



# Porous Carbon and Carbonaceous Materials for Energy Conversion and Storage

Carbon and carbonaceous materials including morphologically diverse structures such as zerodimensional graphene quantum dots, one dimensional nanotubes, two dimensional graphene and three-dimensional polymer monoliths are gaining a great deal of attention due to their unique and tunable electronic and structural properties. These materials can be used on their own (e.g., supercapacitor electrodes) or as supporting scaffolds for other functional materials (e.g., catalysts) for energy conversion and storage. Creation of pores has led to the significant advancement of associated technologies as well as substantial enhancement in performance of the corresponding devices.

This *JMR* Focus Issue will present a broad range of topics covering the synthesis, characterization and applications of porous carbon and carbonaceous materials. Both original research articles and reviews dedicated to the demonstration of the versatile roles of these materials in energy conversion and storage will be considered.

Contributed articles are sought in the following areas:

- Synthesis and mechanical/electronic/morphological characterizations of porous carbon and carbonaceous materials
- Theoretical studies illustrating the mechanism of interfacial interactions or reactions between materials and other phases
- Applications of porous carbon and carbonaceous materials (including their composites) in:
  - Electrochemical/photonic catalysis
  - Photoelectrochemical water splitting
  - Fuel cells
  - Solar cells
  - Supercapacitors
  - Batteries
  - Other carbon-related fields
- Short reviews of porous carbon and carbonaceous materials preparation and the progress of their applications in energy conversion and storage

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To be considered for this issue, new and previously unpublished results significant to the development of this field should be presented. The manuscripts must be submitted via the *JMR* electronic submission system by **October 1, 2017.** Manuscripts submitted after this deadline will not be considered for the issue due to time constraints on the review process. Please select "Focus issue: *Porous Carbon and Carbonaceous Materials for Energy Conversion and Storage*" as the manuscript type. **Note our manuscript submission minimum length of 6000 words, with a maximum of 6-8 figures. Review articles must be pre-approved by proposal to the Editor-in-Chief. The proposal form and author instructions may be found at www.mrs.org/jmr-instructions. All manuscripts will be reviewed in a normal but expedited fashion. Papers submitted by the deadline and subsequently accepted will be published in the Focus Issue. Other manuscripts that are acceptable but cannot be included in the issue will be scheduled for publication in a subsequent issue of** *JMR***.** 





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