Special Issue

Mechanical Characterization through Micropillar Compression of Advanced Materials

Message from the Guest Editors

The versatile use of microstructurally designed/architecture materials, like MAX phases, multilayers, ceramic based composites, high entropy alloys, new types of steels, light alloys, 3D-printed materials, among others. However, the structural and engineer applications for advanced materials are often limited due to the lack of predictability of the material failure. Taking them as a role model for engineered materials, there is still a lot of work in terms of further improvements in the structural design of advanced materials. Within this framework, the following experimental questions are addressed in this Special Issue: How can we measure the mechanical properties at the local scale (within grains, phases, small volumes, coatings, etc.) that cannot be measured with conventional testing methods? How can we evaluate the micromechanical properties with high dynamic range and manipulate/grip small specimens for accurate determination of properties? Research articles, review articles and communications relating to micropillar compressions of advanced materials are all invited for this Special Issue.

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Message from the Editor-in-Chief

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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