



Stress-Strain Analysis and Interface of Thin Solid Films and 2D Material

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Message from the Guest Editors

Stresses and strain produce a significant impact on the performance properties of thin solid films and 2D materials. The stresses are formed in the process of thin film deposition. As a result, thin films and internal nanolayer structures are associated with certain problems. The objective of this Special Issue is to summarize the current knowledge in the field of predicting the formation of internal stresses in several-layers-thin solid films or 2D materials, the methods for measuring them, and their influence on the properties of coatings in various fields of application.

This Special Issue's scope includes: (1) applications and characterizations of thin solid films and 2D materials; (2) stress and strain analysis; (3) experimental or theoretical verification of stress–strain distribution; (4) optimization methods for compensating stress and strain; (5) thin solid film and 2D material deposition processes; (6) fabrication, processing, and properties of devices based upon thin solid films and 2D materials; and (7) mechanical characterization of interface between the coating and the substrate.





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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.

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