

NCNST



国家纳米科学中心

National Center for Nanoscience
and Technology (NCNST)



Zhiyong Tang

Ph. D., Professor

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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 Honours

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

"EvonikParticuology Innovation Award, The Chinese Society of Particuology, 2012

National Natural Science Foundation for Distinguished Youth Scholars of China 2010

ARCH Venture Partners Young Researcher Achievement Award, China 2010

100-Talent Program, Chinese Academy of Sciences, China 2006

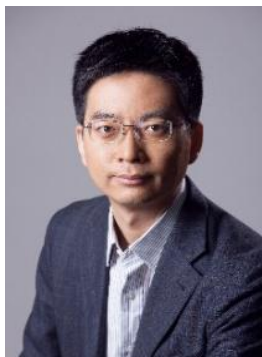
Excellent Graduate Student Award, Changchun Institute of Applied Chemistry, China 1999

Distinguished Graduate Student, Wuhan University, China 1994/1995/1996

Distinguished Undergraduate Student, Wuhan University, China 1990/1991/1992/1993

Research Interest

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



Zhixiang Wei

Ph. D., Professor

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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



Zhong Zhang

Ph. D., Professor

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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

Representative Book

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).

孙连峰



Lianfeng Sun

Ph. D., Professor

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Resume

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.

The Sun group is focused mainly on three major areas

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 ferromagnetism in SP² carbon.

Nanogenerators and self-powered systems: to study the energy conversion in nanoscale systems, such as the energy of nanofluids inside carbon nanotubes into electricity.

Nanoelectronics, novel nonvolatile 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.

Award

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 Publication

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).



Qian Liu

Ph. D., Professor

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Resume

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 Nanoprogram.

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



Baohang Han

Ph. D., Professor

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Resume

LinjieZhi 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.

Direction

Nanomaterials for Clean Energy Applications

Article

1. Qi Song, YuyingJia, Bin Luo, Haiyong He, LinjieZhi*, "Covalently Stabilized Pd Clusters in Microporous Polyphenylene: An Efficient Catalyst for Suzuki Reactions Under Aerobic Conditions", *Small*, 2013, 9, 2460-2465.
2. 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.
3. 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.
4. 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.
5. Bin Wang, Xianglong Li*, Bin Luo, YuyingJia, LinjieZhi*, "One-dimensional/two-dimensional hybridization for self-supported binder-free silicon-based lithium ion battery anodes", *Nanoscale*, 2013, 5, 1470-1474.
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.
8. Long Hao, Xianglong Li, LinjieZhi*, "Carbonaceous electrode materials for supercapacitors", *Adv. Mater.* 2013, 25, 3899-3904.



Tao He

Ph. D., Professor

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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

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 Nanoscience 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 nanomaterials and related devices that can efficiently utilize solar energy at relatively low cost, mainly including:

- 1) Fabrication of photoelectric functional nanomaterials and related devices via modern micro- and nano-technology;
- 2) Controllable modulation of surface & interfacial electronic and photoelectronic property;
- 3) Photocatalytic reduction of CO₂ into value-added chemicals;
- 4) New-concept devices that convert light into electricity.



Baoquan Ding

Ph. D., Professor

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Research Interests

Dr. He's research interest is focusing on R&D of novel photoelectric functional nanomaterials and related devices that can efficiently utilize solar energy at a relatively low cost, mainly including new-concept solar cells and artificial photosynthesis. He has published more than 50 papers in peer-reviewed scientific journals (such as Nature, J. Am. Chem. Soc., Adv. Mater., Proc. Natl. Acad. Sci. USA, and Prog. Mater.Sci.), which have been cited more than 800 times. Fabrication of photoelectric functional nanomaterials and related devices via modern micro- and nano-technology; Controllable modulation of surface & interfacial electronic and photoelectronic property; New-concept solar cells that convert photoenergy into electrical energy; Artificial photosynthesis that convert photoenergy into chemical energy, such as photoreduction of CO₂.

Resume

Baoquan Ding 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 joined NCNST in Nov. 2010. His research interests focused on nanostructures and devices fabrication with self-assembled biomaterials especially nucleic acids, nanoparticles combining with lithography methods and the development of applications in wide areas such as chemical or biosensor, nanophotonics, and nanoelectronics.

Direction

Nanobiomaterials and nanodevices

Recent Publications

1. Zhen-Gang Wang, Chen Song and Baoquan Ding* Functional DNA Nanostructures for Photonic and Biomedical Applications Small, 2013, Accepted
2. Xibo Shen, Ana Asenjo-Garcia, Qing Liu, Qiao Jiang, Javier García de Abajo, Na Liu*, Baoquan Ding*, 3D Plasmonic Chiral Tetramers Assembled by DNA Origami Nano Letters, 2013, Accepted
3. Dangwei Shi, Chen Song, Qiao Jiang, Zhen-Gang Wang and Baoquan Ding*
4. A Facile and Efficient Method to Modify Gold Nanorods with Thiolated DNA at Low pH Value Chemical Communications, 2013, 49, 2533-2535



Jun He

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Resume

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 Barbara, 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

Article

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 WS₂ (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 In₂Te₃ Nanostructures, *Nano Letters*, 12, 4715-4721 (2012).



Xinghua Shi

Ph. D., Professor

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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 Interest

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

Article

1. Xinghua Shi, Annette VomdemBussche, Robert Hurt, Agnes Kane, Huajian Gao, 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, Haimin Yao, Xinghua Shi*, Cooperative entry of nanoparticles into the 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, Shiyang Guo, Jiashu Sun, Yong Gan*, Xinghua Shi*, Huajian Gao*, Rotation-facilitated rapid transport of nanorods in mucosal tissues, *Nano Letters*, 16, 7176-7182 (2016).



Zhenxing Wang

Ph. D., Associate Professor

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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., Hefei 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).

Direction

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

Article

11. 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.

10. 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.

9. Z. X. Wang, H. Yin, C. Jiang, M. Safdar, and J. He*, ZnO/ZnS_xSe_{1-x}/ZnSe Double-Shelled Coaxial Heterostructure: Enhanced Photoelectrochemical Performance and Its Optical Properties Study, *Appl. Phys. Lett.* 2012, 101 253109.

8. 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.

7. Z. X. Wang, X. Y. Zhan, Y. J. Wang, M. Safdar, M. T. Niu, J. P. Zhang, Y. Huang, J. He*, ZnO/ZnS_xSe_{1-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.



Xingjie Liang

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Resume

Dr. 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 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 chief of laboratory of Nanomedicine and Nanosafety, 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 and Union for International Cancer Control. Dr. Liang is current editorial board member of 《Advances in Nano Research》 《ActaBiophysicaSinica》 《Journal of Nanomaterials》 and 《Current Nanoscience》 , guest editor of 《Biotechnology Advances》 . Dr. Liang was honored with 2004、2005、2006 “Fellows Award for Research Excellence” in NIH; “Special Government Allowances” by Department of State, 2011; “National Distinguished Young Scholars” by NSFC; and “Young Pharmaceutics Scholar” by CPA, 2012.

His research interests are in elucidating mechanisms to improve nanomedicinal bioavailability by nanotechnology in vivo, and novel strategies to increase therapeutic effect on cancers and infective diseases. Developing drug delivery strategies for prevention/treatment of AIDS and cancers are current program 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 or nucleic acids) to actively target cells or tissues in vivo to enhance drug safety and efficacy.



Chunying Chen

Ph. D., Professor

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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/>



Guangjun Nie

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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

GuangjunNie 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 AccChem Res, Adv Mater, AngewChem, Blood, Biomaterials, Br J Haematol, JACS, JBC, Scientific Reports, Small.



Zhiyuan Hu

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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. Glyco-capture-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



Hao Wang

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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, Universität Würzburg, 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 (Universität Würzburg, 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

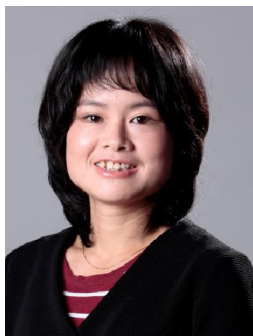
“Yang Shi-xian” award in 2004.

“Top 10 Graduates of Nankai University” award in 2004.

Professional Societies

American Association for the Advancement of Science (AAAS)

American Chemical Society (ACS)



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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

Awards

2000 Braucher scholar Penn State University

1998 Guanghua scholar Peking University

1996 Excellent Undergraduate Student Award Peking University

1995 Prathana Life Sciences Scholar Peking University

Research Experience

2/2013 to current Principle Investigator, National Center for Nanoscience and Technology, Beijing, China

7/2009 to 1/2013 Staff scientist, Fred Hutchinson Cancer Research Center, Seattle, WA

2/2007 to 6/2009 Post-doctoral fellow, Fred Hutchinson Cancer Research Center, Seattle, WA

10/2005 to 1/2007 Post-doctoral fellow, Department of Biological Chemistry at the Johns Hopkins University School of Medicine, Baltimore, MD

Research Interests

1. Proteomics based study of biological effects of nanomaterials and nanosafety;
2. Computational design of peptides against tumors.

Publications

1. Weizhi Wang, Menglin Li, Zewen Wei, Zihua Wang, Xiangli Bu, Wenjia Lai, Shu Yang, He Gong, HuiZheng, Yuqiao Wang, Ying Liu, Qin Li, Qiaojun Fang*, Zhiyuan Hu*, "Bimodal Imprint Chips for Peptide Screening: Integration of High-Throughput Sequencing by MS and Affinity Analyses by Surface Plasmon Resonance Imaging", *Anal. Chem.*, 2014, 86 (8), 3703–3707.

2. Weizhi Wang, ZewenWei, DiZhang, Huailei Ma, ZihuaWang, Xiangli Bu, MenglinLi, LinglingGeng, ChristopherLausted, Leroy Hood, Qiaojun Fang, Hao Wang,* and Zhiyuan Hu*, "Rapid Screening of Peptide Probes through In Situ Single-Bead Sequencing Microarray", *Anal. Chem.*, 2014 Dec 2;86(23):11854-9.



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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.

Direction

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

Article

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 nanotextured GaN 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.



Guanglu Ge

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Resume

Bachelor degree in 1992 and Master degree in 1995 from Department of Chemistry, 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.

Direction

Nanoscale Physical Chemistry

Article

1. "MAC mode Atomic Force Microscopy Studies of Living Samples, Ranging from Cells to fresh Tissue", G. Ge, D. Han, D. Lin, W. Chu, Y. Sun, L. Jiang, W. Ma, C. Wang, *Ultramicroscopy*, 107, 299-307, 2007.
2. "Electrochemically Programmed, Spatially Selective Biofunctionalization of Silicon Wires" Y. L. Bunimovich, G. Ge, K. C. Beverly, R. S. Ries, L. Hood, and J. R. Heath *Langmuir*, 20(24), 10630-10638, 2004.
3. "Gas-liquid-solid Phase Transition Model for Two-dimensional Nanocrystal Self-assembly on Graphite" J. Tang, G. Ge, and L. E. Brus, *J PhysChem B*, 106(22), 5653-5658, 2002.
4. "Fast Surface Diffusion of Large Disk-Shaped Nanocrystal Aggregates" G. Ge and L. E. Brus, *Nano Letters*, 1, (4), 219, 2001.
5. "Evidence for Spinodal Phase Separation in Two-Dimensional Nanocrystal Self-Assembly" G. Ge and L. E. Brus, *J PhysChem B*, 104, (41), 9573, 2000.

Community Service

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

Materials

Commitment to Research the Situation

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



Yanlian Yang

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Resume

Yanlian Yang, Professor. She 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: structure, modulation and the molecular mechanism of peptide assembly related to degeneration diseases; development of new nano-characterization methods based on scanning probe microscopy; and construction and characterization of functional molecular nanostructures.

Direction

- 1) Structure, modulation and the molecular mechanism of peptide assembly related to degeneration diseases;
- 2) Development of new nano-characterization methods based on scanning probe microscopy;
- 3) Construction and characterization of functional molecular nanostructures;

Peer Reviewed Papers

1. Lei Liu, Lin Niu, MengXu, Qiusen Han, HongyangDuan, Mingdong Dong, FlemmingBesenbacher, Chen Wang*, Yanlian Yang*, "Molecular tethering effect of C-terminus of amyloid peptide A β 42", ACS Nano, 2014, 8(9), 9503-9510.
2. Xiaobo Mao, YuanyuanGuo, Yin Luo, Lin Niu, Lei Liu, Xiaojing Ma, Huibin Wang, Yanlian Yang*, Guanghong Wei*, Chen Wang*, "Sequence Effects on Peptide Assembly Characteristics Observed by Using Scanning Tunneling Microscopy" J. Am. Chem. Soc. 2013, 135 (6), 2181–2187.
3. Min Zhang, Xiaobo Mao, Yue Yu, Chenxuan Wang, Xiaobo Mao, Yanlian Yang*, Chen Wang* "Nanomaterials for reducing amyloid cytotoxicity", Adv. Mater., 2013, 25(28), 3780–3801.
6. Lei Liu, Lan Zhang, Lin Niu, MengXu, Xiaobo Mao, Yanlian Yang*, Chen Wang*, "Observation of Reduced Cytotoxicity of Aggregated Amyloidogenic Peptides with Chaperone-like Molecules" ACS Nano, 2011, 5(7), 6001-6007.
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.



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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 Interest

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

Article

- 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, HanqingYin,XinghuaShi,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, QiangFeng, Dingbin Liu, Qifang Yin, DongyanXu, Yujie Wei, BaoquanDing,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, ShiyanGuo, Jiashu Sun, Yong Gan*, Xinghua Shi*, HuajianGao*, Rotation-facilitated rapid transport of nanorods in mucosal tissues, Nano Letters, 16, 7176-7182 (2016).



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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.

Article

1. “Electrical transport mechanism of single monolayer pentacene 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).



Qing Dai

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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 Jiayi 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

Researcher Interests

Her 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.

Key Publications

1. Xiang-Tian Kong, Bing Bai, Qing Dai*, Graphene plasmon propagation on corrugated silicon substrates, *Opt. Lett.*, 40(1), 1,(2015)
2. Zhenjun Li, Xiaoxia Yang, Feng He, Bing Bai, Hang Zhou, Chi Li*, Qing Dai*, High Current Field Emission from Individual Non-Linear Resistor Ballasted Carbon Nanotube Cluster Array, *Carbon*, 89,1,(2015)
3. Xiaoxia Yang, Zhenjun Li, Feng He, Mingju Liu, Bing Bai, Wei Liu, Xiaohui Qiu, Hang Zhou, Chi Li*, Qing Dai*, Enhanced Field Emission from a Carbon Nanotube Array Coated with a Hexagonal Boron Nitride Thin Film, *Small*, DOI: 10.1002/smll.201403323, (2015)
4. H. Butt, A.K. Yetisen, R. Ahmed, S.H. Yun, Q. Dai, Carbon nanotube biconvex microcavities, *Appl. Phys. Lett.*, 106(12), 121108, (2015)
5. Xiang Liu, Nianze Liu, Mingju Liu, Zhi Tao, Wenjian Kuang, Xiangbing Ji, Jing Chen, Wei Lei*, Qing Dai*, Chi Li*, Xuehua Lia and Arokia Nathanb, Graphene nanomesh photodetector with effective charge tunnelling from quantum dots, *Nanoscale*, 7, 4242, (2015).



Lingyu Piao

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Resume

2005, 7 – Now, Professor, National Center for Nanoscience and Technology, China.

2004, 4 – 2005, 4 As a Post-Ph.D, Laboratory Reactivity of Surface, University Pierre and Marie Curie, Paris, France.

2002, 7 – 2004, 4 As a Post-Ph.D, College of Chemistry and Molecular Engineering, Peking University.

1999, 9 – 2002, 6 Ph.D Degree, Department of Catalysis Science and Technology, School of Chemical Engineering, Tianjin University.

Direction

1. Functional nano-materials: controllable synthesis and application in new energy source and environmental protection.
2. Interaction between nano-materials and biomoleculars.

Article

1. YingjuanXie, Xiao Zhang, Peijun Ma, Zhijiao Wu, and LingyuPiao*, Hierarchical TiO₂ Photocatalysts with One-dimensional Heterojunction for Improved Photocatalytic Activities, Nano Research, 2015, 8, 2092–2101.
2. Hongmei Li, YangsuZeng, Tongcheng Huang, LingyuPiao*, Zijie Yan, and Min Liu*, Hierarchical TiO₂Nanospheres with Dominant {001} Facets: Facile Synthesis, Growth Mechanism, and Photocatalytic Activity, Chem. Eur. J, 2012, 18, 7525 – 7532.
3. Qian Wu, Min Liu, Zhijiao Wu, Yongliang Li, LingyuPiao*, 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.
4. Min Liu,LingyuPiao*, 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.
5. Min Liu,LingyuPiao*, 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.



Yong Yan

Ph.D., Professor

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Resume

Ph. D. 2010 Physical Chemistry, National Center for Nanoscience and Technology

M.S. 2007 Applied Chemistry, University of Science and Technology Beijing

B.S. 2005 Applied Chemistry, University of Science and Technology Beijing

Postdoctoral Training, Northwestern University (Evanston, IL)

Professor 2015 Chemistry and material sciences, focus on electronics, chirality, and energy, NCNST

Research Interests

1. Nanoelectronics, memristor, and neuromorphic computing
2. Spintronic devices based on chiral materials
3. Energy harvest from nanomaterials

Selected Publications

1. Li, M.#; Tu, B.#; Cui, B.; Zhao, X.; Yang, L.; Fang, Q.; Yan, Y.*; Grzybowski, B.*, Efficient and long-lasting current rectification by laminated yet separated, oppositely-charged monolayers, ACS Appl. Electron. Mater., 2019, Accepted.
2. Zhao, X.; Guo, J.; Xiao, T.; Zhang, Y.; Yan, Y.*; Grzybowski, B.*, Charged metal nanoparticles for chemoelectronic circuits, Adv. Mater., 2019, 31, 1804864.
3. Zhao, X.#; Tu, B.#; Li, M.; Feng, X.; Zhang, Y.; Fang, Q.; Li, T.; Grzybowski, B.*, Yan, Y.*, Switchable counterion gradients around charged metallic nanoparticles enable reception of radio waves, Science Advances, 2018, 4, eaau3546.
4. Feng, X.#; Zhao, X.#; Yang, L.#; Li, M.; Qie, F.; Guo, J.; Zhang, Y.; Li, T.; Yuan, W.; Yan, Y. *, All-carbon materials p-n diode, Nature Commun. 2018, 9, 3750.
5. Yan, Y.; Warren, S.; Fuller, P.; Grzybowski, B.*, Chemoelectronic circuits based on metal nanoparticles. Nature Nanotech. 2016, 11, 603-608 (Cover art).
6. Yan, Y.; Timonen, J.; Grzybowski, B.*, A long-lasting, concentration cell based on a magnetic electrolyte, Nature Nanotech. 2014, 9, 901-906.
7. 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.
8. Nakanishi, H.; Walker, D.; Bishop, K.; Wesson, P.; Yan, Y.; Soh, S.; Swaminathan, S.; Grzybowski, B.*, Dynamic internal gradients control and direct electric currents within nanostructured materials, Nature Nanotech. 2011, 6, 740-746. (Cover art)
9. 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.
10. 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.



Xinfeng Liu

Ph. D., Professor

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Research ID: <https://publons.com/researcher/1780321/xinfeng-liu/>

Resume

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. His current research focuses on ultrafast spectroscopy, nonlinear optics and the light-matter interaction in condensed matter physics, with an emphasis on the novel physical phenomena emerging in single micro/nano structures and at surfaces/interfaces. He has authored or co-authored over 140 peer-reviewed papers with total citations more than 7000.



Guodong li

Ph. D., Professor

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Qualifications

2004 Bachelor of Jinan University

2007 Master of Ocean University of China

2011 Doctor of Beijing University of Chemical Technology

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.Wei Chen,‡ Guodong Li,‡ Allen Pei, Yuzhang Li, Lei Liao, Hongxia Wang, Jiayu Wan, Zheng Liang, Hao Zhang, Jiangyan Wang, Yi Cui*. A manganese-hydrogen battery with potential for grid-scale energy storage. *Nature Energy*, 2018, 3, 428–435. (‡Co-first author)

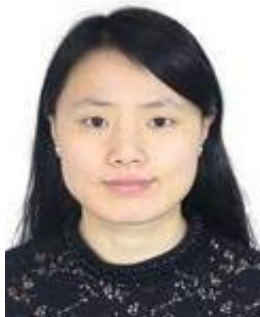
3.Meiting Zhao, Ke Deng, Liangcan He, Yong Liu, Guodong Li,* Huijun Zhao and Zhiyong Tang.* Core-shell palladium nanoparticle@metal-organic frameworks as multifunctional catalysts for cascade reactions. *Journal of the American Chemical Society*, 2014, 136, 1738–1741.

4.Guodong Li, Shenlong Zhao, Yin Zhang and Zhiyong Tang*. Metal-organic frameworks encapsulating active nanoparticles as emerging composites for catalysis: recent progress and perspective. *Advanced Materials*, 2018, 30, 1800702.

5.Yongde Tong,‡ Guangxin Xue,‡ Hui Wang,‡ Mei Liu, Jin Wang, Changlong Hao, Xiaofei Zhang, Dawei Wang, Xinghua Shi, Wei Liu,* Guodong Li,* and Zhiyong Tang. Interfacial coupling between noble metal nanoparticles and metal-organic frameworks for enhanced catalytic activity. *Nanoscale*, 2018, 10, 16425–16430.

Research Interest

Design and fabrication of inorganic nanocomposites with well-defined structures as well as their application in energy, environment and catalysis.



Xiaoli Wang

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Resume:

Xiaoli Wang received her PhD degree in physics from Université Pierre et Marie Curie-Paris VI in 2013 following the studies in Zhejiang University for Master degree in optics. Afterwards, she went to Chalmers University of Technology in Sweden to work as a postdoctoral fellow. Now she is an Associate Professor at the National Center for Nanoscience and Technology, China. Her current research interests are plasmonics, nanophotonics and photocatalysis, especially focused on plasmon-induced hot electron science and applications.

Research subjects:

1. Plasmonic perfect absorber based on 2D materials
2. Plasmon enhanced photoelectrochemical water splitting
3. Ultrafast electron dynamics of plasmonic nanoparticles and hybrid nanostructures
4. Hot electron assisted ultrafast all-optical demagnetization and spin dynamics
5. Hot electron assisted all-optical plasmonic modulator and switching

Selected Publications from 2015:

1. Megersa F. Mideksa, Hongyan Liu, Fei Wang, Wajid Ali, Hongdong Li, Xiaoli Wang*, and Zhiyong Tang, Configuration-Modulated Hot Electron Dynamics of Gold Nanorod Assemblies, *J. Phys. Chem. Lett.*, 2019, 10, 6578–6583.
 2. Hongdong Li, Wajid Ali, Zuochao Wang, Megersa F. Mideksa, Fei Wang, Xiaoli Wang*, Lei Wanga*, Zhiyong Tang, Enhancing hot-electron generation and transfer from metal to semiconductor in a plasmonic absorber, *Nano Energy*, 2019, 63, 103873.
 3. Hongyan Liu*, Jingjing Peng, Weiming Liu, Yonglin Wang, Jianhua Wu, Guanli Zhang, Xiaoli Wang*, Yue Yan*, Strong interference based ultra-thin conductive antireflection coating on metal substrate for optoelectronics, *NPG Asia Materials*, 2018, 10, 309–317.
 4. Jun Guo, Yin Zhang, Lin Shi, Yanfei Zhu, Megersa F. Mideksa, Ke Hou, Wenshi Zhao, Dawei Wang, Meiting Zhao, Xiaofei Zhang, Jiawei Lv, Jianqi Zhang, Xiaoli Wang*, and Zhiyong Tang*, Boosting Hot Electrons in Hetero-superstructures for Plasmon-Enhanced Catalysis, *J. Am. Chem. Soc.*, 2017, 139 (49), 17964–17972.
 5. Xiaoli Wang*, Zhiyong Tang*, Circular dichroism studies on plasmonic nanostructures, *Small*, 2017, 13, 1601115.
 6. Xiaoli Wang, Roberta Morea, Jose Gonzalo and Bruno Palpant, “Coupling localized plasmonic and photonic modes tailors and boosts ultrafast light modulation by gold nanoparticles”, *Nano Lett.*, 2015, 15 (4), 2633–2639.
- Xiaoli Wang, Y. Guillet, P. R. Selvakannan, H. Remita, and B. Palpant, “Broadband Spectral Signature of the Ultrafast Transient Optical Response of Gold Nanorods”, *J. Phys. Chem. C*, 2015, 119 (13), 7416–7427.

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QUALIFICATIONS/ADVISORS

2018-present	Professor, National Center for Nanoscience and Technology, China
2017-2018	Associate Professor, National Center for Nanoscience and Technology, China
2015-2017	Assistant Professor, National Center for Nanoscience and Technology, China
2012-2015	Postdoctoral Fellow, National Center for Nanoscience and Technology, China
2006-2012	Ph. D. Life Science and Technology, Beijing University of Chemical Technology, China
2001-2005	B.S. Chemistry and Chemical Engineering, Tianjin University of Technology, China
Graduate Advisor	Prof. Wei Feng (Beijing University of Chemical Technology)
Postdoctoral Advisor	Prof. Hao Wang (National Center for Nanoscience and Technology)

AWARDS AND HONORS

Youth Innovation Promotion Association, CAS (2017-2021)

GRANTS

- National Key Research and Development Program of China (2018YFE0205401)
- National Natural Science Foundation of China (51873045 and 31671028)
- Youth Innovation Promotion Association, CAS (2017053)
- Young Scientists Fund of National Natural Science Foundation of China (51303036)

REPRESENTATIVE PUBLICATIONS

- Xiao-Xiao Zhao†, Li-Li Li†, Guangjun Nie*, Hao Wang*, et al., *Angew Chem Int Ed*, 2019, 58, 15287
- Li-Li Li; Hao Wang* et al., *Mater. Horiz.* 2019, 2, 3582
- Li-Li Li, Zeng-Ying Qiao*, Lei Wang*, Hao Wang*, *Adv. Mater.* 2018, e1804971.
- Qian Cai, Li-Li Li*, Hao Wang*, et al., *Nano Lett.* 2018, 18, 6229.
- Li-Li Li, Hao Wang*, *Nat. Biomed. Eng.* 2018, 2, 56. (News & Views)
- Li-Li Li, Hao Wang*, et al., *Nat. Commun.*, 2017 8, 1276.
- Sheng-Lin Qiao, Li-Li Li*, Hao Wang*, et al., *ACS Nano*, 2017, 11, 7301.
- Li-Li Li, Zhi-yuan Hu*, Hao Wang*, et al., *Adv. Mater.* 2016. 28, 254.
- Li-Li Li, Hao Wang*, et al., *Adv. Mater.* 2015. 20, 3181
- Li-Li Li, Hao Wang*, et al., *ACS Nano* 2014, 8, 4975

BOOKS

Eds: Hao Wang and Li-Li Li, *In Vivo Self-Assembly Nanotechnology for Biomedical Applications*, Springer, Nanomedicine and Nanotoxicology, 2018, Print ISBN: 978-981-10-6912-3.

PROFESSIONAL SOCIETIES

- China Anti-Cancer Association and China Anti-Microbial Association ; Youth Committee Member
- Chinese Chemical Society, American Chemical Society, Chinese Society of Toxicology, Chinese Society for Biomaterials; Member



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Qualifications

2008 PhD Materials Chemistry, University College Cork

2002 MSc Chemical Technology, IPE, Chinese Academy of Sciences

1997 BEng Chemical Engineering, Inner Mongolia University of Technology

Employment History

2014-Present Associate Professor, National Center for Nanoscience and Technology, China

2011-2014 Marie Curie Intra-European Fellow, University of Cambridge, UK

2011.01-2011.06 Visiting Scholar, Georgia Institute of Technology, USA

2008-2010 Postdoctoral Research Associate, University College Cork, Ireland

1997-1999 Chemical Engineer, Mengxi Hi-Tech Materials Co., Ltd., China

Professional Service

Editorial Board, Nanoscience and Nanometrology (SPG), From 2016

-Editorial Board, Science Journal of Chemistry (SPG), From 2013

Awards and Honors

Marie Curie Intra-European Fellowship for Career Development, European Commission, 2011-2013

Outstanding Graduate Studentship, UCC, 2004-2007

Outstanding Undergraduate Studentship, IMUT, China, 1994-1996

Research Interest

Ligand-Nano interaction; Nano measurement on the interface of colloids and nanostructures

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