

Symposium B: VIII Brazilian Electroceramics Symposium

Scope of the symposium

Electroceramics is an important inter-disciplinary research area involving mainly physicists, chemists and engineers. Electroceramics is a very attractive area in Materials Science. It is large the number of journals and meetings with publication of many papers with potential technological impact. New materials with outstanding properties and potential technological applications together with old materials with actual technological applications and enhanced properties offer a broad field of research opportunities.

This symposium, organized by the Brazilian-MRS intends to be a forum for all researchers and students (undergraduate, M.Sc., PhD and Pos-Docs) on electroceramics. The state-of-the-art of R&D on electroceramic materials will be focused with reviews of the present knowledge and forecasts for future developments. Emphasis will be put on the opportunities for exchange of experiences and discussions among researchers. Several features of R&D on electroceramics, including novel processing, experimental procedures and technological applications will be considered.

Abstracts will be solicited in the following topics:

- Synthesis and Processing

powder synthesis, thin and thick film processing and characterization, self-supported structures, multilayer structures, heterostructures, nanotechnology, sintering and microstructure development, grain boundary engineering, ceramic and polymer ceramic matrix composites.

- Characterization

dc and ac standard electrical measurements, electrochemical impedance spectroscopy, electrical and magnetic ceramics, ionic-electronic mixed conductors, transport phenomena and diffusion, defects in electroceramics, microstructural analysis by X-ray diffraction, neutron diffraction, electron microscopy, Raman spectroscopy, scanning probe microscopy, etc..

- Applications

dielectrics, ferroelectrics, ferroelectric memories, piezoelectrics, non-lead electroceramics. magnetic ceramics, ceramic superconductors, colossal magnetoresistors, spintronics, sensors and actuators, transducers, varistors, PTC and NTC, electroceramics for solid oxide fuel cells, solid state batteries, ceramic membranes, photoluminescent ceramics, electroceramics in catalysis, dielectrics for microwave applications, etc.
Keyword: Electroceramics

Symposium organizers

Reginaldo Muccillo (IPEN, S. Paulo, SP, Brazil)

José Arana Varela (UNESP, Araraquara, SP, Brazil)

José A. Eiras (UFSCar, S. Carlos, SP, Brazil)

Invited speakers (tentative list)

D. Suvorov (Slovenia)

E. Traversa (Japan)

F. Deganello (Itália)

H. L. Tuller (EUA)
J. A. Kilner (England)
J. T. S. Irvine (Scotland)
P. Vilarinho (Portugal),
R. Freer (England)
V. Esposito (Denmark).

Scientific committee members (tentative list)

D. Z. de Florio (UFABC, Santo André, SP, Brazil)
E. N. S. Muccillo (USP, S. Paulo, SP, Brazil)
F. C. Fonseca (S. Paulo, SP, Brazil)
J. A. Eiras (S. Carlos, SP, Brazil)
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