

Preface

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The intent of this issue of *Il Nuovo Cimento Colloquia* is to highlight the breadth and range of the research activities that have been presented at Nanoforum 2012 VIII edition held in Rome on September 24–26, 2012.

The Nanoforum events are designed to offer a forum for the exchange of information on the latest progress in the exploiting field of nanotechnology. In addition to bringing together researchers involved in diverse R&D activities related to the “nano” area, Nanoforum also endeavours to gather experts from industry. In doing so, Nanoforum provides a platform for researchers to discover new research opportunities, to identify the requirements for continued advancement in their field and to overcome the technological challenges related to nanomaterials production and applications. Emphasis is given to monitor progresses, to evaluate tendencies, to present innovative techniques and sophisticated strategies for materials growth and characterization at the nano scale.

The papers published in this issue present an overview of some significant aspects of the nanotechnologies presented at Nanoforum 2012, covering current trends and developments in both basic and applied research.

Topics range from the chemistry and physics of the synthesis/manufacturing processes, to characterization methodologies and to the engineering of nanomaterials for devices and bio-inspired applications.

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