



Symposium U : Carbon-based materials and devices

Scope of the Symposium

This symposium will provide a multidisciplinary forum for the discussion of carbon-based materials, composites and devices. Recent advances on fundamental, technological, design, simulation and applications of carbon-based materials will be covered by this symposium. The main focus will be related but not limited to carbon nanostructures and nanocomposites. Exfoliation methods, pyrolysis, process scalability, conductive inks, transfer methods (wet and dry), synthesis of hybrid materials, nano-functionalization (from graphene to graphite), fabrication of flexible electrochemical devices and applications of carbon-based materials will be contemplated in this forum. Advanced characterization of carbon-based materials and devices at the micro and nanoscale are also welcome to this forum (microscopy, spectroscopy, electrical, electrochemical and mechanical). In summary, the scope of this forum is broad and includes the most recent advances of carbon-based materials (from synthesis to applications).

Abstracts will be solicited in (but not limited to) the following areas

- *Nanocomposites with carbon-based additives*
- *Electrical and electrochemical characterization of carbon-based materials*
- *Nano-functionalization of carbon interfaces*
- *Synthesis of hybrid materials*
- *Synthesis and applications of biocarbons*
- *Flexible and stretchable electrochemical devices*
- *Advanced characterization*
- *Carbon materials for environmental technologies*
- *Energy storage and conversion devices*
- *Mechanical and rheological characterization of carbon-based nanomaterials and nanocomposites*
- *Computational modeling of carbon-based nanomaterials and nanocomposites.*

Tentative list of invited speakers (To be confirmed)

Roland Kdr (*Chalmers University of Technology*) **Thiago R. L. da Paixo** (*University of So Paulo - USP*) **Aldo J. G. Zarbin** (*Federal University of Paran - UFPR*) **Cecilia de Carvalho Castro e Silva** (*Universidade Presbiteriana Mackenzie/MackGrafe*) **Glaura Goulart Silva** (*Federal University of Minas Gerais - UFMG*) **Nicole Raymonde Demarquette** (*Ecole de Technologie Superieure (ETS)*) .

Symposium Organizers

Murilo Santhiago (*CNPEM-LNNano*) **Mathias Strauss** (*CNPEM-LNNano*) **Danilo J. Carastan** (*Universidade Federal do ABC*) .

<https://sbpmat.org.br/18encontro>

XVIII Brazil MRS Meeting