

Call for Papers

Announcing an Issue of the **IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS** on **Metamaterials**

Submission Deadline: June 5, 2009

IEEE Journal of Selected Topics in Quantum Electronics invites manuscript submissions in the area of metamaterials, transformation optics and applications. Electromagnetic metamaterials is a rapidly developing field with remarkable potential for enabling new ways of controlling light from macro- to nano-scale. The purpose of this issue of JSTQE is to highlight the recent progress and trends in design, modeling, fabrication and applications of metamaterials. Broad technical areas include (but are not limited to):

- Novel metamaterials designs
- Low-loss metamaterials: new approaches and fabrication techniques
- Modeling and optimization tools
- Broadband and tunable metamaterials
- Optical nanocircuits
- Light manipulation via transformation optics
- Cloaking
- Light concentrators and electromagnetic field enhancement with metamaterials
- Positive, negative, and near-zero guided wave structures
- Super- and Hyper-lenses
- Novel applications

The Guest Editors for this issue are **Vladimir Shalaev**, Purdue University, USA; **Natalia Litchinitser**, State University of New York at Buffalo, USA; **Thomas Klar**, Technical University of Ilmenau, Germany; **Nader Engheta**, University of Pennsylvania, USA, **Ross McPhedran**, University of Sydney, Australia, **Ekaterina Shamonina**, University of Erlangen-Nuremberg, Germany.

The deadline for submission of manuscripts is **June 5, 2009**; publication is scheduled for **March/April of 2010**.

Online Submission is Mandatory at: <http://mc.manuscriptcentral.com/pho-ieee>. Please select the Journal of Selected Topics Of Quantum Electronics Journal from the drop down menu.

For inquiries please contact:

Chin Tan-yan

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For all papers published in *JSTQE*, there are voluntary page charges of \$110.00 per page for each page up to eight pages. Invited papers can be twelve pages and Contributed papers should be 8 pages in length before overlength page charges of \$220.00 per page are levied. The length of each paper is estimated when it is received. Authors of papers that appear to be overlength are notified and given the option to shorten the paper. Additional charges will apply if color figures are required.

The following supporting documents are required during manuscript submission:

- 1) .doc manuscript (double columned, 12 pages for an Invited Paper. Contributed paper should be double columned, 8 pages in length.) Bios of ALL authors are mandatory, photos are optional. You may find the Tools for Authors link useful: <http://www.ieee.org/web/publications/authors/transjnl/index.html>
- 2) Completed the IEEE Copyright Form. Copy and paste the link below: <http://www.ieee.org/web/publications/rights/copyrightmain.html>
- 3) Completed Color Agreement/decline form.. (Please email c.tan-yan@ieee.org to request for this form.)
- 4) .doc list of ALL Authors FULL Contact information as stated below: Last name (Family name): /First name: Suffix (Dr/Prof./Ms./Mr):/Affiliation:/Dept:/Address:/Telephone:/Fax:/Email:/Alternative Email:

Call for Papers

Announcing an Issue of the **IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS** on **Biophotonics** – Part 1

Submission Deadline: July 1, 2009

The Biophotonics field is an emerging biomedical technology that has opened up new horizons for extensive transfer of applicable state-of-the-art techniques coming from the area of quantum electronics, lasers and electro-optics to the life sciences and medicine. Recently, minimally invasive, cost-effective and rapid biophotonics techniques have been developed as potential alternatives to conventional medical methods for diagnostics, monitoring and treatment of a variety of diseases. *IEEE Journal of Selected Topics in Quantum Electronics* invites manuscript submissions in the area of biophotonics. The purpose of this issue of JSTQE is to highlight the recent progress and trends in developing of novel biophotonics technologies. Broad technical areas include (but are not limited to):

- **Advanced biophotonics diagnostic methods and systems**
 - Ultrahigh-resolution biophotonics imaging including cellular/intracellular, molecular, 3D endoscopic, photoacoustic, photothermal, diffuse, improved OCT, confocal and multi-photon *in-vivo* bioimaging
 - Spectroscopy-based diagnostics including fluorescence, Raman, elastic scattering, evanescent-wave, near-/mid-IR spectroscopy
 - Novel biophotonics sensing techniques
 - Multi-modal biophotonics diagnostics
- **Progress in minimally-invasive biophotonics therapeutic techniques**
 - Photodynamic cancer therapy
 - Ultrashort pulse laser tissue treatment
 - Precise laser tissue manipulation/ablation in ophthalmology, dentistry, dermatology, cardiology and neurosurgery
 - Novel low-level laser therapeutic techniques and light-tissue-interaction mechanisms at cellular/intracellular level
 - Light-assisted neuron stimulation/growth and cellular/tissue repair
- **Novel approaches in nanobiophotonics**
 - Breaking the diffraction barrier in biophotonics nanoimaging
 - Cellular/intracellular nanobiosensors
 - Nanoparticle-enhanced biophotonics diagnostics/therapeutics
 - Novel nanobiomaterials engineered for nanobiophotonics applications

- Biocompatibility and phototoxicity of novel nanobiomaterials
- **Development of novel laser, fiber-optic and electro-optic biophotonics tools and devices**

The Guest Editors for this issue are **Ilko Ilev**, U.S. Food and Drug Administration, USA; **Lihong Wang**, Washington University in St. Louis, USA; **Stephen Boppert**, University of Illinois, USA; **Stefan Andersson-Engels**, Lund University Medical Laser Centre, Sweden; and **Beop-Min Kim**, Yonsei University, Korea.

The deadline for submission of manuscripts is July 1, 2009; publication is scheduled for May/June of 2010.

Online Submission is Mandatory at: <http://mc.manuscriptcentral.com/pho-ieee> Please select the Journal of Selected Topics Of Quantum Electronics Journal from the drop down menu. Contributed papers should be up to eight pages in length, and invited up to 12 pages. Beyond that, a charge of \$220 per page apply. All submissions will be reviewed in accordance with the normal procedures of the Journal.

For inquiries for this Special Issue, please contact:
JSTQE Editorial Office - Chin Tan-yan
IEEE PHOTONICS SOCIETY, 445 Hoes Lane,
Piscataway, NJ 08854, U.S.A.
Phone: 732-465-5813, Email: c.tan-yan@ieee.org

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- 2) Completed the IEEE Copyright Form. Copy and paste the link below: <http://www.ieee.org/web/publications/rights/copyrightmain.html>
- 3) Completed Color Agreement/decline form. Please email c.tan-yan@ieee.org to request for this form.
- 4) .doc list of ALL Authors FULL Contact information as stated below: Last name (Family name): /First name: Suffix (Dr/Prof./Ms./Mr):/Affiliation:/ Dept: / Address:/ Telephone:/ Fax:/ Email:/ Alternative Email:

Call for Papers

Announcing an Issue of the **IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS** on **Biophotonics** – Part 2

Submission Deadline: August 1, 2009

The Biophotonics field is an emerging biomedical technology that has opened up new horizons for extensive transfer of applicable state-of-the-art techniques coming from the area of quantum electronics, laser and electro-optics to the life sciences and medicine. Recently, minimally invasive, cost-effective and rapid biophotonics techniques have been developed as potential alternatives to conventional medical methods for diagnostics, monitoring and treatment of a variety of diseases. *IEEE Journal of Selected Topics in Quantum Electronics* invites manuscript submissions in the area of biophotonics. The purpose of this issue of JSTQE is to highlight the recent progress and trends in developing of novel biophotonics technologies. Broad technical areas include (but are not limited to):

- **Advanced biophotonics diagnostic methods and systems**
 - Ultrahigh-resolution biophotonics imaging including cellular/intracellular, molecular, 3D endoscopic, translational clinical, photoacoustic, photothermal, diffuse, improved OCT, confocal and multi-photon *in-vivo* bioimaging
 - Spectroscopy-based diagnostics including fluorescence, Raman, elastic scattering, evanescent-wave, near-/mid-IR spectroscopy
 - Novel biophotonics sensing techniques
 - Multi-modal biophotonics diagnostics
- **Progress in minimally-invasive biophotonics therapeutic techniques**
 - Photodynamic cancer therapy
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 - Precise laser tissue manipulation/ablation in ophthalmology, dentistry, dermatology, cardiology and neurosurgery
 - Novel low-level laser therapeutic techniques and light-tissue-interaction mechanisms at cellular/intracellular level
 - Light-assisted neuron stimulation/growth and cellular/tissue repair
- **Novel approaches in nanobiophotonics**
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 - Cellular/intracellular nanobiosensors
 - Nanoparticle-enhanced biophotonics diagnostics/therapeutics
 - Novel nanobiomaterials engineered for nanobiophotonics applications
 - Biocompatibility and phototoxicity of novel nanobiomaterials

- Development of novel laser, fiber-optic and electro-optic biophotonics tools and devices

The Guest Editors for this issue are **Ilko Ilev**, U.S. Food and Drug Administration, USA; **Lihong Wang**, Washington University in St. Louis, USA; **Stephen Boppart**, University of Illinois, USA; **Stefan Andersson-Engels**, Lund University Medical Laser Centre, Sweden; and **Beop-Min Kim**, Yonsei University, Korea.

Because of the significant interest in the Biophotonics topics, the Editorial Board is planning to publish the IEEE JSTQE issue on Biophotonics in two parts. The deadline for submission of manuscripts for IEEE JSTQE issue on Biophotonics 2 is **August 1, 2009**; publication is scheduled for July/August of 2010.

Online Submission is Mandatory at: <http://mc.manuscriptcentral.com/pho-ieee> Please select the Journal of Selected Topics Of Quantum Electronics Journal from the drop down menu. Contributed papers should be up to eight pages in length, and invited up to 12 pages. Beyond that, a charge of \$220 per page apply. All submissions will be reviewed in accordance with the normal procedures of the Journal.

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- 3) Completed Color Agreement/decline form. Please email c.tan-yan@ieee.org to request for this form.
- 4) .doc list of ALL Authors FULL Contact information as stated below:
Last name (Family name): /First name: Suffix (Dr/Prof./Ms./Mr):/Affiliation:/ Dept: / Address:/ Telephone:/ Fax:/ Email:/ Alternative Email:

IEEE Sensors Journal

Special Issue on Photonic Crystal-Based Sensors

The IEEE Sensors Journal announces a special issue on photonic crystal-based sensors in 2009. The well-established field of optical fibers has recently experienced a revival triggered by the demonstration of fibers based on innovative structures and/or materials. One of the major players among these new fibers are photonic crystal fibers (PCFs), also known by the more general name of micro-structured optical fibers (MOFs). The fabrication of these new structured waveguides has enabled the realization of fibers with unprecedented characteristics opening new research areas, both fundamental and applied.

PCFs combine the main advantages of standard optical fibers (the ability to operate over long interrogation distances, complete immunity to electro magnetic interference, intrinsic safety, potential low cost due mass production, small volume and weight, possibility of distributed sensing etc) with new and exciting possibilities created by the presence of thin and long air channels that run all the way along the length of the fiber. Not only can their optical properties be tailored much more widely, but also their acoustic and mechanical properties. Incorporating passive and active materials within the holes allows them to interact strongly with the optical mode, opening up new possibilities for monolithic and all-fiber chemical, biological and others sensors. Tapering and ratings in the fibers extend these possibilities.

This special issue on photonic crystal-based sensors will contribute toward encapsulating new exciting developments in this multidisciplinary and active research field. Relevant topics related with sensing applications include, but are not limited by:

- Chemical, Biological, Biochemical, Environmental, Medical, Refractive index and Gas Sensors
- Pressure, Temperature, Strain, Vibration, Electric and Magnetic fields, Voltage and Electric Current sensors
- Sensors based on gratings in PCF (FBG and LPG)
- Tailoring the fiber acoustic and mechanical properties
- Integration of passive and active materials within the fiber

- Design of new fibers
- Fiber fabrication: practical realization of new structured fibers
- Non-silica PCFs: soft-glasses and polymers PCFs
- Solving practical problems: splicing, filling, lateral access etc.
- PCF tapering and coating
- Nano-photonics: PCFs with nano-materials or nano-features

We invite the community working with sensing applications of photonic crystal and microstructured optical fibers to submit their latest research results as high quality journal paper manuscripts. Contributed and invited papers shall undergo the standard IEEE Sensors Journal peer review process. All manuscripts must be submitted on-line, via the IEEE Manuscript Central™, see <http://mc.manuscriptcentral.com/sensors>. Upon submission, authors should select the "2009 Photonic Crystal-Based Sensors Special Issue" Manuscript Type instead of "Regular Paper" as well as indicate, in the Author Comments section, that it is intended for the special issue. Authors for this Special Issue are encouraged to suggest names of potential reviewers for their manuscripts in the space provided for these recommendations in Manuscript Central. For manuscript preparation and submission, please follow the guidelines in the Information for Authors at the IEEE Sensors Journal web page <http://www.ieee.org/sensors/sj>

Deadlines:

- Manuscript Submission: June, 2009
- Notification of Acceptance: September, 2009
- Final Manuscript due: October, 2009
- Tentative publication date: January, 2010

Guest Editors:

- Prof. **C.M.B. Cordeiro**, State Univ. of Campinas, cmcb@ifp.unicamp.br
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