

Guest Editors Preface

The 34-th Annual Conference of the Italian Association of Crystallography (AIC) was held in Rome from 26 to 29 September 2004.

This special volume of the Crystal Research and Technology is devoted to the collection of papers presented at the Italian Crystal Growth Symposium held during the AIC Annual Conference in Rome. The Symposium provided an interdisciplinary forum in a stimulating environment for an interesting exchange of results among scientists of different areas of crystal growth. 45 contributions, distributed among oral (9) and poster (36) presentations were presented to the Symposium and almost all of them were submitted for publication after review in this issue. The standard of the presentations and posters was very high, showing the enthusiasm of the participants for their subject.

The “Italian Crystal Growth-2004” proceedings are a proof of the vitality of the AIC’s growing up Crystal Growth Section, which intends to promote the crystal growth science among young researchers and to avoid the modern trend to an extreme specialisation of the growth process leading to a progressive loss of the fundamental concepts of this scientific area. More than 65% of the contributions were presented by young researchers demonstrating again the success of these aims. Moreover, several contributions came from industrial researchers whose presence stimulates new research fields to the university counterparts.

This volume contains 34 selected reports which were grouped into four sections: nanocrystal growth, epitaxial layers and thin films, device growth and characterisation, bulk crystal growth and characterisation. The preparation and characterisation of epitaxial films, multilayers and nanocrystals was addressed to a variety of materials from Si, to III-V and II-VI semiconductor compounds. Furthermore growth and characterisation of devices were presented, mostly on solar cells applications based on different compounds. The bulk section included Si, CdTe, along with contributions on magnetic compounds.

Following the previous Proceedings published in 1979, 1983, 1988, 1995 and 1999, the 2004 Proceedings constitute an overview of the crystal growth activities in Italy at the beginning of the third millennium. By publishing the proceeding as a special volume of a recognised scientific journal devoted to crystal growth, the Guest Editors really hope to provide the international readers with all the necessary information to appreciate the content of this volume and to stimulate them to establish new contacts with Italian Scientists.

By analysing the evolution of the contributions to the Symposium during the last ten years we can observe the emergence of new research groups beside the confirmed presence of traditional schools. Also research topics evolved, with an increasing presence of thin film growth with respect to bulk materials. This process is mainly driven by the industrial sponsorships to the research.

The Guest Editors wish to thank the referees for their valuable contribution to keep high the scientific level of the manuscripts and they wish to express their appreciation to Prof. W. Neumann, Chief Editor of Crystal Research and Technology and to Mr. H. Kleessen, Editor’s Assistant.

The Guest Editors are highly grateful to Prof. Paola Spadon, AIC president, for the generous support of the AIC to the present publication. They wish to thank also LPE Epitaxial Technology for the large contribution which enabled to partially cover the cost of publication of these proceedings.

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