Special Issue

Carbon Nanomaterial Based Electronic Devices

Message from the Guest Editor

Over the past several years, the development of various novel nanomaterials has been extensively researched for a range of emerging microelectronic technologies and optoelectronic applications. Particularly, new classes of carbon-based low-dimensional nanomaterials in non-conventional device architectures have consistently attracted great attention due to their outstanding electrical and physical characteristics. Significant advances in producing high-purity carbon nanomaterials have been explored to offer remarkable capabilities of more compact electronic systems with minimal feature size and well-controlled defect density of states. Bioinspired wearable sensor electronics based on carbon nanomaterials have also been introduced for conformal applications, due to their environmentally friendly and flexible appearance, including good optoelectronic properties. Therefore, the integration of carbon nanomaterials with printable and flexible platforms has promoted implementation in mechanically compliant and state-of-the-art multi-functional systems. We anticipate that carbon nanomaterials open a facile route to realize new prospects for electronic and optoelectronic applications.

Guest Editor

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