

## 4<sup>th</sup> Polish Optical Conference (PKO 2015)

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**Abstract**—The current issue of the Photonics Letters of Poland contains 7 selected papers presented during the 4<sup>th</sup> Polish Optical Conference, which was held from June 28<sup>th</sup> to July 2<sup>nd</sup> 2015 in Legnica, Poland. The remaining 3 papers included in the issue are regular contributions.

The overall goal of the Polish Optical Conference series is to provide a platform that will facilitate integration of the entire Polish optical community, provide a forum for presenting the most recent research results, establishing contacts leading to future collaborations. The last of the series took place in Legnica from June 28<sup>th</sup> till July 2<sup>nd</sup> 2015 and followed the three previous ones held in Sandomierz in 2013, in Międzyzdroje in 2011 and in Będlewo in 2009. Although the Polish Optical Conference is organized under the auspices of the Optics Section of the Polish Physical Society, it is expected to gather researchers from engineering and industry as well. It has always been the intention of the organizers to attract participants from as many branches of optical sciences as possible, starting from basic research and ending with the applications of photonics in different fields of technology and industry.

In 2015, the program of the Polish Optical Conference comprised 15 invited talks covering various aspects of optical sciences. In addition, 28 talks were contributed mainly by young scientists, and 42 posters presented. This large number of contributions from many research institutions in Poland indicates the steady progress of the conference.

In this issue of the Photonics Letters of Poland we include 7 papers that were presented during the 4<sup>th</sup> Polish Optical Conference. They only partially reflect the broad scope of the conference, which covered quantum and non-

linear optics, optics and technology of lasers and other sources of coherent radiation, optoelectronics, fiber optics and optical integrated systems, medical optics, optical spectroscopy and metrology, as well as novel optical materials.

The first paper (Łapiński *et al.*) describes a laser based method for production of molecular sieves in metal foils for applications in bioengineering. The second one (Sarzyński *et al.*) is also devoted to laser material processing and concerns marking glass objects with color ceramics. The contribution by Napierała *et al.* is devoted to fiber technology; presenting a novel approach for increasing fiber link capacity by using multicore fiber. The contribution by Bieg *et al.* is a theoretical study of light propagation in hot plasma – a possible method for plasma diagnostics in e.g. tokomaks. The paper by Moszczyński and Walczak is a numerical study of a specific liquid crystal cell with the photoconductive polymer (PP) layer. The last two papers are devoted to laser spectroscopy. The contribution by Ciągła *et al.* describes how by a proper choice of ultrashort laser pulse characteristics one can influence excitation efficiency in organic molecules. The last paper by Kowzan *et al.* deals with a novel method for fast measurements of absorption spectra of samples with extremely small extinction coefficients.

This editorial is a good opportunity to thank all the members of the Scientific Committee for their efforts in assuring high scientific level of the conference. Also, we would like to express our gratitude to all participants of the meeting. We believe that this format of the Polish Optical Conference stimulates an exchange of ideas between researchers working on various aspects of optical science. We are looking forward to your participation in the upcoming 5<sup>th</sup> Polish Optical Conference in 2017.

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