Special Issue

Graphene-Based Materials for Supercapacitor Applications

Message from the Guest Editor

Graphene-based materials are promising options for use in supercapacitors and other energy storage devices as they have properties like a tunable surface area, high electrical conductivity, and good chemical stability and mechanical behavior. Graphene itself has outstanding material properties, i.e., it is the thinnest material and possesses the highest conductivity, great strength, light absorption and supercapacitor properties due to its large relative surface area. Graphene-based supercapacitors are advantageous due to their lightweight nature, elastic properties and mechanical strength. It has been revealed that a graphene-based supercapacitor can store almost as much energy as lithium-ion batteries, and they can be charged and discharged in seconds, maintaining these functionalities over ten-thousand charging cycles. This Special Issue will address ways to employ and functionalize graphene to achieve advanced supercapacitors and provide evidence and proof of the properties and capabilities of these devices.

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As the premier open access journal dedicated to experimental organic chemistry, and now in its 25th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts and novel materials. Pushing the boundaries of the discipline, we invite papers on multidisciplinary topics bridging biochemistry, biophysics and materials science, as well as timely reviews and topical issues on cutting edge fields in all these areas.

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