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Thin Films and Semiconductor Heterostructures: From Fundamental to Applications

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Message from the Guest Editor

Semiconductor heterostructures are engineered materials composed of different semiconducting materials that are stacked or layered together to bring unique electronic properties. In addition, the thin-film technology provides an ideal tool for the design of nanostructured interfaces offering novel quantum effects. These structures are designed to combine the favorable properties of multiple semiconductors, enabling the development of high-performance electronic devices. Through the strategic combination of different semiconductors and the manipulation of carrier behavior, these heterostructures play a crucial role in advancing technologies such as optoelectronics, quantum computing, and high-speed electronics.

This Special Issue will compile recent developments in the field of thin films and semiconductor heterostructures. The articles presented in this Special Issue will cover various topics, including advanced semiconductor materials and 2D materials, the optimization of deposition methods, thin-film device fabrication, and device characterization techniques. Topics are open to metal oxide thin film deposition and characterization for the development of applications.



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Special Issue



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Message from the Editor-in-Chief

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