

Special Issue

Friction, Wear and Lubrication of Micro-Patterned Thin Films

Message from the Guest Editor

The surface is the first region of any material and subject which physically acts together with the environment. Changing the surface properties can alter material interaction and response essentially. Thin films can grow on surfaces naturally or be deposited by several methods. Usually, the thickness of a thin film is below 50 µm. Even friction of a counterbody or thermal spraying can lead to a thin film. There are several reasons for deposition of thin films, like increasing the hardness and wear resistance or changing the friction, catalytic, or optic effects. The selected thin film material may send signals to cells or microorganisms. A special thin film material can act as a stimulant for bacteria growth, which may be useful for biomass decomposition. Other thin film materials can prevent inflammation due to antiseptic effect. All of these properties can be further changed by patterning the thin films additionally. Dimples, grooves, and micro-hills of different dimensions change the interaction not only with lubricants and fluids, but the reflection and adsorption of irradiation or adhesion of additives, molecules, and microorganisms.

Guest Editor

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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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