国家纳米科学中心

NATIONAL CENTER FOR

NANOSCIENCE AND TECHNOLOGY

CHINA(NCNST)

Introduction of Supervisors for International Students

Supervisors and Their Research Direction

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（For more information, please contact via admission guideline of the institute. You can also contact Ms. PAN Hailian (panhl@nanoctr.cn) for admission affairs.）

CAS Key Laboratory for Nanosystem and Hierarchical Fabrication

TANG Zhiyong

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Qualifications

1999 Doctor of Chinese Academy of Sciences
1996 Master of Wuhan University
1993 Bachelor of Wuhan University

Employment History

2006-present Professor, National Center for Nanoscience and Technology, China
2003-2006 Research Fellow, Department of Chemical Engineering, University of Michigan, Dr. Nicholas A. Kotov's research group
2001-2003 Research Fellow, Chemistry Department, Oklahoma State University, Dr. Nicholas A. Kotov's research group
2000-2001 Research Associate, Institute for Chemical and Bioengineering, Swiss Federal Institute of Technology Zurich, Zurich, Switzerland, Dr. RoelPrins' research group

Professional Service

Advisory Board Member, *Nanoscale*, From 2012-
Guest Editor, Special Issue "Nanomaterials", *ChemPhysChem*, 2012

Awards and Honors

Asian Rising Stars, The 15th Asian Chemical Congress, 2013
Emerging Investigator, ChemComm, RSC 2013
Distinguished Asian Speaker, University of Alberta, Canada 2012
"Ten Outstanding Young People" of Chinese Academy of Sciences, China 2012
National Natural Science Foundation for Distinguished Youth Scholars of China 2010
100-Talent Program, Chinese Academy of Sciences, China 2006

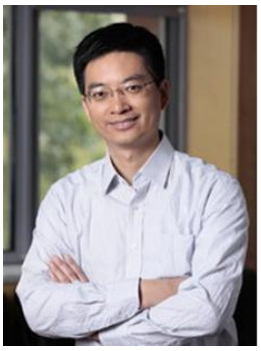
Research Interests

Controllable synthesis and assembly, property manipulation and practical application of inorganic nanomaterials.

Recent Publications

1. Zhao, M.; Yuan, K.; Wang, Y.; Li, G.;* Guo, J.; Gu, L.; Hu, W.; Zhao, H.; * **Tang, Z**.* Metal-Organic Frameworks as Selectivity Regulators for Hydrogenation Reactions. Nature, 2016, 539, 76-80.
2. Zhao, S.; Wang, Y.; Dong, J.; He, C.-T.; Yin, H.; An, P.; Zhao, K.; Zhang, X.; Gao C.; Zhang, L.; Lv, J.; Wang, J.; Zhang, J.; Khattak, A. M.; Khan, N. A.; Wei, Z.; Zhang, J.; Liu, S.;* Zhao, H.;* **Tang, Z.*** Coordinative unsaturation engineering on ultrathin bimetal-organic frameworks nanosheets toward high performance electrocatalysts. Nature Energy 2016, 1, 16184.

WEI Zhixiang



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Educational and Professional Experiences

2006.1 - Present. Professor, National Center for Nanoscience and Technology;
2005.1 - 2006.12. Postdoctoral Fellow, University of Toronto, Canada;
2003.7 - 2004.12. Postdoctoral Fellow, Max Planck Institute of Colloids and Interfaces, Germany;
2000. 9 - 2003. 6 Ph. D., Institute of Chemistry, the Chinese Academy of Sciences;
1997. 9 - 2000. 7 M.S.and B.S, Xi'an Jiaotong University.

Research Interests

We are focused on organic functional nanomaterials: self-assembly and flexible devices. We are using bottom-up approach to self-assemble organic functional nanostructures and supramolecular structures by adjusting non-covalent interactions. We are especially interested with structures with chiral, electro-optical and multifunctional properties. On the other hand, we are developing novel methods to printing highly controlled nanostructures on flexible substrate. Further property investigations are also being carried out in our lab, which may lead potential applications in flexible sensors, photovoltaic devices, supercapacitors, and lithium ion batteries.
Dr. Wei has published more than 80 papers in peer review scientific journals, which have been cited more than 3000 times.

Honors

1)Chinese Academy of Science President Award, 2003
2)Hundred Talents Program of Chinese Academy of Sciences, 2006
3) Youth Chemist, Chinese Chemical Society, 2009
4)Outstanding Young Scientist Award, NSFC, 2011
5)First Prize of Beijing Science and Technology Award, 2011
6)Second Prize of National Natural Science Award, 2014

Selected Publications

(1) Fluorination-enabled optimal morphology leads to over 11% efficiency for inverted small-molecule organic solar cells. Dan Deng, Yajie Zhang, Jianqi Zhang, Zaiyu Wang, Lingyun Zhu, Jin Fang, Benzheng Xia, Zhen Wang, Kun Lu, Wei Ma, Zhixiang Wei, *Nature Commun*., 2016.
(2) Synergistic Effect of Polymer and Small Molecules for High-Performance Ternary Organic Solar Cells, Y.J. Zhang, D. Deng, K. Lu, J.Q. Zhang, B.Z. Xia, Y.F. Zhao, J. Fang and Z.X. Wei, *Adv. Mater.,* 2015.

ZHANG Zhong

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Resume

Dr. Zhong Zhang is a full professor and the head of division at the National Center for Nanoscience and Technology, China. He obtained his Bachelor, Master and PhD degrees from the University of Science and Technology of China in 1990, 1996, and 1999, respectively. He was also a joint PhD student at the German Karlsruhe Research Center and UK Rutherford Appleton Laboratory from 1997 to 1998. His major research interests now are hierarchically structured multi-functional polymer nanocomposites, nanostructured surfaces and coatings, nanomanufacturing and applications.

Since 2000, Dr. Zhang started to work at the Institute for Composite Materials, University of Kaiserslautern of Germany, firstly as an Alexander von Humboldt research fellow. In 2001, he obtained a distinguished award from the German Federal Ministry for Education and Research, the SofjaKovalevskaja Award, which supported him to establish an independent research group at IVW between 2001 and 2006. In 2005, Dr. Zhang was recruited by the newly established NCNST to set up a division of Nanomanufacturing and Applications in 2009.

Directions

1. The design, fabrication and investigation of hierarchically structured multi-functional polymer nanocomposites;
2. Nanostructured surfaces and coatings;
3. Nanocomposite manufacturing and their applications.

Achievements

1. National Natural Science Funds for Distinguished Young Scholar, 2012
2. Excellence Award of Chinese Academy of Sciences, 2011
3. Chinese Academy of Sciences - Bayer AG Young Scientist Award, 2008
4. SofjaKovalevskaja Award, Alexander von Humboldt Foundation, Germany, 2001
5. Alexander von Humboldt Research Fellowship, Germany, 2000
6. Excellence Prize of the Presidential Scholarship, Chinese Academy of Sciences, 2000

Selected Publications

(1) Friedrich K, Fakirov S, Zhang Z (editors): Polymer Composites - from Nano- to Macro- Scale, Springer Polymer Sciences Book, Springer, 2005 (ISBN: 0-387-24176-0). (Book)

(2) Wang GR, Dai ZH, Wang YL, Tan PH, Liu LQ, Xu ZP, Wei YG, Huang R, Zhang Z: Measuring interlayer shear stress in bilayer graphene. *Physical Review Letters* 2017; 119: 036101.

(3) Dai ZH, Wang YL, Liu LQ, Liu XL, Tan PH, Xu ZP, Kuang J, Liu Q, Lou J, Zhang Z: Hierarchical graphene based films with dynamic self-stiffening for biomimetic artificial muscle. *Advanced Functional Materials,* 2016; 26: 7003-7010.

SUN Lianfeng

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Sun was born in Zibo, Shandong Province in 1964. After doctoral studies at Institute of Physics, CAS, he went to National University of Singapore and Cavendish Laboratory, University of Cambridge as postdoctors. In 2004, he joined National Centre for Nanoscience and Technology, China as one of "Hundred Talents of CAS". His work has been recognized by a number of awards, including the Top Prize for Graduate Students (2000), the First Grade Prize of CAS(2003) and the Second Grade Prize of National Natural Science of China(2004). He has published about 100 papers in peer-reviewed journals and is the principal inventor on 6 patents.

Research Interests

(1) Synthesis and Characterization of Novel Carbon Nanomaterials. This group is committed to the discovery, design and development of carbon nanomaterials and nanostructures with an emphasis on their unusually properties, such as ferromagntism in SP^2 carbon.
(2) Nanogenerators and self-powered systems: to study the energy conversion in nanoscale systems, such as the energy of nanofluids inside carbon nanotubes into electricity.
(3) Nanoelectronics, novel nonvalitle memory: to develop novel memory devices based on the edge/end state of graphene or nanotubes.

Education

2001.4- 2003.9 Research Associate, Cavendish Laboratory, University of Cambridge, UK
2000.7-2001.4: Research fellow, Department of Physics, National University of Singapore
1997.9-2000.6: PhD, Institute of Physics, Chinese Academy of Science
1986.9-1989.5: M. S., Institute of Physics, Chinese Academy of Sciences
1982.9-1986.7: B. S., Department of Physics, Qufu Normal University.

Awards

2002: Minor Award of the National Natural Science (Issued by State Department of the People's Republic of China)
2001: Major Award of Natural Science of Chinese Academy of Sciences
2000: Top Director Award of Chinese Academy of Science
2000: Excellent PhD Student of Institute of Physics, Chinese Academy of Science

Selected Publications

1. WB Huang, GL Wang, FQ Gao, Nanoscale 6，3921(2014).
2. YC Zhao, Z Liu, GT Liu, et al. JOURNAL OF PHYSICAL CHEMISTRY C 117， 16256 (2013).
3. MJ Chen, HQ Zhou, F Yu, HC Yang, et al., NANOSCALE 5,8359(2013).
4. F Yu, HQ Zhou, ZX Zhang, G Wang, HC Yang, MJ Chen, L Tao, DS Tang, J He, LF Sun, SMALL 9,2405(2013).

LIU Qian

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Prof. Qian Liu received his PhD from Hokkaido Univ., Japan, and worked for Hokkaido University and AIST, respectively, as foreigner researcher and research scientist. He was back to China in 2005. Now he is Director of Department of Science and Technology, and professor in Nanodevice and Thin Film Lab, at National Center For Nanoscience and Technology，China. He is also an Overseas Panel Judges of ORC, Australia, and leader of steering group of China-Finland Nano-program.

More than 30 years of research experience in applied optics, near-field optics, and nano-optics, especially in ultra-high-density optical storage, super-resolution near-field structure and thin film optics, in nano-device fabrication, interferometer and interferometric components. Now he has published more than 100 papers as first author or corresponding author and more than 20 international and national patents. His research activities received strong support from National Science Foundation of China, EU FPT-7, Ministry of Science and Technology of China, and Chinese Academy of Sciences.

Research Interests

1) Novel micro/nano fabrication method
2) Super-high density optical storage
3) Nanoparticle ordered self-assembly
4) Nano functional thin film materials
5) Nano device
6) SERs based on surface nanostructure

Selected Publications

(1) Haoran Zhang, Fengyou Yang, Jianjie Dong, Lena Du, Chuang Wang, Jianming Zhang, Chuan Fei Guo* & Qian Liu*，Kaleidoscopic imaging patterns of complex structures fabricated by laser-induced deformation. *Nature Communications* 7, 13743 (2016).

(2) Yujia Liang, Yong Xie, Dongxue Chen, Chuanfei Guo, Shuai Hou, Tao Wen, Fengyou Yang, Ke Deng*, Xiaochun Wu*, Ivan I. Smalyukh* &Qian Liu* Symmetry control of nanorod superlattice driven by a governing force. *Nature Communications* 10, 1410 (2017).

HAN Baohang

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Dr. Bao-Hang Han is a professor of nanoporous materials chemistry at the NCNST, obtained his Ph D degree from Nankai University, Tianjin, China. Before he joined the NCNST, he worked as a post-doctorial fellow in the Max-Planck-Institute of Colloids and Interface, Golm, Germany, the Department of Chemistry, University of Ottawa, Ottawa, Canada, and the Department of Chemistry, University of Toronto, Toronto, Canada.

His current research interests focus on preparation of various organic porous materials employing a wide variety of building blocks and exploring their potential application in the fields of energy, environmental, and healthy, such as hydrogen storage, carbon dioxide capture, gas separation, supercapacitor, biocompatible and biodegradable biomass-based drug delivery system.

Recent Selected Publications

1. Qi Chen, Min Luo, Peter Hammershøj, Ding Zhou, Ying Han, Bo Wegge Laursen, Chao-Guo Yan, Bao-Hang Han* "Microporous Polycarbazole with High Specific Surface Area for Gas Storage and Separation" *J. Am. Chem. Soc.* **2012**, *134* (14), 6084–6087

2. Qi Chen, De-Peng Liu, Min Luo, Li-Juan Feng, Yan-Chao Zhao, Bao-Hang Han* "Nitrogen-Containing Microporous Conjugated Polymers via Carbazole-Based Oxidative Coupling Polymerization: Preparation, Porosity, and Gas Uptake" *Small* **2014**, *10* (2), 308–315

3. Ding Zhou, Yi Cui, Pei-Wen Xiao, Mei-Yang Jiang, Bao-Hang Han* "A General and Scalable Synthesis Approach to Porous Graphene" *Nature Commun.* **2014**, *5* (Sept. 2), 4716(1–7)

4. Zhu-Yin Sui, Yue-Na Meng, Pei-Wen Xiao, Zhi-Qiang Zhao, Zhi-Xiang Wei,* Bao-Hang Han* "Nitrogen-Doped Graphene Aerogels as Efficient Supercapacitor Electrodes and Gas Adsorbents" *ACS Appl. Mater. Interfaces* **2015**, *7* (3), 1431–1438

5. Zhu-Yin Sui, Caiyun Wang, Kewei Shu, Quan-Sheng Yang, Yu Ge, Gordon G. Wallace,* Bao-Hang Han* "Manganese Dioxide-Anchored Three-Dimensional Nitrogen-Doped Graphene Hybrid Aerogels as Excellent Anode Materials for Lithium Ion Batteries" *J. Mater. Chem. A* **2015**, *3* (19), 10403–10412

6. Xuesong Ding, Bao-Hang Han* "Novel Metallophthalocyanine-Based Conjugated Microporous Polymers as High Efficient Photosensitizers for Singlet Oxygen Generation" *Angew. Chem., Int. Ed.* **2015**, *54* (22), 6536–6539

7. Hui Li, Xuesong Ding,* Bao-Hang Han* "Porous Azo-Bridged Porphyrin-Phthalocyanine Network with High Iodine Capture Capability" *Chem.–Eur. J.* **2016**, *22* (33), 11863–11868

8. Qiang Cao, Qing Yin, Qi Chen,* Zhi-Bing Dong,* Bao-Hang Han* "Fluorinated Porous Conjugated Polyporphyrins through Direct C–H Arylation Polycondensation: Preparation, Porosity, and Heterogeneous Catalyst for Baeyer–Villiger Oxidation" *Chem.–Eur. J.* **2017**, *23* (41), 9831–9837

ZHI Linjie

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Resume

Prof. ZHI Linjie received his PhD in 2000 at the Institute of Coal Chemistry, CAS. Since 2003 he had been working with Prof. Müllen at the Max-Planck Institute for Polymer Research for two years before assuming the position of project leader there until the end of 2007. He is currently a professor in the National Center for Nanoscience and Technology of China. His research interests focus on carbon-rich materials and their application in energy-related areas.

Research Direction

Nanomaterials for Clean Energy Applications

Selected Publications

1. Zhang, Xinghao, Qiu, Xiongying, Kong, Debin, Zhou, Lu, Li, Zihao, Li, Xianglong, Zhi, Linjie. Silicene Flowers: A Dual Stabilized Silicon Building Block for High-Performance Lithium Battery Anodes. ACS Nano, 2017, 7(11), 7476-7484.
2. Ning, Jing; Hao, Long; Jin, Meihua; Qiu, Xiongying; Shen, Yudi; Liang, Jiaxu; Zhang, Xinghao; Wang, Bin; Li, Xianglong; Zhi, Linjie. A Facile Reduction Method for Roll-to-Roll Production of High Performance Graphene-Based Transparent Conductive Films. Adv. Mater., 2017, 9(29). DOI:10.1002/adma.201605028
3. Bin Wang, Xianglong Li*, Xianfeng Zhang, Bin Luo, Yunbo Zhang, LinjieZhi*, “High volumetric capacity silicon-based lithium battery anodes by nanoscale system engineering”, Nano Lett. 2013, 13, 5578-5584.
4. Bin Wang, Xianglong Li*, Xianfeng Zhang, Bin Luo, Yunbo Zhang, LinjieZhi*, “Contact-engineered and void-involved silicon/carbon nanohybrids as lithium ion battery anodes”, Adv. Mater., 2013, 25, 3560-3565.
5. Bin Wang, Xianglong Li*, Bin Luo, Jingxuan Yang, Xiangjun Wang, Qi Song, Shiyan Chen, LinjieZhi*, “Pyrolyzed bacterial cellulose: a versatile support for lithium ion battery anode materials”, Small, 2013, 9, 2399-2404.
6. Xianglong Li*, LinjieZhi*, “Managing voids of Si anodes in lithium ion batteries”, Nanoscale, 2013, 5, 8864-8873.
7. Bin Wang, Xianglong Li*, Bin Luo, Xianfeng Zhang, Yuanyuan Shang, Anyuan Cao, LinjieZhi*, “Intertwined network of Si/C nanocables and carbon nanotubes as lithium ion battery anodes”, ACS Appl. Mater. Interfaces, 2013, 5, 6467-6472.

HE Tao

Ph. D., Professor, Ph.D&Master supervisor
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Prof. Dr. Tao He, received his Ph.D. in 2002 from Institute of Chemistry, CAS, China. He did postdoctoral research at Weizmann Institute of Science (Israel) and Rice University (USA) from 2002 to 2009. Since July of 2009, he joined National Center for Nanoscienc and Technology, China as a full professor. He has published more than 70 papers in peer-reviewed scientific journals, such as Nature, J. Am. Chem. Soc., Adv. Mater., Prog. Mater.Sci., J. Phys. Chem., J. Mater.Chem. and Appl. Catal. B. His research interest is focusing on R&D of novel photoelectric functional namomaterials and related devices that can efficiently utilize solar energy at relatively low cost.

Research Interests

1) Fabrication of photoelectric functional namomaterials and related devices via modern micro- and nano-technology;
2) Controllable modulation of surface & interfacial electronic and photoelectronic property;
3) Photocatalytic reduction of CO_2 into value-added chemicals;
4) New-concept devices that convert light into electricity.

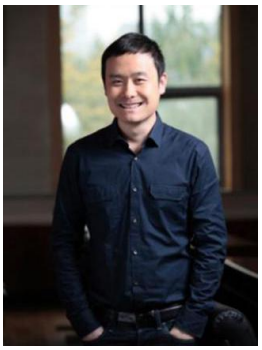
Education

1999.9 – 2002.7 Ph.D. The Chinese Academy of Sciences, Beijing,
China Institute of Chemistry; Key Laboratory of Photochemistry;
1996.9 – 1999.7 M.S. Shandong University, Jinan, China
School of Chemistry and Chemical Engineering;
1989.9 – 1993.7 B.Ch.E. Dalian University of Technology, Dalian, China. School of Chemical Engineering.

Professional Experience

2009.7 – Present Professor National Center for Nanoscience and Technology, China
2005.7 – 2009.5 Postdoc Rice University, Houston, TX, USA
Department of Chemistry & Smalley Institute for Nanoscale Science and Technology
2002.10 – 2005.7 Postdoc Weizmann Institute of Science, Rehovot, Israel
Faculty of Chemistry; Department of Materials and Interfaces

DING Baoquan



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Prof. DING Baoquan is a principle investigator in the National Center for Nanoscience and Technology of China (NCNST). He received his PhD in 2006 from the Department of Chemistry, New York University under supervision of Professor Nadrian Seeman. After the PhD, he joined Molecular Foundry, Lawrence Berkeley National Lab as a post-doctoral research fellow and worked with Professor Jeffrey Bokor in the nanofabrication facility. Then he became a research assistant professor at Biodesign Institute, Arizona State University and worked with Professor Hao Yan from Oct. 2009. He became a Full Professor of NCNST since Nov. 2010. Prof. Ding has published high-impact research works in top journals such as Science, Acc. Chem. Res., J. Am. Chem. Soc., and Adv. Mats. He has been supported by the "Hundred Talents Program" Program of Chinese Academy of Sciences in 2011 and National Program for Support of Top-notch Young Professionals in 2014. He was awarded "Excellent Young Scholars" of the National Natural Science Foundation of China in 2012.

Research Interests

His research interests focused on nanostructures and nanodevices fabrication with nucleic acids (DNA/RNA) based chemical self-assembly. His goal is to create molecular architectures and intelligent materials with optimal control of components at the molecular level and develop applications in wide areas such as chemical or biosensor, drug delivery, nanophotonics and nanoelectronics.

Recent Publications

1. Q. Jiang, Q.Liu, Y. Shi, Z.-G. Wang, P. Zhan, J. Liu, C. Liu, H. Wang, X. Shi, L. Zhang, J. Sun*, **B. Ding***, and M. Liu*. Stimulus-Responsive Plasmonic Chiral Signals of Gold Nanorods Organized on DNA Origami, *Nano Lett.*, 2017, 17, 7125-7130.
2. Q. Liu, H. Wang, X. Shi*, Z.-G. Wang*, and **B. Ding***. Self-Assembled DNA/Peptide-Based Nanoparticle Exhibiting Synergistic Enzymatic Activity, *ACS Nano*, 2017, 11, 7251-7258.
3. P. Zhan, P. K. Dutta, P. Wang, G. Song, M. Dai, S. Zhao, Z.-G. Wang, P. Yin, W. Zhang*, **B. Ding***, and Y. Ke*. Reconfigurable Three-Dimensional Gold Nanorod Plasmonic Nanostructures Organized on DNA Origami Tripod, *ACS Nano*, 2017, 11, 1172-1179.
4. M. J. Urban, P. K. Dutta, P. Wang, X.Duan, X. Shen, **B. Ding***, Y. Ke*, and N. Liu*, Plasmonic Toroidal Metamolecules Assembled by DNA Origami, *J. Am. Chem. Soc.*, 2016, 138 (17), 5495–5498
5. Y. Du, Q. Jiang, N. Beziere, L. Song, Q. Zhang, D. Peng, C. Chi, X. Yang, H. Guo, G. Diot, V. Ntziachristos*, **B. Ding***, J. Tian*. DNA Nanostructure–Gold Nanorod Hybrids for Enhanced in vivo Optoacoustic Imaging and Photothermal Therapy, *Adv. Mater.*, 2016, 28, 10000-10007

HE Jun

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Prof. He received his PhD in Semiconductor Physics from the Institute of Semiconductors, Chinese Academy of Sciences (CAS), in 2003. Then he joined Applied Physics Department of Technische Universiteit Eindhoven, Netherlands, as a postdoctoral fellow. From 2005 to 2007, he worked at Material Department of University of California, Santa Babara, USA. From 2007 to 2010, he worked at California NanoSystem Institute (CNSI), University of California, Los Angeles, USA. He joined the "100-Talents" Program of CAS in Nov. 2010 and became a Full Professor of NCNST since then. Up to date, He has authored or co-authored over 50 peer-reviewed papers.

Current Research Interests

1) Synthesis, physical properties and devices of low-dimensional semiconductor materials;
2) Electronic, optoelectronic and optical information devices;
3) Multi-component hybrid nanostructure design and applications in energy, electronics, and optoelectronics.

Selected Publications

1. Q. S.Wang, M. Safdar, K. Xu, M. Mirza, Z.X. Wang and **J He***.Van der Waals Epitaxy and Photoresponse of Hexagonal Tellurium Nanoplates on Flexible Mica Sheets, *ACS Nano*.8, 7497-7505 (2014).
2. K. Xu, F. M. Wang, Z. X. Wang, X. Y. Zhan, Q. S. Wang, Z. Z. Cheng, M. Safdar and **J He*** Component-Controllable $WS_{2\,(1-x)}$ Se_{2x} Nanotube for Efficient Hydrogen Evolution Reaction, *ACS Nano*. 8, 8468-8476(2014).
3. Z. X. Wang, K. Xu, Y. C. Li, X. Y. Zhan, M. Safdar, Q. S. Wang, F. M. Wang, and **J He***Role of Ga Vacancy on a Multilayer GaTe Phototransistor, *ACS Nano*. 8, 4859-4865 (2014).
4. M. Safdar, Q. S. Wang, M. Mirza, Z. X. Wang, K. Xu, and **J He*** Topological Surface Transport Properties of Single-Crystalline SnTe nanowire, *Nano Letters*. 13, 5344-5349 (2013).
5. Q. S. Wang, M. Safdar, Z. X. Wang, and **J He*** Low-Dimensional Te-Based Nanostructures *Advanced Materials*. 25, 3915-3921 (2013).
6. Z. X. Wang, M. Safdar, C. Jiang, **J He***High-Performance UV-Visible-NIR Broad Spectral Photodetectors Based on One-Dimensional In_2Te_3Nanostructures, *Nano Letters*. 12, 4715-4721 (2012).

GONG JianRu

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JianRu Gong is a Professor at National Center for Nanoscience and Technology, China. She received her Ph.D in Physical Chemistry from Institute of Chemistry, Chinese Academy of Sciences under the guidance of Prof. Chunli Bai in 2005, and was a postdoctoral fellow with Prof. Charles M. Lieber at Harvard University, Chemistry & Chemical Biology Department during 2005-2008.

Prof. Gong has published *series of* high-impact research works in *Proc. Natl. Acad. Sci.* USA, *J. Am. Chem. Soc., Nano Lett.,* and *Adv. Mater. etc. prestigious academic journals and edited three books on nanomaterials. Some of the papers were selected as Top 100 Most Cited Chinese Papers Published in International Journals* and highlighted by Nature Publishing Group Asia Materials and other *scientific media.* She also won many academic awards, such as Young Talent of Chinese Academy of Sciences (2011), Beijing Science and Technology Prize (2010), Chinese National Natural Science Prize (2007), First-rank Prize of China Association for Instrumental Analysis (2006), Procter & Gamble Honorary Award of Chinese Academy of Sciences (2004), Young Scientist Prize of Institute of Chemistry, Chinese Academy of Sciences (2004). She is on the editorial board of *Journal of Bioterrorism & Biodefense*, a fellow of Chinese Academy of Sciences Youth Innovation Promotion Council, and a long-time reviewer of American Chemistry Society, Wiley-VCH, Royal Society of Chemistry, and other academic Journals. Her research work was granted by Ministry of Science and Technology of China, National Natural Science Foundation of China, Ministry of Education of China, and Chinese Academy of Sciences etc.

The research interests of Gong group currently focus on design and preparation of novel nanomaterials and devices, and their applications in energy and biomedicine. The research is inherently interdisciplinary, involving chemistry, physics, materials, and biology field. The PhD. candidate and postdoctoral fellow with the related background are welcome to join the group.

For more details, please visit our group **website http://www.nanoctr.cn/gongjianru and contact E-mail: gongjr@nanoctr.cn**

SHI Xinghua

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Resume

Xinghua Shi received his Bachelor degree from Peking University, Master degree from Institute of Mechanics, Chinese Academy of Sciences and PhD from Brown University. He studied nanoparticle-cell interaction with multiscale modeling. In the beginning of 2016 he joined National Center for Nanoscience and Technology (NCNST) as full professor and principle investigator. There he focused on the mechanics problems of drug delivery systems. He has published several papers in the international journals like Nature Nanotechnology、Nature Materials、Physical Review Letters、Nano Letters、Advanced Materials、ACS Nano etc.

Research Interests

Multiscale simulation, biomechanics, self-assembly, target drug delivery

Selected Publications

1.Xinghua Shi, Annette VomdemBussche, Robert Hurt, Agnes Kane, HuajianGao, Cell entry of one-dimensional nanomaterials occurs by tip recognition and rotation, Nature Nanotechnology, 6(11), 714-719 (2011).
2.Yujie Wei, Jiangtao Wu, Hanqing Yin, Xinghua Shi,Ronggui Yang, Mildred S. Dresselhaus, The nature of strength enhancement and weakening by pentagon-heptagon defects in graphene, Nature Materials,11, 759-763 (2012).
3.Jiuling Wang, HaiminYao, Xinghua Shi*, Cooperative entry of nanoparticles intothe cell, Journal of the Mechanics and Physics of Solids,73, 151-165 (2014).
4. Jiashu Sun, Lu Zhang, Jiuling Wang, Qiang Feng, Dingbin Liu, Qifang Yin, Dongyan Xu, Yujie Wei, Baoquan Ding,Xinghua Shi*, Xingyu Jiang*, Tunable rigidity of (polymeric core)-(lipid shell) nanoparticles for regulated cellular uptake,Advanced Materials,27, 1402-1407 (2015).
5.Miaorong Yu, Jiuling Wang, Yiwei Yang, Chunliu Zhu, Qian Su, Shiyan Guo, Jiashu Sun, Yong Gan*, Xinghua Shi*, HuajianGao*, Rotation-facilitated rapid transport of nanorods in mucosal tissues, Nano Letters, 16, 7176-7182 (2016).

CHU Weiguo

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Prof. Weiguo Chu obtained his Ph. D. from Harbin Institute of Technology in 2000, and then worked as a postdoctor at Institute of Physics, Chinese Academy of Sciences, China, and as a research fellow at the University of Tokyo and Tokyo University of Science, Japan during the period from 2000 to 2004. He joined National Center for Nanoscience and Technology, China, and is professor in energy-related nanomaterial, and Nanofabrication and optical devices. He has been recognized by some awards, such as one of ten excellent postdoctors in CAS in 2001, and the first prize of Beijing Science and Technology Award in 2004. He has published over 100 papers in peer-reviewed journals, and over 30 patents.

Research interests:

1. Cathode nanomaterials for Lithium Ion Batteries including intercalation compounds, and Lithium sulfur etc.
2. Optical metasurfaces, pixelated micropolarizer arrays made of nanogratings, and nanofabrication
3. Nanosensors for trace gas molecules or heavy metal ions detection based on SERS etc.

Selected publications:

1. Y. Jiang, H. Q. Liu, X. H. Tan, W. G. Chu et al., Monoclinic ZIF-8 Nanosheet-Derived 2D Carbon Nanosheets as Sulfur Immobilizer for High-Performance Lithium Sulfur Batteries, ACS APPL. MATER. & INTERFACES: 9, 25239-25249, 2017.
2. R. Y. Tian, H. Q. Liu, Y. Jiang, W. G. Chu et al., Drastically Enhanced High-Rate Performance of Carbon-Coated $LiFePO_4$ Nanorods Using a Green Chemical Vapor Deposition (CVD) Method for Lithium Ion Battery: A Selective Carbon Coating Process, ACS APPL. MATER. & INTERFACES: 7, 11377-11386, 2015.
3. Q. T. Li, F. L. Dong, W. G. Chu, Y. Li et al., Free-Space Optical Beam Tapping with an All-Silica Metasurface, ACS PHOTONICS: 4, 2544-2549, 2017.
4. B. Wang, F. L. Dong, W. G. Chu, Y. Li et al., Visible-Frequency Dielectric Metasurfaces for Multiwavelength Achromatic and Highly Dispersive Holograms, NANO LETTERS: 16, 5235-5240, 2016.
5. M. Zhao, L. Q. Yan, X. F. Zhang, W. G. Chu et al., Room temperature NH_3 detection of Ti/graphene devices promoted by visible light illumination, JOURNAL OF MATERIALS CHEMISTRY C : 5, 1113-1120, 2017.
6. M. Zhao, F. L. Dong, L. Q. Yan, W. G. Chu et al., High efficiency room temperature detection of NO_2 gas based on ultrathin metal/graphene devices, RSC ADV.: 6, 84082-84089, 2016.
7. Z. Q. Li, Y. Q. Chen, H. G. Duan, W. G. Chu et al., Fabrication of single-crystal silicon nanotubes with sub-10 nm walls using cryogenic inductively coupled plasma reactive ion etching, NANOTECHNOLOGY: 27, 365302, 2016.

LI Guodong

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Resume:

Guodong Li is a Professor at the National Center for Nanoscience and Technology of China. He received his BS degree from University of Jinan in 2004, MS degree from Ocean University of China in 2007, and PhD degree from Beijing University of Chemical Technology in 2011. Then, he joined in National Center for Nanoscience and Technology. He was also a visiting scholar in Stanford University from 2016 to 2017. His research interests are focused on design and fabrication of inorganic nanocomposites with well-defined structures as well as their application in energy, environment and catalysis. He has published several papers in the international journals like Nature, Journal of the American Chemical Society, Angewandate Cheme International Edition, Energy Environment & Science, Small, Nanoscale, etc.

Research Directions:

1. Design and construction of nanocatalysts with well-defined structures
2. Heterogeneous catalysis
3. Energy storage and conversion

Articles:

1. Meiting Zhao,‡ Kuo Yuan,‡ Yun Wang, **Guodong Li,*** Jun Guo, Lin Gu, Wenping Hu, Huijun Zhao,* Zhiyong Tang.* Metal-organic frameworks as selectivity regulators for hydrogenation reactions. *Nature*, 2016, 539, 76-80.
2. Jie Chen,‡ Dawei Wang,‡ Jian Qi, **Guodong Li**,* Fengying Zheng, Shunxing Li,* Huijun Zhao, and Zhiyong Tang.* Monodisperse Hollow Spheres with Sandwich Heterostructured Shells as High-Performance Catalysts via Extended SiO_2 Template Method. *Small*, 2015, 11, 420-425.
3. Meiting Zhao, Ke Deng, Liangcan He, Yong Liu, **Guodong Li**,* Huijun Zhao and Zhiyong Tang.* Core-Shell Palladium Nanoparticle@Metal-Organic Frameworks as Multifunctional Catalysts for Cascade Reactions. *J. Am. Chem. Soc.*, 2014, 136, 1738-1741.
4. Jian Qi, Jie Chen, **Guodong Li**,* Shunxing Li, Yan Gao and Zhiyong Tang.* Facile synthesis of core-shell Au@CeO_2 nanocomposites with remarkably enhanced catalytic activity for CO oxidation. *Energy Environ. Sci.*, 2012, 5, 8937-8941.
5. **Guodong Li**, Qingya Liu, Zhenyu Liu,* Z. Conrad Zhang,* Chengyue Li, and Weize Wu. Production of Calcium Carbide from Fine Biochars. *Angew. Chem. Int. Ed.*, 2010, 49, 8480-8483.

YAN Yong

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Resume

Prof. YAN Yong was born in Sichuan, southwest of China (1982). He attended University of Science and Technology Beijing for his undergraduate and master education in Applied Chemistry (2005, 2007). He then moved to National Center for Nanoscience and Technology for his doctoral studies and graduated with honors in Physical Chemistry (2010). After four and a half years postdoctoral training at Northwestern University (Evanston, IL), he returned to China and joined National Center for Nanoscience and Technology as a professor in Chemistry (2015). His research focuses on electronics, chirality, and energy.

Research Interests

1. Nanoelectronics, molecular electronics, and spintronics;
2. Self-assembly, sensor, separation, and catalysis from chiral materials;
3. Energy harvest from nanomaterials.

Selected Publications

1. Yan, Y., Warren, S., Fuller, P. and Grzybowski, B. Chemoelectronic circuits based on metal nanoparticles. *Nature Nanotech.* 2016, *11*, 603-608 (Cover art).
2. Yan, Y.; Timonen, J.; Grzybowski, B., A long-lasting, concentration cell based on a magnetic electrolyte, *Nature Nanotech.* 2014, *9*, 901-906.
3. Zou, W.; Yan, Y.; Fang, J.; Liang, J.; Deng, K.; Yao, J.; Wei, Z., Biomimetic Superhelical Conducting Microfibers with Homochirality for Enantioselective Sensing, *J. Am. Chem. Soc.* 2014, *136*, 578-581.
4. Nakanishi, H.; Walker, D.; Bishop, K.J.M.; Wesson, P.J.; Yan, Y.; Soh, S.; Swaminathan, S.; Grzybowski, B.A., Dynamic internal gradients control and direct electric currents within nanostructured materials, *Nature Nanotech.* 2011, *6*, 740-746. (Cover art)
5. Yan, Y.; Wang, R.; Qiu, X.; Wei, Z., Hexagonal Superlattices of Chiral Polymer Self-assembled by Mimic Protein *β*-folding with Anisotropic Electrical Transport, *J. Am. Chem. Soc.* 2010, *132*, 12006-12012.
6. Yan, Y..; Deng, K.; Yu, Z.; Wei, Z. X., Tuning the Supramolecular Chirality of Polyaniline by Methyl Substitution, *Angew. Chem. Int. Ed.* 2009, *48*, 2003-2006.

WANG Zhenxing

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Resume

2013.04 - Present Associate Prof., National Center for Nanoscience and Technology, China.
2011.07 －2013.03 Assistant Prof., National Center for Nanoscience and Technology, China.
2009.04 － 2011.06 Postdoctoral Fellow, College of Chemistry and Molecular Engineering, Peking University, China.
2002.07 －2009.03 Ph. D., Heifei National Laboratory for Physical Sciences at the Microscale, USTC.
2006.02 －2006.08 Visit student, Dept. of Electrical and Computer Engineering, University of Alberta, Canada.
1998.09 －2002.06 B.S., Dept. of Applied Chemistry, University of Science and Technology of China (USTC).

Research Directions

Low-dimensional semiconducting materials: design, fabrication, properties and devices.

Selected Publications

1. J. D. Wang, Z. X. Wang (co-first author), Q. C. Li, L. Gan, X. J. Xu, L. D. Li*, X. F. Guo*, Revealing Interface-Assisted Charge Transfer Mechanisms Using Silicon Nanowires as Local Probes, Angew. Chem. Int. Ed. 2013, 52, 3369-3373.
2. Z. X. Wang, M. Safdar, C. Jiang, J. He*, High-Performance UV-Visible-NIR Broad Spectral Photodetectors Based on One-Dimensional In2Te3 Nanostructures, Nano Lett. 2012, 12, 4715-4721.
3. Z. X. Wang, H. Yin, C. Jiang, M. Safdar, and J. He*, ZnO/ZnSxSe1-x/ZnSe Double-Shelled Coaxial Heterostructure: Enhanced Photoelectrochemical Performance and Its Optical Properties Study, Appl. Phys. Lett. 2012, 101 253109.
4. Z. X. Wang, X. Y. Zhan, Y. J. Wang, S. Muhammad, Y. Huang, J. He*, A flexible UV nanosensor based on reduced graphene oxide decorated ZnO nanostructures, Nanoscale 2012, 4, 2678-2684.
5. Z. X. Wang, X. Y. Zhan, Y. J. Wang, M. Safdar, M. T. Niu, J. P. Zhang, Y. Huang, J. He*, ZnO/ZnSxSe1−x core/shell nanowire arrays as photoelectrodes with efficient visible light absorption,Appl. Phys. Lett.2012, 101, 073105.
6. F. X. Shen, M. M. Tan, Z. X. Wang (co-first author), M. S. Yao*, Z. Q. Xu, Y. Wu, J. D. Wang, X. F. Guo*, and T. Zhu*, Integrating Silicon Nanowire Field Effect Transistor, Microfluidics and Air Sampling Techniques For Real-Time Monitoring Biological Aerosols, Environ. Sci. Technol. 2011, 45, 7473-7480.

CAS Key Laboratory for Biomedical Effects of Nanomaterials and Nanosafety

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Education

1999 B.S. The University of Chicago
2004 Ph.D. Harvard University
(Prof. George Whitesides)

Professional Experience

2004~2005 Postdoct., Department of Chemistry and Chemical Biology, Harvard University
2005-present Professor, National Center for NanoScience and Technology, China

Research Interests

Lab-on-a-chip systems, micro/nano-fabrication, microfluidics, cell biology, immuno-assays, tissue engineering, flexible electronics and nanomedicine.

Editorship

2009- Editorial Advisor and Associate Editor, *Nanoscale* (the Royal Chemical Society)

Major Honors and Awards

2016 Chu Yuet Wah Prominent Teacher Award
2016 Fellow of the Royal Society of Chemistry (U.K.)
2014 Youth Science and Technology Innovation Leader, Ministry of Science and Technology, China
2013 Chinese Central Government "The Outstanding Youth of Ten Thousand Talents Plan"
2010 The National Science Foundation for Distinguished Young Scholars of China
2008 Chinese Academy of Sciences, "One Hundred Plan"
2008 Chinese Chemical Society—John Wiley&Sons Inc. Prize for Young Chemist
2007 Human Frontier Science Program for Young Scientists

Publications

Over 200 peer-reviewed papers, 100 patents. Recent publications:

1. Gold nanoclusters-assisted delivery of NGF siRNA for effective treatment of pancreatic cancer, Lei YF, Tang LX, Xie YZY, Xianyu YL, Zhang LM, Wang P, Hamada Y, Jiang K, Zheng WF, Jiang XY, ***Nat Commun***, DOI: 10.1038/ncomms15130. (2017).
2. Self-adjusting, polymeric multilayered roll that can keep the shapes of the blood vessel scaffolds during biodegradation, Cheng SY, Jin Y, Wang NX, Cao F, Zhang W, Bai W, Zheng WF, Jiang XY, ***Adv Mater***, DOI: 10.1002/adma.201700171. (2017).
3. Point-of-care biochemical assays using gold nanoparticle-implemented microfluidics, Sun J, Xianyu YL, Jiang XY, ***Chem Soc Rev,*** 43(17), 6239-6253. (2014).

LIANG Xingjie

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Resume

Dr. Xing-Jie Liang got Ph.D at National Key Laboratory of Biomacromolecules, Institute of Biophysics, Chinese Academy of Sciences. He finished his postdoc with Dr. Michael M. Gottesman (Deputy Director of NIH, USA) for 5 years at Laboratory of Cell Biology, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, Maryland. Then, he worked as a Research Fellow at Surgical Neurology Branch, NINDS (National Institute of Neurological Diseases and Strokes, NIH) for 2 years. In 2007, he was an Assistant professor at Department of Radiology, School of Medicine, Howard University. Dr. Liang currently is deputy director of Key Laboratory for Biomedical Effects of Nanomaterials and Nanosafety, Chinese Academy of Sciences and a principal investigator at Laboratory of Controllable Nanopharmaceuticals, CAS Center for Excellence in Nanoscience and National Center for Nanoscience and Technology of China. Dr. Liang is a founder member of International Society of Nanomedicine, member of American Association for Cancer Research, American Society of Cell Biology, American Chemical Society, and deputy director of nanoscale biomaterials committees of Chinese Society of Biomaterials and Chinese Society of Micro/Nanoscale Sicene and Technology. Dr. Liang is current Editor-in-Chief of 《Current Drug Delivery》, Associate Editors of 《Biomaterials》 and《Biophysics Report》; Advisory editorial board member of 《ACS Nano》 and《Advanced Therapeutics》; Editorial member of 《Biomaterials Research》, 《Theranostics》 and guest editor of 《Biotechnology Advances》.

His research interests are in elucidating mechanisms to improve nanomedicinal bioavailability by nanotechnology in vitro and in vivo, and novel strategies to increase therapeutic efficacy on cancers and infective diseases. Developing drug delivery strategies for prevention/treatment of infective diseases and cancers are current programs ongoing in Dr. Liang's lab based on understanding of basic physio-chemical and biological processes of nanomedicine. Most protocols are employed for delivering therapeutic molecules (chemical compounds, peptides or nucleic acids) to actively target cells or tissues in vivo to enhance drug safety and efficacy.

CHEN Chunying

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Resume

Dr. Chen received her Bachelor's degree in chemistry (1991) and obtained her PhD degree in Biomedical engineering from Huazhong University of Science and Technology of China in 1996. She worked as a postdoctoral research fellow at the Key Laboratory of Nuclear Analytical Techniques, Institute of High Energy Physics of Chinese Academy of Sciences (1996-1998) and at the Medical Nobel Institute for Biochemistry of Karolinska Institute, Sweden (2001-2002). From 2002 onwards, she is working as a group and project leader at the China Nanosafety lab. She is one of the earliest researchers in this new field in China. Dr. Chen currently is a principal investigator at Key Laboratory for Biomedical Effects of Nanomaterials and Nanosafety in National Center for Nanoscience and Technology of China. She has authored/co-authored over 150 peer-reviewed papers/book chapters and 3 books. She has been authorized 13 granted patents and one international standard. She has served as editorial board members of peer-reviewed journals. She is the principle investigator of several domestic and international projects, such as China MOST 973 Program and projects from Natural Science Foundation of China, the EU-FP6 and EU-FP7, IAEA Coordinated Research Project (2009-2012), Danish Council for Strategic Research (2013-2015), Germany BMBF Cooperation Project (2011-2014), and Japan photon factory cooperation projects (2006-2007, 2008-2009). She has been supported by the National Science Foundation for Distinguished Young Scholars of China in 2014. She has been awarded the National Award for Innovation and Outstanding Service to the Standard authorized by Standardization Administration of the People's Republic of China in 2011, the Second Prize of Beijing Science and Technology (ranked second) in 2008, the Second Prize of the National Natural Science Award (ranked second) in 2012, and Chinese Young Female Scientists Award in 2014. She has been selected as one of Highly Cited Researchers in Pharmacology & Toxicology field during 2002-2012 by Thomson Reuters in 2014.

Research Interests

1) Development of novel nanomedicine with high efficiency and low toxicity for tumor theranostics.
2) Investigation on the interaction of engineered nanomaterials with biological systems.
3) Integrating advanced nuclear techniques and biotechnologies for nanomaterials exposure and molecular mechanisms.
4) Exposure scenarios and the occupational exposure to nanomaterials.

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Chinese homepage：http://www.nanoctr.cn/chenchunying/ketizu/

NIE Guangjun

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Education/Training

2002-2008 Jewish General Hospital, McGill University, Canada Postdoctoral Associate
Hematology and Cell Biology
2002 Institute of Biophysics, Academia Sinica, Beijing Ph.D
Biophysics
2007 Simon Fraser University, Vancouver, Canada Masters
Business Administration in Biotechnology Management
1999 Jilin University, China Masters, Biochemistry and Molecular Biology
1996 Northeast Normal University, China Bachelor, Biology

Positions and Employment

2008-present Professor of Nanobiology and Nanomedicine, National Center for Nanoscience and Technology, PR China
2002-08 Postdoctoral Research Associate, Jewish General Hospital, McGill University, Canada
2000 Jun-Dec Visiting Scientist, Institute of Food Research, Norwich, United Kingdom

Resume

Guangjun Nie is a Professor at the National Center for Nanoscience and Technology of China. He obtained his Ph.D in Biochemistry and Biophysics at the Institute of Biophysics, CAS in 2002. Currently, he is a CAS 100 Talents Scientist and Chief Scientist of a MoST National Basic Research Program Grant. He has a long standing interest in cancer biology and blood pathophysiology. Currently, his main interests are intracellular trafficking of nanoparticles and design of bio-inspired materials to overcome the current barriers in tumor therapy. In particular, his group is working toward controlling the chemical properties of multi-functional nanoparticles in order to allow specific targeting and regulation of tumor cells and their microenvironment. His most recent research activities generated a group of interdisciplinary works in nanobiology and nanomedicine fields, including papers published in Acc Chem Res, Adv Mater, AngewChem, Blood, Biomaterials, Br J Haematol, JACS, JBC, Scientific Reports, Small.

HU Zhiyuan

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Hu's lab is focused on in vitro diagnostics for immune diseases based on proteomics and nano technology. We have developed a microfluidic platform for high throughput peptides/peptoids synthesis. We also have developed a method for high throughput peptide on-beads screening based on magnetic beads enrichment, MS sequencing, and Surface Plasmon Resonance imaging (SPRi) chip analysis. The goal is to discover disease specific biomarkers of autoantigens and allergens, then to further develop peptide chip for personal diagnosis for autoimmune and allergy diseases.

Resume

2011- Professor, National Center for Nanoscience and Technology of China
2007-2010 Research Scientist, Institute for Systems Biology, USA
2006-2007 Postdoctoral Fellow, Institute for Systems Biology, USA
2005-2006 Postdoctoral Fellow, Johns Hopkins University
2000-2005 Ph. D. at Dept. Biological Chemistry, Johns Hopkins University
1990-1995 B.S. at Dept. Genetics, Fudan University, China.

Publications

1) Sun B, Utleg AG, Hu Z, Qin S, Keller A, Lorang C, Gray L, Brightman A, Lee D, Alexander VM, Ranish JA, Moritz RL, Hood L. Glycocapture-Assisted Global Quantitative Proteomics (gagQP) Reveals Multiorgan Responses in Serum Toxicoproteome.J Proteome Res. (2013);12(5):2034-44
2) Lausted C., Hu Z., Hood L., Label-free detection with surface plasmon resonance imaging. Methods Mol. Biol., 2011, 723:321-33.
3) Wang K, Zhang S, Marzolf B, Troisch P, Brightman A, Hu Z, Hood L, and Galas D. Circulating microRNAs, a new class of blood biomarker for drug- induced liver injury. PNAS. (2009); 106(11): 4402-7
4) Lausted C*, Hu Z*, Hood L. Quantitative serum proteomics from surface plasmon resonance imaging. Mol Cell Proteomics. (2008); 7(12): 2464–2474
5) Hu Z, Hood L and Tian Q. Quantitative Proteomic Approaches for Biomarker Discovery. Proteomics-Clinical Applications. (2007); 1(9): 1036-41
6) Chakravarthy MV, Zhu Y, Lopez M, Yin L, Wozniak DF, Coleman T, Hu Z, Wolfgang M, Vidal-Puig A, Lane MD, Semenkovich CF. Brain fatty acid synthase activates PPARalpha to maintain energy homeostasis. J Clin Invest. (2007); 117(9): 2539-52
7) Hu Z, Cha SH, van Haasteren G, Wang J and Lane MD.Effect of centrally-administered C75, a FAS inhibitor, on ghrelin secretion and its downstream effects.PNAS. (2005); 102(11): 3972-7

WANG Hao

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Current Research Interests

My research interests are to develop supramolecular materials for the advancement of molecular diagnostics (imaging) and therapeutics, as well as in vitro molecular diagnostics. We envision that the combination of modular molecular assembly strategy and modern in vivo molecular diagnostics/therapeutics and in vitro molecular diagnostics represents an important paradigm shift for drug discovery and clinical patient management applications.

Qualifications/Advisors

2011-present Professor, National Center for Nanoscience and Technology of China
2010-2011 Staff Research Associate, Department of Molecular and Medical Pharmacology, UCLA
2007-2010 Postdoctoral Fellow, Department of Molecular and Medical Pharmacology, UCLA
2006 - 2007 Alexander von Humboldt (AvH) Fellow, Univers?tWürzburg, Germany.
2000 -2005 Ph. D. at Department of Chemistry, Nankai University, China.
1996 - 2000 B.S. at the Department of Chemistry, Nankai University, China.
Graduate Advisor Prof. Yu Liu (Nankai University)
Postdoctoral Advisor Prof. Frank Würthner (Univers?tWürzburg, Germany)
Prof. Hsian-Rong Tseng (UCLA)

Awards and Honors

Adjunct Professor，East China University of Science and Technology, 2011-2014
100 Talents Program of The Chinese Academy of Sciences, 2011
Excellent Ph. D. Thesis Award in Tianjin, 2007
Nomination National Top 100 Excellent Ph. D. Thesis Award in China, 2007
Alexander von Humboldt Fellowship in 2005-2007
Scholarship of Chinese Academy of Science in 2004
“Yang Shi-xian” award in 2004.
“Top 10 Graduates of Nankai University” award in 2004.

Professional Societies

American Association for the Advancement of Science (AAAS)
American Chemical Society (ACS)

FANG Qiaojun

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Education:

Ph. D. 2005 Department of Biological Chemistry, Johns Hopkins University, Baltimore, MD, USA

M.S. 1999 Biochemistry Department, Peking University, Beijing, P. R. China

B.S. 1996 Department of Plant Physiology and Molecular Biology, Peking University, Beijing, P. R. China

Research Experience

02/2013 to current Principle Investigator, National Center for Nanoscience and Technology, Beijing, China

07/2009 to 01/2013 Staff scientist, Fred Hutchinson Cancer Research Center, Seattle, WA

02/2007 to 06/2009 Post-doctoral fellow, Fred Hutchinson Cancer Research Center, Seattle, WA

10/2005 to 05/2007 Post-doctoral fellow, Department of Biological Chemistry at the Johns Hopkins University School of Medicine, Baltimore, MD

Research Interests

1. Proteomics-based study on the biological effects of nanomaterials;

2. Computational study on the interactions of nanomaterials and biomolecules.

Publications

1. Wenjia Lai, Qingsong Wang, Lumeng Li, Zhiyuan Hu, Jiankui Chen*, **Qiaojun Fang***, "Interaction of gold and silver nanoparticles with human plasma: Analysis of protein corona reveals specific binding patterns", *Colloids Surf B Biointerfaces*. 2017 Apr 1;152:317-325.

2. Zhichu Xiang, Xiaoliang Yang, Junjie Xu, Wenjia Lai, Zihua Wang, Zhiyuan Hu*,Jiesheng Tian*, Lingling Geng*,**Qiaojun Fang***, "Tumor Detection Using Magnetosome Nanoparticles Functionalized with A Newly Screened EGFR/HER2 Targeting Peptide", *Biomaterials*, 2017 Jan 16;115:53-64

YANG Rong

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Resume

Rong Yang is a Professor in National Center for Nanoscience and Technology of China. Rong Yang got her Ph.D. from Ohio University, U.S.A. in 2006. After that she worked as a postdoctoral researcher at department of Chemical Engineering and Materials Science in University of Minnesota from 2006 to 2007. She is working on the interdisciplinary research linking materials, biology, chemistry and physics. Her research includes studies of preparation and properties of nanomaterials/biointerface; preparations and applications of nano-biomaterials, nano-drugs; bioeffects of nanomaterials, etc. She has published 26 papers in academic journals.

Research Direction

Functional nanomaterials; nano-biomaterials; nano/bio interface properties.

Selected Publications

1. Wang X, Han Q, Yu N*, Li J, Yang L, Yang R*, Wang C. Aptamer-Conjugated Graphene oxide/gold Nanocomposites for Targeted Chemo-Photothermal Therapy of Cancer Cells. Journal of Materials Chemistry B 2015, DOI: 10.1039/C5TB00134J.
2. Li J, Han Q, Wang X, Yu N, Yang L, Yang R*, Wang C*, "Reduced aggregation and cytotoxicity of amyloid peptides by graphene oxide/gold nanocomposites prepared by pulsed laser ablation in water", Small, 2014,10, 4386-4394.（IF 8.3）
3. Li J, Han Q, Wang X, Yang R*, Wang C*, "Enhanced cell growth on nanotexturedGaN surface treated by UV illumination and fibronectin Adsorption", Colloids and Surfaces B, 2014, 123, 293-301 (IF 4.2）
4. Wu H, Yang R*, Song B, Han Q, Li J, Zhang Y, Fang Y, Tenne T, Wang C*, "Biocompatible Inorganic Fullerene-Like Molybdenum Disulfide Nanoparticles Produced by Pulsed Laser Ablation in Water", ACS Nano 2011, 5,1276.（IF 9.855）

Commitment to Research the Situation

1.National Natural Science Foundation of China(General Program)："Studies of Gallium nitride nano-structure and related biointerface in molecular level", PI.
2. The Major Program of Chinese Academy of Sciences: "Major diseases related nanotechnology research", Key Member.
3. National Natural Science Foundation of China- Sino-Denmark Joint Project : "Self-assembly and Function of Molecular Nanostructures on Surfaces", Key Member.
4. Start funding from NCNST, PI.

LIU Ying

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Education and Employment History

2015-Present Professor, National Center for Nanoscience and Technology
2012-2015 Associate professor, National Center for Nanoscience and Technology
2009-2012 Assistant professor, National Center for Nanoscience and Technology
2006-2009 Post-doctoral, National Center for Nanoscience and Technology
2003-2006 PhD of Academy of Military Medical Sciences
2000-2003 Master of Hebei Medical University
1995-2000 Bachelor of Tianjin Medical University

Scientific Awards, Honors, Appointments and Professional Recognition

2016 National Natural Science Fund for Outstanding Young Scholars
2014 Lu Jiaxi Young Talent Award from Chinese Academy of Sciences

Research Interests and Scientific Focus

Nanomedicine: therapy for malignant tumor using nanoparticles.

Nanobiology: the interaction of nanomaterials with biological systems.

The 6 Most Important Publications

1. **Ying Liu**, Chunying Chen, Pengxu Qian, et al. Gd-metallo fullerenol nanomaterial as a non-toxic breast cancer stem cell specific inhibitor. ***Nat Commun***, 6, 5988 (2015).
2. **Ying Liu**, Yuliang Zhao, Baoyun Sun*, Chunying Chen*. Understanding the Basis of Carbon Nanotubes Toxicity. ***Acc. Chem. Res.***, 46, 702-713 (2013).
3. **Ying Liu,** Chunying Chen. Role of Nanotechnology in HIV/AIDS Vaccine Development. ***Advanced Drug Deliver. Rev.,*** 103, 76-89 (2016).
4. Jing Liu, …… **Liu Ying***, Chen Chunying*. Rapid Degradation and High Renal Clearance of Cu3BiS3 Nanodots for Efficient Cancer Diagnosis and Photothermal Therapy in Vivo. ***ACS Nano***, 10, 4587-4598 (2016).
5. Huige Zhou, Xiaoyang Hou, **Ying Liu***, et al. Superstable Magnetic Nanoparticles in Conjugation with Near-Infrared Dye as a Multimodal Theranostic Platform. ***ACS Appl. Mater. Inter.***, 8, 4424-4433 (2016).
6. Jinglong Tang, ……Chunying Chen, **Ying Liu***. Polyhydroxylated fullerenols regulate macrophage for cancer adoptive immunotherapy and greatly inhibit the tumor metastasis. ***Nanomedicine***, 12, 945-954 (2016).

YANG Yang

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Selected Publications

[1] Y. Jia, Y. Cui, J.B. Fei, M.C. Du, L.R. Dai J.B. Li* and **Y. Yang***.Construction and evaluation of Hemoglobin-based capsules as blood substitutes. Adv. Funct. Mater. 2012, 22, 1446–1453.

[2] **Y. Yang**,* Y. Jia, L. Gao, J.B. Fei, L.R. Dai, J. Zhao, J.B. Li*. Fabrication of autofluorescent protein coated mesoporous silica nanoparticles for biological application. Chem. Commun., 2011, 47. 12167-12169.

[3] D.Y. Hua, **Y. Yang*** , X.M. Zhang, P.L. Zhu, J.B. Fei, J.B. Li*. Biotinylated Lipid Membrane Patterns Supported by Proteins for the Recognition of Streptavidined Polystyrene Microspheres. J. Nanosci. Nanotechnol. 2010, 10, 6318-6323.

[4] **Y. Yang**, W.X. Song, A.H. Wang, P.L. Zhu, J.B. Fei, J.B. Li. Lipid coated mesoporous silica nanoparticles as photosensitive drug carriers. Phys. Chem. Chem. Phys., 2010, 12, 4418-4422.

[5] **Y. Yang**, X.H. Yan, Y. Cui, Q. He, D.X. Li, A.H. Wang, J.B. Fei, J.B. Li. Preparation of polymer-coated mesoporous silica nanoparticles used as cellular imaging by “graft-from” method. J. Mater. Chem. 2008, 18, 5731- 5737.

[6] **Y. Yang**, Q. He, L. Duan, Y. Cui, J.B. Li. Assembled alginate/chitosan nanotubes for biological application.Biomaterials. 2007, 28, 3083-3090.

[7] **Y. Yang**, Y. Chu, Y.P. Zhang, F.Y. Yang, J.L. Liu. Polystyrene-ZnO core-shell microspheres and hollow ZnO structures synthesized with the sulfonated polystyrene templates. J. Solid State Chem., 2006, 179, 470-475.

[8] **Y. Yang**, Y. Chu, F.Y. Yang, Y.P. Zhang. Uniform hollow conductive polymer microspheres synthesized with the sulfonated polystyrene template. Mater. Chem. Phys., 2005, 92, 164-171.

[9] W.X. Song, **Y. Yang**, H. Moehwald and J.B. Li. Two-dimensional polyelectrolyte hollow sphere arrays at a liquid–air interface.Soft Matter. 2011, 7, 359-362.

[10] A.H. Wang, Y. Cui, **Y. Yang** and J.B. Li. Capsules with Silver Nanoparticle Enrichment Subdomains and Their Antimicrobial Properties. Chem. - Asian J. 2010, 8(5), 1780-1787.

[11] W. Qi, A.H. Wang, **Y. Yang**, M.C. Du, M. N. Bouchu, P. Boullanger, J.B. Li. The lectin binding and targetable cellular uptake of lipid-coated polysaccharide microcapsules. J. Mater. Chem., 2010, 20, 2121-2127.

Book Chapter

Y. Yang and J.B. Li. Silica-based Nanostructured Porous Biomaterials.
Chapter 1 in “Nanostructured Biomaterials”,
Springer Press, 2009, pp 1-30. ISBN 978-3-642-05011-4

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Resume

Bachelor degree in 1992 and Master degree in 1995 from Department of Chemsitry, Shandong University.Ph.D. in 2001 under supervision of Prof. L. E. Brus from Columbia University, US. Thesis was on self-assembly of nanoparticles at solid/liquid interface. Postdoctoral research from 2001 to 2005 at California Institute of Technology, with research focus on large scale protein detection using array of silicon nanowires.Joined NCNST in 2005.

Research Direction

Nanoscale Physical Chemistry

Selected Publications

[1] “Rapid synthesis of nitrogen doped carbon dots and their application as label free sensor array for simultaneous discrimination of multiple proteins”, Shenghao Xu; Zhengzhong Su; Zhuo Zhang; Yongyin Nie; Jun Wang; Guanglu Ge and Xiliang Luo*, Journal of Materials Chemistry B, 2017, DOI: 10.1039/C7TB02129A.
[2] “Synergetic Determination of Thermodynamic and Kinetic Signatures Using Isothermal Titration Calorimetry: A Full-Curve-Fitting Approach ” . Dexing Li; Lan Chen*; Ruimin Wang; Renxiao Liu; Guanglu Ge*. Anal. Chem, 2017, 89, 7130-7138 [PDF]
[3] “Alloyed crystalline Au-Ag hollow nanostructures with high chemical stability and catalytic performance”. Renxiao Liu*; Jianhua Guo; Peng Jiang*; Donghui Zhang; Dexing Li; Lan Chen; Yuting Guo; Guanglu Ge*. ACS Applied Materials and Interface,2016, 8(26), 16833-16844.

Selected ISO Standards

[1]. IEC/TS 62607-4-2: 2016 Nanomanufacturing – Key control characteristics – Part 4-2: Nano-enabled electrical energy storage devices – Physical characterization of cathode nanomaterials, density measurement
[2]. ISO 18473-1: 2015 Functional pigments and extenders for special applications – Part 1: Nanoscale calcium carbonate for sealant application

Community Service

Youth councilor of Chinese Particuology Society, Member of SAC/TC118 on Reference Materials

Commitment to Research

1. NSFC general project
2. National Key Scientific Research Project
3. Knowledge Innovation Program of the Chinese Academy of Sciences

YANG Yanlian

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Resume

Prof. YANG Yanlian received B.S. and M.S. degrees in Chemistry from Shandong University in 1996 and 1999, respectively. In 2002, she obtained PhD degree in Physical Chemistry from Peking University, and then worked as a postdoctoral researcher in Peking University from 2002 to 2004. Since 2004, she joined National Center for Nanoscience and Technology (NCNST). She was a visiting scholar at the Center for Biomedical Engineering, Massachusetts Institute of Technology from 2007 to 2008. She currently is a Professor in NCNST. Her research interests include peptide assembly, nanobiological detection, and scanning probe microscopy.

She is the PIs of several national level key research projects, such as the Strategic Priority Research Program of Chinese Academy of Sciences, Major Program of Ministry of Science and Technlogy of China and General program of National Natural Science Foundation of China etc.. She has published nearly 200 papers in well-known academic journals, including Chem. Soc. Rev., Proc. Acad. Sci. USA, J. Am. Chem. Soc., Angew. Int. Ed., Nano Today, Nano Lett., ACS Nano and others. Her publications has been cited for nearly 4000 times.

Research Directions:

1. Structure, modulation and the molecular mechanism of peptide assembly related to degeneration diseases;
2. Development of peptide-based IVD nanotechnology, expecially liquid biopsy nanotechnology;
3. Development of new nano-characterization methods based on scanning probe microscopy.

Selected Publications:

1. Niu, Lin; Liu, Lei; Xi, Wenhui; Wang, Chen*; Wei, Guanghong*; Yang, Yanlian*, et al., “Synergistic inhibitory effect of Peptide-Organic Co-assemblies on Amyloid Aggregation”, ACS Nano, 2016, 10 (4), 4143–4153.

2. Lei Liu, Chen Wang*, Yanlian Yang*, et al., “Molecular tethering effect ofC-terminus of amyloid peptide Aβ42”, ACS Nano, 2014,8(9),9503-9510.

3. Xiaobo Mao, Yanlian Yang*, Guanghong Wei*, Chen Wang*, et al., “Sequence Effects on Peptide Assembly Characteristics Observed by Using Scanning Tunneling Microscopy” J. Am. Chem. Soc. 2013,135(6),2181–2187.

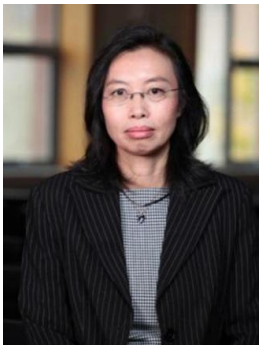
4. Min Zhang, Yanlian Yang,* Chen Wang* et al., “Nanomaterials for reducing amyloid cytotoxicity”, Adv. Mater., 2013, 2013, 25(28),3780–3801.

5. Lei Liu, Yanlian Yang*, Chen Wang*, “Observation of Reduced Cytotoxicity of Aggregated Amyloidogenic Peptides with Chaperone-like Molecules”ACS Nano,2011,5(7),6001-6007.

6. Xiaobo Mao, Chenxuan Wang, Yanlian Yang*, Chen Wang*, et al., “Beta structure motifs of islet amyloid polypeptides identified through surface-mediated assemblies” Proc. Natl. Acad. Sci. USA. 2011, 108(49), 19605-19610.

7. Yanlian Yang, Chen Wang*, “Hierarchical construction of self-assembled low-dimensional molecular architectures observed by using scanning tunneling microscopy”, Chem. Soc. Rev.,2009,38,2576-2589.

WU Xiaochun



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Ph.D. in Science from Nankai University in 1995.

A two-year postdoctor research in institute of Physics, Chinese Academy of Sciences. Sponsored by a fellowship from Alexander-von-Humboldt-Stiftung in institut für Chemie Anorganischer Materialien (Prof. S. Veprek), Technische Universität München from January, 1998 to August, 1999. As a visiting scientist in Nanoscale Science Department (Prof. K. Kern), Max-Planck-Institute for Solid State Research from September, 1999 to May, 2003.As a research staff in Physikalisches Institut, Westfälische Wilhelms-Universität from July, 2003 to December, 2004. More than 60 scientific papers have been published.

Area of Interests

1) Design and synthesis of noble metal nanostructures, studies of optical and catalytic properties and exploring potentials in biochemical assays and biomedical applications.
2) Creation of patterned heterogeneous surfaces in two- and three-dimension using various methods and techniques, such as soft lithography (microcontact printing), nanoimprinting, self-assembly, template-guided organization, and nanolithography. Studies of mechanisms involved in pattern formation and improvements of obtained structures. 3) Organization and assembly of nano-objects on heterogeneous surfaces. Studies of organization mechanisms and related properties.

Selected Publications

1. Yan, Jiao, Chen, Yuandong, Hou, Shuai, Chen, Jiaqi, Meng, Dejing, Zhang, Hui, Fan, Huizhen, Ji, Yinglu, Wu, Xiaochun. Fabricating chiroptical starfruit-like Au nanoparticles via interface modulation of chiral thiols. Nanoscale, 2017, 9(31), 11093-11102.
2. Shi, Xiaoli, Zhu, Yuting, Hua, Wenda, Ji, Yinglu, Ha, Qing, Han, Xinxiao, Liu, Yang, Gao, Jingwei, Zhang, Qiang, Liu, Sidi, Ren, Keli, Wu, Xiaochun, Li, Hongyi, Han, Dong. An in vivo study of the biodistribution of gold nanoparticles after intervaginal space injection in the tarsal tunnel. Nano Research, 2016, 7(9), 2097-2109.
3. Wang, Jing, Liu, Jing, Liu, Ying, Wang, Liming, Cao, Mingjing, Ji, Yinglu, Wu, Xiaochun, Xu, Yingying, Bai, Bing, Miao, Qing. Gd-Hybridized Plasmonic Au-Nanocomposites Enhanced Tumor-Interior Drug Permeability in Multimodal Imaging-Guided Therapy. Adv. Mater., 2016, 28(40), 8950.

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Resume

Prof. Dr. Chao JIANG, male, born in January, 1965. Being the Professor of Physics in National Center for Nanoscience and Technology, China, from 2005. Awarded by the "Hundred Talent Program" of Chinese Academy of Sciences in 2007. He received his BS from Peking University in 1986, and PhD from Institute of Semiconductors, CAS in 1998. From 1998 to 2005, Prof. Jiang, as post-doctoral researcher and JSPS Foreigner Research Fellow working on fabrication of low-dimensional semiconductors and its characterization in Hokkaido University and University of Tokyo, respectively. He is the principal Scientist for the "973" project of "Standardization for the key Nano-measurement Techniques" (2006-2010). His current research interests include (1) Organic electronics and its larger area circuit architectures; (2) Optical characterization and nano-metrology.

Selected Publications

1. "Electrical transport mechanism of single monolayer pentance film employing field-effect characterization",Jiawei Wang, Chao Jiang*,Org. Electron. 16 (2015) 164-170.
2. "Novel Top-Contact Monolayer Pentacene-Based Thin-Film Transistor for Ammonia Gas Detection",Mishbah Mirza, Jiawei Wang, Dexing Li, S. Atika Arabi, and Chao Jiang*, ACS Appl. Mater. Interfaces 2014, 6, 5679-5684.
4. "Photoinduced degradation of organic solar cells with different microstructures",Lu Chun-Xi, Yan Peng, Wang Jin-Ze, Liu Ai-Min, Song De, and Jiang Chao*, Chin. Phys. B, 23 (2014) 088803.
5. "Influence of grain size at first monolayer on bias-stress effect in pentacene-based thin film transistors" ,Yiwei Zhang, Dexing Li, and Chao Jiang*, Appl. Phys. Lett., 103, 213304 (2013).
7. "Scattering due to anisotropy of ellipsoid quantum dots in GaAs/InGaAs single quantum well",Dong-Dong Jin, Chao Jiang, Guo-Dong Li, Liu-Wan Zhang, Tao Yang, Xiang-Lin Liu, Shao-Yan Yang, Qin-Sheng Zhu, and Zhan-Guo Wang, J. Appl. Phys. 113, 033701 (2013).
8. "Controllable synthesis and photocatalytic properties of hierarchical flower-like TiO2 nanostructure",Lixia Du, Zhijiao Wu, Qian Wu, Chao Jiang*, Lingyu Piao*, Chin. J. Catal., 2013, 34(4): 808-814.
9. "Atomic-layer triangular WSe2 sheets: synthesis and layer-dependent photoluminescence property",Kai Xu, Zhenxing Wang, Xiaolei Du, Muhammad Safdar, Chao Jiang and Jun He, , Nanotechnology, 24 (2013) 465705.
10. "Two-step growth of large pentacene single crystals based on crystallization of pentacene monolayer film", Qiao Jin, Dexing Li, Qiong Qi, Yiwei Zhang, Jun He, and Chao Jiang*, Cryst. Growth Des., 12, 5432-5438(2012).

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Education

- Postdoctoral at Stanford University from 2009 to 2012
- PhD degree in Physical Chemistry from Peking University 2009
- Visiting PhD student at Massachusetts Institute of Technology from 2007 to 2008
- BS degree in Chemistry from Peking University in 2004

Research Interest

Current research is on two-dimensional materials, including the synthesis, characterization and devices. Dr. Xie has 50+ SCI publications with 5800+ citing and an H index of 28.

Selected Publications

1. Zhang, M.; Zhu, Y. M.; Wang, X. S.; Feng, Q. L.; Qiao, S. L.; Wen, W.; Chen, Y. F.; Cui, M. H.; Zhang, J.; Cai, C. Z.; Xie, L. M., Controlled Synthesis of ZrS2 Monolayer and Few Layers on Hexagonal Boron Nitride. J. Am. Chem. Soc. 2015, 137 (22), 7051-7054.
2. Feng, Q. L.; Mao, N. N.; Wu, J. X.; Xu, H.; Wang, C. M.; Zhang, J.; Xie, L. M., Growth of MoS2(1-x)Se2x (x = 0.41 - 1.00) Monolayer Alloys with Controlled Morphology by Physical Vapor Deposition. ACS Nano 2015, 9 (7), 7450–7455.
3. Zhang, M.; Wu, J. X.; Zhu, Y. M.; Dumcenco, D. O.; Hong, J. H.; Mao, N. N.; Deng, S. B.; Chen, Y. F.; Yang, Y. L.; Jin, C. H.; Chaki, S. H.; Huang, Y.-S.; Zhang, J.; Xie, L. M., Two-Dimensional Molybdenum Tungsten Diselenide Alloys: Photoluminescence, Raman Scattering, and Electrical Transport. ACS Nano 2014, 8 (7), 7130-7137.
4. Feng, Q. L.; Zhu, Y. M.; Hong, J. H.; Zhang, M.; Duan, W. J.; Mao, N. N.; Wu, J. X.; Xu, H.; Dong, F. L.; Lin, F.; Jin, C. H.; Wang, C. M.; Zhang, J.; Xie, L. M., Growth of Large-Area 2D MoS2(1-x)Se2x Semiconductor Alloys. Adv. Mater. 2014, 26 (17), 2648-2653.
5. Chen, Y. F.; Xi, J. Y.; Dumcenco, D. O.; Liu, Z.; Suenaga, K.; Wang, D.; Shuai, Z. G.; Huang, Y.-S.; Xie, L. M., Tunable Band Gap Photoluminescence from Atomically Thin Transition-Metal Dichalcogenide Alloys. ACS Nano 2013, 7 (5), 4610-4616.

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Curriculum Vitae

Dr. Qing Dai is a professor in Nanophotonics at National Center for Nanoscience and Technology (NCNST). He received his BEng and MEng [Electronic & Electrical Engineering] from Imperial College, London, before coming to the University of Cambridge to pursue a PhD in Nanophotonics at the Department of Engineering. After completing his PhD in 2011, Qing continued as a Research Associate at CMMPE (Centre of molecular materials for photonics and electronics) working in collaboration with Samsung to develop novel nanophotonic devices using patterned-aligned carbon nanotubes (CNTs) for applications in 3D display. Since 2012, he joined National Center for Nanoscience and Technology (NCNST).

Honors and Awards：

2013 Lu Jiaxi Young Talent Award of the Chinese Academy of Sciences
2012 Junior Research Fellowship at Wolfson College, University of Cambridge
2012 Global Experts Programme supported by Chinese central government

Research Interests：

His research interests include: Light-matter interaction and photonic devices based on graphene and other 2D nanomaterials; carrier transport and electronic devices using carbon nanomaterials; device applications in communications and biosensors; integration of emerging and traditional materials.

Selected Publications:

1. Debo Hu, Xiaoxia Yang, Chi Li, Ruina Liu, Ziheng Yao, Hai Hu, Stephanie N. Gilbert Coeder. Jianing Chen, Zhipei Sun, Mengkun Liu*, Qing Dai*. Probing optial anisotropy of nanometer-thin van der waals microcrystals by near-field imaging. Nature Communications. 2017. DOI: 10.1038/s41467-017-01580-7
2. Chi Li, Xu Zhou, Feng Zhai, Zhenjun Li, Fengrui Yao, Ruixi Qiao, Ke Chen, Matthew Thomas Cole, Dapeng Yu, Zhipei Sun*, Kaihui Liu*, and Qing Dai*. Carbon Nanotubes as an Ultrafast Emitter with a Narrow Energy Spread at Optical Frequency. Advanced Materials, 2017,29:1-6
3. Hai Hu, Xiaoxia Yang, Feng Zhai, Debo Hu, Ruina Liu, Kaihui Liu*, Zhipei Sun*, Qing Dai*. Far-field nanoscale infrared spectroscopy of vibrational fingerprints of molecules with graphene plasmons. Nature Communications. 2016, 7: 12334
4. Xiaoxia Yang , Feng Zhai , Hai Hu , Debo Hu , Ruina Liu , Shunping Zhang , Mengtao Sun, Zhipei Sun*, Jianing Chen*, and Qing Dai*. Far-field spectroscopy and near-field optical imaging of coupled plasmon-phonon polaritons in two-dimensional van der Waals heterostructures. Advanced Materials, 2016, 28(15): 2931-2938

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Prof. Liu received his PhD in National Center for Nanoscience and Technology (NCNST), in 2011. Then he joined School of Physical and Mathematical Sciences (SPMS) of Nanyang Technological University (NTU), Singapore, as a postdoctoral fellow. He joined the "100-Talents" Program of CAS in 2015 and became a Full Professor of NCNST since then. He has authored or co-authored over 70 peer-reviewed papers.

Research Interests:
Light matter interaction, Ultrafast spectroscopy, Nano-photonics, Small light source

Publications:

1. Jia Shi,Peng Yu,Fucai Liu,Peng He, Rui Wang, Liang Qin, Junbo Zhou, Xin Li, Jiadong Zhou, Xinyu Sui, Shuai Zhang, Yanfeng Zhang, Qing Zhang, Tze Chien Sum, Xiaohui Qiu,* Zheng Liu,* and Xinfeng Liu*, 3R MoS_2 with Broken Inversion Symmetry: A Promising Ultra-thin Nonlinear Optical Device, **Advanced Materials**, 29, 1701486 (**2017**)
2. Yang Mi, Zhepeng Zhang, Liyun Zhao, Shuai Zhang, Jie Chen, Qingqing Ji, Jianping Shi, Xiebo Zhou, Rui Wang, Jia Shi, Wenna Du, Zhiyong Wu, Xiaohui Qiu, Qing Zhang,* Yanfeng Zhang,* and Xinfeng Liu,* Tuning Excitonic Properties of Monolayer MoS2 with Microsphere Cavity by High-throughput Chemical Vapor Deposition Method, **Small**, 13, 1701694 (**2017**)
3. Qing Zhang,* Qiuyu Shang, Jia Shi, Jie Chen, Rui Wang, Yang Mi, Wenna Du, Chao Shen, Renmin Ma, Xiaohui Qiu, Xinfeng Liu*, Tze Chien Sum*, Wavelength tunable plasmonic lasers based on intrinsic self-absorption of gain material, **ACS Photonics**, 4, 2789 (**2017**)
4. Yanzheng Li, Haiyang Xu,* Weizhen Liu,* Guochun Yang, Jia Shi, Zheng Liu, Xinfeng Lliu,* Zhongqiang Wang, Qingxin Tang, and Yichun Liu, Enhancement of exciton emission from multilayer MoS2 at high temperatures: intervalley transfer versus interlayer decoupling, **Small**, 13, 1700157 (**2017**)
5. Lin Niu, Qingsheng Zeng, Jia Shi,Chunxiao Cong, Chunyang Wu, Fucai Liu,Jiadong Zhou,Wei Fu, Qundong Fu,Chuanhong Jin,Ting Yu, Xinfeng Liu,* and Zheng Liu*, Controlled Growth and Reliable Thickness-dependent Properties of Organic-inorganic Perovskite Platelet Crystal, **Advanced Functional Materials**, 26, 5263 (**2016**)
6. XinfengLiu,* Lin Niu, Chunyang Wu, Chunxiao Cong, Hong Wang, Qingsheng Zeng, Haiyong He, Qundong Fu,Ting Yu, Chuanhong Jin, Wei Fu, Zheng Liu,* TzeChien Sum*, Periodic Organic–Inorganic Halide Perovskite Micro-platelet Arrays on Silicon Substrates for Room-Temperature Lasing, **Advanced Science**, 3, 1600137(**2016**)

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Resume

In 2002, PIAO Lingyu obtained her PhD degree in Chemical Engineering from Tianjin University, and then worked as a postdoctoral researcher in Peking University and University Pierre and Marie Curie from 2002 to 2005, respectively. Since 2005, she joined National Center for Nanoscience and Technology (NCNST). Her research interests include functional nano-materials: controllable synthesis and application in new energy source and environmental protection; the interaction between nano-materials and biomoleculars.

Selected Publications

1. Yuelei Si, Shuang Cao, YingluJi, Yang Mi, Zhijiao Wu, Xiaochun Wu, Xinfeng Liu, LingyuPiao*, Facile Synthesis of Non-centrosymmetric Au nanorod-TiO2Heterostructure with Sunlight-driven Photocatalytic Activity for Water Splitting, Nano Energy, 2017, 41, 488-493.

2 Yuelei Si, Shuang Cao, YingluJi, Yang Mi, Zhijiao Wu, Xiaochun Wu, Xinfeng Liu, LingyuPiao*, What is the predominant electron transfer process for Au NRs/TiO2nanodumbbellheterostructure under natural solar irradiation? Appl. Catal. B Environ., 2018, 220, 471-476.

3 Yingjuan Xie, Xiao Zhang, Peijun Ma, Zhijiao Wu, and Lingyu Piao*, Hierarchical TiO2 Photocatalysts with One-dimensional Heterojunction for Improved Photocatalytic Activities, Nano Research, 2015, 8, 2092–2101.

4 Qian Wu, Min Liu, Zhijiao Wu, Yongliang Li, Lingyu Piao*, Is Photooxidation Activity of {001} Facets Truly Lower Than That of {101} Facets for Anatase TiO2 Crystals? J. Phys. Chem. C, 2012, 116 (51)：26800–26804.

5 Min Liu, Lingyu Piao*, Weiming Lu, Lei Zhao, Siting Ju, Zijie Yan, Tao He, Wenjing Wang*, Anatase TiO2 Single Crystals with Exposed {001} and {110} Facets: Facile Synthesis and Enhanced Photocatalysis, Chem. Commun., 2010, 46,1664-1666.

6 Min Liu, Lingyu Piao*, Weiming Lu, Lei Zhao, Siting Ju, Wenjing Wang*, Flower-like TiO2 Nanostructures with Exposed {001} Facets: Facile Synthesis and Enhanced Photocatalysis, Nanoscale, 2010, 2, 1115-1117.