

'The Photonics Letters of Poland' a new peer reviewed Internet publication of the Photonics Society of Poland

Ryszard S. Romaniuk*

*Faculty of Electronics and Information Technologies, Warsaw University of Technology
Nowowiejska 12, 00-667 Warszawa*

Received January 5, 2009; accepted March 9, 2009; published March 31, 2009

Abstract— The global scientific publications market, especially in technical sciences, has been subject, during the last years, to an essential reconfiguration. It has witnessed the biggest changes ever for several decades. These changes embrace: a considerable increase in the number of journals of the global impact, emerging of new research branches and accompanying, relevant journals (biophotonics, THz technology, metamaterials, optics of negative refraction), a fast 'internetization' of journals, with all consequences of this process (leading in the near future to the confinement of the role of a pure text and classical figures in favor of dynamic multimedia presentations of the research results), and a complete change of bibliometric tools measuring the objective value of the publications. The paper tries to define the PSP Photonics Letters of Poland in a wider context of the virtual journal market and the accessibility of research results in the global network.

The consequences of the changes in the publications market of professional journals introduced by the Internet are irreversible. The market of strictly scientific publications resigns irretrievably from the static evaluation of the value of published work, as well as from the paper versions of the journal issues. These processes go independently on the strength of the sentiments of classical, analog publishers and authors. To stop the remaining doubts, one can say that the costs will ultimately decide. Digital publications are an order of magnitude cheaper than analog ones. Trying to keep pace with these revolutionary changes of publication methods and tools, ruling the new market, the Photonics Society of Poland – PSP, [<http://photonics.pl>] has launched, since the second half of 2008, a new, peer reviewed, research and engineering, Internet based, fast publishing journal "Photonics Letters of Poland" [photonics.pl/PLP]. The questions associated with such an action are: paid versus unpaid access, whether a research result is a marketable commodity or rather, whether knowledge is a product, (either scientific or technical), academia – industry cooperation results, spin-off business generation in photonics, etc.

I. THE JOURNAL

The journal "The Photonics Letters of Poland" is a publication issued only in the Internet, without any paper copy. According to the PSP estimate, only such a

publication initiative for a journal, issued digitally, very versatile, and published extremely fast, has a real chance of success on a very dense, difficult and competitive global publishing market. During the initial period, the Photonics Letters of Poland journal will be issued as a quarterly, next bimonthly and monthly. A biweekly issue is also not excluded, as the ultimate aim. The publication time for an Author will be, however, much shorter. The first issues of "The Photonics Letters of Poland" will be published in 2009 embracing all the quarters of the year. The journal aspires to the high class of peer reviewed, fast, short, letter type publications, functioning not very long in the Internet, under a general name of rapid Internet publications. Our models are publications on electronics and photonics issued by professional associations of global reach like SPIE, IEEE, OSA, for example Electronics Letters, Photonics Technology Letters, Optics Letters, etc. The journal accepts for publication short papers, not extending over three pages of text, prepared according to a two-column format analogous to the one published by IEEE Transactions. The submitted work should have the structure of a full journal paper.

A. Topical Area

The journal covers the topical areas of optics, optoelectronics and photonics in the following aspects: fundamental and applied research, physics and technical, materials, components, devices, circuits, systems, technology, design, construction, manufacturing, and metrology. In particular, the above aspects concern the following areas of the photonics: theory and experiment, quantum, photon physics, ultra-low power, atto-watt, single photon, ultrafast, femto- and atto-second, high power, high intensity, tera-watt and peta-watt, nonlinear, integrated and planar as well as volume, information, image, lighting, photovoltaic, semiconductor, laser, terahertz – THz, IR, UV, synchrotron, roentgen, free electron lasers, optical fiber, communications, sensors and instrumentation, biomedical, chemical and environmental, industrial and engineering, synthesis and processing of materials, and educational. The journal also embraces all kinds of experiments of interaction of a

* E-mail: rrom@ise.pw.edu.pl

photon beam with matter, as well as the usage of photonics in high energy physics experiments and astroparticle physics and astronomy. A very current subject, embraced by the journal, is the synthesis of metamaterials for photonics and, in particular, research on meta-glasses and their applications. This research leads to negative refraction optics.

The journal also covers neighboring regions to the above mentioned ones. "Photonics Letters of Poland" accepts all work concerning the construction of research and application systems with all its many aspects: metrological, astronomical, chemical, biomedical, agricultural, food-processing, environmental (monitoring), mechatronic, electronic, automational and robotical, nano- and microsystemic, and everywhere the photonics is a functional part of a bigger unity. The functions played by photonics may embrace sensors, metrology, data transmission channels, EM wave energy delivery, and other types of functional components and subassemblies, etc. One can mention the following exemplary systems: application specific 3D imaging devices, integrated processors of the type – lab on chip, lab on fiber (capillary), MOEMS, MEMS, THz imaging, transmission with quantum coding, optical gauges of time, frequency and distance, devices made of metamaterials and photonic crystals, etc.

B. Paper Acceptance

The journal accepts for publication only original, fast, i.e. very current, research and technical work reports, prepared in the form of a short, fully structured paper. In the above sense, the main area of the journal activity is applied science and technology, as well as developments of practical engineering. Despite the initial organization of the journal as quarterly, the basic intention of the PSP as journal publisher, and the editorial board of Photonics Letters of Poland, is to provide the Authors with a very fast path to a peer reviewed, high quality, Internet publication. The aim is to reach two weeks from paper submission to publication on-line. This would be possible only via complete automation of submission, refereeing and paper verification processes. After the acceptance, the work would be immediately, without delay, published on-line on the webpage of the journal. Each paper would be checked obligatory by two reviewers. Apart from classical text with figures, the journal intends to publish accompanying auxiliary multimedia files in the form of additional still and animated graphics, audio comments, and video recordings of the experiment. Possibly, in the future, the text form would be only a formal addition to the full multimedia record of the work to be published.

II. INTERNET PUBLICATION MARKET

The launching of a completely new publication, in a very attractive field, is an extremely challenging task now, and is usually the result of a long series of negotiations on the

local, national level as well as international and global levels. Locally in Poland, the agreements concerned social, professional organizations, research institutions, universities, industry, government and business, as well as key persons, representing this very dynamically developing branch of science and technology, which is now photonics. The consulted national organizations, relevant to the publication of "Photonics Letters of Poland", embraced among others: the Polish Academy of Sciences (PAN), Committee of Electronics and Telecommunications, Section of Optoelectronics; Polish Committee of Optoelectronics; Polish Physical Society, Section of Optics; and a number of other professional organizations of topical relevance.

On the international level, the problem of consultation of such a big initiative, like launching a new journal of a global extent, is much more complex than locally. There have been carried out, by the PSP, intense and advanced consultations with SPIE – The International Society for Optical Engineering [spie.org]. The reason of proposed cooperation concerning the journal have been close, friendly, and profitable, spanning over more than two decades, and effective relations between SPIE Poland Chapter [spie.pl] and SPIE. The PSP is a direct continuator of SPIE Poland Chapter. The participation of SPIE in launching the journal gives it immediately a global character. The guarantee of success of this large undertaking lies in the cooperation between PSP and SPIE, being its great, positive record.

III. PSP – SPIE COOPERATION

The guarantee of success for such a complex, mutual PSP - SPIE initiative is a great product of cooperation between a local and global photonics society, spanning over a quarter of a century. The results of this cooperation are: publishing of over 200 volumes of Proc. SPIE from the international technical conferences on photonics organized in Poland, cooperation on publishing the next 100 volumes of Proc. SPIE from the international conferences organized elsewhere, common organization, with SPIE, in 2005, in Warsaw, of an International Congress on Optics and Optoelectronics, which gathered around 1000 professional participants, etc.

The decision of launching "The Photonics Letters of Poland" is supported, on the international level, by a number of developmental processes concerning the photonics in the global scale. The photonics is subject to further dynamic development, much faster than other related branches of the industry. This industrial and related research development trend is supported by some powerful application pillars. These pillars are: optical communications, reborn with only marginal losses after a serious crisis a few years ago, precision metrology offered by lasers and interferometry, continuously extending applications of lasers, imaging techniques in

medicine, and sensors and integrated instrumental systems of MOEMS type. Another observed process is maturing reconstruction and integration of the research and technical professional community of photonics on the global scale. A particular layer of this integration is a different view now on the cooperation, and its strongly synergetic role, between societies acting locally and globally. A perfect example of this is profitable, long-lasting cooperation between PSP and SPIE.

IV. AIMS OF PSP

Local aims of PSP concerning the launching of the Photonics Letters of Poland are: building a strong, international societal journal; making more active the local engineering community of photonics; strengthening the ties of this community with analogous local communities in Europe; globalization of the local activities; increasing the cooperation with industry and national economy; tracing and participation in the development of the current research direction of photonics; promotion of these directions locally; stimulation of applied research in photonics for the local economy.

One of the main motivations to launch our own journal was the recent transformation from SPIE Poland Chapter to the Photonics Society of Poland. SPIE Poland Chapter has acted for the last twenty years as a legally registered technical professional society. Transformation of the name was approved by the administrative court in 2007/08. The society is highly evaluated by the local professional community due to its intense activities on behalf of its members. Locally, the major aim of the Photonics Letters of Poland journal is to open a possibility of fast, peer reviewed publications with a wide international indexing. A number of authors of valuable work tend to publish the results locally, assuming a proper level of the journal and global indexing. Despite global access to the journal it is treated by authors as a local one. The idea is to build a global journal, in the future, by launching a network of combined local editions.

PSP intends to introduce a new journal, in close cooperation with SPIE and the national research and technical community of photonics, to be indexed by the ISI-Thomson and other key indexes and scientific publication databases like: Scopus, Scholar, Scirus, Scitopia, etc. The intentions of PSP as the main publisher of "The Photonics Letters of Poland" is close cooperation in Poland with the publishers of the other two important, strictly photonics journals, which are indexed by the ISI-Thomson. These are: *Optica Applicata* - published by the Faculty of Physics, Wrocław University of Technology and *Opto-Electronics Review* published by the Military University of Technology, Versita and Springer. Cooperation and usage of synergy in the

publishing activities of all of these journals may be based on utilizing the new specificity of a fast Internet publication to strengthen archival journals publishing the work results in extenso. These journals are also subject to evolution towards Internet based publications. They publish much longer papers, usually being a full documentation of concrete experiments, construction of new apparatus, thus, this kind of publication will never be so fast as a publication of the 'letter' type on-line. The aims of PSP concerning the European and global photonics communities, related to launching the Photonics Letters are: strengthening and extending the cooperation with SPIE, and considerable internationalization of this cooperation, building a strong international photonic journal of clearly European character and, simultaneously, of very global impact.

V. EDITORIAL BOARD

The invited Editorial Board of "The Photonics Letters of Poland" has members from Poland and international ones (International Advisory Board). The Board consists of the leaders of large research and technical laboratories in photonics of considerable scientific impact on the global scale. The individual persons declared active participation in launching and building the new journal. Each person is responsible for a particular area of photonics, usually associated with the specialty of the represented laboratory.

VI. INITIAL STEPS

The Photonics Society of Poland and the Editorial Board of "The Photonics Letters of Poland" have recently made a number of initial steps towards the practical launching of the journal. The initial make-up of the Editorial Board has been decided. The first web page of the journal has been launched containing the basic technical information. This page will be transformed to a full submission and on-line data base machine, of the type analogous to MySPIE, eXplore, OpticsInfoBase. A call for papers has been announced for the first issues of the journal. There are continued further consultations, domestic and international concerning the launching and maintaining of the journal, and building of its unique identity.

VII. INVITATION

The Photonics Society of Poland encourages prospective Authors to publish the results of their research and technical work in the new, peer reviewed, rapid Internet journal 'Photonics Letters of Poland'.

References

- [1] SPIE [spie.org]; SPIE Poland Chapter [spie.pl]; PSP [photonics.pl]; Photonics Letters of Poland [photonics.pl/PLP]
- [2] T.R.Wolinski, R.S.Romaniuk, Photonics Society of Poland established, Bulletin of the Polish Academy of Sciences – Technical Sciences **56**, 2 (2008), pp. 197-202
- [3] R.S.Romaniuk, Photonics Letters – a new, peer reviewed Internet publication, Bulletin of the Polish Academy of Sciences – Technical Sciences, **56**, 3 (2008), pp. 301-303