Special Issue

Nanocomposite Thin Film and Multilayers

Message from the Guest Editors

Nanocomposite thin film and multilayers provide extraordinary structural flexibility to manipulate mechanical and functional properties that are sensitive to defect, strain, dimensionality, and interface. For structural materials, nanocomposite coatings may enhance strength and wear resistance, and stability under an extreme environment. Heterostructure interfaces affect dislocation gliding, twin boundary migration, and crack initiation, which play an important role in mechanical property enhancement. For functional materials, heterostructure interfaces allow exploring the strong interplay between lattice, orbital, charge, and spin degrees of freedom, which could create emerging electronic or magnetic states with exciting functionalities. Potential topics include but are not limited to:

- Design, growth, and characterization of nanocomposite thin films and multilayers;
- Metallic-based nanocomposite thin films and structural application;
- Semiconductor thin films and electronic devices;
- Functional oxide thin films and heterostructures;
- Multiscale modeling of thin film growth and performance.

Guest Editors

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Deadline for manuscript submissions

closed (30 April 2022)

Coatings

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.4

mdpi.com/si/64570

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Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.
Coatings is a well-established, peerreviewed, online journal dedicated to the vibrant field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers that make the point on the hottest research topics.

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