S8-3 Synthesis, Processing and Functionalization of Two-dimensional (2D) Nanomaterials

SHORT DESCRIPTION:

The aim of this symposium is to discuss up-to-date status and progress in synthesis, processing and functionalization of 2D nanomaterials from a cross-disciplinary perspective of nanochemistry, nanophysics as well as nanoceramics. It intends to achieve a better understanding of the extraordinary potentials of 2D nanomaterials and their hybrid composites through an active assimilation of state-of-the-art properties and practical application prospects in various fields.

SESSION TOPICS:

1. Synthesis of 2D nanomaterials
2. Colloidal properties and stability of 2D nanomaterials
3. Advanced characterizations of 2D nanomaterials
4. Processing and hybrid functionalization of 2D nanomaterials
5. Self-assembly and nanoarchitectonics using 2D nanomaterials as building blocks
6. Novel design and construction of hetero-structured composites based on 2D nanomaterials
7. Development of functional nanocoatings/films, membranes/separators based on 2D nanomaterials
8. Development of electro- and photocatalysts based on 2D nanomaterials
9. Applications of 2D nanomaterials in electronic, photonic, thermoelectric devices
10. Applications of 2D nanomaterials in energy storage and conversion systems (supercapacitors, batteries, fuel cells, solar cells, etc.)
11. Theoretical exploration of intrinsic/exotic properties of 2D nanomaterials
12. Theoretical forecasting of new/emerging 2D nanomaterials

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