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Advances in Multi-scale Mechanical Characterization of Materials with Optical Methods

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Message from the Guest Editor

Dear Colleagues,

It is my great pleasure to announce this Special Issue “Advances in Multi-scale Mechanical Characterization of Materials with Optical Methods”, which will appear in *Materials* next year.

Optical Methods (OM) are naturally suited for mechanical characterization of materials in view of their capability to accurately measure displacements, strains and stresses in real time and to gather full field information without altering specimen conditions. OM cover a full-range of wavelengths from X-ray to visible lights and infrared. A definite strength of OM is the possibility of changing measurement scales by properly modulating wave frequencies and setting parameters of experimental setups. The multi-scale ability is fundamental in complex fields like bioengineering, MEMS, high precision metrology, etc.

This Special Issue will focus on the advances in the multi-scale mechanical (statical and dynamical) characterization of materials with optical methods. The aim is to provide a forum on the state-of-the-art and frontier applications of OM for material characterization.



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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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