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Special Issue Reprint

Carbon Based Electronic Devices

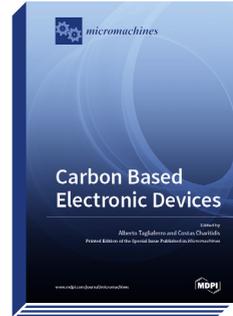
Edited by

Alberto Tagliaferro and Costas Charitidis

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For more than 50 years, silicon has dominated the electronics industry. However, this growth will come to an end, due to resources limitations. Thus, research developments need to focus to alternative materials, with higher performance and better functionality. Current research achievements have indicated that carbon is one of the promising candidates for its exploitation in the electronics industry. Whereas the physical properties of graphite and diamond have been investigated for many years, the potential for electronic applications of other allotropes of carbon (fullerenes, carbon nanotubes, carbon nanofibres, carbon films, carbon balls and beads, carbon fibers, etc), has only been appreciated relatively recently. Carbon-based materials offer a number of exciting possibilities for new applications of electronic devices, due to their unique thermal and electrical properties. However, the success of carbon-based electronics depends on the rapid progress of the fabrication, doping and manipulation techniques. In this Special Issue, we focus on both insights and advancements in carbon-based electronics. We will also cover various topics ranging from synthesis, functionalisation, and characterisation of carbon-based materials, for their use in electronic devices, including advanced manufacturing techniques, such as 3D printing, ink-jet printing, spray-gun technique, etc.



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