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Jan Dorosz
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Contents

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Michał Żelechower, Silesian University of Technology (Poland)

2 Optical Networks II
Andrzej Zając, Białystok University of Technology (Poland)

3 Optoelectronic Sensors
Ryszard S. Romaniuk, Warsaw University of Technology (Poland)

4 Photonic, Nonlinear, and Active Optical Fibers
Jan Dorosz, Białystok University of Technology (Poland)

Introduction
Optical Fibers and Their Applications, Białystok-Białowieża 2011

The Optical Fibers and Their Applications series of conferences are a kind of a forum of national science in this branch of photonics. The conference is organized every year and a half by major optical fiber technology and application centers located in Białystok - at Białystok University of Technology; in Lublin at Maria Curie-Skłodowska University, and the Technical University of Lublin. The conference belongs to a bigger circle of national conferences on optoelectronics, optics, photonics, sensors, and laser technology which are under a general patronage of professional community organizations such as the Polish Ceramic Society, the Photonics Society of Poland, the Polish Optoelectronics Committee, and the Section of Optoelectronics in the Committee of Electronics and Telecommunications.

The XIII Conference on Optical Fibers and Their Applications was held 26–29 January 2011, and opened at the Electrical Engineering Faculty of Białystok University of Technology. The conference continued in Białowieża, the capital of the largest European Primeval Forest National Park. The conferences of this series have been organized since 1976 from the beginning in the Jabłonna Village Palace near Warsaw, and then every other year conversely in Białowieża (by Białystok University of Technology, Prof. Jan Dorosz, with emphasis on applications, especially non-telecom ones) and in Krasnobród (by UMCS Lublin, Dr. Jan Wójcik, Prof. J. Rayss, with emphasis on technology and telecom applications). The first conference in Białowieża that focused on non-telecommunication application of optical fibers was held in 1982. During this period the conferences in Lublin and then Krasnobród were more focused on technology and metrology of optical fibers supplementing the application and construction topics covered in Białowieża. The Optical Fibers and Their Applications conference series has been organized in this country for more than 30 years. It was initiated by the late Professors J. Groszkowski, A. Smoliński, A. Waksmundzki, M. Pluta, and B. Paszkowski. The conferences have always gathered the entire national group of optical fiber, as well as optoelectronics experts and a large number of international guests.

The XIII Conference was opened by Prof. W. Woliński in the presence of the Rector of Białystok University of Technology. The national expertise in optical fibers was gathered during the recent years around several big organizations, some of them with international roots: Section of Optoelectronics, Committee of Electronics and Telecommunications, Polish Academy of Sciences; Polish Committee of Optoelectronics, Association of Polish Electrical Engineers; the former Polish Chapter of SPIE. (The latter organization registered in this country as a society was transformed in 2008 to the Photonics Society of Poland.) These organizations cooperate with IEEE Poland Section and LEOS Chapter, Section of Optics by Polish Physical Society, and Polish Ceramic Society.

During the conference's opening ceremony, Prof. J. Dorosz reminded everyone about the history of the Białowieża conferences. The national experts of guided wave, laser, and semiconductor optoelectronics meeting in Krasnobród, Białowieża, and Świnoujście (Laser Technology Symposium) managed to integrate their activities in the frame of numerable optoelectronics research programs carried out during these years. These were programs: national, central, departmental, priority, university, and recently also European realized with a number of international partners. The realizations of these programs led to numerable scientific and technical achievements, and were underlying factors for establishing a number of photonic firms in this country.

The XIII Conference gathered over 80 participants, with over 60 papers in oral and poster sessions. The biggest groups of papers originated from such university centers active in optoelectronics as: Silesian University of Technology in Gliwice, Białystok, Warsaw and Lublin, as well as UMCS in Lublin. The conference's topics covered were: materials for optoelectronics – in particular materials for optical fiber technology, fabrication of optical fibers, components and sub-assemblies for optoelectronics, metrology of optical fibers, metrology of optoelectronic components and devices, applications of optical fibers, and education in optoelectronics and photonics. The plenary papers that were presented touched on current problems in optoelectronics.

The technological sessions of the conference presented the works from three main national centers where optical fibers are pulled. These are Faculty of Chemistry, University of Maria Curie Skłodowska in Lublin; Faculty of Electrical Engineering at Białystok University of Technology, and Institute of Electronic Materials Technology in Warsaw. A number of research centers, both in this country and international, use these optical fibers for optical fiber sensors and photonic instrumentation devices. A large group of applications concerned optical fibers filled or impregnated with liquid crystals, which are highly nonlinear optical substances, much more nonlinear than glasses. This group of papers originated from the laboratories at Warsaw and Wrocław Universities of Technology.

The conference organizers provided very favorable participation conditions for Ph.D. and M.Sc. students, who participated in the symposium in a large number. The majority of the papers were presented by young researchers, which supports the belief that this branch of technology is vital and promising for future development.

The Editors would like to thank Dr. Maciej Zajkowski from Białystok University of Technology for his devoted help as a Chair of the Organization Committee of the XIII Conference on Optical Fibers and Their Applications.

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