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个人简历

吴宇恩，现为中国科学技术大学应用化学系教授，博士生导师，教育部长江特聘教授。2009年本科毕业于清华大学化学系。2014年在清华大学化学系获得博士学位，师从李亚栋院士。2014年9月至今在中国科学技术大学化学系工作。担任国际重要期刊Science Bulletin （国际Q1区） 副主编，Science China Materials（国际Q1区） 编委， Small methods客座编辑， 无机化学学报青年编委，高等化学学报等,内燃机协会燃料电池分会委员。主持优青、青年拔尖等项目，受聘为科技部重点研发计划首席科学家。曾获中国化学会纳米新锐奖、中国化学会青年化学奖、霍英东青年教师奖等。

受教育经历

2009/09 – 2014/07，清华大学，化学系，博士

2005/09 – 2009/07，清华大学，化学系，学士

研究工作经历

2014/07 –2016/01，中国科学技术大学，化学系，特任副研究员

2016/01 至今中国科学技术大学，应用化学系，教授

主要研究方向

本课题组尝试用简单的化学原理，尝试合成出美妙的纳米材料；通过我们的巧妙设计，探索奇妙的微观世界；用我们化学家的手，构筑神奇的纳米结构，并将应用在多相催化，有机催化、电催化、光催化等领域。在单原子催化、燃料电池、传感器、酶催化等领域有扎实的研究基础。近年来，专注于金属单原子、团簇催化剂的合成方法学研究，并将催化剂应用于以燃料电池相关的小分子活化反应研究。近5年来，以通讯作者在Nat. Cat., Chem. Soc. Rev.， J. Am. Chem. Soc.，Angew. Chem. Int. Edit.等国际顶尖杂志发表学术论文几十余篇，论文共计SCI引用6000余次, h-index 41。发展了一种“自上而下”的单原子、团簇催化剂合成策略，已被国内外同行广泛采用;开发了双原子团簇燃料电池催化剂，解决了非Pt催化剂在酸性氧还原反应中稳定性的难题；开发出单原子Ru催化剂，解决了电解水催化剂在酸性氧化性条件下不稳定的难题；发展了原子蒸发法，解决了大规模制备中均一性的问题。建立了单原子催化剂的大数据库以及生产线，面向环保、农业、能源、精细化工等多个领域实现了多项专利成果的转化。

荣誉与奖励

2013年清华大学特等奖学金

2014年清华大学学术新秀

2014年清华大学优秀博士论文一等奖

2016年获得基金委优秀青年基金资助

2017年获得中组部青年拔尖人才

2017年获得国家重点研发计划纳米专项资助并任首席

2018年获得中国化学会纳米新锐奖

2019年获得中国化学会青年化学奖

2020年霍英东青年教师奖

学生培养

所培养的研究生中已有10 余人次获得国家奖学金（2016-2020），多人获得校级优秀毕业生，3人获得中科院优博和中科院院长奖学金。毕业学生中何目前已经有10余人在国内高校及研究机构担任教授及副教授（详见课题组网站），已向工业界输送多名技术总监等人才。培养的本科生中目前已有多人获得哈佛大学、加州理工大学、加州大学伯克利分校、哥伦比亚大学、南洋理工、加州大学洛杉矶分校等美国名校的offer。本科生中3人获得郭沫若奖学金。

对未来有梦想的你，我们翘首以盼！

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Personal Resume

Wu Yuen is currently a professor in the Department of Applied Chemistry of the University of Science and Technology of China and a doctoral advisor. He is also a Distinguished Professor under the Changjiang Scholars Program of the Ministry of Education. He received a bachelor's degree from the Department of Chemistry of Tsinghua University in 2009 and a Ph.D. in 2014 under the supervision of Academician Li Yadong. Since September 2014, he has been working in the Department of Chemistry of the University of Science and Technology of China. He serves as the deputy editor of the international journal Science Bulletin (Q1), an editorial board member of Science China Materials (Q1), a guest editor of Small Methods, a youth editorial board member of the Chinese Journal of Inorganic Chemistry and Chemical Journal of Chinese Universities. He is also a member of the Fuel-cell Engine Committee of the Chinese Society for Internal Combustion Engines. He has led projects such as the Excellent Young Scientists Fund Project and the Young Top-notch Talent Project, and he is appointed as the Chief Scientist of Key Research and Development Program of the Ministry of Science and Technology. He has received numerous awards, including the Emerging Award in Nanochemistry of Chinese Chemical Society, the Young Chemist Award of Chinese Chemical Society, and the Young Teacher Award of Fok Ying Tung Education Foundation.

Educational Background

2009/09 – 2014/07: Ph.D. from the Department of Chemistry of Tsinghua University

2005/09 – 2009/07: Bachelor's degree from the Department of Chemistry of Tsinghua University

Research Experience

2014/07 – 2016/01: Special-term Associate Researcher of the Department of Chemistry of the University of Science and Technology of China

2016/01 – Present: Professor of the Department of Applied Chemistry of the University of Science and Technology of China

Main Research Directions

His research group uses simple chemical principles to synthesize fascinating nanomaterials, exploring the microscopic world through clever design, constructing magical nanostructures, and applying them in fields such as heterogeneous catalysis, organic catalysis, electrocatalysis, and photocatalysis. He has a solid research foundation in areas like single-atom catalysis, fuel cells, sensors, and enzyme catalysis. In recent years, he has focused on the synthesis methodology of metal single-atom and cluster catalysts and applied these catalysts in small molecule activation reactions related to fuel cells. In the past five years, he has published dozens of academic papers as a corresponding author in top international journals such as Nat. Cat., Chem. Soc. Rev., J. Am. Chem. Soc., and Angew. Chem. Int. Edit., with over 6,000 SCI citations and an H-index of 41. He developed a "top-down" synthesis strategy for single-atom and cluster catalysts, which is widely adopted by peers domestically and internationally; he developed diatomic cluster fuel cell catalysts, addressing the stability challenge of non-Pt catalysts in acidic oxygen reduction reactions; he developed single-atom Ru catalysts, solving the instability issue of water-electrolytic catalysts under acidic oxidative conditions; and he developed the atomic evaporation method, addressing the uniformity problem in large-scale production. He established a large database and production line for single-atom catalysts, achieving multiple patent conversions in fields such as environmental protection, agriculture, energy, and fine chemicals.

Honors and Awards

In 2013: Special Grade Scholarship of Tsinghua University

In 2014: Academic Rookie of Tsinghua University

In 2014: First Prize of the Excellent Doctoral Dissertation Award of Tsinghua University

In 2016: Excellent Young Scientists Fund Project of the National Natural Science Foundation of China

In 2017: Young Top-notch Talent Project of the Organization Department of the Central Committee of the CPC

In 2017: Chief Scientist of the Key Special Project of Nano Frontier of National Key Research and Development Program of China

In 2018: Emerging Award in Nanochemistry of Chinese Chemical Society

In 2019: Young Chemist Award of Chinese Chemical Society

In 2020: Young Teacher Award of Fok Ying Tung Education Foundation

Student Training

Over the years (2016-2020), more than 10 of the graduate students trained in his group have received national scholarships, with many receiving university-level outstanding graduate awards, and three receiving the Excellent Doctoral Dissertation Award of Chinese Academy of Sciences and the CAS President's International Fellowship Initiative. More than 10 graduates currently hold professorships or associate professorships at domestic universities and research institutions (detailed on the website of the research group), and many have been employed as technical directors in the industry. Among the undergraduates, many have received offers from prestigious American universities such as Harvard University, California Institute of Technology, University of California, Berkeley, Columbia University, Nanyang Technological University, and University of California, Los Angeles. Three undergraduates have received Guo Moruo Scholarship.

We look forward to the dreamers of the future joining us!