

PROGRESS IN BIOMEDICAL OPTICS AND IMAGING

Vol. 13, No. 38

Tenth International Conference on
***Photonics and Imaging in Biology
and Medicine (PIBM 2011)***

Qingming Luo
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Editors

2–5 November 2011
Wuhan, China

Sponsored and Organized by
Huazhong University of Science and Technology (China)
Wuhan National Laboratory for Optoelectronics (China)
Britton Chance Center for Biomedical Photonics (China)

Co-organized by
Key Laboratory of Biomedical Photonics, Ministry of Education (China)
Virtual Research Center of Biomedical Photonics, Ministry of Education (China)
Hubei Bioinformatics and Molecular Imaging Key Laboratory (China)

Technical Cosponsors
Biomedical Photonics Committee of Chinese Optical Society
Journal of Innovative Optical Health Sciences

Published by
SPIE

Volume 8329

Proceedings of SPIE, 1605-7422, v. 8329

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

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Author(s), "Title of Paper," in *Tenth International Conference on Photonics and Imaging in Biology and Medicine (PIBM 2011)*, edited by Qingming Luo, Lihong V. Wang, Valery V. Tuchin, Proceedings of SPIE Vol. 8329 (SPIE, Bellingham, WA, 2012) Article CID Number.

ISSN 1605-7422

ISBN 9780819489869

Published by

SPIE

P.O. Box 10, Bellingham, Washington 98227-0010 USA

Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445

SPIE.org

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Introduction

The Tenth International Conference on Photonics and Imaging in Biology and Medicine (PIBM 2011) combined with the Fourth International Photonics and Optoelectronics Meetings (POEM 2011) was held 2–5 November at Wuhan Science & Technology Convention & Exhibition Center, Wuhan, P.R. China. The present volume contains the texts of a selection from the invited talks delivered at the conference and the poster presentations.

PIBM is the largest series international biomedical photonics conference in Asia. It was initially held at HUST bi-yearly since 1999. After being held three times in Wuhan (1999, 2001, and 2003), it was hosted once in Tianjin (2005), and then, back to Wuhan yearly since 2006. PIBM is designed to bring together scientists, engineers and clinical researchers from a variety of disciplines engaged in applying optical science, photonics, and imaging technologies to problems in biology and medicine. The scope of this conference ranges from basic research to instrumentation engineering, to biological and clinical studies. It is recognized as one of the largest and most comprehensive international conferences in China, and represents the highest level of worldwide research in this field. In past years, a volume of 53 papers was published as conference proceedings by Institute of Physics (IOP), a volume of 75 papers was published by World Scientific Publishing Company, and seven proceedings volumes with a total of 672 papers were published by SPIE. The PIBM proceedings published in the years 1999, 2001, 2003, 2005, 2006, 2008, 2009 and 2010 were indexed by EI Compendex; PIBM proceedings published in 1999, 2001, 2003, 2005, 2006, and 2007 were indexed by SCI. Some excellent papers were recommended to publish in the peer-reviewed *Journal of Innovative Optical Health Sciences* (JIOHS). More and more young researchers presented and exchanged their innovative ideas on this friendly and professional platform, which made PIBM an unforgettable annual meeting in Wuhan.

PIBM has been successfully combined with POEM (Photonics and OptoElectronics Meetings) for three years. This year, PIBM was again combined with POEM, and the Eighth Optics Valley of China International Optoelectronics Exposition and Forum (OVC Expo 2011). PIBM attracted distinguished scholars in biomedical photonics and imaging from all over the world, such as United States, Russia, Australia, Canada, Sweden, Saudi Arabia and China. Thirty-two invited presentations, four oral presentations, and 52 posters were presented at the conference.

The major topics covered at the conference and presented in this volume include Photonic Therapeutics, Diagnostics and Instrumentation, Tissue Optics and Laser Tissue Interaction, Biomedical Spectroscopy and Microscopy, Multimodal and Hybrid Biomedical Imaging, and Optical Molecular Imaging. The

conference elected three best student paper awards which were given to the participant students whose posters were recognized excellent and attended competition in oral presentations. The evaluation was carried out by the present program committee members. The conference received 104 submitted abstracts. This volume includes a selection of 33 excellent papers.

The Conference Secretariat and Local Organizing Committee deserve great appreciation in creating a smoothly run and productive conference with comprehensive, instructive lectures and innovative work presented by posters. The faculties and students from Britton Chance Center for Biomedical Photonics were dedicated in the reception and service during the conference. It is a pleasure to thank all of them for their hard work. We are also thankful for the financial support from the 111 Project (B07038), Science Fund for Creative Research Group of China (61121004), and the organizing and coordinating help from Wuhan National Laboratory for Optoelectronics and Huazhong University of Science and Technology. Finally, we would like to thank all the authors for their contributions to PIBM 2011, and all the members of the Committees for their cooperation and time spent reviewing submissions.

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Valery V. Tuchin