



PCM

Physico-chemistry of surfaces and polymer materials

1. Scientific skills	1
2. Research areas	2
2.1	2
2.1.1 Materials for storage and energy conversion	2
2.1.2 Materials and sustainability	2
2.1.3 Functional materials	2
3. Members	2
4. Structuring projects	3
4.1	3
4.1.1 Materials for storage and energy conversion	3
4.1.2 Materials and sustainability	3
4.1.3 Functional materials	3
5. Publications	3

Scientific skills

Polymer chemistry, chemistry of materials

Synthesis, functionalization, self-assembly

Photocatalysis – Photochemistry

Multi-scale characterizations

Interface reactivity, surface structuration, surface treatments

Polymer physics





Research areas

Materials for storage and energy conversion

- Surfaces and interfaces of electrode materials and electrolytes: batteries and supercapacitors
- Semiconductor organic materials: organic photovoltaics, NIR detectors, artificial photosynthesis, bioelectronics

Materials and sustainability

- Bio-sourced Materials: Forest resources, polysaccharides, biosurfactants, biomonomers
- Materials and Environmental Impact
- Photoactive Materials

Functional materials

- (Hierarchically) structured materials
- Polymers at interfaces: modelling polymer brushes

Members

ALLAL Ahmed

ALLOUCHE Joachim

BILLON Laurent

BLANC Sylvie

BORDAT Patrice

BORISOV Oleg

BOUSQUET Antoine

BROWN Ross

CHARRIER Bertrand

CHARRIER BOUHTOURY Fatima

DENIAU Elise

DERAIL Christophe

DUPIN Jean-Charles

EHRENFELD Francis

FLAHAUT Delphine

FOIX Dominique

GRAEBLING Didier

GRASSL Bruno

HIORNS Roger

KHOUKH Abdel

LEDEUIL Jean-Bernard

LEONARDI Frédéric

MADEC Lénaïc

MARTINEZ Hervé

NARDIN Corinne

PELLERIN Virginie

RADJI Sadia

ROBY François

RUBATAT Laurent

SAVE Maud



COURREGES Cécile

LAFFORE Anthony

TACHON Christine

DAGREOU Sylvie

LARTIGAU DAGRON Christine

TISON Yann

DEDRYVERE Rémi

LE BECHEC Mickaël

Structuring projects

Materials for storage and energy conversion

- H2020 projects: [HELis](#) (Li-S batteries), [eSCALED](#) (imitate photosynthesis)
- E2S-UPPA project : IXIA platform (tomography x-ray imaging, ionic probe, laser ablation)
- ANR projects: DEOSS (organic battery), [DeLi-RedOx](#) (electrode materials), [TAPIR](#) (IR photodetector)
- Aquitaine project: [TAMANOIR](#)

Materials and sustainability

- 3 E2S-UPPA projects: Chair of excellence [MANTA](#) (Marine materials), Challenge MAyDay (Pre-maturation), Mécapeau (impact of pollutants on skin)
- 2 ANR projects:
 - [Picposs](#): Continuous-flow integrated processes for photo-oxygenations with solid-supported sensitizers for the safe and sustainable production of fine chemicals and pharmaceuticals)
 - [Funpolysurf](#): Design of advanced structured functional polymer surfaces from photo-active polymer nanoparticles
- 3 Aquitaine projects: Biocolpic, Fixpin et Aquitgemme (biobased materials)

Functional materials

- H2020 projects:
 - 1 RISE project (*Research & innovation staff exchange*): polymers for ophtalmology
 - 2 Poctefa projects : [FOODYPLAST](#) (food packaging), [REVALTPET](#) | ♻️ (recycling),
- 2 ANR projects: [BIOSCA](#) (Bioinspired oleophobic self-cleaning surfaces for automotive indoor environment), [MACAOs](#) (Morphological control of self-assembled amphiphilic block copolymers through stimuli)
- 1 FUI project: MATIMELEC (MATériaux Innovants pour Meuble Electrique)

Publications

