

Nanochemistry & Nanoparticles

(Last update: June 1st, 2020)

Description

Nanostructures prepared by wet-chemistry routes can play an important role in numerous technology fields. Optimizing their performances requires a better understanding of their structure at atomic level in relation to their properties, especially under real conditions of use. On the other hand, it is essential to be able to tune their properties in order to optimize their performance. It is thus, necessary to carefully design and synthesize nanostructures of well controlled characteristics (size, shape, crystal structure, chemical composition,...).

In this context, it is necessary to gain an in-depth understanding of the nucleation and growth mechanisms of chemically synthesized nanostructures. In parallel, for a large part of the applications, the integration of individual nano-objects in a macroscopic system is also required. These key points for moving towards new and increasingly complex nanomaterials of optimized or new properties will be discussed in presentations of experimental or theoretical results in this session, which will be organized in partnership with a future GDR proposed by the laboratories MONARIS (Sorbonne University) and LCPNO (INSA Toulouse).

Keywords

wet chemistry; inorganic nanoparticles; nucleation & growth mechanisms; *in-situ*/ *operando* studies; theory

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