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Epitaxial Growth and Application of Metallic Oxide Thin Films

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Message from the Guest Editors

Dear Colleagues,

Oxides are abundantly found in nature, encompassing insulators, semiconductors, as well as (good and bad) metals. Of these, metallic films are of particular interest. Epitaxial growth that can control film stoichiometry and thickness, strain, as well as defects serves as a versatile experimental method for engineering material properties. Further, integrating different materials by epitaxial growth could create new physical properties at the boundary of two materials, i.e., at the interface.

This Special Issue aims to present a collection of articles describing recent advances in the epitaxial growth of oxide films using various epitaxy techniques such as molecular beam epitaxy (MBE), pulsed laser deposition (PLD), atomic layer deposition (ALD), and sputtering deposition, and will also provide new results and insights into the physical properties and their application. The topics, with more emphasis on film synthesis and application, cover the theoretical design of novel materials, synthesis and characterization of oxide films, and device development based on metallic thin films.

Specialsue



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