

# **Program of The International Conference on Nanophotonics 2009**

**May 11-14, 2009, Harbin, Heilongjiang, China**

## **Sponsors:**

**The Optical Society of America (OSA)**

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**Peking University**

**University of Dayton**

# Program of Nano2009

<b>1st Day</b>	<b>2009-5-11</b>		
<b>Time</b>	<b>Agenda</b>		
	<b>Opening Ceremony and Plenary Talks (International Conference Center, the 4th Floor of the Conference Building)</b>		
<b>8:30-8:45</b>	<b>Welcome Speeches</b>	Session Chair : Xiudong Sun, Harbin Institute of Technology	
<b>8:45-9:30</b>	Plenary I: Paras Prasad, SUNY at Buffalo, USA	Session Chair: Qihuang Gong, Peking University	
<b>9:30-10:15</b>	Plenary II: Shouzhu Zhang, NSFC, China		
<b>10:15-10:30</b>	<b>Tea Break</b>		
<b>Parallel Session I</b>			
	<b>Nanophotonics for Energy I (International Conference Center) Session Chair: Jiangeng Xue</b>	<b>Characterization (Room480, Conference Building) Session Chair: George Barbastathis</b>	
<b>10:30-10:45</b>	Invited [NANO-09-026] Max Shtein (University of Michigan, USA)	[NANO-09-138] X.H. Zeng (Université de technologie de Troyes, France)	
<b>10:45-11:00</b>		[NANO-09-067] Yang Gan (Harbin Institute of Technology)	
<b>11:00-11:15</b>	[NANO-09-197] Huaming Wu (Huazhong University of Science and Technology)	Invited [NANO-09-014] Rainer Hillenbrand (CIC nanoGUNE, Spain)	
<b>11:15-11:30</b>	[NANO-09-072] Wen-Chau Liu (National Cheng-Kung University, Taiwan)		
<b>11:30-11:45</b>	[NANO-09-049] Abu Bakar Md. Ismail (Independent University, Bangladesh)	[NANO-09-151] Janusz Daniel Fidelus (Polish Academy of Sciences, Poland)	
<b>12:00-13:00</b>	<b>Lunch Break (Friendship Hall, the 1st Floor of the Building)</b>		

<b>Parallel Session II</b>			
	<b>Quantum dot I (Room353) Session Chair: Yiping Cui</b>	<b>Nanodevice I (Room480) Session Chair: Z. M. Zhang</b>	<b>Short Course I (Room489, Conference Building)</b>
<b>13:30-13:45</b>	Invited [NANO-09-019] Peter Lodahl (Technical University of Denmark)	[NANO-09-045] Chunfei Li (Harbin Institute of Technology)	Nanostructures for photovoltaics (Instructor: Prof. Jiangeng Xue)
<b>13:45-14:00</b>		[NANO-09-063] Jian Xu (The Pennsylvania State University, USA)	
<b>14:00-14:15</b>	[NANO-09-066] Qiguang Yang (Hampton University, USA)	Invited [Nano-09-009] George Barbastathis (Massachusetts Institute of Technology, USA)	
<b>14:15-14:30</b>	[NANO-09-083] Kazuaki Sakoda (National Institute for Materials Science, Japan)		
<b>14:30-14:45</b>	[NANO-09-193] Yusuke Arashida (Tokyo Institute of Technology, Japan)	[NANO-09-166] Wei Fang (Zhejiang University)	
<b>14:45-15:00</b>	[NANO-09-200] Xiaolong Zhou (Institute of Semiconductor, Chinese Academy of Science)	[NANO-09-155] Guanying Chen (Harbin Institute of Technology)	
<b>15:00-15:15</b>	[NANO-09-057] Hao Feng (Beijing University of Posts and Telecommunications)	[NANO-09-125] Qiong He (CNRS, France)	
<b>15:15-15:30</b>	[NANO-09-223] Chenxin Zhu (Institute of Microelectronics, CAS)	[NANO-09-183] Caihong Jia (Institute of Semiconductor, Chinese Academy of Science)	
<b>15:30-15:45</b>	<b>Tea Break</b>		

<b>Parallel Session III</b>			
	<b>Plasmonics I (Room489) Session Chair: Yunlong Sheng</b>	<b>Photonic Crystals I (Room480) Session Chair: John Sipe</b>	<b>Nanofabrication I (Room353) Session Chair: Minghui Hong</b>
<b>15:45-16:00</b>	Invited [NANO-09-033] C. C. Yang (National Taiwan University, Taiwan)	Invited [NANO-09-017] Zhiyuan Li (Institute of Physics, Chinese Academy of Sciences)	[NANO-09-215] Anna Ushanova (Helsinki University of Technology, Finland)
<b>16:00-16:15</b>			[NANO-09-137] Yongzhao Yao (National Institute for Materials Science, Japan)
<b>16:15-16:30</b>	[NANO-09-043] M.J. Park (SunMoon University, Korea)	[NANO-09-059] Zhiyong Xu (Australian National University, Australia)	Invited [NANO-09-024] Marek Samoc (Wroclaw University of Technology, Poland)
<b>16:30-16:45</b>	[NANO-09-042] Shiyi Wang (Harbin Institute of Technology)	[NANO-09-098] Mingxin Xing (Institute of Semiconductors, Chinese Academy of Sciences)	
<b>16:45-17:00</b>	Invited [NANO-09-036] Z. M. Zhang (Georgia Institute of Technology, USA)	[NANO-09-082] Junqing Li (Harbin Institute of Technology)	[NANO-09-213] Liwei Wang (Beijing Jiaotong University)
<b>17:00-17:15</b>		[NANO-09-175] Ya-Zhao Liu (Institute of Physics, Chinese Academy of Science)	[NANO-09-182] Liang Fang (Institute of Optics and Electronics, Chinese Academy of Sciences)
<b>17:15-17:30</b>	[NANO-09-135] Jiangjun Zheng (Shanghai Institute of Optics and Fine Mechanics)	[NANO-09-169] Jin Hou (Huazhong University of Science & Technology)	[NANO-09-210] Zhongyi Guo (Harbin Institute of Technology)
<b>17:30-17:45</b>	[NANO-09-150] C.C. Yang (National Taiwan University, Taiwan)	[NANO-09-075] Shuqi Chen (Nankai University)	[NANO-09-130] Hanchen Liu (Xi'an Polytechnic University)
<b>17:45-18:00</b>		[NANO-09-086] Weimin SUN (Harbin Engineering University)	[NANO-09-228] Yongqi Fu (University of Electronic Science Technology of China)
<b>18:30</b>	<b>Conference Banquet (Friendship Hall, the 1st Floor of the Building)</b>		

<b>2nd Day</b>	<b>2009-5-12</b>		
	<b>Plenary Talks (International Conference Center)</b> <b>Session Chair: Qiwen Zhan, University of Dayton, USA</b>		
<b>8:30-9:15</b>	<b>Plenary III: Min Gu, Swinburne University of Technology, Australia</b>		
<b>9:15-10:00</b>	<b>Plenary IV: John Sipe, University of Toronto, Canada</b>		
<b>10:00-10:15</b>	<b>Tea Break</b>		
<b>Parallel Session IV</b>			
	<b>Biophotonics/Sensor I (International Conference Center)</b> <b>Session Chair: Daniel Ou-Yang</b>	<b>Nanophotonics for Energy II (Room480)</b> <b>Session Chair: Lixin Xiao</b>	<b>Industry Lectures (Room489)</b>
<b>10:15-10:30</b>	Invited [NANO-09-034] Xiacong Yuan (Nankai University)	Invited [Nano-09-010] Guozhong Cao (University of Washington, USA)	<b>Nanonics Imaging Ltd.</b>
<b>10:30-10:45</b>			
<b>10:45-11:00</b>	[NANO-09-081] Qiuqiang Zhan (Zhejiang University)	Invited [NANO-09-035] Xianghua Zhang (University of Rennes I, France)	
<b>11:00-11:15</b>	[NANO-09-106] Jing Yang (Southeast University)		
<b>11:15-11:30</b>	[NANO-09-070] Xiaoxu Deng (Shanghai Jiao Tong University)	[NANO-09-209] Zhaoyue Lü (Beijing Jiaotong University)	<b>NT-MDT Co.</b>
<b>11:30-11:45</b>	[NANO-09-206] Hao Xu (Wuhan University)	[NANO-09-120] Yawei Liu (Shenzhen University)	
<b>11:45-12:00</b>	[NANO-09-190] Jie Yan (University of Science and Technology of China)	[NANO-09-129] Jiarong Lian (Shenzhen University)	
<b>12:00-13:00</b>	<b>Lunch Break (Friendship Hall)</b>		

<b>Parallel Session V</b>			
	<b>Plasmonics II (Room353) Session Chair: Din-Ping Tsai</b>	<b>Nanodevice II (Room480) Session Chair: Sang Hyun Oh</b>	<b>Short Course II (Room489)</b>
<b>13:30-14:00</b>	Invited [NANO-09-021] Ross McPhedran (University of Sydney, Australia)	Invited [NANO-09-037] Weidong Zhou (University of Texas at Arlington, USA)	Nanophotonics (Instructors: Prof. Joseph Haus and Prof. Qiwen Zhan)
<b>14:00-14:15</b>	Invited [NANO-09-025] Yunlong Sheng (Laval University, Canada)	[NANO-09-122] Daohong Song (Nankai University)	
<b>14:15-14:30</b>		[NANO-09-123] Yuanzhao Yao (National Institute for Materials Science, Japan)	
<b>14:30-14:45</b>	[NANO-09-052] Weibin Chen (University of Dayton, USA)	Invited [NANO-09-038] Cun-Zheng Ning (Arizona State University, USA)	
<b>14:45-15:00</b>	[NANO-09-154] Jia Li (Peking University)		
<b>15:00-15:15</b>	[NANO-09-064] Haixi Zhang (Chinese University of Hong Kong)	[NANO-09-162] KaiJun Che (Institute of Semiconductors,CAS)	
<b>15:15-15:30</b>	[NANO-09-208] Hai Liu (Harbin Institute of Technology)	[NANO-09-230] Yundong Zhang(Harbin Institute of Technology)	
<b>15:30-15:45</b>	<b>Tea Break</b>		
<b>Parallel Session VI</b>			
	<b>Nanofabrication II (Room489) Session Chair: Max Shtein</b>	<b>Photonic Crystals II (Room480) Session Chair: Zhiyuan Li</b>	<b>Quantum Dot II (Room353) Session Chair: Peter Lodahl</b>
<b>15:45-16:00</b>	[NANO-09-131] C. Surya (Hong Kong Polytechnic University)	Invited [NANO-09-011] Hong Chen (Tongji University)	Invited [NANO-09-013] Yiping Cui (Southeast University)
<b>16:00-16:15</b>	[NANO-09-073] Jingyu Wang (Harbin Institute of Technology)		

16:15-16:30	Invited [NANO-09-015] M.H. Hong (National University of Singapore, Singapore)	[NANO-09-238] J.W. Haus (University of Dayton)	[NANO-09-074] Pratima Sen (Shri G S Institute of Technology & Science)
16:30-16:45		[NANO-09-097] Wei Chen (Institute of Semiconductors, CAS)	[NANO-09-048] Lu Wenjuan (Institute of Optical Communication and Optoelectronics)
16:45-17:00	[NANO-09-172] Linxin Hu (Sun Yat-sen University)	[NANO-09-161] Nianyu ZOU (Dalian Polytechnic University)	[NANO-09-141] Z. Mi (McGill University, Canada)
17:00-17:15	[NANO-09-192] Ming Fu (Beijing Jiaotong University)	[NANO-09-163] Ming-Liang Ren (Institute of Physics, Chinese Academy of Sciences)	[NANO-09-055] Pengfei Lu (Beijing University of Posts and Telecommunications)
17:15-17:30	[NANO-09-127] Tengfei Wu (Shanghai Institute of Optics and Fine Mechanics)	[NANO-09-119] Dong Mao (Harbin Engineering University)	[NANO-09-205] Yoshihiro Ogawa (Tokyo Institute of Technology, Japan)
17:30-17:45	[NANO-09-211] Zhongyi Guo (Harbin Institute of Technology)	[NANO-09-133] Lihong Han (Beijing University of Posts and Telecommunications)	[NANO-09-046] Liu Yu-Min (China Jiliang University)
17:45-18:00	[NANO-09-219] Dong-Sing Wu (National Chung Hsing University, Taiwan)	[NANO-09-051] Weiqiang Ding (Harbin Institute of Technology)	
18:30	<b>Dinner (Friendship Hall )</b>		
19:30-21:30	<b>Poster Session</b>		
3rd Day	<b>2009-5-13</b>		
	<b>Plenary Talks (International Conference Center) Session Chair: Xiudong Sun, Harbin Institute of Technology, China</b>		
8:30-9:15	<b>Plenary V: Concita Sibilis, University of Rome, Italy</b>		
9:15-10:00	<b>Plenary VI : Limin Tong, Zhejiang University, China</b>		
10:00-10:15	<b>Tea Break</b>		

<b>Parallel Session VII</b>			
	<b>Nanodevice III (International Conference Center) Session Chair: Liming Tong</b>	<b>Nanoparticles I (Room480) Session Chair: Joseph Haus</b>	<b>Plasmonics III (Room489) Session Chair: Ross McPhedran</b>
<b>10:15-10:30</b>	Invited [NANO-09-022] Sang Hyun Oh (University of Minnesota, USA)	[NANO-09-136] S. Jradi ( Université de Technologie de Troyes, France)	Invited [NANO-09-030] Din Ping Tsai (National Taiwan University, Taipei)
<b>10:30-10:45</b>		[NANO-09-107] Shantang Liu (Wuhan Institute of Technology)	
<b>10:45-11:00</b>	[NANO-09-092] Jing Zhang (Harbin Institute of Technology)	Invited [NANO-09-007] Mario Agio (ETH Zurich, Switzerland)	[NANO-09-053] Zhi Wu (University of Dayton, USA)
<b>11:00-11:15</b>	[NANO-09-231] C. H. Raymond Ooi ( Monash University, Malaysia)		[NANO-09-188] Zhanghua Han (University of Alberta, Canada)
<b>11:15-11:30</b>	[NANO-09-132] Hongchao Cao (Shanghai Institute of Optics and Fine Mechanics)	[NANO-09-178] Lingling Xu (Harbin Institute of Technology)	[NANO-09-078] Yan Liu (Harbin Institute of Technology)
<b>11:30-11:45</b>	[NANO-09-056] Boyong Jia (Beijing University of Posts and Telecommunications)	[NANO-09-149] Yongyuan Jiang ( Harbin Institute of Technology)	[NANO-09-207] Chunchong Chen (University of Science and Technology of China)
<b>11:45-12:00</b>	[NANO-09-189] Feng Qin (Harbin Institute of Technology)	[NANO-09-142] Yachen Gao (Heilongjiang University)	
<b>12:00-13:00</b>	<b>Lunch Break (Friendship Hall)</b>		
<b>Parallel Session VIII</b>			
	<b>Nanodevice IV (Room480) Session Chair:Chih-Chung Yang</b>	<b>Metamaterials (Room489) Session Chair: Xiaocong Yuan</b>	
<b>13:30-14:00</b>	Invited [NANO-09-029] Limin Tong (Zhejiang University)	Invited [NANO-09-018] H. Liu (Nanjing University)	



14:00-14:15	[NANO-09-146] Moncef B Tayahi ( Rutgers University, USA)	Invited [NANO-09-027] Gennady Shvets (University of Texas at Austin, USA)	
14:15-14:30	[NANO-09-168] Huakang Yu (Zhejiang University)	[NANO-09-124] Xueqin Huang (Fudan University)	
14:30-14:45	[NANO-09-058] X. Qi (Australian National University, Australian)	[NANO-09-176] Ming Che (Institute of Physics, Chinese Academy of Sciences)	
14:45-15:00	[NANO-09-091] Lei Ma (Harbin Institute of Technology)	[NANO-09-159] Lin Gan (Institute of Physics, Chinese Academy of Sciences)	
15:00-15:15	[NANO-09-194] Changbin Ju (Beijing Jiaotong University)	[NANO-09-184] Hong-mei Liu (Beijing University of Technology)	
15:15-15:30	[NANO-09-181] Yong Lv (University of Science and Technology of China)	[NANO-09-096] Xuefeng Yang (Institute of Optics and Electronics, Chinese Academy of Sciences)	
15:30-15:45	<b>Tea Break</b>		
<b>Parallel Session IX</b>			
	<b>Biophotonics/Sensor II (Room480) Session Chair: Ho-pui Ho</b>	<b>Photonic Crystals III (Room489) Session Chair: Hong Chen</b>	
15:45-16:00	Invited [NANO-09-008] Habib Ammari (Ecole Polytechnique and CNRS, France)	[NANO-09-099] Wanhua Zheng (Institute of Semiconductors, CAS)	
16:00-16:15		[NANO-09-117] Seitai Iwahashi (Kyoto University, Japan)	
16:15-16:30	[NANO-09-148] Yong Peng (Dalian Maritime University)	[NANO-09-087] F.F. Shi (Harbin Institute of Technology)	
16:30-16:45	[NANO-09-105] Xuebin Tan (Southeast University)	[NANO-09-102] Wenjun Zhou (Institute of Semiconductors, CAS)	

16:45-17:00	[NANO-09-204] Fuxing Gu (Zhejiang University)	[NANO-09-085] Weimin SUN (Harbin Engineering University)	
17:00-17:15	[NANO-09-104] Chunyuan Song (Southeast University)	[NANO-09-170] Dingshan Gao (Huazhong University of Science & Technology)	
17:15-17:30	[NANO-09-147] Yong Peng (Dalian Maritime University)	[NANO-09-041] Huiqin Wang (Nanchang University)	
17:30-17:45	[NANO-09-139] Yufei Wang (Longyan University)	[NANO-09-118] Chunying Guan (Harbin Engineering University)	
17:45-18:00		[NANO-09-229] Lier Deng( Beijing Jiaotong University)	
18:30	<b>Dinner (Friendship Hall)</b>		
4th Day	<b>2009-5-14</b>		
<b>Parallel Session X</b>			
	<b>Nanodevice V (Room480) Session Chair: Kazuaki Sakoda</b>	<b>Nanofabrication III (Room489) Session Chair: Changhe Zhou</b>	
8:30-8:45	Invited [NANO-09-031] Prabhat Verma (Osaka University, Japan)	[NANO-09-069] Yao Li (Harbin Institute of Technology)	
8:45-9:00		[NANO-09-226] Weilong Li(Institute of Microelectronics, Chinese Academy of Sciences)	
9:00-9:15	[NANO-09-186] Guillaume Vienne (Zhejiang University)	Invited [NANO-09-020] Shoji Maruo (Yokohama National University, Japan)	
9:15-9:30	[NANO-09-212] Mengxia Zhu (Huazhong University of Science and Technology)		

9:30-9:45	[NANO-09-187] Huijuan Liang (Harbin Institute of Technology)	[NANO-09-128] Jijun Feng (Shanghai Institute of Optics and Fine Mechanics)	
9:45-10:00	[NANO-09-100] Anjin Liu (Institute of Semiconductors, Chinese Academy of Sciences)	[NANO-09-199] Xiaoxian Zhang (Peking University)	
10:00-10:15	[NANO-09-191] Changyu Li (Northeast Forestry University, Harbin)	[NANO-09-076] Guan Hua-nan (Northeast Forestry University)	
10:15-10:30	<b>Tea Break</b>		
<b>Parallel Session XI</b>			
	<b>Nanophotonics for Energy III (Room480) Session Chair: Prabhat Verma</b>	<b>Nanoparticles II (Room489) Session Chair: Mario Agio</b>	
10:30-11:00	Invited [Nano-09-012] Zhijian Chen (Peking University)	Invited [NANO-09-023] Daniel Ou-yang (Lehigh University, USA)	
11:00-11:15	Invited [NANO-09-016] Matthew Lloyd (Sandia National Lab, USA)	[NANO-09-110] Yoshihiko Takeda (National Institute for Materials Science, Japan)	
11:15-11:30		[NANO-09-217] Yanbo Pei (Harbin Institute of Technology)	
11:30-11:45	[NANO-09-235] Qiang Kan (Institute of Semiconductors, Chinese Academy of Science)	[NANO-09-174] ChunLei Wang (Southeast University)	
11:45-12:00	[NANO-09-134] FangFang Niu (Shenzhen University)	[NANO-09-158] Fei Zhou (Institute of Physics, Chinese Academy of Sciences)	
12:00	<b>Lunch Break (Friendship Hall)</b>		
13:30-17:30	<b>Harbin Half-day Tour</b>		

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# Nano2009 Committees

## Conference Honorary Chairs

Paras N. Prasad (State University of New York at Buffalo, USA)

Bingkun Zhou (Chinese Optical Society, Tsinghua University, China)

## Conference Co-chairs:

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Qiwen Zhan (University of Dayton, USA)

Xiudong Sun (Harbin Institute of Technology, China)

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Joseph W. Haus (University of Dayton, USA)

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Concita Sibilìa (Universita Roma, Italy)

Lars Thylen (KTH, Sweden)

Dinping Tsai (National Taiwan University)

Qiming Wang (Institute of Semiconductor, CAS, China)

Jingjun Xu (Nankai University, China)

Jiangeng Xue (University of Florida, USA)

Guozhen Yang (Institute of Physics, CAS, China)

Zhou Yu (New Focus Inc., USA)

Changhe Zhou (SIOFM- CAS, China)

# Invited Speakers

## Plenary Speakers

Paras Prasad, SUNY Buffalo, USA

Shouzhu Zhang, NSFC, China

Min Gu, Swinburne University of Technology, Australia

John Sipe, University of Toronto, Canada

Concita Sibilina, University of Rome, Italy

Limin Tong, Zhejiang University, China

## Invited Speakers

Mario Agio, ETH Zurich, Switzerland

Habib Ammari, Ecole Polytechnique and CNRS, France

George Barbastathis, MIT, USA

Guozhong Cao, University of Washington, USA

Hong Chen, Tongji University, China

Zhijian Chen, Peking University, China

Yiping Cui, Southeast University, China

Rainer Hillenbrand, CIC nanoGUNE, Spain

Minghui Hong, National University of Singapore, Singapore

Julia Hsu, Sandia National Lab, USA

Zhiyuan Li, Institute of Physics, CAS, China

Hui Liu, Nanjing University, China

Peter Lodahl, Technical University of Denmark, Denmark

Shoji Maruo, Yokohama National University, Japan

Ross McPhedran, University of Sydney, Australia

Cunzheng Ning, Arizona State University, USA

Sang Hyun Oh, University of Minnesota, USA

Daniel Ou-yang, Lehigh University, USA

Marek Samoc, Wroclaw University of Technology, Poland

Yunlong Sheng, Laval University, Canada

Max Shtein, University of Michigan, USA

Gennady Shvets, University of Texas at Austin, USA

Franky So, University of Florida, USA

Din-Ping Tsai, NTU and ITRS, Taiwan

Prabhat Verma, Osaka University, Japan

Jean-Pol Vigneron, FUNDP, Belgium

C. C. Yang, National Taiwan University, Taiwan

Xiaocong Yuan, Nankai University, China

Xianghua Zhang, University of Rennes I, France

Zhuomin Zhang, Georgia Institute of Technology, USA

Weidong Zhou, University of Texas at Arlington, USA

## **Short Courses**

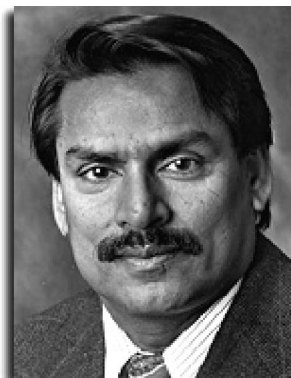
Joseph Haus and Qiwen Zhan, University of Dayton, USA

Jiangeng Xue, University of Florida, USA



## Biography of Plenary Speakers

**Paras N. Prasad** (State University of New York at Buffalo, USA)



**Institute for Lasers, Photonics and Biophotonics**  
**Department of Chemistry, Physics, Electrical Engineering and Medicine**  
**State University of New York at Buffalo**  
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Dr. Paras N. Prasad is a SUNY Distinguished Professor of Chemistry, Physics, Medicine and Electrical Engineering, the highest rank in the New York State university system. He has the highly unusual distinction of being a faculty member in three different UB schools: College of Arts and Sciences, School of Engineering and Applied Sciences, and the School of Medicine and Biomedical Sciences. He also holds the Samuel P. Capen Chair at the University at Buffalo. He established the internationally recognized Photonics Research Laboratory, which forms the core of the multidisciplinary Institute for Lasers, Photonics and Biophotonics, of which he is the Executive Director. He has published over 617 scientific papers, co-edited six books and co-authored a monograph (with D.J. Williams), *"Introduction to Nonlinear Optical Effects in Molecules and Polymers,"* the first monograph in this field, which has widely been used as a textbook and a reference source. Recently, Dr. Prasad published *"Introduction to Biophotonics,"* the first monograph in this field, which authoritatively defines the field, details its scope and identifies emerging opportunities, as well as a second book, *"Nanophotonics,"* which includes its impact on Nanomedicine.

Professor Prasad is one of the early pioneers and most widely recognized by the international community for his seminal contributions to the field of nonlinear optical effects in molecules and polymers. Through more than a decade of numerous ground breaking theoretical and experimental works, Professor Prasad has made a major contribution to the fundamental understanding of the interplay of structure and energy state dynamics to produce a specific nonlinear optical response.

More recently, his contributions have been in the new field of "Nanophotonics." His efforts have focused on creating a fundamental understanding of nonlinear optical processes at the nanometer size scale, developing novel concepts for the design of nanostructured optical materials, and probing interactions and dynamics of nonlinear processes.

He has also contributed to developing another new field, "Biophotonics," which utilizes light-matter interaction to probe biological structure and functions at the cellular, tissue and organism levels, leading to novel methods of optical diagnostics and light-activated therapy. Professor Prasad has focused on applications of nonlinear optical techniques for Biophotonics.

Recently Prof. Prasad has attracted worldwide attention for his contributions in “Nanomedicine and Nanobiotechnology”. He is well known for his development of novel nanomaterials such as quantum dots and ORMOSIL nanoparticles for applications in advanced diagnosis of diseases such as pancreatic cancer, novel therapeutics such as non-viral gene therapy, nanoparticle mediated gene silencing using siRNA delivery, as well as targeted delivery across biological barriers such as the blood brain barrier. He is known as one of the pioneers in introducing novel concepts such as ‘multimodal nanoparticles’ and ‘theranostic nanoparticles’, which promise to revolutionize the field of healthcare in the near future.

Dr. Prasad has received much recognition for his pioneering contributions. He is a Fellow of the American Physical Society, a Fellow of the Optical Society of America and a Fellow of the SPIE. He is also a recipient of the prestigious Sloan and Guggenheim fellowships. Dr. Prasad has received the Schoellkopf Award of the Western New York American Chemical Society for his academic achievements. He was also awarded the Technology/Discovery award from the Western New York Health Care Industries Association for his pioneering work on “Nanoclinics” for Biophotonics. He has been awarded the "Excellence in Pursuit of Knowledge" award by the Chancellor of the State University of New York system. He is a recipient of the Morley Prize of the Cleveland Section of the American Chemical Society in 2004, has been chosen Scientific America’s Top 50 Scientists (2005), awarded a State of New York Legislative Resolution Honoring Dr. Prasad (2006). He received an Honorary Professorship (In recognition of his scholarship and outstanding achievements), from Zhejiang University, one of the top 5 Universities in China.

Dr. Prasad is also a leader in promoting international scientific infrastructures, particularly to benefit developing countries. He organized six “International Conferences on Frontiers of Polymers and Advanced Materials (India, 1991; Indonesia, 1993; Malaysia, 1995; Egypt, 1997; Poland, 1999; Brazil, 2001).” Each of these conferences brought together top level scientists, engineers and government representatives from more than 20 countries to develop a global infrastructure for advanced materials and emerging technologies.

### **Shouzhu Zhang (NSFC, China)**

Shouzhu Zhang received his B. S. degree from Shandong University in 1985 majored in Physics, got his Ph. D. degree from the University of Science and Technology of China in 1990. After working at Italy, France, Spain and Brazil as a postdoctoral research associate or visiting professor for six years, he returned and served in the organization of National Natural Science Foundation of China in 1997. Now he is the Head of Division of Physics I, National Science Foundation of China. The main research areas are focused on condensed state physics, atomic molecular and optical physics.

### **Min Gu (Swinburne University of Technology, Australia)**

Min Gu, A University Distinguished Professor in optoelectronics, is Director of the Centre of Micro-Photonics at Swinburne University of Technology and Node Director of the Australian Research

Council Centre of Excellence for Ultrahigh-bandwidth Devices for Optical Systems. His research interests span nanophotonics and biophotonics with internationally renowned expertise in three-dimensional optical imaging theory. Professor Gu is an elected Fellow of both the Australian Academy of Technological Sciences and Engineering and the Australian Academy of Science. He is also an elected Fellow of the Institute of Physics (UK), the Australian Institute of Physics, the Optical Society of America and the International Society for Optical Engineering. Professor Gu is a sole author of two standard reference books, *Principles of Three-Dimensional Imaging in Confocal Microscopes* (World Scientific) and *Advanced Optical Imaging Theory* (Springer-Verlag), published in 1996 and 2000 respectively. He has published over 550 publications (including over 280 papers in internationally refereed journals). He is a member of the 13 Editorial Boards of top international journals. He has been a member of the Advisory/Steering/Organizing committees of many international conferences (more than 100). He was/is a plenary/invited/keynote speaker on many international conferences (more than 100 conferences). He was/is President (2002-2004) and Vice President (2004-2010) of the International Society of Optics within Life Sciences. He is Vice President of the International Commission for Optics (2005-2011).

### **J. E. Sipe (University of Toronto, Canada)**

J. E. Sipe is a theoretical physicist who has worked in many areas in quantum optics and condensed matter physics. He received his Ph.D. in 1975 from the University of Toronto, and returned there in 1981 to join the academic staff. Recent research efforts have focused on quantum interference processes in semiconductors, leading to optically injected currents and spin currents; the study of optically resonant structures to enhance biosensing through fluorescence and Raman scattering; and the nonlinear quantum optics of artificially structured materials, the design of such materials, and the analysis of their performance. He is a Fellow of the Optical Society of America, of the American Physical Society, and of the Royal Society of Canada.

### **Concita Sibilìa (University of Roma, Italy)**

**Dipartimento di Energetica- Università' di Roma "La Sapienza" – Via Scarpa 16 , 00161 Roma phone : +39 06 49916541, concita.sibilìa@uniroma1.it**

**Concita Sibilìa** received her doctoral degree from the University of Roma "La Sapienza". She is currently Head of the nonlinear optical laboratory at the Dipartimento di Energetica of the University of Roma. She is full professor in Physics since 2000. The main research interests are in the field of optics and nonlinear optics at nanoscale. She has been chair of ESF-COST P11 action on "Physics of Photonics Crystals ". She is also member of the American Optical Society, member of the European Physical Society and in the Board of the European Optical Society and Italian Optical Society.

## **Limin Tong (Zhejiang University, China)**

Limin Tong received B.S., M.S., and Ph.D. degrees from Zhejiang University, Hangzhou, China, in 1991 (physics), 1994 (Optics), and 1997 (materials science and engineering), respectively. From 1997 to 2001 he worked at Department of Physics, Zhejiang University, and followed as a visiting scientist in Mazur group at Harvard University from 2001 to 2004, where he and his colleagues reported the first work on low-loss optical nanofibers. In 2004 he joined Department of Optical Engineering and State Key Laboratory of Modern Optical Instrumentation at Zhejiang University, and is currently a professor and director of Department of Optical Engineering, Zhejiang University. His research interest covers nanophotonics and fiber optics including micro- and nanoscale photonic structures and devices for optical communications, sensors and nonlinearities. He has published about 100 original publications in refereed journals and has received several awards, including “Wang-Da-Heng Optics Award” from the Optical Society of China (2007), China Youth Science and Technology Prize (2006) and Young Teachers award from Fok Ying Tung education foundation (2006).

## Plenary Presentations

**Monday, May 11, 2009**

**Plenary Session I**

**08:45-10:15**

**Room: International Conference Center**

**Session Chair: Qihuang Gong, Peking University, China**

**8:45--9:30: Nanophotonics and Its Pivotal Role in Meeting the 21st Century**

**Challenge for Renewable Energy**

Paras Prasad, SUNY Buffalo, USA.

**9:30-10:15: Brief Introduction to Basic Research Fund (BRF) in China**

Shouzhu Zhang, NSFC, China

**Tuesday, May 12, 2009**

**Plenary Session II**

**08:30-10:00**

**Room: International Conference Center**

**Session Chair: Qiwen Zhan, University of Dayton, USA**

**8:30--9:15: What can nanorods do for us?**

Min Gu, Swinburne University of Technology, Australia

**9:15-10:00: Towards a QED for dispersive and absorptive media**

John Sipe, University of Toronto, Canada.

**Wednesday, May 13, 2009**

**Plenary Session III**

**08:30-10:00**

**Room: International Conference Center**

**Session Chair: Xiudong Sun, Harbin Institute of Technology, China**

**8:30--9:15: Nonlinear photonics at the nanoscale**

Concita Sibilgia, University of Rome, Italy

**9:15-10:00: Optical nanofibers: merging fiber optics and nanotechnology for new opportunities**

Limin Tong, Zhejiang University, China

## Short Course Sessions

**Monday, May 11, 2009**

**Short Course Session I**

**13:30-15:30**

**Room: 489, Conference Building**

**Nanostructures for photovoltaics**

Jiangeng Xue, University of Florida, USA

**Tuesday, May 12, 2009**

**Short Course Session II**

**13:30-15:30**

**Room: 489, Conference Building**

**Nanophotonics**

Joseph Haus and Qiwen Zhan, University of Dayton, USA

## **Oral Sessions**

### **Nanophotonics for Energy Sessions**

**Monday, May 11, 2009**

**Nanophotonics for Energy Session I**

**10:45-12:00**

**Room: International Conference Center**

**Session Chair: Jiangeng Xue**

**10:45-11:15 Invited: Nanostructured and non-planar organic semiconductor devices for applications in lighting and microscopy,** Max Shtein, University of Michigan, USA..... NANO-09-026

**11:15-11:30 Enhancement of light-extraction of GaN-LED with asymmetric profile grating reflector,** Huaming Wu, Jin Hou, Dingshan Gao, Wenhua Wu, Tingwei Wu, and Zhiping Zhou, Huazhong University of Science and Technology.....NANO-09-197

**11:30-11:45 On a Light Emitting Diode with KOH-Treated Textured Sidewalls and Air-Buffer Structures,** Yi-Jung Liu, Tsung-Yuan Tsai, Shiou-Ying Cheng, Jung-Hui Tsai, Kun-Wei Lin, Wen-Chau Liu, National Cheng-Kung University..... NANO-09-072

**11:45-12:00 LaF3-passivation of Porous Silicon (PS) for the enhancement and stabilization of Photoluminescence,** Sinthia Shabnam Mou, Md. Atowar Rahman, Moshtaq Ahmed Sobhan, Md. Abdur Rahman, Abu Bakar Md. Ismail, Independent University, Bangladesh.....NANO-09-049

**Tuesday, May 12, 2009**

**Nanophotonics for Energy Session II**

**10:15-12:00**

**Room: 480, Conference Building**

**Session Chair: Lixin Xiao**

**10:15-10:45 Invited: Hierarchically Structured ZnO/TiO<sub>2</sub> Films for Dye-Sensitized Solar Cells,** Guozhong Cao, University of Washington, USA..... Nano-09-010

**10:45-11:15 Invited: Nano crystallized transparent glass ceramics for renewable energy and energy saving,** Xianghua ZHANG and Xianping FAN, University of Rennes I, France.....NANO-09-035

**11:15-11:30 The effect of carbon nanotube doping on the performance of organic light-emitting diodes,** Zhaoyue Lü, Zhenbo Deng, Jianjie Zheng, Zheng Chen, Ye Zou, Degang Li, and Hailiang Du, Beijing Jiaotong University..... NANO-09-209

**11:30-11:45 New OLED materials 1,3,5-Tris(1,8-naphthalimide-4-yl)benzenes.** Ya-Wei Liu, Peng-Ju Zeng, Jia-Rong Lian, Fang-Fang Niu, Han-Ben Niu, Shenzhen University. ....NANO-09-120

**11:45-12:00 Research on the interface between Cs<sub>2</sub>CO<sub>3</sub> and electron transport materials in OLEDs,** Jiarong Lian, fangfang Niu, Yawei Liu, Pengju Zeng, Hanben Niu, Shenzhen University..... NANO-09-129

**Thursday, May 14, 2009**

**Nanophotonics for Energy Session III**

**10:30-12:00**

**Room: 480, Conference Building**

**Session Chair: Prabhat Verma**

**10:30-11:00 Invited: The application of mesoscopic optic structures on organic photoelectronics devices,** Zhijian Chen, Lixin Xiao, Ziyao Wang, Shiyong Zhang and Qihuang Gong, Peking University.....Nano-09-012

**11:00-11:30 Invited: Nanostructured hybrid organic-inorganic solar cells,** Matthew T. Lloyd, Yun-Ju Lee, Dana C. Olson, Robert J. Davis, and Julia W. P. Hsu, Sandia National Lab, USA.. .....NANO-09-016

**11:30-11:45 Light Extraction of GaN LEDs with 2-D Photonic Crystal Structure,** Hongwei Liu\*, Qiang Kan, Chunxia Wang, Feng Yu, Xingsheng Xu, Hongda Chen, Institute of Semiconductors, Chinese Academy of Science.....NANO-09-235

**11:45-12:00 A novel carbazole derivatives for organic light-emitting diodes,** Fang-Fang Niu, Peng-Ju Zeng, Jia-Rong Lian, Ya-Wei Liu, Han-Ben Niu, Shenzhen University.....NANO-09-134

## **Characterization Session**

**Monday, May 11, 2009**

**Characterization Session**

**10:45-12:00**

**Room: 480, Conference Building**

**Session Chair: George Barbastathis**

**10:45-11:00 High speed sub-micrometric microscopy using optical polymer microtip,** X.H. Zeng, J. Plain, S. Jradi, P. Renaud Goud, R. Deturche, P. Royer and R. Bachelot, Université de technologie de Troyes, France.....NANO-09-138

**11:00-11:15 Techniques for Attaching Nanoparticles to a Probe's Tip for Scanning Near-field Optical (SNOM) Measurements: A Critical Review,** Yang Gan, Harbin Institute of Technology....NANO-09-067

**11:15-11:45 Invited: IR and THz nanoscopy for characterizing electronic and photonic nanostructures,** Rainer Hillenbrand, CIC nanoGUNE, Spain.....NANO-09-014

**11:45-12:00 Influence of post-growth annealing on physico-chemical properties of the Pr<sup>3+</sup> doped yttria stabilized zirconia nanopowders,** Janusz Daniel Fidelus, Sergey Yatsunenko, Marek Godlewski, Wojciech Paszkowicz, Ewa Werner-Malento, Ewelina Wolska, and Witold Łojkowski, Polish Academy of Sciences, Poland.. .....NANO-09-151

## Quantum Dot Sessions

**Monday, May 11, 2009**

**Quantum Dot Session I**

**13:30-15:30**

**Room: 353, Conference Building**

**Session Chair: Yiping Cui**

**13:30-14:00 Invited: High-efficiency and large-bandwidth single-photon source based on a single quantum dot in a photonic crystal waveguide**, Peter Lodahl, Technical University of Denmark, Denmark.....NANO-09-019

**14:00-14:15 Linear and Nonlinear Optical Origins of the Group Velocity Manipulation Using Semiconductor Quantum Dots**, Qiguang Yang, JaeTae Seo, Bagher Tabibi, William Yu, Guolong Tan, Doyle Temple, Hampton University, USA.....NANO-09-066

**14:15-14:30 Lifetime control of GaAs quantum dots by photonic crystal microcavities**, Kazuaki Sakoda, Takashi Kuroda, Naoki Ikeda, Takaaki Mano, Yoshimasa Sugimoto, Tetsuyuki Ochiai, Keiji Kuroda, Shunsuke Ohkouchi, Nobuyuki Koguchi, and Kiyoshi Asakawa, National Institute for Materials Science, Japan..... NANO-09-083

**14:30-14:45 Neutral and charged multi-excitonic emissions from GaAs quantum dot studied by single photon correlation spectroscopy**, Yusuke Arashida, Yoshihiro Ogawa, and Fujio Minami, Tokyo Institute of Technology, Japan.....NANO-09-193

**14:45-15:00 Temperature dependent spectra of high density Quantum Dots: A new tunneling modal**, Xiaolong Zhou, Xiaoling Ye, Yonghai Chen, Key Laboratory of Semiconductor Material Science, Chinese Academy of Science.....NANO-09-200

**15:00-15:15 The effect of spacing layer thickness during InAs/GaAs Quantum Dot stacks growth using a hybrid method**, Hao Feng, Zhongyuan Yu, Yumin Liu, Wei Zhao, Beijing University of Posts and Telecommunications.....NANO-09-057

**15:15-15:30 Fabrication and study of Si quantum dots and metal nanocrystals based solar cells**, Chenxin Zhu, Rui Jia, Chen Chen, Weilong Li, Ming Liu, Xinyu Liu and Tianchun Ye, Institute of Microelectronics, Chinese Academy of Sciences.....NANO-09-223

**Tuesday, May 12, 2009**

**Quantum Dot Session II**

**15:45-17:45**

**Room: 353, Conference Building**

**Session Chair: Peter Lodahl**

**15:45-16:15 Invited: Optical and Electrical properties of colloidal II-VI semiconductor nanocrystals**, Yiping Cui, Jiayu Zhang, Southeast University.....NANO-09-013

**16:15-16:30 Entanglement of States in InGaAs/GaAs Quantum Dot**, Mohd. Shakil Qureshi, Pratima Sen, J. Thomas Andrews, Pranay K. Sen, Shri G S Institute of Technology & Science.....NANO-09-074

**16:30-16:45 The strain field distribution of quantum dot array with conical shape**, Lu Wenjuan, Liu



- Yumin, Yu Zhongyuan, Jia Boyong, Xu Zihuan, Lu Pengfei, Han Lihong, Institute of Optical Communication and Optoelectronics, Beijing..... NANO-09-048
- 16:45-17:00 3-Dimensionally Confined Optical Modes in Self-Assembled InGaAs/GaAs Quantum Dot Microtubes**, F. Li, S. Vicknesh, and Z. Mi, McGill University, Canada.....NANO-09-141
- 17:00-17:15 Electronic structure of GaN/AlN quantum dots with adjacent threading dislocations**, Pengfei Lu, Han Ye, Zhongyuan Yu, Lihong Han, Beijing University of Posts and Telecommunications.....NANO-09-055
- 17:15-17:30 Nanometer-scale dielectric constant mapping of Ge/Si quantum dots**, Yoshihiro Ogawa, Fujio Minami, Yohannes Abate, and Stephen R. Leone, Tokyo Institute of Technology, Japan.....NANO-09-205
- 17:30-17:45 Strain distribution and electronic structure of Self-organized InAs/GaAs quantum dots**, Liu Yu-Min, Yu Zhong-Yuan, Ren Xiao-Min, Institute of Optical Communication and Optoelectronics..... NANO-09-046

## Nanodevice Sessions

**Monday, May 11, 2009**

**Nanodevice Session I**

**13:30-15:30**

**Room: 480, Conference Building**

**Session Chair: Z. M. Zhang**

**13:30-13:45 Optical switching in silicon nanowaveguide ring resonators based on Kerr effect and TPA effect**, Chunfei Li and Na Dou, Harbin Institute of Technology.....NANO-09-045

**13:45-14:00 Low-Threshold Two-Photon Pumped ZnO Nanowire Lasers**. Jian Xu, Chunfeng Zhang, Fan Zhang, Nitin Kumar, Jong-in Hahm, Jin Liu, Zhonglin Wang, The Pennsylvania State University.....NANO-09-063

**14:00-14:30 Invited: 3D nanostructured optical element design and assembly**, George Barbastathis, Satoshi Takahashi, Anthony Nichol, and Martin Deterre, Massachusetts Institute of Technology..... NANO-09-009

**14:30-14:45 Four-Wave Mixing in Micro/Nanofiber**. Wei Fang, Jian Fu, and Limin Tong, Zhejiang University.....NANO-09-166

**14:45-15:00 A general strategy to enhance the upconversion radiation in lanthanide-doped oxide nanocrystals**, Guanying Chen, Huijuan Liang, and Zhiguo ZhangGuanying Chen, Harbin Institute of Technology.....NANO-09-155

**15:00-15:15 Bragg Diffraction in Thin Two-Dimensional Gratings**. Qiong He, Isabelle Zaquine, Gerald Roosen, and Robert Frey, Lei Zhou, CNRS, France..... ..NANO-09-125

**15:15-15:30 Photoluminescence properties of porous InP infilled with ferroelectric polymer**, Caihong Jia, Yonghai Chen, Yuchao Jiang, Fengqi Liu, Shengchun Qu, and Zhanguo Wang, Institut of Semiconductor,

**Tuesday, May 12, 2009**

**Nanodevice Session II**

**13:30-15:30**

**Room: 480, Conference Building**

**Session Chair: Sang Hyun Oh**

**13:30-14:00 Invited: Nanophotonic devices based on Fano resonances on stacked nanomembranes,** Weidong Zhou and Zhenqiang (Jack) Ma, University of Texas at Arlington, USA..... NANO-09-037

**14:00-14:15 Self-trapping of an optical vortex at the surface of optically-induced photonic lattices,** Daohong Song, Cibo Lou, Liqin Tang, Yi Hu, Jingjun Xu and Zhigang Chen, Nankai University.....NANO-09-122

**14:15-14:30 Electronic structure of GaAs/AlGaAs Quantum Double Ring in lateral electric field,** Y.Z. Yao, T. Ochiai, T. Mano, T. Kuroda, T. Noda, N. Koguchi, K. Sakoda, National Institute for Materials Science, Japan..... NANO-09-123

**14:30-15:00 Invited: Semiconductor Nanolasers: From Wires, Pillars, to Plasmonic Shells,** Cun-Zheng Ning, Arizona State University, USA..... NANO-09-038

**15:00-15:15 Mode characteristics of metallic-confined square-resonator microlasers,** Kai-Jun Che, Yong-Zhen Huang, Yue De Yang, Yun Du, Institute of Semiconductors, Chinese Academy of Sciences..... NANO-09-162

**15:15-15:30 Dispersionless slow light Photonic Crystal waveguide,** Yundong Zhang, Bo Yu, Ping Yuan, Institute of Opt-Electronics, Harbin Institute of Technology..... NANO-09-230

**Wednesday, May 13, 2009**

**Nanodevice Session III**

**10:15-12:00**

**Room: International Conference Center**

**Session Chair: Liming Tong**

**10:15-10:45 Invited: Plasmonic Nanostructures for Biosensing, Spectroscopy and Photovoltaics,** JSang Hyun Oh, University of Minnesota, USA.....NANO-09-022

**10:45-11:00 Slow light in two micro-spheres optical fiber system,** Yundong Zhang, Jing Zhang, Xuenan Zhang, Nan Wang, He Tian, Ping Yuan, Harbin Institute of Technology.....NANO-09-092

**11:00-11:15 Superconducting Photonic Crystal for Terahertz Applications,** C. H. Raymond Ooi, Monash University, Malaysia..... NANO-09-231

**11:15-11:30 High-performance polarizing beam splitter based on total internal reflection used at 10.6 mm wavelength,** Hongchao Cao, Changhe Zhou, Jijun Feng, Jiangjun Zheng, and Peng Lv, Shanghai Institute of Optics and Fine Mechanics..... NANO-09-132

**11:30-11:45 Calculation of hole states in InAs/GaAs quantum rings: Six-band k-p model using Fourier transform method,** Boyong Jia, Zhongyuan Yu, Yumin Liu, Wenjie Yao, Beijing University of Posts and Telecommunications..... NANO-09-056

**11:45-12:00 Ultraviolet Upconversion Emissions in Er<sup>3+</sup> doped Nanocrystalline Y<sub>2</sub>O<sub>3</sub> by Nd<sup>3+</sup> Laser (532 nm) Excitation**, Feng Qin, Ying Yu, Yangdong Zheng, and Zhiguo Zhang, Harbin Institute of Technology..... NANO-09-189

**Wednesday, May 13, 2009**

**Nanodevice Session IV**

**13:30-15:30**

**Room: 480, Conference Building**

**Session Chair: Chih-Chung Yang**

**13:30-14:00 Invited: Functionalized microfibers and nanofibers for photonics applications**, Limin Tong, Zhejiang University.....NANO-09-029

**14:00-14:15 Photoactivated Carbon Nanotube Device for High-Power and High-Speed Switching**, Moncef B Tayahi, Rutgers University, USA .....NANO-09-146

**14:15-14:30 Modeling bending losses of optical nanofibers or nanowires**, Huakang Yu, Shanshan Wang, Jian Fu, Fuxing Gu, and Limin Tong, Zhejiang University.... .....NANO-09-168

**14:30-14:45 Nonlinear Waves at the Edge of Curved Optical Waveguide Arrays**, X. Qi, I. L. Garanovich, Z. Xu, A. A. Sukhorukov, D. N. Neshev, W. Krolikowski, A. Mitchell, Yu. S. Kivshar, Australian National University, Australian.....NANO-09-058

**14:45-15:00 Nonlinear optical and optical limiting properties of phenoxy- phthalocyanines studied using Z-scan technique**, Yundong Zhang, Lei Ma , Chaobo Yang , Ping Yuan, Harbin Institute of Technology.....NANO-09-091

**15:00-15:15 Study on the Infrared Property of Polyaniline /Multi-wall Carbon Nanotube Composite**, Changbin Ju, Yufan Du, Bin Feng, Yongsheng Wang, Dawei He, Ming Fu, Jinghua Jiang, Beijing Jiaotong University..... NANO-09-194

**15:15-15:30 Ag<sub>2</sub>S nanobelts fabrication from CdS nanobelts through Cation Exchange**, Yong Lv , Weifeng Liu , Jian ming Huang, Xiang zhou Chen, Lian zeng Yao, University of Science and Technology of China.....NANO-09-181

**Thursday, May 14, 2009**

**Nanodevice Session V**

**8:30-10:15**

**Room: 480, Conference Building**

**Session Chair: Kazuaki Sakoda**

**8:30-9:00 Invited: Subwavelength Magnified Color Imaging with silver Nanolens**, Prabhat Verma, Satoshi Kawata, Osaka University, Japan..... NANO-09-031

**9:00-9:15 Towards Rugged Microfiber Devices**, Guillaume Vienne, XuFeng Kou, and Limin Tong, Zhejiang University.....NANO-09-186

**9:15-9:30 A High-k gate silicon Electro-Optic modulator based on MOS capacitor**, Mengxia Zhu, Dingshan Gao, and Zhiping Zhou, Huazhong University of Science and Technology.....NANO-09-212

**9:30-9:45 Ultraviolet and blue upconversion emissions of NaYF<sub>4</sub>:La<sup>3+</sup>( Nd<sup>3+</sup>, Tb<sup>3+</sup>, Eu<sup>3+</sup>) nanocrystals under 532 nm laser excitation**, Huijuan Liang, Li Wu, Guanying Chen, Yuan Liu, Long Li, and Zhiguo Zhang, Harbin Institute of Technology.....NANO-09-187

**9:45-10:00 Single-defect photonic crystal vertical-cavity surface-emitting laser with a ring cavity**, Anjin Liu, Hongwei Qu, Wei Chen, Mingxin Xing, Wenjun Zhou, and Wanhua Zheng, Institute of Semiconductors, Chinese Academy of Sciences.....NANO-09-100

**10:00-10:15 Optical properties of indium hydroxide nanocubes and nanorods synthesized by chemical bath deposition method**, Li Chang-Yu, Liu Shou-Xin, Northeast Forestry University.....NANO-09-191

## Plasmonics Sessions

**Monday, May 11, 2009**

**Plasmonics Session I**

**15:45-17:45**

**Room: 489, Conference Building**

**Session Chair: Yunlong Sheng**

**15:45-16:15 Invited: Behaviors of Surface Plasmon Coupling with a Light Emitter/absorber and Their Applications to Light-emitting Diode and Solar Cell**, Jyh-Yang Wang, Kun-Ching Shen, Yen-Cheng Lu, Cheng-Yen Chen, Dong-Ming Yeh, Wen-Hung Chuang, Cheng-Hung Lin, Yean-Woei Kiang, and C. C. Yang, National Taiwan University, Taiwan.....NANO-09-033

**16:15-16:30 Gigantic Enhancement through Optical Pulling using the Periodic Nanopatterns on the Pyramidal Probe**, S.S. Choi, O. Suwal, V. Jha, H.J. Jang, M.J. Park, SunMoon University, Korea..... NANO-09-043

**16:30-16:45 The near-field mechanism of particularly designed metallic micro-structure based on Surface Plasmon Polaritons**, Xiudong Sun, Shiyi Wang, Harbin Institute of Technology.....NANO-09-042

**16:45-17:15 Invited: Magnetic Polaritons on the Optical Properties of Multilayered Gratings and Films**, Z. M. Zhang and L. P. Wang, Georgia Institute of Technology.....NANO-09-036

**17:15-17:30 Highly-efficient metal-mirror-based reflecting polarizing beam splitter**, Jiangjun Zheng, Changhe Zhou, Shanghai Institute of Optics and Fine Mechanics .....NANO-09-135

**17:30-17:45 Fabrication of Au Nanospheres with Pulsed Laser Ablation/annealing and Their Surface Plasmon Behaviors**, Cheng-Yen Chen, Yen-Cheng Lu, C. C. Yang, National Taiwan University, Taiwan..... NANO-09-150

**Tuesday, May 12, 2009**

**Plasmonics Session II**

**13:30-15:30**

**Room: 353, Conference Building**

**Session Chair: Din-Ping Tsai**

**13:30-14:00 Invited: Cloaking by anomalous localized resonance: principles, problems and possibilities**, R C McPhedran, N A Nicorovici, L C Botten and G W Milton, University of Sydney, Australia.....NANO-09-021

- 14:00-14:30 Invited: On the Transit SPP Launched by Subwavelength Real Metal Slits**, Yann Gravel and Yunlong Sheng, Laval University, Canada.....NANO-09-025
- 14:30-14:45 Surface Plasmon Excitation on Annular Metallic Slits With Radially Polarized Illumination**, Weibin Chen, Don C. Abeysinghe, Qiwen Zhan, University of Dayton.....NANO-09-052
- 14:45-15:00 Controlling plasmonic resonance properties in binary metallic nanostructures**, Jia Li, Ying Gu, Yan Wang, and Qihuang Gong, Peking University.....NANO-09-154
- 15:00-15:15 Creating Hot Region in Hole-disk System for Cascaded Enhanced Surface-Enhanced Raman Scattering**, Haixi Zhang, Ho-Pui Ho, Chinese University of Hong Kong.....NANO-09-064
- 15:15-15:30 Waveguide-Clad In-Plane Integrated Surface Plasmon Cavities**, Hai Liu, Xiudong Sun, Yongyuan Jiang, Harbin Institute of Technology..... NANO-09-208

### Wednesday, May 13, 2009

### Plasmonics Session III

**10:15-11:45**

**Room: 489, Conference Building**

**Session Chair: Ross McPhedran**

- 10:15-10:45 Invited: PLASMONIC NANOSTRUCTURES FOR PHOTO-CATALYTIC CHEMICAL REACTORS**, Din Ping Tsai, Chi Sheng Wu, Nae Lih Wu, Yuan Hsing Fu, Kuo Pin Chiu, Cheng Hung Chu, Hong Yi Chung, Fu Hau Chen, Lian Da Lin, Li Han Huang, Chun Da Shue, National Taiwan University, Taipei.....NANO-09-030
- 10:45-11:00 Long-range Surface Plasmon Excitations on Gain Assisted Metal Gratings**, Zhi Wu, Joseph W. Haus and Qiwen Zhan, University of Dayton.....NANO-09-053
- 11:00-11:15 Aperture coupled deep subwavelength Plasmonic ring resonators**, Zhanghua Han and Vien Van, University of Alberta, Canada.....NANO-09-188
- 11:15-10:30 Quantitive criterions for enhanced transmission of uniform nano-slits in metallic films**, Yan Liu, Li Xue Chen, Dong Hua Tang, Wei Qiang Ding, Xiu Dong Sun, Harbin Institute of Technology.....NANO-09-078
- 11:30-11:45 Enhance Transmission through Sub-wavelength Conducting Polymers Grating Structures**, Chunchong Chen, Xiwen Zhang, Pei Wang and Hai Ming, University of Science and Technology of China.....NANO-09-207

### Photonic Crystals Sessions

#### Monday, May 11, 2009

#### Photonic Crystals Session I

**15:45-18:00**

**Room: 480, Conference Building**

**Session Chair: John Sipe**

- 15:45-16:15 Invited: Plane-Wave Transfer-Matrix Method and Its Application to Photonic Crystals**, Zhiyuan Li, Institute of Physics, Chinese Academy of Sciences.....NANO-09-017

- 16:15-16:30 Control and manipulation of two-colour surface solitons**, Zhiyong Xu, Yuri S. Kivshar, Australian National University, Australia.....NANO-09-059
- 16:30-16:45 The design of a novel electrically driven photonic crystal edge-emitting laser**, Mingxin Xing, Wanhua Zheng, Wei Chen, Wenjun Zhou, Hailing Wang, Lianghai Chen, Institute of Semiconductors, Chinese Academy of Sciences..... NANO-09-098
- 16:45-17:00 Uniqueness of the Chiral Photonic Crystal Fibers**, Junqing Li, Qiyao Su, Lei Jin, Harbin Institute of Technology.....NANO-09-082
- 17:00-17:15 Realization and characterization of novel waveguides and channel-drop filters in two-dimensional silicon photonic crystals**, Ya-Zhao Liu and Zhi-Yuan Li, Institute of Physics, Chinese Academy of Science.....NANO-09-175
- 17:15-17:30 Ultraslow Light in Symmetric Line Defect Photonic Crystals Waveguide**, Jin Hou, Dingshan Gao, Huaming Wu, Zhiping Zhou, Huazhong University of Science & Technology.....NANO-09-169
- 17:30-17:45 Study on Z-scan characteristics for one-dimensional nonlinear photonic band gap materials with defect mode**, Shuqi Chen, Weiping Zang, Xin Liu, Jianguo Tian, Nankai University.....NANO-09-075
- 17:45-18:00 Characters of deformed polarization-maintaining photonic crystal fibers**, Weimin Sun, Fenghua Fu, Xiaoqi Liu, Jianzhong Zhang, Shuai Shi, Quan Chai, T.A. Birks, Harbin Engineering University..... NANO-09-086

**Tuesday, May 12, 2009**

**Photonic Crystals Session II**

**15:45-18:00**

**Room: 480, Conference Building**

**Session Chair: Zhiyuan Li**

- 15:45-16:15 Invited: Nonlinearity Enhancement via Light Tunneling in a Thick Metal Film**, Guiqiang Du, Haitao Jiang, Zhanshan Wang and Hong Chen, Tongji University.....NANO-09-011
- 16:15-16:30 Photobleached DAST Photonic Crystal Dispersion and Propagation**, M. Siraj and J.W. Haus, P. Prasad, M. Samoc, HElectro-Optics Program, University of Dayton.. .....NANO-09-238
- 16:30-16:45 High polarization single dipole mode photonic crystal microlaser**, Wei Chen, Mingxin Xing, Wenjun Zhou, Anjin Liu, Lianghai Chen, and Wanhua Zheng, Institute of Semiconductors, Chinese Academy of Sciences.....NANO-09-097
- 16:45-17:00 Proposal of Unique Highly Nonlinear Photonic Crystal Fibers for Optical Coherence Tomography and Telecommunication Window**, Feroza Begum, Nianyu ZOU, Yuncui Zhang, Yoshinori Namihira, and Shubi Kaijage, Dalian Polytechnic University.....NANO-09-161
- 17:00-17:15 Giant Enhancement of Second Harmonic Generation in One-Dimensional Nonlinear Photonic Crystals with Distributed Bragg Reflectors**, Ming-Liang Ren and Zhi-Yuan Li, Institute of Physics, Chinese Academy of Sciences.....NANO-09-163

- 17:15-17:30 All-solid highly birefringent Photonic Crystal Fibers**, Dong Mao, Chunying Guan, Harbin Engineering University.....NANO-09-119
- 17:30-17:45 Study on the Birefringence and Loss Properties in Photonic Crystal Fiber**, Lihong Han, Zhongyuan Yu, Ding Ni, Yumin Liu, Pengfei Lu, Beijing University of Posts and Telecommunications.....NANO-09-133
- 17:45-18:00 Efficient multiple beaming of photonic crystal waveguide branches**, Donghua Tang, Lixue Chen, Yan Liu, Xiudong Sun, Weiqiang Ding, Harbin Institute of Technology....NANO-09-051

**Wednesday, May 13, 2009**

**Photonic Crystals Session III**

**15:45-18:00**

**Room: 489, Conference Building**

**Session Chair: Hong Chen**

- 15:45-16:00 High efficient and tunable edge emitting microlaser on photonic crystal slab**, Wanhua Zheng, Mingxin Xing, Wei Chen, Wenjun Zhou, Anjin Liu, Hailing Wang, Lianghai Chen, Institute of Semiconductors, Chinese Academy of Sciences.....NANO-09-099
- 16:00-16:15 Two-Tiered Air-Hole Design for High Power Two-Dimensional Photonic-Crystal Surface-Emitting Lasers**, Seita Iwahashi, Kyosuke Sakai, and Susumu Noda, Kyoto University, Japan.....NANO-09-117
- 16:15-16:30 A Novel Photonic Crystal Fiber with High Birefringence**, F.F. Shi, Y. Zhao, M.C. Li, L.C.Zhao, Harbin Institute of Technology.....NANO-09-087
- 16:30-16:45 The design and optimization of electrically driven Fabry-Pérot cavity integrated photonic crystal surface emitting laser**, Wenjun Zhou, Wei Chen, Anjin Liu, Mingxin Xing, Lianghai Chen and Wanhua Zheng, Institute of Semiconductors, Chinese Academy of Sciences.....NANO-09-102
- 16:45-17:00 Fiber-embedded photonic crystal fiber mode convertor**, Weimin Sun, Xiaoqi Liu, Quan Chai, Shuai Shi, Jianzhong Zhang, Fenghua Fu, Shuai Shi, T.A. Birks, Institute of Semiconductors, Chinese Academy of Sciences.....NANO-09-085
- 17:00-17:15 Self-imaging in Photonic Crystal Multimode Waveguide with Only Partial Band Gap**, Dingshan Gao, Jin Hou, Huaming Wu, Huazhong University of Science & Technology.....NANO-09-170
- 17:15-17:30 The influence on the optical characteristics of amorphous nanoclusters by introducing photonic crystals**, Huiqin Wang, Zhengdong Liu, Nanchang University.....NANO-09-041
- 17:30-17:45 Coupling characteristics of linearly distributed multicore photonic crystal fibers**, Chunying Guan, Libo Yuan, Harbin Engineering University.....NANO-09-118
- 17:45-18:00 Modified Spontaneous Emission of Organic Molecules In-Filled in Inverse Opal Colloidal Crystals**, Lier Deng, Yongsheng Wang, Ming Fu, Dawei He, Ailun Zhao, Yinglei Tao, Dongdong Wang, Beijing Jiaotong University.....NANO-09-229

## Nanofabrication Sessions

**Monday, May 11, 2009**

**Nanofabrication Session I**

**15:45-18:00**

**Room: 353, Conference Building**

**Session Chair: Minghui Hong**

**15:45-16:00 Fabrication and optical properties of metal coated non-close packed colloidal crystals,** Anna Ushanova and Harri Lipsanen, Helsinki University of Technology, Finland.....NANO-09-215

**16:00-16:15 Lattice constants of isotopic<sup>nat</sup>Ga<sup>15</sup>N epilayers grown on c-plane sapphire,** Yong-zhao Yao, Takeshi Ohgaki, Kenji Matsumoto, Isao Sakaguchi, Yoshiki Wada, Hajime Haneda, Takashi Sekiguchi, and Naoki Ohashi, National Institute for Materials Science, Japan.....NANO-09-137

**16:15-16:45 Invited: Nonlinear electrochromism and nonlinear photochromism in organometallics,** Katy A. Green, Marie P. Cifuentes, Mark G. Humphrey and Marek Samoc, Wroclaw University of Technology, Poland.....NANO-09-024

**16:45-17:00 Effect of vanadium content on room temperature photoluminescence and magnetic properties of doped ZnO thin films,** Liwei Wang, Fujun Zhang, Zheng Xu, Suling Zhao, Xurong Xu, Beijing Jiaotong University.....NANO-09-213

**17:00-17:15 Fabrication of 100nm features with laser interference lithography,** Liang Fang, Yao Liu, Beibei Zeng, Changtao Wang, Xiangang Luo, Institute of Optics and Electronics, Chinese Academy of Sciences.....NANO-09-182

**17:15-17:30 Realization of holographic storage on metal film by femtosecond laser pulses micromachining,** Zhongyi Guo, Haifeng Wang, Zhengjun Liu, Shiliang Qu, Jingmin Dai and Shutian Liu, Harbin Institute of Technology.....NANO-09-210

**17:30-17:45 A new method of making grating--etch by SPM,** Zhang Yingtang, Liu Hanchen, Yu Huawa, Zhou Guangxi, Wu Junfang, Xi'an Polytechnic University.....NANO-09-130

**17:45-18:00 Focused ion beam fabrication for plasmonic nanostructures: negative and positive contributions,** Yongqi Fu, Xiuli Zhou, University of Electronic Science Technology of China.....NANO-09-228

**Tuesday, May 12, 2009**

**Nanofabrication Session II**

**15:45-18:00**

**Room: 489, Conference Building**

**Session Chair: Max Shtein**

**15:45-16:00 Growth of Copper Zinc Tin Sulfide Nanorods by Electrodeposition Using Anodized Aluminum as the Growth Mask,** C.P. Chan, H. Lam and C. Surya, Hong Kong Polytechnic University.....NANO-09-131

**16:00-16:15 Low-temperature process for fabrication of SnO-TiO<sub>2</sub> heterostructure and the photoactivity under visible light,** Jingyu Wang, Dan Su, Fei Chen, Xijiang Han, Harbin Institute of



Technology.....	NANO-09-073
<b>16:15-16:45 Invited: Large area plasmonics structure fabrication by laser irradiation</b> , M.H. Hong, National University of Singapore, Singapore.....	NANO-09-015
<b>16:45-17:00 Selective Transmittance of Circular Polarized Light in Thin Films Which are Fabricated by Glancing Angle Deposition</b> , Linxin Hu, Chaoyi Wang, and Shaoji Jiang, Sun Yat-sen University.....	NANO-09-172
<b>17:00-17:15 Morphological Controlled electrodeposition of ZnO and Cu<sub>2</sub>O by Colloidal Crystal Template Method</b> , Ming Fu, Ailun Zhao, Ji Zhou, Dawei He, and Yongsheng Wang, Beijing Jiaotong University.....	NANO-09-192
<b>17:15-17:30 Periodic microstructures on chromium film induced by femtosecond laser</b> , Tengfei Wu , Changhe Zhou, Zehua Han, Linwei Zhu, Shanghai Institute of Optics and Fine Mechanics.....	NANO-09-127
<b>17:30-17:45 Self-assembled volume grating in silica glass induced by a tightly focused femtosecond laser pulses</b> , Zhongyi Guo, Weiqiang Ding, Shiliang Qu, Jingmin Dai and Shutian Liu, Harbin Institute of Technology.....	NANO-09-211
<b>17:45-18:00 Enhanced optical properties of well-aligned ZnO nanotube arrays by self-catalyzed MOCVD</b> , Dong-Sing Wu, Chia-Cheng Wu, Po-Rung Lin, National Chung Hsing University.....	NANO-09-219

**Thursday, May 14, 2009**

**Nanofabrication Session III**

**8:30-10:15**

**Room: 489, Conference Building**

**Session Chair: Changhe Zhou**

<b>8:30-8:45 Construction of three dimensionally photonic crystals based template assisted method</b> , Xiangdong Meng, Wuhong Xin, Li Xue, Cao Zhong, Liu Xin, Jiupeng Zhao, Li Yao, Harbin Institute of Technology.....	NANO-09-069
<b>8:45-9:00 Fabrication , Characterization , and comparison of silicon nanocrystals embedded in high k dielectric HfO<sub>2</sub> and low k dielectric SiO<sub>2</sub></b> , Weilong Li, Rui Jia, Chen Chen, Haofeng Li, Chenxin Zhu, and Ming Liu, Institute of Microelectronics, Chinese Academy of Sciences.....	NANO-09-226
<b>9:00-9:30 Invited: Multiphoton microfabrication and replication technique for MEMS application</b> , Shoji Maruo, Yokohama National University, Japan.....	NANO-09-020
<b>9:30-9:45 Polarization selective fused-silica beam splitter grating</b> , Jijun Feng, Changhe Zhou, Jiangjun Zheng, Hongchao Cao, Peng Lv, Shanghai Institute of Optics and Fine Mechanics, Academia Sinica.....	NANO-09-128
<b>9:45-10:00 Fabrication of large-scale highly-ordered ZnO nanorod arrays for optical application</b> , Xiaoxian Zhang, Dongfang Liu, Lihuan Zhang, Wenliang Li, Min Gao, and Sishen Xie, Peking	

University.....NANO-09-199  
**10:00-10:15 Fabrication of a novel photodegradable nano-pesticide**, Guan Hua-nan, Chi De-fu, Northeast Forestry University.....NANO-09-076

## **Biophotonics/Sensor Sessions**

**Tuesday, May 12, 2009**

**Biophotonics/Sensor Session I**

**10:15-12:00**

**Room: International Conference Center**

**Session Chair: Daniel Ou-Yang**

**10:15-10:45 Invited: Micro-optical element enabled new applications in optical manipulation and surface plasmon resonance sensing and imaging**, Xiacong Yuan, Guoguang Mu and Zhiliang Fang, Nankai University..... NANO-09-034

**10:45-11:00 Facile preparation of silica-coated gold nanorods and their potential applications in biophotonics**, Qiuqiang Zhan, Jun Qian, Xin Li, Linfang Qiao and Sailing He, Zhejiang University..... NANO-09-081

**11:00-11:15 Fluorescence and SERS study of interaction of 9AA-HCl and silver nanoparticle in living cancer cell**, JingYang, Zhuyuan Wang, XuebinTan, Chunyuan Song, Ruohu Zhang, Yiping Cui, Southeast University.....NANO-09-106

**11:15-11:30 A exploitation of the attenuated-total-reflection technique to measure the complex second hyperpolarizability for quadratic electro-optic effect of linear conjugated polymer**, Xiaohui Zhu, Xiaoxu Deng, Xiang Zheng, Zhuangqi Cao, Shanghai Jiao Tong University..... NANO-09-070

**11:30-11:45 Spectral Imaging Analysis of the Distribution of the Cancer Biomarkers using Quantum Dots Probes**, Hao Xu, Chun-Mei Liu, Chuang Chen, Yan Li, and Hong-Wu Tang, Wuhan University..... NANO-09-206

**11:45-12:00 Fiber-optic surface plasmon resonance sensor with radially polarized beam**, Jie Yan, Yonghua Lu and Pei Wang, University of Science and Technology of China.....NANO-09-190

**Wednesday, May 13, 2009**

**Biophotonics/Sensor Session II**

**15:45-17:45**

**Room: 480, Conference Building**

**Session Chair: Ho-pui Ho**

**15:45-16:15 Invited: Habib Ammari**, Ecole Polytechnique and CNRS, France.....NANO-09-008

**16:15-16:30 The Research of photonic-crystal fiber sensor**, Yong Peng , Yi Cheng, Li Hong Cheng, Dalian Maritime University.....NANO-09-148

**16:30-16:45 A biocompatible and stable core/shell drug nanocarrier with Surface-enhanced Raman Scattering activity**, Xuebin Tan, Zhuyuan Wang, Jing Yang, Chunyuan Song, Ruohu Zhang, Yiping Cui, Southeast University.....NANO-09-105

- 16:45-17:00 Functionalized Polymer Single Nanowires as Fast-Response High-Selectivity Optical Sensors**, Fuxing Gu, Lei Zhang, Xuefeng Yin, and Limin Tong, Zhejiang University.... .NANO-09-204
- 17:00-17:15 Tagged molecule induced nanoparticle aggregation: Preparing Raman reporter-labeled SERS activity immuno-Au aggregate as immuno-sensor**, Chun-Yuan Song, Zhu-Yuan Wang, Ruo-Hu Zhang, Jing Yang, Xue-Bin Tan, Yi-Ping Cui, Southeast University.....NANO-09-104
- 17:15-17:30 Research of SiO<sub>2</sub>-WO<sub>3</sub> nano-composition thin film and its gas sensitivity-optical characteristics**, Yong Peng , Yi Cheng, Li Hong Cheng, Dalian Maritime University..... NANO-09-147
- 17:30-17:45 Investigation on an unpolarized photonic crystal self-collimation sensor**, Wang Yu-fei, Chen Xi-yao, Qiang Ze-xuan, Longyan University.....NANO-09-139

## Nanoparticles Sessions

**Monday, May 13, 2009**

**Nanoparticles Session I**

**10:15-12:00**

**Room: 480, Conference Building**

**Session Chair: Joseph Haus**

- 10:15-10:30 Light-induced silver nanoparticles at the extremity of single mode optical fiber**, S. Jradi, L. Balan, X.H. Zeng, J. Plain, D.J. Loughnot, P. Royer, R. Bachelot, Université de Technologie de Troyes, France.....NANO-09-136
- 10:30-10:45 Synthesis and Composition Dependent Optical Properties of Bimetallic Gold-Silver Nanoparticles on Amino-propyltriethoxysilane Monolayer**, Shantang Liu, Qin Qu, Lei Qi, Wuhan Institute of Technology.....NANO-09-107
- 10:45-11:15 Invited: Improving the coupling between photons and molecules in free space**, Mario Agio, ETH Zurich.....NANO-09-007
- 11:15-11:30 Low-temperature Upconversion Luminescence in Silica coated Gd<sub>2</sub>O<sub>3</sub>:Er and Gd<sub>2</sub>O<sub>3</sub>:Tm,Yb nano-composite**, Lingling Xu, Yanqiu Sheng, Di Zhai, Peng Wang and Zhiguo Zhang, Harbin Institute of Technology.....NANO-09-178
- 11:30-11:45 Electro-optical Properties of Twisted Nematic Liquid Crystals Doped with Silver Nanoparticles**, Yongyuan Jiang, Linyi Huang, Harbin Institute of Technology.....NANO-09-149
- 11:45-12:00 Optical limiting in gold nanoparticles protected by 9-(5-thiopentyl)-carbazole**, Yachen Gao, Cun Chang, Qing Chang, Yuliang Li, Yinglin Song, Daoben Zhu, Heilongjiang University...NANO-09-142

**Tuesday, May 14, 2009**

**Nanoparticles Session**

**10:30-12:00**

**Room: 489, Conference Building**

**Session Chair: Mario Agio**

- 10:30-11:00 Invited: Quantitative analysis of optical trapping and micromanipulation of nanoparticles**

- in suspension**, Daniel Ou-yang, Lehigh University, USA.....NANO-09-023
- 11:00-11:15 Spectral Dependence of Optical Nonlinearity of Metal Nanoparticle Materials**, Yoshihiko Takeda, Hiroyoshi Momida, Masato Ohnuma, Takahisa Ohno and Naoki Kishimoto, National Institute for Materials Science, Japan.....NANO-09-110
- 11:15-11:30 Optical properties of silver nanoparticles dispersed polyvinyl pyrrolidone film**, Yanbo Pei, Fengfeng Yao, and Xiudong Sun, Harbin Institute of Technology..... NANO-09-217
- 11:30-11:45 Salts-based Size-selective Precipitation of Aqueous Nanoparticles: An Alternative to the Traditional Nonsolvents-based Precipitation**, ChunLei Wang, Min Fang, ShuHong Xu, YiPing Cui, Southeast University.....NANO-09-174
- 11:45-12:00 Quantitative analysis on dipole and quadrupole excitation of metal nanoparticles**, Fei Zhou and Zhi-Yuan Li, Institute of Physics, Chinese Academy of Sciences.....NANO-09-158

## Metamaterials Session

**Wednesday, May 13, 2009**

**Metamaterials Session**

**13:30-15:30**

**Room: 489, Conference Building**

**Session Chair: Xiaocong Yuan**

**13:30-14:00 Invited: Hybridization effect in metamaterials**, H. Liu, T. Li, Z. G. Dong, S. M. Wang, S. N. Zhu, X. Zhang, Nanjing University .....NANO-09-018

**14:00-14:15 Invited: Optical MetaMaterials:Science and Applications**, Gennady Shvets, University of Texas at Austin, USA.....NANO-09-027

**14:15-14:30 Fractal Plasmonic Metamaterials for Subwavelength Imaging**, Xueqin Huang, Dexin Ye, Shiyi Xiao, Jiangtao Huangfu,Zhiyu Wang, Lixin Ran, and Lei Zhou, Fudan University. ....NANO-09-124

**14:30-14:45 Enhanced absorption in three-dimensional metamaterials with negative refraction**, Ming Che and Zhi-Yuan Li, Laboratory of Optical Physics, Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences..... NANO-09-176

**14:45-15:00 Realization and Ray Trace Visualization of Negative Refraction in Two-Dimensional Air-Bridged Silicon Photonic Crystal Slabs at 1.55  $\mu\text{m}$** , Lin Gan, Ya-Zhao Liu, Jiang-Yan Li, Ze-Bo Zhang, Dao-Zhong Zhang, Zhi-Yuan Li, Institute of Physics, Chinese Academy of Sciences...NANO-09-159

**15:00-15:15 Template Eliminated Solution Processed Metallic Photonic Crystals**, Hong-mei Liu, Xin-ping Zhang, Jing-juan Li, and Jiao-yang Song, Beijing University of Technology.....NANO-09-184

**15:15-15:30 Super resolution imaging with an unmatched superlens**, Xuefeng Yang, Xiangang Luo, Institute of Optics and Electronics, Chinese Academy of Sciences.. .....NANO-09-096

# Poster Sessions

The excellent poster session is scheduled in Tuesday evening from 19:30 to 21:30. The following posters will be displayed. All poster authors should set up their posters between 18:30 to 19:00, Tuesday. Authors ( belong to Poster Session I ) are required to be present for discussion at the Poster Session from 19:30 to 20:30; Authors ( belong to Poster Session II ) are required to be present for discussion at the Poster Session from 20:30 to 21:30.

**Tuesday, May 12, 2009**

**Poster Session I**

**19:30-20:30**

**Room: 4th Floor of Conference Building**

- Dark soliton stripes on a paraboloidal background in a bulk nonlinear medium**, Xuesong Zhao, Lu Li, Zhiyong Xu, Shanxi University.....NANO-09-050
- High device linearity of pseudomorphic doped-channel field-effect transistor using InGaP/GaAs/InGaAs camel-like gate heterostructure**, Jung-Hui Tsai, Der-Feng Guo, Ning-Xing Su, Yin-Shan Huang, and Wen-Chau Liu, Kaohsiung Normal University, Taiwan.....NANO-09-054
- Influence on focusing contribution from the locations of individual pinholes of a photon sieve**, Junyong Zhang, Qing Cao, Xingqiang Lu, and Zunqi Lin, Shanghai Institute of Optics and Fine Mechanics.....NANO-09-060
- Imaging analysis for photon sieves composed of square pinholes**, Junyong Zhang, Qing Cao, Xingqiang Lu, and Zunqi Lin, Shanghai Institute of Optics and Fine Mechanics..... NANO-09-061
- SiO<sub>2</sub>-passivation based hydrogen gas detector**, Tsung-Han Tsai, Chung-Fu Chang, Po-Shun Chiu, Huey-Ing Chen, Kun-Wei Lin, Shiou-Ying Cheng, Jung-Hui Tsai, Wen-Chau Liu, National Cheng-Kung University, Taiwan.....NANO-09-062
- On an InP/InGaAs heterobipolar transistor with an InAlGaAs/InP step-graded heterostructure collector**, Tzu-Pin Chen, Chi-Jhung Lee, Shiou-Ying Cheng, Jung-Hui Tsai, Kun-Wei Lin, Wen-Chau Liu, National Cheng-Kung University, Taiwan..... NANO-09-065
- High Performance Heterostructure Transistor with Graded -Doped Sheets**, Li-Yang Chen, Chien-Chang Huang, Shiou-Ying Cheng, Jung-Hui Tsai, Kun-Wei Lin, Wen-Chau Liu, National Cheng-Kung University, Taiwan..... NANO-09-068
- The Research of Electronic Speckle Pattern Interferometry based on Spatial Carrier for the Tiny out-of-plane Measurement**, Zhenheng Lin, Wenfang Li, Xizhao Lu, Chun Lin, Luolin Song, Yuanqing Huang, Xiamen University.....NANO-09-071
- Multimode Interference of Multimode fiber Based Coupling Method between Single Mode Fiber and Multi-core PCF**, Xiaoqi Liu, Jianzhong Zhang, Weimin Sun, Libo Yuan, Harbin Engineering University.....NANO-09-077

<b>Photocarrier transport and time of flight measurements in iron-doped potassium lithium tantalate niobate</b> , Yang Li, Zhongxiang Zhou, Hao Tian, Jun Li, Yuqiang Liu, Yanqiang Yang, Harbin Institute of Technology.....	NANO-09-080
<b>Analysis of Equilibrium Composition Profile in InGaAs/GaAs Quantum Dot</b> , Wei Zhao, Zhongyuan Yu, Yumin Liu, Beijing University of Posts and Telecommunications.....	NANO-09-084
<b>Design of a high-speed horizontal pn junction type silicon electrooptical modulator</b> , Huai-Yi Chen and Liang-Zheng Li, Huafan University, Taiwan.....	NANO-09-088
<b>Creating Grayscale Photomasks Using Laser Direct-write Bimetallic</b> , Feng Ma , Duo-shu Wang, Chong-tai Luo, Lanzhou Institute of Physics.....	NANO-09-089
<b>Transparent Electrode for Organic Electronics from Reduced Langmuir-Blodgett Films of Graphene Derivatives</b> , Yan Gao, Yunlong Zou, Rempeng Gu, Mang Wang, Hongzheng Chen, Zhejiang University .....	NANO-09-090
<b>Room temperature ferromagnetic of Cu doped ZnO nanofilm</b> , Shifeng Zhao, Jian-guo Wan, Qi Lu, Mengliang Yao, Fengqi Song, and Guanghou Wang, Nanjing University.....	NANO-09-094
<b>Sub-wavelength focusing by using one dimensional photonic crystal system</b> , Beibei Zeng, Yanhui Zhao, Liang Fang, Changtao Wang, Xiangang Luo, Institute of Optics and Electronics, Chinese Academy of Sciences.....	NANO-09-095
<b>Tight-banding Approach for Coupled-cavity-mode Estimation</b> , Hui Sun, Bin Jiang, Wei Chen, Wenjun Zhou, Minxin Xing, Anjin Liu, Wanhua Zheng, Institute of Semiconductors, Chinese Academy of Sciences.....	NANO-09-101
<b>Investigation of light scattering in nonlinear crystal</b> , S. V. Ivanova, P. N. Lebedev Physical Institute of RAS, Moscow.....	NANO-09-109
<b>The fabrication and study of ZnO UV Photodetector</b> , Chunlei Zhao, Xiaotian Yang, Chao Wang, Wei Tang, Xiaohong Gao, Jia Yang, Boyang Liu, Hai Jing, Xiangping Li, Guotong Du, Chinese Academy of Sciences.....	NANO-09-114
<b>Simulation for Single Crystal Aluminium Nano-Indentation and its Experiment Research</b> , Y.Zhu, Q.Q.Liu, D.Y.Gao, Harbin University of Science And Technology.....	NANO-09-121
<b>Modeling and Analysis on Scattering Property of Subsurface Crackle</b> , Wang Hongjun, Xi'an Technological University.....	NANO-09-126
<b>Synthesis of copper nanoparticles by submerged continuous DC arc discharge</b> , F. Nayeb A.M., R. Malekfar, Physics Department, Faculty of Basic Sciences ,Tarbiat Modares University, Iran...NANO-09-140	
<b>Design and optimization of diffraction gratings alignment scheme</b> , Wangfu Chen, Song Hu, Xiaoping Tang, Yong Yang, Yan Wei, Institute of Optics & Electronics, The Chinese Academy of Science, Chengdu, China.....	NANO-09-152

**Fabrication Technology of the Centrosymmetric Continuous Relief Diffractive Optical Elements**, Duoshu Wang, Chongtai Luo, Yuqing Xiong, Tao Chen, Hongkai Liu, Jizhou Wang, Lanzhou Institute of Physics.....NANO-09-153

**Analyses on angle and displacement adjustment in spatial phase modulation based alignment in nanolithography**, Shaolin Zhou, SongHu, Yan Wei, Yong Yang, Xiaoping Tang, Institute of Optics & Electronics, The Chinese Academy of Sciences, Chengdu.....NANO-09-156

**Tuesday, May 12, 2009**

**Poster Session II**

**20:30-21:30**

**Room: 4th Floor of Conference Building**

**Thermal Conductivity Measurement for Ag/ SiO<sub>2</sub> Nano-Film**, Sha Feng, Chen Yunfei, Wang Zan, Chen Minhua, Jiangsu Key Laboratory for Design and Manufacture of Micro-nano Biomedical Instruments.....NANO-09-157

**Synthesis and growth mechanism of -MnS nanorod-arrays by hydrothermal method**, Jianming Huang, Weifeng Liu, Yong Lv, Lianzeng Yao, University of Science and Technology of China.... .NANO-09-160

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# General information

## Logistics

NANO2009 will be held on May 11-14, 2009 in Harbin, Heilongjiang, China. The symposium will be held at **The Friendship Palace Hotel**. The hotel is located at the central area of Youyi Road in the Daoli District, just minutes walk from the bank of picturesque Songhua River, CBD as well as the Harbin railway station. The Friendship Palace Hotel is just 60 minute's drive from Harbin International Airport.

- Distance from the airport: 40 Km
- Distance from the railway station: 3 Km
- Distance from the city center: 1 Km

## Sponsorship

The Optical Society of America (OSA)

The Chinese Optical Society (COS)

The National Science Foundation of China

Harbin Institute of Technology

Peking University

University of Dayton

## Registration and Information Hours

Sunday, May 10, 2009                      9:00am to 6:00 pm

Monday, May 11, 2009                    8:30am to 10:00 am

## Insurance

The organizers cannot be responsible for personal accidents or material damage that may occur to the participants or their possessions during the conference or tours. All participants are advised to make their own arrangements for health and travel insurance before commencing their journey to the conference.

## Official Language

The official language of NANO2009 is English.

## Presentation Equipment

The multimedia projector (computer projector) will be available in all of the meeting rooms.

## **Secretariat Office/Slides Rehearsal**

The location and open hours will be announced on the NANO2009 official website

<http://physics.hit.edu.cn/nano2009/news.html>

They will also be posted at the convention center.

## **Banquet**

A banquet will be held on May 11 starting at 18:30 in the Friendship Hall in the **Friendship Palace Hotel**.

## **Ticketing Services**

**Friendship Palace** Travel Agency is available to book tickets for train and airplane for you.

## **Travel Information**

### **Visa to China:**

Usually, the normal letters of invitation that have been sent to the participants can be used to obtain an entry visa to China. In case of need, special letters of invitation for visa applications can be provided upon request from the secretariat.

Nano09 Secretariat

Tel: +86-451-86414130

Fax: +86-451-86414129

Email: [nano@hit.edu.cn](mailto:nano@hit.edu.cn)

## **Weather**

Known as the “Ice City”, Harbin also possesses the luscious crown of “The City of Lilac”, which represents the wonderful landscape of charming flowers in the May of Harbin. The average high temperature then will be around 20°C (70°F), and the average low temperature will be around 8°C (46°F), providing you a dramatic feeling of comfort and geniality.

## **Access to Conference Site and Hotel**

Should you choose to arrive in Harbin by air, there are many direct flights from Beijing, Shanghai, and Hong Kong.

## 1 . From Harbin Taiping International Airport to Harbin Friendship Palace Hotel



### Route 1:

Directly take a taxi from the airport to the hotel. The distance from the airport to the Harbin Friendship Palace Hotel ( 友谊宫宾馆 ) is about 40 kilometers, the trip will cost about **120 RMB** and one hour.

Please show the following words to the Taxi driver

**请把我带到友谊路的友谊宫宾馆，谢谢！**

### Route 2:

Take the airport shuttle bus to the An Fa Bridge(安发桥) , the trip will cost about **20 RMB** and 45 minutes; Then take a taxi to the Harbin Friendship Palace Hotel, the trip will cost about 10RMB and 10 minutes.

How to find the airport shuttle bus? Please show the following words to the Inquiry Office staff member.

**请把我带到机场大巴售票处，谢谢！**

Then as you want to go to the An Fa Bridge, please show the following words to the airport shuttle bus driver.

**请提醒我到安发桥下车，谢谢！**

When you get off at An Fa Bridge, you can take a taxi to the hotel, please show the following words to the Taxi driver.

**请把我带到友谊路的友谊宫宾馆，谢谢！**

## 2. From the Railway Station to the Hotel



The hotel is about 3 kilometers from the railway station, if you arrive in Harbin railway station, you can go to the hotel by NO.13 bus (1 RMB), or take a taxi, which costs around 10 RMB.



## Harbin Quick Guide

Harbin, the capital of Heilongjiang, China's northernmost province, is a city of a combination of Chinese and Western style. Lying on the east of the Songnen Plain, Harbin plays a vital role in communications not only between South and North Asia but also the regions of Europe and the Pacific Ocean.

Harbin is famous for its moderate weather in summer and its wonderland of ice and snow in winter. Lilac is the flower of Harbin city. Over the years, Harbin has been working to create a "Lilac City". In 2009, Harbin plans to plant more than 300,000 Lilacs in 35 different varieties. It will increase the planting areas of White Lilac, Double Petal Lilac, Blue Lilac, and Red Lilac. The total planting will exceed 3,000,000 Lilacs in Harbin. Each winter fantastic sculptures are created from snow and ice. Ice lanterns and exciting sporting events attract thousands of visitors from abroad.



With special historical process, Harbin is a famous city which assembles the cultures of all ethnic minorities in North China and integrates Chinese culture with foreign culture. The city is beautifully decorated with the Confucian Temple, the Bliss Temple, Western classic architectures and different kinds of Christian churches. Hence it is given the name of "Eastern Paris".

## Harbin Attractions

### Central Street

The Central Street is the largest and longest pedestrian street in Asia. The street then called "Chinese Street" was first built in 1898. In 1925, the name was changed into "Central Street". It gradually developed into the busiest commercial street in Harbin. It begins from the Songhua River Flood Monument in the north to the Jingwei Street in the south. There are 71 European-style and simulated European-style buildings on the street in

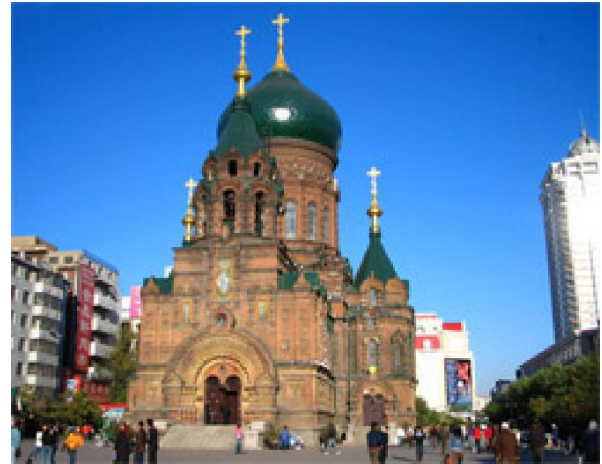


total 13 city-level protected buildings assemble here. These buildings are in various styles, such as, renaissance style, baroque style, eclectic style, modern style. It's a rare "Architectural Art Gallery" in China.

The pedestrian street is in beautiful surroundings. The whole street is in good order. It has become a bright spot of Harbin because of its unique European-style feature, long lines of edifices, masses of entertainment areas, and colorful cultural life.

## St. Sofia Orthodox Church

The St. Sofia Orthodox Church is the largest Orthodox Church in the Far East. The St. Sofia Orthodox Church is 53.35 meters high. It covers an area of 721 square meters. It's the typical representative of the Byzantine architecture. The church is majestic and extremely beautiful. All the walls of the church adopt red brick.



There is a huge onion-shaped dome on the top of the church. Four tent-shaped arch roofs are distributed around it in different sizes. There are stairs to connect four buildings. It has four entrances in four directions.

At the top of the main entrance is the Bell Tower. Seven copper bells just stand for seven notes. The trained ringer strikes them with his hands and feet. People can hear a ripple of melodious ding. The lofty St. Sofia Orthodox Church is a unique human landscape with exoticism in Harbin.

## Siberian Tiger Park

The Siberian tiger is the largest felid in the world and is known as the King of the Forest. In the 1980s, it was listed as one of the first-class national protected animals of China. To preserve this valuable species, the Siberian Tiger Park was built in 1996. The park is located on the north bank of the Songhua River to the northwest of Harbin, occupying an area of 1,440,000 square meters (355.8 acres). It is the largest natural park for wild Siberian tigers in the world at present.



There are over 500 purebred Siberian tigers here, with 100 visible to visitors. In addition, visitors can also see white tigers, lions, lynx, leopards, and black pumas as well as Bengali tigers.

For visitors who love to see exciting activities, the Siberian Tiger Park is also a perfect place. In addition to viewing the tigers walking leisurely in the open-air, visitors can buy poultry or animals to feed them, including ducks, chickens, and even cows.

## Temple of Paradise( the Kek Lok Si Temple and the Confucian Temple)

Temple of Paradise, also named the Kek Lok Si Temple, built in the 1920s with a total area of 57,000 square meters , is one of the four famous Buddhist temples of the three northeast provinces.



The temple locates at No.1 Dong Da Street Nan Gang District and belongs to First Class Preserved Building.

The overall design, layout and construction of the temple maintain the traditional style of Chinese temple-buildings. It lies facing southward along the street. At the entrance, the first thing coming into sight is a two--storey bell tower. The main, east and west yards lie horizontally in the temple courtyard. As for the main yard with a total area of 1.800 square meters, therein lie four great halls: the Hall of Deva-kings, the Hall of Mahavira, the Hall of Three Saints and a Hall for the depositary of Buddhist texts. In the middle of the Hall of Deva-kings is a Maitreya (a large Buddha icon) with four deva-kings to the left and right. In front of the hall, there are bell and drum towers on both sides.

The most imposing building of the temple is probably the Futu Pagoda on the eastern tip of the grounds, a 37m tall stone structure building dotted with caves engraved with Buddhist embossed sculptures. At the bottom of the pagoda is a large hall with Buddhist stature.

## Ice and Snow Festival

With 190-day freezing season, the northeastern city of Harbin is known as a "City of Ice" and is famous for its dazzling outdoor winter artwork. The long and frigid winter, and the high plasticity and hardness of ice blocks quarried from the Songhua River, furnish favorable conditions for ice and snow sculpture. Harbin in winter will become a delighted paradise of ice and snow culture. Tourists both at home and abroad are welcome to the Ice and Snow Cultural Paradise.



To enhance the city's image and boost its tourism industry, the first Harbin Ice and Snow Festival was unveiled on January 5, 1985. Since then it has become an annual event, which is highly acclaimed around the world. The festival is now one of most popular local festivals in China, as well as one of the largest ice and snow spectacles in the world, making Harbin a favorite destination for numerous tourists from home and

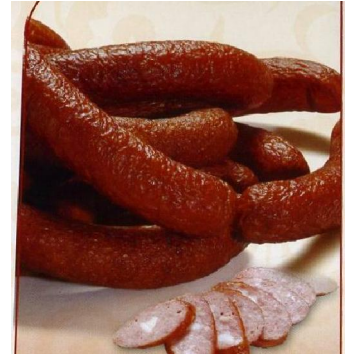


abroad to spend their winter holidays. There are all sorts of things for them to do during the festival: skating, skiing, tobogganing, ice sailing, ice hockey, or simply enjoying the winter scenery.

## Harbin Specialties

### Harbin Sausage

The original name of Harbin sausage is Daolis, imported from Russia, with almost one hundred years' history. Adopting traditional European processing workmanship and with carefully selected materials, Harbin Sausage remains fresh, lustrous and wrinkled in appearance. It has a kind of smoke fragrance and tastes good. Harbin Sausage is the pride of Harbin People and loved and unforgotten by tourists .



### Harbin big bread

Called Palestine also, known as a special skill of Harbin, it is the unique flavor food in Harbin. The large such bread is round, it is weigh 2.5 kilograms, taste is special and fragrant, and have traditional European flavors. The big bread after making, the crust is burnt and fragile, the interior flesh is soft, perfume is unique, should preserve, it is the all-ages instant food.

### Fungi food

Harbin is also rich in delicate wild fungi food, such as hazel mushroom, Jew's-ear (a genus of agarics) and *Hericium erinaceus* , which enables to enhance the immunization of human by its marvelous function. Also name *Hericium*, *Hericium erinaceus* (as illustrated in the right photo) is a famous wild plant, with white fruit, good taste and abundant nutrition. It is one of China famous wild precious, along with sea pumpkin, bear paw, bird's nest become the four famous dishes in China, in feudalism society, only the royalty can eat.

