



Atomic Layer Deposition of Oxide Thin Films

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Message from the Guest Editors

Atomic layer deposition (ALD) is a promising method since it allows the synthesis of uniform films of various materials on flat, high aspect ratio and 3D surfaces. Furthermore, it is possible to control the thickness of the deposited coatings with high precision. ALD can be applied in wide range of applications, from creation of the individual functional coatings to full thin-film devices fabrication.

The aim of the Special issue is to acquaint scientific community with the main achievements in the field of oxide film formation using the ALD method for various applications.

- Thermal and Plasma-assisted atomic layer deposition;
- Precursors for oxide films deposition;
- Multilayered structures, nanolaminates;
- Effect of ALD conditions on growth rate, chemical and phase composition of deposited films and coatings;
- Surface functionalization;
- Study of functional properties (dielectric, semiconductor, electrochemical, passivation, catalytic etc.) of deposited films;
- Oxide films for microelectronics, electrochromic devices, photovoltaic, Li-ion and Na-ion batteries, solid-state batteries and other applications.





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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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