



Structural, Electrical and Optical Properties of Semiconductor Alloys and Their Heterostructures

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

It is our dream to inaugurate new materials platforms to carry out the “on demand” functions that accomplish the novel technological possibilities in the 21st century, such as future computers that can achieve quantum supremacy, ultrasensitive sensors that immediately notify us of tiny environmental changes, supersmart personal wearable electronics, the ultrahigh-speed network that provides an unprecedented enrichment of our lives, and many other items. One of the keys to attaining these technological miracles is a class of semiconductor alloys and their heterostructures beyond silicon, in which the extraordinary effects of quantum mechanics give rise to exotic and often incredible properties. Although the discovery of semiconductors revolutionized computation and information storage and piloted in today’s hundred-billion-dollar electronics industry, research on traditional semiconductor alloys and their heterostructures still has great potential to renovate energy and energy-related technologies, to generate, store, and process qubits, to offer extraordinary advantages for high-speed, low-power electronics, and so on.





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Message from the Editor-in-Chief

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