X Encontro da SBPMat

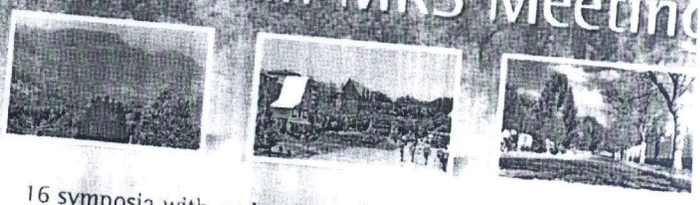
Gramado-RS

25 to 29 | september 2011

SBPMat Brazil-MRS

Brazilian Materials Research Society

X Brazilian MRS Meeting



16 symposia with oral, poster and invited lecture presentations

Plenary lectures

Exhibits

Celebration of 10 years of Brazilian MRS

Conference Details and Registration

All attendees are encouraged to visit the conference website http://www.sbpmat.org.br/x-meeting for further and updated information such as registration, submission of abstracts, important links for traveling (visas, travel agencies) and hotel reservation.

Symposia

A) Magnetic and Superconducting Materials

B) Biodegradable Polymer Materials

C) Electronic Materials

D) Surface Engineering: Fabrication, Characterization, Properties and Applications of Protective Coatings and Modified Surfaces

E) Materials with Negative Properties

F) Nanostructured Functional Materials for Advanced Energy and Environmental Applications

3) Molecular Modeling Materials Science

H) Structure-property Relationship of Advanced Metallic Materials

) Sol-gel Route to Prepare New Inorganic, Hybrid and Multifunctional Materials

) Solidification of Metals and Alloys

) Supramomolecular Organic Materials for Electronic, Photonics and Nanotechnology

Structure-Property Relationship of Ceramic Materials: Theoretical and Experimental Aspects

) Advances and Applications of Electron Microscopy

Prospects for Materials Science with Synchrotron Radiation in Brazil

1st Brazilian Symposium in Friction Stir Welding and Processing

Graphene

ficial Travel Agency: Liga Turismo

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10 years of excellence in the congregation of science and research in materials technology in Brazil

Contact

Secretariat
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Conference Chairs

Paulo F. P. Fichtner - UFRGS - RS
Naira M. Balzaretti - UFRGS - RS

Important Dates

April, 5th - Registrations open
May, 30th - Submissions deadline
June, 13th - Acceptance

Support

UFRGS Universidade Federal do Rio Grande do Sul

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CNPq Conselho Nacional de Desenvolvimento Científico e Tecnológico

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Chemical Force Microscopy with Enzymes: Applications for Detecting Herbicides

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Atomic force microscopy (AFM) has been useful to investigate materials performance, processes, physical and surface properties at the nanometer scale. In addition to the standard AFM, which measures surface topography, many accessories and technologies have been developed to obtain specific additional information. In this group, we shall concentrate on atomic force spectroscopy (AFS), chemical force microscopy (CFM) and computational force microscopy using molecular dynamic (MD), which are modern trends in AFM applied to conducting polymers, biologic materials (proteins) and development of nanobiosensor. AFM has proved to be a useful technique to measure interactions on a molecular level, in special, using CFM, which is used as a tool for chemical discrimination of surface chemical species. In the current study, AFS allowed one to distinguish between nonspecific adhesion and specific interactions (pesticide). We use cantilever biosensors to transduce the recognition event from its receptor-coated surface into a mechanical response. The receptors (enzymes) were covalently anchored to the cantilever (tip surface functionalization).

Keywords: Chemical Force Microscopy with Enzymes: Applications for Detecting Herbicides

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