

Special Issue

Interfaces and Thin Layers in Ceramic Composites

Message from the Guest Editor

Ceramic materials are crucial for many industries. They are multiphase polycrystals. Research indicates that the behaviour of multiphase materials depends on the interfaces between the phases. These interfaces have a finite thickness and influence the meso- and macro-performance of the composites. Phenomena in such composites leading to their failure comprise microcracking, coalescence of microcracks, macrocracks, and spallation. These usually lead to rapid failure. If the metallic phase exists, it makes the material more ductile, delaying the failure. A tentative list of the problems to be investigated is given below. Nevertheless, the list is open.

- Interface properties;
- Interface constitutive law;
- Interface forming;
- Experiments on interfaces;
- Microscale numerical models (molecular dynamics, density functional theory);
- Multiscale models;
- Experimental techniques;
- Static and dynamic behaviour of the composites;
- Impact loading;
- Nonlocal methods;
- Phase transformation.

We invite all colleagues to submit a full paper, communication, or a review.

Guest Editor

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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