



Field Emission from Graphene and other Nanostructures

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Message from the Guest Editor

The extraction of electrons from a conducting material by an external electric field, known as field emission (FE), is an interesting quantum–mechanical phenomenon, which has many practical applications. High-current and long-lifetime electron sources based on FE, so-called cold-cathodes, have been exploited in high-power and microwave vacuum electronic devices, flat panel displays, scanning and transmission electron microscopy, electron-beam lithography, electric propulsion systems, etc.

The availability in the past two decades of new nanostructured materials and improved nano-patterning techniques has considerably boosted the research in FE materials and devices. These new cold cathodes include carbon nanotubes, graphene, nanodiamonds, semiconducting or metallic nanoparticles and nanowires, nanocones, etc.

This Special Issue, “Field Emission from Graphene and other Nanostructures” of Applied Sciences includes both fundamental studies and applications. It aims at covering all recent experimental and theoretical work on electron field emission from carbon-based and other nanostructured materials.





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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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