, B.M Pham¹, B.T Huang¹, M. Bonetti¹, M. Roger¹, C. Filomeno³, E. Dubois³, V Peyre³, G. Demouchy³, M. Kouyate³, R. Persynski³, S. Nakamae¹ (1 SPEC-CEA-CNRS, Univ. Paris-Saclay, 2 Ecole des Ponts ParisTech, 3 UPMC, France)
- 12.25 [O/16] **Osmosis for enhanced oil recovery studied with microfluidics**
E. Crestel^{1,2}, E. Santanach Carreras², J Bibette¹, N. Bremond¹ (1 ESPCI, 2 Total, France)
- 12.45 Lunch
- 14.00 **Keynote Lecture by G. Gebel (CEA, France)**
Colloids for renewable energies
- 14.45 [O/13] **Subcooling and wettability effects on gas hydrate growth in round glass microcapillaries**
A. Touil¹, D. Broseta¹, R. Brown², A. Desmedt³ (1 LFCR Univ. Pau, 2 IPREM Univ. Pau, 3 ISM Univ. Bordeaux, France)
- 15.05 [O/9] **Complex fluids for the nuclear decontamination of radioactive solid surfaces**
A. Gossard, F. Frances, C. Lepeyre, S. Faure, A. Grandjean (LPSD-CNRS, France)
- 15.25 [O/26] **From hierarchical assembly of nanoparticles to aerogels**
M. Odziomek^{1,2}, F. Chaput¹, M. Sitarz², F. Lerouge¹, S. Parola¹ (1 Univ. Lyon, France ; 2 AGH Univ. of Science and Technology of Krakow, Poland)
- 15.45 Closing address

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