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## Preface

The fullerene family represents a new molecular form of pure carbon, which has proven to be of remarkable interest for both its chemical and physical properties. Following the serendipitous discovery of  $C_{60}$  (a quasi-spherical molecule with dimensions of  $\sim 1$  nm) and the production of bulk crystalline samples of fullerenes from arc-processed carbon, research on the solid-state properties of fullerene-based nanostructures and nanonetworks has proceeded at an exhilarating pace. Novel carbon materials like the nanotubes, the buckyonions and the endohedral metallofullerenes have been subsequently discovered, while fullerene derivatives show a plethora of interesting properties, ranging from superconductivity to ferromagnetism and promise future applications in batteries, transistors, solar cells and sensors among others. The present volume contains contributions from both theorists and experimentalists and attempts to highlight some of the interdisciplinary issues, presently at the forefront of fullerene research. I hope the reader will benefit from the range of topics covered in this volume and find the issues stimulating and possibly able to generate new ideas and approaches to these fascinating materials.

I warmly thank all the authors who enthusiastically contributed their outstanding work for this volume.

Brighton, January 2004

Kosmas Prassides

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