Special Issue

Stress Analysis in Thin Films and Multilayers Materials

Message from the Guest Editor

Thin films and multilayers typically present high and strongly non-uniform internal stress. Stress-induced degradation of functional thin films and coating systems poses a persistent problem in materials science and technology. The performance, reliability, and durability of material components in micro/opto-electronics applications can be dramatically affected by excessive residual stress levels (compressive or tensile). The study of stress in thin films has congregated many efforts, both from experimental and fundamental points of view, to get a better understanding on how to deal with it and, particularly, how to tailor stresses during deposition and post processing. This Special Issue is devoted to all scientific and analytical aspects related to: -stress evaluation methods and measurement techniques (including in-situ advanced experiments) -stress investigation, tailoring and analysis in thin films and multilayers: influence of the growth parameters on the stress formation -role of interface reactivity and phase transformation on stress Keywords

- stress analysis
- thin films
- multilayers
- interfacial stress

Guest Editor

Dr. Claudia Cancellieri
Swiss Federal Laboratories for Materials Science and Technology, 8600 Dübendorf, Switzerland

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Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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