



Electrochemically and Electrophoretically Deposited Thin Films and Their Applications

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Message from the Guest Editors

A thin film is a layer of material with thickness ranging from fractions of a nanometer to several micrometers. Thin films play an important role in the development and study of materials with new and unique properties. Advances in thin-film deposition techniques have enabled a wide range of technological breakthroughs in many industrial areas. Among the known methods, the electrochemical and electrophoretic deposition (EPD and ELD) are distinguished by their flexibility of application, the possibility of applying various materials on a complex surface, the low cost of equipment, the ability to obtain films of a given thickness by controlling the deposition parameters and the short timeframe required. The scope of these deposition methods differs significantly – from electrochemical devices, such as fuel cells, batteries, various sensors and MEMS devices, to thermal protective, hardening and decorative coatings, and even biomolecules, such as enzymes and proteins. We invite you to present original papers or reviews on the latest experimental and theoretical developments in the field of electrochemical and electrophoretic deposition of thin-film coatings.

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Special Issue



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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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