



Symposium P : Characterization of organic and non-organic materials by x-ray source techniques

Scope of the Symposium

Characterization of different type of materials are the subject of study in different areas of knowledge, including physics, mechanical engineering, inorganic, organic, and physical chemistry, etc. Among others, X-ray characterization techniques, such as imaging (topography, microtomography/nanotomography, topo-tomography coherent diffraction imaging, ptycography diffraction contrast imaging, chemical bond contrast imaging) , diffraction (XRD), small angle X-ray scattering (SAXS), spectroscopy (fluorescence - XRF, X-ray absorption spectroscopy - XAS, energy dispersive X-ray spectroscopy - EDS, inelastic X-ray scattering - IXS) are widely accessible for obtaining information about the materials. For example, the porosity of the synthesized materials can be characterized by XRD, microtomography/nanotomography and SAXS, electronic materials, such as SiC and GaN single crystals can be characterized by X-ray topography and resonant IXS can be used to characterize in operando batteries. This symposium aims to bring together researchers and students involved with characterization of materials based on broad spectrum of X-ray characterization techniques.

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

- *X-ray diffraction and X-ray scattering*
- *X-ray spectroscopy (XRF, XAS, EDS IXS) and chemical bond contrast imaging*
- *X-ray Tomography, Microtomography and Nanotomography*
- *Coherent diffraction imaging and Ptycography*
- *Diffraction contrast X-ray imaging, X-ray topography and topo-tomography*
- *Synchrotron X-ray diffraction for materials characterization*

Tentative list of invited speakers (To be confirmed)

Ricardo Tadeu Lopes (*Universidade Federal do Rio de Janeiro*) **Sergei Anatolyevich Paschuk** (*Universidade Tecnológica Federal do Paraná*) **Antonio Brunetti** (*Università degli Studi di Sassari, Sassari (UNISS)*) **Antonio J. Ramirez** (*Manufacturing and Materials Joining Innovation Center - Ma2JIC*) **Beatriz Diaz Moreno** (*Canadian Light Source*) .

Symposium Organizers

Walmor Cardoso Godoi (*Universidade Tecnológica Federal do Paraná*) **Marcelo Antoniassi** (*Universidade Tecnológica Federal do Paraná*) **Keli Fabiana Seidel** (*Universidade Tecnológica Federal do Paraná*) **Marcelo Goncalves Hnnicke** (*Universidade Federal da Integração Latino-Americana*) **Andre Paulo Tschiptschin** (*Universidade de São Paulo*) **Julian Arnaldo Avila Diaz** (*Universidade Estadual Paulista*) **Osvaldo Cintho** (*Universidade Estadual de Ponta Grossa*) **Joo Pedro Oliveira** (*Universidade Nova de Lisboa*) .

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XIX Brazil MRS Meeting