

Characterization of Materials

« materials characterization/factories of the future »
KETs for Energy and materials characterization

Thematic brokerage workshops

EU Brokerage Event on Kets in Horizon 2020

Strasbourg, 17th October 2017

Who we are : SIAM

- SIAM (**Synthesis, Irradiation & Analysis of Materials**) is a **technological platform** of the University of Namur in Belgium
- <http://platforms.unamur.be/platforms/siam>
- SIAM expertise in **materials characterization** relies on its capability of **combining various SPECTROSCOPIES** (XPS, ToFSIMS & IBA) for offering a global picture of any kind of samples with applications sectors such as glass, polymers, metals, oxydes, powders, micro-electronic, nanotechnology, biomedical, photovoltaic, energy, coatings, automotive...
- In addition, SIAM has several facilities for **FUNCTIONALIZATION** of materials and/or **SYNTHESIS** of thin films by plasma treatments and/or ion implantation.
- Past experience in EU funded projects :
 - FP7 Graphene Flagship Project Nr604391
 - FP7-NMP-2010-SMALL-4 program, project number 263073 (HYMEC)



Our expertise

A unique combination of material characterization techniques :

- **Tandetron Linear Accelerator (ALTAIS)**

- IBA non-destructive and quantitative elemental depth profiles.
- Including H quantitation.
- Typical depth 10nm to 1 μ m
- Micro-probe in 2018 (1x1 μ m² ; 2D elemental mapping)



- **2 XPS and 1 ToF-SIMS**

- Chemical and molecular composition at surfaces
- Chemical mapping (2D) and profiling (3D)
- Depth profiling of polymers (Ar cluster)



- Typical services to *industrial partners*: surface elemental quantification, trace detection, hydrogen quantification, retroengineering, failure problems, quality control, coating characterization, contamination detection, DLC coatings full characterization, defect mapping, cell irradiation,...
- Open for collaboration in call « Factories of the future » (pilot lines for metal additives,...) and « medical technology innovation » and « open innovation test beds » (lightweight, nano-enabled multifunctional composite materials and components)

Contact details

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