

Proceedings of the X International Conference
on Ion Implantation and other Applications
of Ions and Electrons — ION 2014

Kazimierz Dolny, Poland, June 23–26, 2014

Editors of the Proceedings:

Marcin Turek, Jerzy Żuk

WARSAW 2015

POLISH ACADEMY OF SCIENCES
INSTITUTE OF PHYSICS

Chairmen:

Dariusz Mączka — Honorary Chairman

Jerzy Żuk — chairman, Maria Curie-Skłodowska University

Paweł Żukowski — Lublin University of Technology

Jerzy Zdanowski — Wrocław University of Technology

International Scientific Committee:

V.M. Anishchik (Belarus)

R. Hurley (Northern Ireland)

F.F. Komarov (Belarus)

F. Nickel (Germany)

L. Pranevičius (Lithuania)

W. Skorupa (Germany)

L. Thomé (France)

Z. Werner (Poland)

R.L. Boxman (Israel)

J. Jagielski (Poland)

Z.W. Kowalski (Poland)

A.D. Pogrebnjak (Ukraine)

B. Rajchel (Poland)

B. Słowiński (Poland)

A. Turowski (Poland)

K. Wieteska (Poland)

Organizing Committee:

J. Filiks (Secretary)

M. Turek

K. Pyszniak

T. Kołtunowicz

P. Budzyński

A. Markowski

A. Drożdżel

Preface

The X International Conference on Ion Implantation and Other Applications of Ions and Electrons (ION 2014) was held in Kazimierz Dolny, Poland from 23 to 26 June, 2014. 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. This series of biennial meetings has been devoted to application of ion beams for modification and analysis of subsurface layers of semiconductors, metals, insulators and polymers. Ion implantation is a powerful technique to change material properties in a controllable way. It all started from the development of electromagnetic isotope separators during the Manhattan project. Their construction allowed the formation of isotopically pure ion beams in ion implanters. The doping of semiconductors to fabricate electronic devices has been for many years a pushing force for improvements in ion beam technology and further establishing of ion beam engineering.

Over 80 participants attended the ION 2014 Conference in Kazimierz Dolny. During the conference sessions 12 invited talks and 16 oral contributions were given, as well as 70 posters were presented, focused on specialised areas of research. The dominant theme of the ION 2014 Conference was formation and modification of thin films using ion technologies. Detailed topics of the papers presented in this volume include, to name a few: applying of ion beams to improve mechanical properties of multicomponent coatings or to change magnetic anisotropy of thin nanocomposite layers, and investigating the response of wide band-gap semiconductors to ion irradiation.

We would like to thank all the authors and referees for their efforts. We wish to cordially thank Dr. Wolfgang Skorupa for giving our traditional organ concert for the conference participants in the newly renovated Kazimierz Dolny Fara church. Many special thanks are due to Mr. Janusz Filiks and all those who have contributed to the organization of the ION 2014 Conference.

Editors: Marcin Turek, Jerzy Żuk
Institute of Physics
Maria Curie-Skłodowska University
Lublin, Poland