

REI-2005 will be the 13th international symposium in a series of conferences dedicated to research relating to radiation effects in insulators and non-metallic materials. This meeting is convened every other year, most recently in Gramado - Rio Grande do Sul, BRAZIL, August 31 - September 5, 2003.

We propose that REI-2005 sessions will review recent developments in the following topical areas related to radiation effects in insulators:

- fundamentals, theory and computer simulations
- ion - solid interactions and ion-beam modification
- laser - insulator interactions
- simple and complex oxides
- metal carbide and nitride compounds
- polymers
- nanocomposites and nanostructured materials
- glasses and silica
- swift heavy ion irradiations
- neutron irradiations
- applications (optoelectronics, optics, polymers, biomaterials, nuclear)

In addition, we are intrigued by new developments and opportunities in research areas related to nuclear fuel forms, nuclear waste forms, and components materials for fusion and next generation fission reactors. We propose to have one or more special sessions relating to recent develops regarding (1) the usage of ceramics as so-called inert or non-fertile matrices for nuclear fuels designed to transmute unwanted nuclear materials such as surplus plutonium or highly-radioactive spent nuclear fuel products; (2) advances in ceramics and glasses as matrices for the immobilization and disposal of surplus nuclear materials; (3) and ceramics for next-generation nuclear reactors.