Curriculum Vitae

Yongji Guan

Current Address

Department of Chemistry
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Higher Education

Ph.D. Radio Physics, Lanzhou University, Gansu, China — Jun 2019
Advisor: Prof. Xiaoping Zhang and Prof. Youquan Deng

M.S. Radio Physics, Lanzhou University, Gansu, China — Jun 2016
Advisor: Prof. Xiaoping Zhang and Dr. Qunfeng Shao

B.S. Communication Engineering, Lanzhou University, Gansu, China — Jun 2014

Research Experience

Oct 2019 –present	**Postdoctoral Research Fellow** Department of Chemistry, Imperial College London Co-Advisor: Prof. Tom Welton
Oct 2019 – present	**International Postdoctoral Research Fellow** School of Information Science and Engineering, Lanzhou University Co-Advisor: Prof. Xiaoping Zhang

Awards & Grants

May 2019	The International Postdoctoral Scholarship Fund of Lanzhou University
Dec 2018	The Liu Bing Alumni Scholarship
Dec 2017	The title of Merit Postgraduate of Lanzhou University
2014 - 2018	The First Prize Scholarship of Lanzhou University

Journal Publications

12. **Yongji Guan**, Jiao Zhang, Jinyuan Wang, Fulong Yang, Huanwang Jing, Xiaoping Zhang*, Youquan Deng*: *In-Depth Investigation on THz Spectrum of 1-Butyl-3-Methylimidazolium Dicyanamide Spreading on Graphene*

Surface by Computational Calculation. Journal of Molecular Liquids 05/2020; 311:113353., DOI:10.1016/j.molliq.2020.113353

11. Jiao Zhang[1], **Yongji Guan[1]**, Jinyuan Wang, Fulong Yang, Huanwang Jing, Xiaoping Zhang*, Youquan Deng*: *Vibrational Spectrum of 1-Ethyl-3-Methylimidazolium Tetrafluoroborate on Graphene Surface*. Journal of Molecular Liquids 05/2020; 311:113340., DOI:10.1016/j.molliq.2020.113340

10. Wenqiong Chen, **Yongji Guan**, Jiao Zhang, Junjie Pei, Xiaoping Zhang*, Youquan Deng*: *Atomistic Insight into Changes in the Vibrational Spectrum of Ionic Liquids under External Electric Field*. Acta Physico-Chimica Sinica 03/2020; 36(X):1-11., DOI:10.3866/PKU.WHXB202001004

9. 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

8. Chao Du, **Yongji Guan**, Shimin Liu, Wenpeng Ni, Junjie Pei, Wei Zhang, Xiaoping Zhang*, Youquan 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

7. 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

6. Fulong Yang, Jiaohao Gong, E Yang, **Yongji Guan**, Xiaodong He, Shimin Liu, Xiaoping Zhang, Youquan 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

5. **Yongji Guan**, Wenqiong Chen, Jiao Zhang, Fulong Yang, Chao Du, Xiaoping Zhang*, Youquan 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

4. **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

3. 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

2. **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

1. 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

3. **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

2. **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

1. 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

Service & Leadership

Journal Review	Nano Energy, Langmuir, The Journal of Physical Chemistry C, Journal of Molecular Liquids, Chinese Physics B
Conference Review	2019 8th International Conference on Advanced Materials and Engineering Materials (8th ICAMEM2019)

Research Support

2017 - 2019	The Fundamental Research Funds for the Central Universities (lzujbky-2018-it62)
2019 - 2021	The International Postdoctoral Scholarship Fund of Lanzhou University

Research Interest

Nano-wetting of ionic liquids	1). Spontaneously spreading on the solid surface 2). Influence of water on the wetting of ionic liquids 3). External field (electric and magnetic field) induced spreading on the solid substrate
Flow-induced energy harvesting	1). Driving ionic liquids droplet over monolayer graphene 2). Flowing ionic liquids over graphene nano-channel 3). Flowing ionic liquids over SWCNTs