



## Crystallization and Growth of Graphite

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**closed (19 February 2021)**

### Message from the Guest Editors

While carbon constitutes only about 0.032 mass % of the Earth's lithosphere (crust and outer mantle), its uses in modern technology span many fields—from graphite-reinforced polymers used in the manufacture of expensive sports cars, competition bicycles and motorbikes, or high-performance sailboats to graphitic cast iron for wind turbine parts, engine blocks, and cooking pans. Graphite is also a natural mineral. Understanding how to produce certain forms of graphite and graphite arrays from nature, such as nanotubes and conical shapes, can have scientific and technological paybacks. In addition, graphene can be obtained from graphite through exfoliation methods, as it is a basic layer of the graphite crystal. It can be used as a nanofiller in polymer composites with enhanced electrical, mechanical, and thermal properties. Hence, whether we consider natural graphite formed from a metamorphic fluid or cast-iron graphite crystallized from an iron–carbon melt, the need to understand its crystallization and growth transcends disciplines in science and technology.





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## Message from the Editor-in-Chief

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