Journal of Nanomaterials

Special Issue on

Nanostructured Surfaces, Coatings, and Films: Fabrication, Characterization, and Application

Call for Papers

Nanotechnology makes it possible to intentionally modify the properties of surfaces and endow them with any desired function. Nanostructured surfaces, coatings, and films have represented important advances in control of wetting, adhesion, and mechanical, thermal, magnetic, electrical, and optical properties and ability to direct cell behavior. A number of promising approaches to fabricate functional micro- and nanostructured surfaces, coatings, and films have been stimulated by opportunities to enhance the properties of surfaces and interfaces via the combination of surface structure, morphology, and physical and chemical properties. Such functional micro- and nanostructured surfaces, coatings, and films are playing an increasingly important part in a broad range of novel applications, such as energy, electronics, photonics, as well as sensor systems, advanced materials, and medical devices.

We invite investigators to contribute original research articles as well as comprehensive review articles that will stimulate the continuing efforts on experimental and theoretical studies in the science, technology, and applications of nanostructured surfaces, coatings, and films. We are particularly interested in interdisciplinary topics describing the scientific and engineering advances in design, fabrication, manipulation, and characterization of innovative nanostructured surfaces with the aim of improving their surface properties and functional performance, as well as new insights on physical principles underlying their properties and enormous potential applications. Potential topics include, but are not limited to:

- Synthesis, fabrication, self-assembly, and processing of nanostructured surfaces, coatings, and films
- Characterization and evaluation of nanostructured surfaces, coatings, and films
- Surface modification, functionalization, and patterning
- Thin film deposition and growth, atomic and electronic structure of surfaces, and surface and interface reactions
- Nanostructured surfaces for control of wetting, adhesion, friction, corrosion, electrical and thermal conductivity, and fluid flow
- The design, fabrication, and application of nanostructured biomimetic surfaces, stimuli-responsive surfaces, self-healing surfaces, and coatings
- Antibacterial and antifouling surfaces and coatings, surfaces and interfaces of biomaterials, and biointerfaces
- Nanostructured surfaces, coatings, and films with new optical properties including antireflection, structural coloration, plasmonics, and surface-enhanced Raman scattering

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Manuscript Due	Friday, 19 July 2013
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