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Optical Communication Systems and Networking

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Editors

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Contents

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Introduction

The 4th International Photonics and Optoelectronics Meetings (POEM 2011) combined with the 10th International Conference on Photonics and Imaging in Biology and Medicine (PIBM 2011) was held during 2–5 November 2011 at Wuhan Science & Technology Convention & Exhibition Center, Wuhan, P.R. China. This volume contains manuscripts of a selection from the invited talks delivered at the conference and the poster presentations.

The POEM is an international conference of broad scale and multidiscipline, which is extended over a large area of optoelectronics, initiated by WNLO. Aimed at giving full play to the industrial advantage of Wuhan Optics Valley of China, building an independent brand for our international conference, facilitating the regional economic development, promoting the academic reputation and international status of WNL), domestic and internationally renowned academic institutes and organizations in the area of optoelectronics were invited to provide professional support. On such an international platform, POEM was built into a high-level academic conference that integrates academia and industry with the support from Wuhan Optics Valley of China.

POEM 2011 broadened the themes, conducting extensive discussions on four major areas including biomedical photonics, industrial photonics, information photonics and photonics for energy.

POEM 2011 was open to all individuals and entities, domestic and international, which have interest in our four technical areas. The six sub conferences of POEM 2011 were: (1) 10th International Conference on Photonics and Imaging in Biology and Medicine (PIBM 2011); (2) Laser and Tera-Hertz Science and Technology (LTST); (3) Optoelectronic Sensing and Imaging (OSI); (4) Optoelectronic Devices and Integration (OEDI); (5) Optical Communication Systems and Networking (OCSN); and (6) Solar Cells, Solid State Lighting and Information Display Technologies (SSID).

Besides the six sub conferences in four major areas, POEM was organized along with symposiums and workshops including: Workshop on Technology Transfer Models, Sino-Russia Symposium on Biophotonics and Biomedical Photonic, the China-Australia Symposium on Optoelectronic Materials and Devices, 1st Workshop on International Laser Technology and Industrialization, 5th Sino-Russian Laser Technology Forum, 2nd International Workshop on Nanomaterials and Nanosystems (INN 2011). The 40th anniversary of the College of Optoelectronic Science and Engineering at HUST was also celebrated at the same time. Activities such as the Workshop on Immunophotonics, the Workshop on Optical Imaging in Brain Connectivity, the Workshop on Organic Spin Optoelectronics, as well as training courses in Optoelectronic Devices and Integration, and courses given by

travelogue scholars from OSA were arranged to provide a variety of choices for the attendees.

POEM owes its distinguished features to its wide-ranging topics and contents, highly professional delegates, and a strong academic atmosphere. Presentations given by experts worldwide demonstrated previously unpublished cutting-edge scientific achievements. Popular activities such as speeches and posters were intensively organized to provide a unique and immediate access for scientists, entrepreneurs, and students all over the world.

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According to different technical areas, the proceedings were divided into six topical volumes:

- 10th International Conference on Photonics and Imaging in Biology and Medicine (PIBM 2011),
- Laser and Tera-Hertz Science and Technology (LTST),
- Optoelectronic Sensing and Imaging (OSI),
- Optoelectronic Devices and Integration (OEDI),
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