

Fifth International Conference on

Photonics and Imaging in Biology and Medicine

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Editors

1–3 September 2006
Wuhan, China

Organized by

Britton Chance Center for Biomedical Photonics (China) • Wuhan National Laboratory for Optoelectronics (China) • Key Laboratory of Biomedical Photonics, Ministry of Education (China) Hubei Bioinformatics and Molecular Imaging Key Laboratory (China) • Huazhong University of Science and Technology (China) • Bio-Optics and Laser Medicine Committee of Chinese Optical Society (China) • Saratov State University (Russia) • SPIE Russia Chapter (Russia)

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Published by

SPIE—The International Society for Optical Engineering

Volume 6534



The International Society
for Optical Engineering

Proceedings of SPIE—The International Society for Optical Engineering, 9780819466563, v. 6534

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Author(s), "Title of Paper," in *Fifth International Conference on Photonics and Imaging in Biology and Medicine*, edited by Qingming Luo, Lihong V. Wang, Valery V. Tuchin, Min Gu, Proceedings of SPIE Vol. 6534 (SPIE, Bellingham, WA, 2007) Article CID Number.

ISSN 1605-7422
ISBN 9780819466563

Published by
SPIE—The International Society for Optical Engineering
P.O. Box 10, Bellingham, Washington 98227-0010 USA
Telephone 1 360/676-3290 (Pacific Time) · Fax 1 360/647-1445
<http://www.spie.org>

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Printed in the United States of America.

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Pagination: Proceedings of SPIE follow an e-First publication model, with papers published first online and then in print and on CD-ROM. Papers are published as they are submitted and meet publication criteria. A unique, consistent, permanent citation identifier (CID) number is assigned to each article at the time of the first publication. Utilization of CIDs allows articles to be fully citable as soon they are published online, and connects the same identifier to all online, print, and electronic versions of the publication. SPIE uses a six-digit CID article numbering system in which:

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Introduction

The International Conference on Photonics and Imaging in Biology and Medicine (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 meeting ranges from basic research to instrumentation engineering, to biological and clinical studies. The common thread is ultimate application, or immediate relevance, to problems in biology and medicine. The meeting has afforded attendees the opportunity to interact one-on-one with presenters. Multiple poster sessions have allowed for lively discussions about the latest research.

PIBM is the largest serial international biomedical photonics conference in Asia. It was first held at HUST in 1999. Since then, PIBM has been held biyearly, twice at Wuhan (2001, 2003) and once at Tianjin (2005). From 2006 forward, it will be held annually. PIBM has attracted distinguished scholars in biomedical photonics and imaging from all over the world, including Asia, Europe, America, Australia, and Africa.

The Fifth PIBM and exhibition was held concurrently with the first Russian-Chinese Workshop on Biophotonics and Biomedical Optics, September 1–3, 2006, at Wuhan National Laboratory for Optoelectronics, Huazhong University of Science and Technology (HUST), Wuhan, China. It contained five main topics:

- Tissue Optics and Diffuse Optical Imaging
- Optical Molecular Imaging
- Multiphoton Microscopy in Biomedical Sciences
- Photonic Therapeutics, Diagnostics and Instrumentations
- Multimodal and Hybrid Biomedical Imaging.

The Russian-Chinese Workshop on Biophotonics and Biomedical Optics (BBO) was established in 2006 within the framework of the Russian-Chinese collaborative program created by the Russian Foundation for Basic Research (RFBR) and National Natural Science Foundation of China. The main goal of the workshop is to discuss recent developments and applications of laser and optical technologies in medicine and biology and to involve junior researchers and students of both countries, Russia and P. R. China, in the field of advanced biophotonics and biomedical optics. The focus of the workshop was the discussion of fundamentals and general approaches of description of coherent, low-coherent, polarized, and spatially and temporally modulated light interactions with tissues and cells *in vitro* and *in vivo*. On this basis the variety of laser and optical technologies for medical diagnostics, therapy, surgery, and light dosimetry were discussed. It is important that a few collaborative groups from Russia, P. R. China and other countries have presented their papers. There were

totally 30 attendees: 15 from Russia and 15 from China with about 20 students and young researchers from both countries. We are planning to organize the next Workshop in Russia in 2007 on the campus of Saratov State University.

For both PIBM and BBO about 175 participants from China, Russia, USA, Canada, Australia, and Finland, including experts and students, communicated their excellent work at the conference with 31 invited presentations, 6 oral presentations, and 110 posters.

It is a great pleasure and privilege for the chairs of PIBM and BBO to thank all of the authors for their contributions to PIBM 2006.

The organizers of PIBM and BBO are grateful to all of the sponsoring organizations and programs that supported this meeting very effectively: SPIE Russia Chapter, personally to executive director Edmund Akopov; National Natural Science Foundation of China; Wuhan National Laboratory for Optoelectronics; and Russian Foundation for Basic Research, for their financial support.

We would like to thank Hua Shi and Jin Su for their help in preparation of the manuscripts, as well as Natalia Kharish and Hua Shi for their help in organizing of the Russian-Chinese Workshop.

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