$\begin{array}{c} Proceedings\ of\ the\\ IX\ International\ Conference\ on\ Ion\ Implantation\\ and\ Other\ Applications\ of\ Ions\ and\ Electrons\\ ION\ 2012 \end{array}$

Kazimierz Dolny, Poland, June 25–28, 2012

Editors of the Proceedings: Marcin Turek and Jerzy Żuk

WARSAW

POLISH ACADEMY OF SCIENCES INSTITUTE OF PHYSICS

The Conference was organized by:

Maria Curie-Skłodowska University, Lublin in cooperation with Lublin University of Technology and Wrocław University of Technology

Chairmen:

Dariusz Mączka — Honorary Chairman Jerzy Żuk — Chairman, Maria Curie-Skłodowska University, Lublin Paweł Żukowski — Lublin University of Technology Jerzy Zdanowski — Wrocław University of Technology

International Scientific Committee:

V.M. Anishchik (Belarus) R.L. Boxman (Israel) R. Hurley (Northern Ireland) J. Jagielski (Poland) F.F. Komarov (Belarus) Z.W. Kowalski (Poland) F. Nickel (Germany) A.D. Pogrebnjak (Ukraine) L. Pranevičius (Lithuania) B. Rajchel (Poland) W. Skorupa (Germany) B. Słowiński (Poland) L. Thomé (France) A. Turos (Poland) Z. Werner (Poland) K. Wieteska (Poland)

Organizing Committee:

J. Filiks (Secretary) M. Kulik A. Markowski M. Turek K. Pyszniak A. Droździel

Preface

The papers included in this volume of Acta Physica Polonica A are the contributions to the IXth International Conference on Ion Implantation and Other Applications of Ions and Electrons — ION 2012, held in Kazimierz Dolny, Poland, June 25–28, 2012. The Conference was organized by Maria Curie-Skłodowska University, Lublin in cooperation with the Universities of Technology of Lublin and Wrocław, and the Polish Physical Society.

Over 80 participants from 12 countries had an opportunity to meet in a friendly atmosphere in the beautiful historic town Kazimierz Dolny, with an aim to exchange experience in the field of ion implantation and application of electron beams and plasma. The idea of the biennial ION Conferences has been stimulated by the permanent interest in ion beam methods, which have started from fundamental studies in ion and plasma physics and established themselves as standard techniques for material modification and characterization. A wide range of topics were addressed during the ION 2012 Conference including *inter alia* ion, cluster and electron interactions with solids, ion beam and plasma-assisted formation and modification of semiconductors, metals, insulators and polymers, synthesis of nanocrystallites by ion implantation, ion beam analysis, structural, optical and electrical investigations of implanted materials, mass spectrometry and its applications, new developments in ion and electron techniques.

All together, 30 oral and 55 poster contributions were presented during the ION 2012 Conference. The diversity of topics was a great advantage for the Conference participants, since it offered new approaches of solving scientific and technological problems. This character of the ION 2012 Conference is reflected in the presented volume.

We wish to thank Dr. Wolfgang Skorupa and Ms. Denise Reichel for giving a traditional organ concerto for the conference participants in the Sandomierz Cathedral. We all enjoyed the evening with classical music in historic surroundings. Special thanks are due to all those who have contributed to the organization of the ION 2012 Conference. The Conference was sponsored by the Polish Ministry of Science and Higher Education.

Marcin Turek, Jerzy Żuk Institute of Physics Maria Curie-Skłodowska University