

Preface

This volume contains selected papers presented at GraphITA (L'Aquila Italy May 15–18, 2011) a multidisciplinary and intersectorial European conference/workshop on synthesis, characterization and technological exploitation of Graphene.

In the latest years graphene based research has witnessed a tremendous explosion. This two dimensional “dream” material has come into the main spotlight of fundamental and applied research in diverse nano-science fields, but surprisingly rapidly, it has also attracted the interest of major stakeholders in the private sector. The technological exploitation of graphene can be considered to be based on four fundamental interconnected wide topics: growth and synthesis methods, nano-structuring and tailoring of graphene properties, structural and physical characterization, and device design and applications. GraphITA focused its sessions, and this volume presents selected contributions, on such topics.

The event was jointly organized by two Italian institutions: the Department of Physics University of L'Aquila and the CNR-IMM (Consiglio Nazionale delle Ricerche, Istituto per la Microelettronica e Microsistemi) of Bologna. The conference has been held under the auspices of major scientific Italian and European “stakeholders”: first of all INFN (Istituto Nazionale di Fisica Nucleare) that sponsored and hosted the event at the worldwide renowned Gran Sasso Laboratory (Assergi, L'Aquila), and COST (European Cooperation in Science and Technology) one of the longest-running European instruments supporting cooperation among scientists and researchers across the Europe.

The event mission was to merge scientist carrying out their research on Graphene. Theorists and experimentalists as well as researcher from academia and the private sector, early stage researchers, enthusiastic beginners as like as very much experienced researchers in the field, had the chance to get together in a very friendly and efficiently run three-day-full-immersion-event with top leading scientist in graphene (among them Prof. Konstantin Novoselov Nobel prize in Physics 2010). The event was, scientifically speaking, a “blast”. With more than 180 participants from 22 different countries, it could boast overall a number of twenty four among sponsors and legal sponsors. The workshop, run on a very tight breathtaking single session schedule, beside 18 invited speakers, and 10 keynote

speakers, gave the contributors the chance to present their results during oral or (very lively) poster sessions. The quality of presentations was generally acknowledged of very high level, and a lively discussion took place after each talk. Despite the heavy scientific program, the atmosphere was relaxed and informal.

After a first selection on the basis of the response of the audience, 35 papers were finally submitted for publication. All the submitted and preliminary accepted papers were reviewed mainly by the members of an International Advisory Committee, in line with the quality standards of peer-review process of Springer. Papers accepted were thoroughly reviewed taking into account originality and scientific excellence, as well compliance with the main topic of the conference, the referees and editors finally accepted 28 papers. All participants deemed this event as a great success. The event succeeded through the efforts of many people. Special thanks are due to the whole staff of volunteers of students of the physics department of the University of L'Aquila (Patrizia De Marco, Stefano Prezioso, Valentina Grossi, Antonina Monaco, Federico Bisti, Silvia Grande, Daniela Di Felice, Cesare Tresca, Matteo Cialone, Francesco Paparella, Laura De Marzi, Alessio Pozzi, Maurizio Donarelli, Francesco Perrozzi, Valentina Sacchetti, Alessia Perilli, Ivan De Bernardinis, Luca Giancaterini, Giuseppe D'Adamo, Salvatore Croce, Demetrio Cavicchia, Francesco Gizzarelli, Mattia Iannella, Gaetano Campanella) and to people of the CNR-IMM of Bologna (Luca Ortolani, Rita Rizzoli, Giulio Paolo Veronese and Cristian Degli Esposti Boschi). As Editors, we are very grateful to all the members of the International Advisory Committee, as well as other anonymous referees, for their valuable contribution to the review procedure.

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The Editors and Chairs of GraphITA

Vittorio Morandi
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