

Proceedings of the 40th “Jaszowiec”
International School and Conference
on the Physics of Semiconductors

Krynica-Zdrój, Poland, June 25 — July 1, 2011

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The Organizing Committee highly acknowledges the financial support from the Ministry of Science and Higher Education.

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Preface

This issue contains some of the papers presented at the 40th “Jaszowiec” International School and Conference on the Physics of Semiconductors, which took place in Krynica-Zdrój, Poland, on June 25 — July 1, 2011. This traditional meeting of Polish and international semiconductor community has been organized annually by several Polish scientific institutions since 1970. The last event was organized jointly by the Institute of Physics of the Polish Academy of Sciences, the Faculty of Physics of University of Warsaw (Institute of Experimental Physics, Institute of Theoretical Physics), the Institute of High Pressure Physics of the Polish Academy of Sciences, the Committee on Physics of the Polish Academy of Sciences, and Foundation *Pro Physica*.

The School and Conference were attended by 266 people, including 106 students and 23 invited speakers. The program included 4 three-hour long tutorial lectures, 21 invited talks, and 194 contributed (oral and poster) presentations devoted to almost all research fields in the semiconductor physics. The topics covered in the invited talks included transport in graphene, ferromagnetism in semiconductors, optical control of spin in quantum dots and defect centers, growth of GaN structures, theory of topological insulators, theory of fractional quantum Hall effect, and various topics related to semiconductor devices. The tutorial talks during the School were devoted to semiconductor epitaxy, quantum dot physics, simulation of devices, and engineering of GaN-based nanostructures.

This volume contains 2 invited papers followed by 43 contributed ones that have been ordered according to the following topics: (1) graphene and carbon nanotubes, (2) quantum wells, (3) quantum dots, (4) nitrides and ZnO, (5) THz physics, (6) various materials and phenomena, impurities.

Organizers of the School and Conference in 2011 would like to acknowledge the financial support from the Ministry of Science and Higher Education, the Polish Academy of Sciences, University of Warsaw, the U.S. Army Forward Element Command-Atlantic, the U.S. Department of the Navy, Office of Naval Research Global, and from the European Regional Development Fund projects POIG 01.01.02-00-108/09 and POIG.01.01.02-00-008/08.

We invite all the researchers in the fields related to semiconductor physics to present their achievements during the future “Jaszowiec” conferences in Krynica-Zdrój. Please visit the conference website (www.ifpan.edu.pl/jaszowiec) for information on previous and upcoming events.

Czesław Skierbiszewski (*Chairman*)
Łukasz Cywiński (*Secretary*)