Qiyuan Wu

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Education

Ph.D. in materials science and engineering

Stony Brook University, USA, 2017

B.E. in engineering science

Stony Brook University, USA, 2012

• Graduated Manga Cum Laude

B.S. in materials science

Nanjing University, China, 2012

Experience

Postdoctoral researcher	National Renewable Energy Laboratory, 2019 - current
Research associate	Brookhaven National Laboratory, 2018 - 2019
Research assistant	Stony Brook University, 2012 - 2017
Teaching assistant	Stony Brook University, 2011 - 2014

Editorial

Reviewer

ACS Applied Materials & Interfaces
ACS Catalysis
Applied Surface Science
Catalysis Today
Chemical Communications
Chemsuchem
Clean Energy
RSC Advance
Surface Review and Letters

Awards

American Chemical Society (ACS) Graduate Student Award in Environmental Chemistry
ACS ENVR travel award
ACS CATL travel award
Sigma Xi travel award
Graduate scholarship
Chinese People's scholarship

Publications

Mukarakate, C., Iisa, K., Habas, S.E., Orton, K.A., Xu, M., Nash, C.P., **Wu, Q.**, Happs, R.M., French, R.J., Kumar, A., Miller, E.M., Nimlos, M.R., Schaidle, J.A. "Accelerating Catalyst Development for Biofuel Production through Multiscale Insight into Deactivation and Regeneration during Catalytic Fast Pyrolysis of Biomass over Mo2C" *Chem Catalysis* (2022) under revision

Yang, H., Cen, J., **Wu, Q.**, Ridge, C.J., Tong, X., Zhou C., Veerasamy, V., Su, D., Lindsay, C.M., Liu, M., Orlov, A. "Enhancing CO Oxidation Activity via Tuning a Charge Transfer

Between Gold Nanoparticles and Support" *The Journal of Physical Chemistry* 126.10 (2022): 4836-4844. (Highlighted in journal cover)

Wu, Q., To, A.T., Nash, C.P., Dupuis, D.P., Baddour, F.G., Habas, S.E., Ruddy, D.A. "Spectroscopic insight into carbon speciation and removal on Cu/BEA catalyst during renewable high-octane hydrocarbon synthesis" *Applied Catalysis D: Environmental* 287 (2021): 119925.

Wu, Q., Abraham A., Wang, L., Tong, X., Takeuchi, E.S., Takeuchi, K.J. Marschilok A.C. "Electrodeposition of MoSx: Tunable Fabrication of Sulfur Equivalent Electrodes for High Capacity or High Power" *Journal of The Electrochemical Society* 167.5 (2020): 050513.

Zhang, Z.*, **Wu, Q.***, Johnson, G.*, Ye, Y., Li, X., Li, N., Cui, M., Lee, J., Liu, C., Zhao, S., Orlov, A., Murray, C., Zhang, X., Gunnoe, T., Su, D., Zhang, S. "A Generalized Synthesis Strategy for Transition Metal Doped Brookite-Phase TiO2 Nanorods" *Journal of the American Chemical Society* 141.42 (2019): 16548-16552. (Highlighted in journal cover) *equal contribution

Wang, L., **Wu, Q.**, Abraham A., West, P.J., Housel, L.M., Singh, G., Sadique, N., Quilty, C.D., Wu, D., Takeuchi, E.S., Marschilok A.C., Takeuchi, K.J. "Silver-Containing α-MnO2 Nanorods: Electrochemistry in Rechargeable Aqueous Zn-MnO2 Batteries" *Journal of The Electrochemical Society* 166.15 (2019): A3575-A3584.

Yan, B., Zhao B., Kattel, S., **Wu, Q.**, Yao, S., Su, Dong., Chen, J.G. "Tuning CO2 hydrogenation selectivity via metal-oxide interfacial sites" *Journal of Catalysis* 374 (2019): 60-71.

Housel, L.M., Li, W., Quilty, C.D., Vila, M.N., Tang, C.R., Bock, D.C., **Wu, Q.**, Tong X., Head A.R., Takeuchi, K.J., Marschilok, A.C., Takeuchi, E.S. "Insights into Reactivity of Silicon Negative Electrodes: Analysis Using Isothermal Microcalorimetry" *ACS Applied Materials & Interfaces* 11.41 (2019): 37567-37577.

Yan, D., Topsakal, M., Selcuk, S., Lyons, J.L., Zhang, W., **Wu, Q.**, Wluyo, I., Stavitski, E., Attenkofer, K., Yoo, S., Lu, D., Hybertsen, M.S., Stacchiola, D.J., Liu, M. "Unravelling the atomic motifs in ultrathin amorphous titania capping layer over zinc oxide nanowire photocatalyst" *Nano Letters* 19.6 (2019): 3457-3463.

Wang, L., Housel, L.M., Bock, D.C., Abraham, A., Dunkin, M., McCarthy, A., **Wu, Q.**, Kiss, A., Thieme, J., Takeuchi, E.S., Marschilok, A.C., Takeuchi, K.J. "Deliberate Modification of Fe3O4 Anode Surface Chemistry: Impact on Electrochemistry" *ACS Applied Materials & Interfaces* 11.22 (2019): 19920-19932.

Xie, Z., Yan, B., Lee, J.H., **Wu, Q.**, Li, X., Zhao, B., Zhang, L., Chen, J.G. "Effects of oxide supports on the catalytic reduction of CO2 by ethane over Pt-Ni bimetallic catalysts" *Applied Catalysis B: Environmental* 245 (2019): 376-388.

Yan, B.*, **Wu, Q.***, Cen, J., Timoshenko, J., Frenkel, A.I., Su, D., Chen, X., Parise, J.B., Stach, E.A., Orlov, A., Chen, J.G. "Highly Active Subnanometer Rh Clusters Derived from Rh-doped SrTiO3 for CO2 Reduction" *Applied Catalysis B: Environmental* 237 (2018): 1003-1011. *equal contribution

Cen, J., **Wu, Q.**, Yan, D., Zhang, W., Zhao, Y., Tong, X., Liu, M., Orlov, A. "New Aspects of Improving the Performance of WO3 Thin Films for Photoelectrochemical Water Splitting by Tuning the Ultrathin Depletion Region" *RSC Advance* 9.2 (2019): 899-905.

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Zhao, B., Yan, B., Jiang, Z., Yao, S., Liu, Z., **Wu, Q.**, Ran, R., Senanayake, S.D., Weng, D., Chen, J.G. "High Selectivity of CO2 Hydrogenation to CO by Controlling the Valence State of Nickel using Perovskite" *Chemical Communications* 54.53 (2018): 7354-7357.

Yao, S., Yan, B., Jiang, Z., Liu, Z., **Wu, Q.**, Lee, J.H. Chen, J.G. "Combining CO2 Reduction with Ethane Oxidative Dehydrogenation by Oxygen-modification of Molybdenum Carbide" 8.6 *ACS Catalysis* (2018): 5374-5381. (Highlighted in journal cover)

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Wu, Q., Quilty, C.D., Takeuchi, K.J., Takeuchi, E.S., Marschilok, A.C. "Material Design Strategies to Achieve Simultaneous High Power and High Energy Density" *MRS Advances* (2018): 1-7.

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Zhang, W., Yan, D., Li, J., **Wu, Q.**, Cen, J., Zhang, L., Orlov, A., Xin, H., Tao, J., Liu, M. "Anomalous conductivity tailored by domain wall transport in crystalline BiVO4 photoanodes" *Chemistry of Materials* 30.5 (2018): 1677–1685.

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Wu, Q., Cen, J., Tong, X., Li, Y., Frenkel, A.I., Zhao, S., Orlov, A. "Comprehensive Study of Catalytic, Morphological and Electronic Properties of Ligand-protected Gold Nanoclusters by XPS, STM, XAFS, and TPD Techniques" *Physical Chemistry Chemical Physics* 20.3 (2018): 1497-1503.

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Zhang, W., Yan, D., Appavoo, K., Cen, J., **Wu, Q.**, Orlov, A., Sfeir, M.Y., Liu, M. "Unravelling Photocarrier Dynamics beyond the Space Charge Region for Photoelectrochemical Water Splitting." *Chemistry of Materials* 29.9 (2017): 4036-4043.

Cen, J.*, **Wu, Q.***, Liu, M., Orlov, A. "Developing New Understanding of Photoelectrochemical Water Splitting via in-situ Techniques: A Review on Recent Progress" *Green Energy and Environment* 2.2 (2017): 100-111. *equal contribution

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Zhang, Q., Tackett, B. M., **Wu, Q.**, Chen, J.G. "Trends in Hydrogen Evolution Activity of Metal-Modified Molybdenum Carbides in Alkaline and Acid Electrolytes" *ChemElectroChem* 3 (2016): 1686.

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