

## Preface

This book collects papers selected from the 15<sup>th</sup> Annual conference and 4<sup>th</sup> International Conference of the Chinese Society of Micro-Nano Technology.

Micro-nano is considered as an emerging high technology for the 21<sup>th</sup> century. It involves various high-tech fields including electronics, machinery, materials, manufacturing, testing, and disciplines of physical, chemical and biological. A lot of remarkable achievements have been made in the past few years. Still it is expected that the emerging novel ideas will change people's way of thinking. The conference brings together leading scientists and engineers in Micro-Nanotechnology to exchange information on their latest research progress. The theme of the conference this year will be "Micro-Nanotechnology changes human life", reflecting the rapid growing interests in applying nanotechnology to multi-disciplinary fields that will help develop society and improve the quality of life for people. The conference provides a perfect forum for scientist and engineers of different disciplines to meet and discuss.

The 15<sup>th</sup> Annual conference and 4<sup>th</sup> International Conference of the Chinese Society of Micro-Nano Technology have been held in Tianjin, China. Tianjin, Tianjin sits at the southeast of Beijing, about 140 km, as the confluence of five tributaries of the North China Plain, east is near Bohai sea, north of Yanshan, known as "the pearl of Bohai sea". The mother river- the Haihe river, flows through the city, making Tianjin more beautiful and prosperous. There are not only famous snacks-Goubuli stuffed bun, Tianjin twist, etc, but also the local folk—art crosstalk, Tianjin allegro, ping ju, in Tianjin.

This conference received more than 800 papers, and accepted 508 papers with the acceptance rate of 64%.

In this conference, 11 top level MEMS and NANO technology researchers were invited to make plenary presentations. They are:

- Zheng You, Academician of China National Engineering Resarch Institute;
- Yuelin Wang, Vice Chairman of China Instrument and Control Society;
- Lining Sun, The Dean of the Electrical Engineering Academy at Soochow University;
- Jing Liu, Professor, Department of Biomedical Engineering at Tsinghua University;
- Peter Zeppenfeld, Dr. Univ.-Prof. for Experimental Physics at the University of Linz;
- Wei Pang, Professor, College of Precision Instrument and Opto-electronics Engineering at Tianjin University;
- Zhihong Li, Professor, Microelectronics research institute , Peking University;
- Xiaodong Hu, Professor, State Key Laboratory of Precision Measurement Technology and instruments, Tianjin University;
- Weizheng Yuan, Director of Institute of Advanced Manufacturing Engineering, Northwest Polytechnic University;
- Jinliang Xu, Professor, North China Electric Power University;
- Yihui Wu , Head of Group of Micro/Nano Devices and System of the State Key Lab of Applied Optics;

Thanks the staff of Tianjin University and CSMNT Secretary for the efforts they have made, and thanks all honored attendees. Their contributions in all aspects are indispensable to the conference's success.

Thanks to Trans Tech Publications (TTP) for their work on publishing the special volume for selected papers of this conference. We have a good experience for cooperation, and hope that we can continue this cooperation in coming conferences in the future.

The 16<sup>th</sup> Annual conference and 5<sup>th</sup> International Conference of the Chinese Society of Micro-Nano Technology will be held in August 31-September 3, 2014, Chengdu, China. Southwest China, is one of the most modern and prosperous cities in China. The fertile Chengdu Plain, on which Chengdu is located, is also known as the "Country of Heaven". Being the birthplace of China's 4 leading cuisines in China-Scichuan Cuisine, Chengdu is widely recognized as the "land of Abundance and Capital of Great Food" and was crowned the UNESCO City of Gastronomy of the World in 2010, the first one in Asia. With a city history of 2,300 years, Chengdu is one of the first historically and culturally famous cities nominated in China and a permanent venue for China.

See you in Chengdu!

Zheng You  
Chairman of Organizing Committee  
Vice President of Chinese Society of Micro/Nano Technology