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Yongji Guan, PhD

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Education

Sep 2016 – Jun 2019 **Lanzhou University**
Doctor of Philosophy, Radio Physics
Lanzhou, Gansu, China

Sep 2014 – Jun 2016 **Lanzhou University**
Master of Science, Radio Physics
Lanzhou, Gansu, China

Sep 2010 – Jun 2014 **Lanzhou University**
Bachelor of Engineering, Communication Engineering
Lanzhou, Gansu, China

Thesis

Sep 2014 – Jun 2019 **Doctor of Philosophy**
Lanzhou University, School of Information Science and Engineering
Lanzhou, Gansu, China
Advisor: Prof. Xiaoping Zhang and Prof. Youquan Deng
Dissertation title: Molecular Dynamics Study on Wetting Behaviour and Energy Harvesting of Nano-Confined Imidazolium Ionic Liquids

Sep 2010 – Jun 2014 **Bachelor of Engineering**
Lanzhou University, School of Information Science and Engineering
Lanzhou, Gansu, China
Advisor: Prof. Xiaoping Zhang and Dr. Qunfeng Shao
Dissertation title: Nano-Sized Water Droplet in an Electric Field Using Molecular Dynamics Simulation

Research Experience

Oct 2019 –present **PostDoc Position**
Lanzhou University, School of Information Science and Engineering

Lanzhou, Gansu, China

Advisor: Prof. Xiaoing Zhang

International Postdoctoral Research Fellow

Oct 2019 – present **PostDoc Position**
Imperial College London, Department of Chemistry
London, England, United Kingdom

Advisor: Prof. Tom Welton

Postdoctoral Research Fellow

Awards & Grants

May 2019 Scholarship: The International Postdoctoral Scholarship Fund of Lanzhou University

Dec 2018 Scholarship: Liu Bing Alumni Scholarship

Oct 2018 Scholarship: The First Prize Scholarship of Lanzhou University

Dec 2017 Award: The title of Merit Postgraduate of Lanzhou University

Oct 2017 Scholarship: The First Prize Scholarship of Lanzhou University

Oct 2016 Scholarship: The First Prize Scholarship of Lanzhou University

Oct 2015 Scholarship: The First Prize Scholarship of Lanzhou University

Oct 2014 Scholarship: The First Prize Scholarship of Lanzhou University

Projects

lzujbky-2018-it62 The Fundamental Research Funds for the Central Universities

2017YFA0403101 The National Key Research and Development Program of China

Journal Publications

Jinyuan Wang, **Yongji Guan**, Xiaogang Yu, Youzhi Cao, Jiazang Chen, Yilin Wang, Bin Hu, Huanwang Jing: *Photoelectrocatalytic reduction of CO_2 to Paraffin Using p-n Heterojunctions*. iScience 12/2019; 23(1):100768., DOI:10.1016/j.isci.2019.100768

Chao Du, **Yongji Guan**, Shimin Liu, Wenpeng Ni, Junjie Pei, Wei Zhang, Xiaoping Zhang, Y. F. Deng: *Highly Efficient and Non-Precious Metal for the Li-$SOCl_2$ Battery Using Nitrogen Doped Carbon Supported*

Cu Nanoparticles. Journal of The Electrochemical Society 03/2019; 166(4):A641., DOI:10.1149/2.0701904jes

Fulong Yang, Jianhao Gong, E. Yang, **Yongji Guan**, Xiaodong He, Shimin Liu, Xiaoping Zhang, Youquan Deng: *Ultrabroadband metamaterial absorbers based on ionic liquids*. Applied Physics A 02/2019; 125(2)., DOI:10.1007/s00339-019-2443-x

Fulong Yang, Jiaohao Gong, E Yang, **Yongji Guan**, Xiaodong He, Shimin Liu, Xiaoping Zhang, Y. F. Deng: *Microwave-absorbing properties of room-temperature Ionic Liquids*. Journal of Physics D Applied Physics 01/2019; 52(15)., DOI:10.1088/1361-6463/ab016c

Yongji Guan, Wenqiong Chen, Jiao Zhang, Fulong Yang, Chao Du, Xiaoping Zhang, Y. F. Deng: *Ionic Liquid Filled Single-Walled Carbon Nanotubes for Flow-Induced Energy Harvesting*. The Journal of Physical Chemistry C 01/2019;, DOI:10.1021/acs.jpcc.8b11142

Yongji Guan, Qunfeng Shao, Wenqiong Chen, Zhang Jiao, Youquan Deng, Xiaoping Zhang: *Flow-induced Voltage Generation by Driving Imidazolium-Based Ionic Liquids over a Graphene Nano-Channel*. Journal of Materials Chemistry A 05/2018; 6(25)., DOI:10.1039/C8TA02629G

Wenqiong Chen, **Yongji Guan**, Xiaoping Zhang, Youquan Deng: *Influence of External Electric Field on Vibrational Spectrum of Imidazolium-Based Ionic Liquids Probed by Molecular Dynamics Simulation*. Acta Physico-Chimica Sinica 04/2018; 34(8):1-9., DOI:10.3866/PKU.WHXB201801091

Yongji Guan, Qunfeng Shao, Wenqiong Chen, Shimin Liu, Xiaoping Zhang, Youquan Deng: *Dynamic Three-Dimensional Nano-Wetting Behaviour of Imidazolium Based Ionic Liquids Probed by Molecular Dynamics Simulation*. The Journal of Physical Chemistry C 09/2017; 121(42)., DOI:10.1021/acs.jpcc.7b07474

Qunfeng Shao, Jingjing Jia, **Yongji Guan**, Xiaodong He, Xiaoping Zhang: *Flow-induced voltage generation by moving a nano-sized ionic liquids droplet over a graphene sheet: Molecular dynamics simulation*. The Journal of Chemical Physics 03/2016; 144(12):124703., DOI:10.1063/1.4944611

Conference Proceedings

Yongji Guan, Qunfeng Shao, Xiaoping Zhang, Youquan Deng: *Flow-induced Voltage Generation by Driving Imidazolium-Based Ionic Liquids over a Graphene Nano-Channel*. The 6th Asian Pacific Congress on Ionic Liquid & Green Processes (APCIL-6), Tottori, Japan; 10/2018

Yongji Guan, Qunfeng Shao, Xiaoping Zhang: *Probing Nano-Wettability of Hydrophilic/Hydrophobic Ionic Liquids Using Molecular Dynamics Simulation*. The 8th International Conference on Molecular Simulations and Informatics Technology Application (8th-ICMS&I), Dalian, China; 09/2016

Zhiyun Li, Zhinan Wang, Pengfei Cao, **Yongji Guan**, Lin Cheng, Linshan Chen: *Near infrared plasmonic optical trapping based on hybrid metal nanorod*. 2016 Progress in Electromagnetic Research Symposium (PIERS); 08/2016, DOI:10.1109/PIERS.2016.7734436

Research interest

Nano-wetting of ionic liquids	Spontaneously spreading on the solid surface
	Influence of water on the wetting of ionic liquids
	External field (electric and magnetic field) induced spreading on the solid substrate
Flow-induced energy harvesting	Driving ionic liquids droplet over monolayer graphene Flowing ionic liquids over graphene nano-channel Flowing ionic liquids over SWCNTs

Skills & Activities

Skills	Molecular Dynamics Simulation, Ionic Liquids, Energy Harvesting, Quantum Chemistry, Modeling and Simulation, Soft Matter, Density Functional Theory
Languages	Chinese, English
Scientific Memberships	The Royal Society of Chemistry The American Chemical Society
Interests	Chinese Go; Badminton; poetry;

Statistics

RG Score	15.79
Publications	12
Reads	1,392
Citations	34