Foreword

Fullerenes and carbon nanotubes have been extensively researched in the past two decades owing to their fascinating structures and properties—the perfect embodiments of zero-dimensional (0-D) and one-dimensional (1-D) nanostructures. Diamond with various morphologies has also attracted immense attention due to its superb thermal, mechanical, and electrical properties. With the discovery in 2004 of single-layer graphene—the perfect embodiment of two-dimensional (2-D) nanostructures—research on carbon-based electronic materials has seen another exponential growth. For the first time, the Journal of Electronic Materials is publishing a special section on carbon-based electronics to provide a focused forum for researchers to exchange ideas.

This special section includes papers on material growth, characterization, processing, nanostructures, and devices based on carbon-based electronic materials. Many of the papers were also presented at the 50th Electronic Materials Conference (EMC), held in June 2008 at the University of California, Santa Barbara. The conference has become a lively annual forum for the discussion of research on carbon-based electronic materials.

Publication of this special section was made possible through the efforts of the authors, reviewers, editors, and journal staff members, and we thank them for their invaluable contributions.

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