叶树集

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个人简历

叶树集，教授，博士生导师，国家杰出青年科学基金获得者。1997年中国科学技术大学化学物理系本科毕业，2000年中国科学院广州化学所硕士毕业，2004年日本东京大学博士毕业。2004年至2009年先后在纽约州立大学水牛城分校物理系和密歇根大学化学系从事博士后研究。2009年10月-2016年6月中国科学技术大学合肥微尺度物质科学国家实验室副教授。2016年6月至现在，中国科学技术大学合肥微尺度物质科学国家实验室研究员，兼化学物理系教授。致力于发展高灵敏、免标记、快速识别的超快非线性光谱新技术，系统研究复杂体系的界面物理与化学问题。研究方向包括界面物理与化学、超快光谱成像、界面超快动力学、界面分析化学、界面能源学、界面表征新技术。在Nature Communications, J.Am.Chem.Soc., Angew. Chem. In. Ed., J.Phys.Chem.Lett., Science Advances, Langmuir等著名期刊上发表系列高水平研究成果。研究成果“生物界面非线性光谱分析新方法的发展与应用”获2014年中国分析测试协会科学技术奖二等奖。2017年个人荣获第六届中国化学会张存浩化学动力学青年科学家奖。2019年获国家杰出青年科学基金资助。

指导的研究生中多人获得研究生国家奖学金、郭永怀研究生奖学金、朱李月华奖等。多名研究生获得全国生物物理化学会议、全国超快光谱会议优秀口头报告或优秀墙报奖。

研究方向

界面物理与化学

超快光谱与动力学

招生信息

物理、光学、物理化学

论文专著

1) Visualizing Water Monomers and Chiral OH-(H2O) Complexes Infiltrated in a Macroscopic Hydrophobic Teflon Matrix - Visualizing Water Monomers and Chiral OH-(H2O) Complexes Infiltrated in a Macroscopic Hydrophobic Teflon Matrix - 2023

2) Boosting Charge Transport in a 2D/3D Perovskite Heterostructure by Selecting an Ordered 2D Perovskite as the Passivator - Boosting Charge Transport in a 2D/3D Perovskite Heterostructure by Selecting an Ordered 2D Perovskite as the Passivator - 2022

3) Ordered Water Layer on the Macroscopically Hydrophobic Fluorinated Polymer Surface and Its Ultrafast Vibrational Dynamics - Ordered Water Layer on the Macroscopically Hydrophobic Fluorinated Polymer Surface and Its Ultrafast Vibrational Dynamics - 2021

4) Conformational disorder of organic cations tunes the charge carrier mobility in two-dimensional organic-inorganic perovskites - Conformational disorder of organic cations tunes the charge carrier mobility in two-dimensional organic-inorganic perovskites - 2020

5) Observing Two-Dimensional Spontaneous Reaction between a Silicon Electrode and a LiPF6-Based Electrolyte In Situ and in Real Time - Observing Two-Dimensional Spontaneous Reaction between a Silicon Electrode and a LiPF6-Based Electrolyte In Situ and in Real Time - 2022

6) Conformational Order of Alkyl Side Chain of Poly(3-alkylthiophene) Promotes Hole-Extraction Ability in Perovskite/Poly(3-alkylthiophene) Heterojunction - Conformational Order of Alkyl Side Chain of Poly(3-alkylthiophene) Promotes Hole-Extraction Ability in Perovskite/Poly(3-alkylthiophene) Heterojunction - 2021

7) Stacking Arrangement and Orientation of Aromatic Cations Tune Bandgap and Charge Transport of 2D Organic-Inorganic Hybrid Perovskites - Stacking Arrangement and Orientation of Aromatic Cations Tune Bandgap and Charge Transport of 2D Organic-Inorganic Hybrid Perovskites - 2023

8) Orientation of Thiocyanate Ions Tuning the Electron-Phonon Interactions in Pseudo-Halide Perovskites - Orientation of Thiocyanate Ions Tuning the Electron-Phonon Interactions in Pseudo-Halide Perovskites - 2024

Ye Shuji

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Personal Profile

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Curriculum Vitae

Ye Shuji is a Professor, Doctoral Supervisor, and Recipient of the National Science Fund for Distinguished Young Scholars. He graduated with a Bachelor's degree in Chemical Physics from the University of Science and Technology of China in 1997, earned a Master's degree from the Guangzhou Institute of Chemistry, Chinese Academy of Sciences in 2000, and received a Ph.D. from the University of Tokyo in 2004. From 2004 to 2009, he conducted postdoctoral research at the Department of Physics of University at Buffalo, and the Department of Chemistry of University of Michigan. From October 2009 to June 2016, he served as an Associate Professor at the Hefei National Laboratory for Physical Sciences at the Microscale of the University of Science and Technology of China. Since June 2016, he has been a Researcher at the Hefei National Laboratory for Physical Sciences at the Microscale and a Professor in the Department of Chemical Physics of the University of Science and Technology of China.

He is dedicated to developing highly sensitive, label-free, and rapid identification ultrafast nonlinear spectroscopy techniques, and systematically studying the interfacial physical and chemical issues of complex systems. His research directions include interfacial physics and chemistry, ultrafast spectroscopy imaging, interfacial ultrafast dynamics, interfacial analytical chemistry, interfacial energy science, and new techniques for interfacial characterization. He has published a series of high-level research papers in renowned journals such as Nature Communications, J. Am. Chem. Soc., Angew. Chem. Int. Ed., J. Phys. Chem. Lett., Science Advances, and Langmuir. The research achievement “Development and Application of a New Method for Nonlinear Spectroscopy Analysis of Biological Interfaces” won the Second Prize of the China Association for Instrumental Analysis Award for Science and Technology in 2014. In 2017, he was awarded the sixth Zhang Cunhao Young Scientist Award on Chemical Dynamics of Chinese Chemical Society. In 2019, he received the National Science Fund for Distinguished Young Scholars.

Several graduate students guided by him have won national scholarships, the Guo Yonghuai Graduate Scholarship, and the Zhu Li Yuehua Award. And many have received outstanding oral presentation or poster awards at national conferences on biophysical chemistry and ultrafast spectroscopy.

Research Directions

Interfacial Physics and Chemistry

Ultrafast Spectroscopy and Dynamics

Admissions Information

Physics

Optics

Physical Chemistry

Publications and Monographs

1) Visualizing Water Monomers and Chiral OH-(H2O) Complexes Infiltrated in a Macroscopic Hydrophobic Teflon Matrix - Visualizing Water Monomers and Chiral OH-(H2O) Complexes Infiltrated in a Macroscopic Hydrophobic Teflon Matrix - 2023

2) Boosting Charge Transport in a 2D/3D Perovskite Heterostructure by Selecting an Ordered 2D Perovskite as the Passivator - Boosting Charge Transport in a 2D/3D Perovskite Heterostructure by Selecting an Ordered 2D Perovskite as the Passivator - 2022

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