Special Issue

Current Research in Thin-Film Deposition: From Principles and Technologies to Film Properties and Applications

Message from the Guest Editors

Thin films represent a mature, well-established field that bridges an almost unlimited range of potential applications, including functional coatings, optoelectronics, sensing, energy harvesting and storage, and heterogeneous catalysis. This variety is thanks to the unique properties of these films, which may substantially deviate from their bulk counterparts due to the small thickness, higher surface-to-volume ratio, strong interface interactions with other compounds in multiple device architectures, and internal microstructure. Many of the abovementioned factors depend highly on the deposition technique; for example, the same compound can present rather distinct properties depending on its density, compactness, morphology, crystallinity, microstructure, or doping, all easily tunable by setting specific growth conditions for multiple physical or chemical deposition methods.

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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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