

个人简介

田程程，华东理工大学资源与环境工程学院，特聘研究员。2019年上海市高校特聘教授“东方学者”。2015年博士毕业于华东理工大学，2015至2019年在美国橡树岭国家实验室和田纳西大学从事博士后研究工作。长期致力于多介质环境污染控制及资源化利用研究（大气和水），专注于烟气中CO₂、挥发性有机物（VOCs）等污染物和废水中难降解有机物的吸附分离和催化转化机制。发展了前驱体调控的原位聚合制备方法，研发了一系列具有多级孔结构和多活性位点的先进功能性吸附/催化材料，为环境污染控制工程中污染物吸附分离和资源化转化效率低等问题的解决提供了新策略。在J. Am. Chem. Soc.、Angew. Chem. Int. Ed.、Adv. Mater.、Appl. Catal. B、ACS Catal.、Chem. Sci. 等环境相关领域共发表SCI论文39篇，总他引超过1000次，H因子19。获美国发明专利1件。

研究方向

1. 设计并合成用于CO₂捕集与废水中污染物吸附的环境功能性多孔微纳材料；
2. 可控制备用于环境催化的单原子催化剂，负载型的纳米金属簇以及纳米颗粒催化剂等，研究其在污染物降解和资源化转化方面的应用。

研究成果及主要发表文章

1. Tian C.C., Zhang H.Y., Zhu X., Lin B., Liu X.F., Chen H., Zhang Y.F., Mullins D.R., Abney C.W., Shakouri M., Chernikov R., Hu Y.F., Polo-Garzon F., Wu Z.L., Fung V., Jiang D., Liu X.M., Chi M.F., Liu J.Y. and Dai S. A new trick for an old support: Stabilizing gold single atom on LaFeO₃ perovskite. Appl. Catal. B, 2020, 261, 118178.
2. Zhu X., Hua, Y. Y., Tian C.C.*, Abney C.W., Zhang P., Liu G.P., Jin T., Browning K. L., Jin W.Q., Dai S. Accelerating Membrane-based CO₂ Separation by Soluble Nanoporous Polymer Networks Produced Via Mechanochemical Oxidative Coupling. Angew. Chem. Int. Ed., 2018, 57, 2816.
3. Tian C.C., Zhu X., Abney C.W., Liu X.F., Foo G.S., Wu Z.L., Li M.J., Mahurin S.M., Yang S.Z., Liu J.Y. and Dai S. Towards the Design of a Hierarchical Perovskite Support: Ultra Sintering-Resistant Gold Nanocatalysts for CO Oxidation. ACS Catal. 2017, 7, 3388.
4. Zhu X., Tian C.C.*, Veith G.M., Abney C.W., Dehaudt J., Dai S. An In situ Doping Strategy for the Preparation of Conjugated Triazine Frameworks Displaying Efficient CO₂ Capture Performance. J. Am. Chem. Soc., 2016, 138, 11497.
5. Tian C.C., Zhu X., Chai S.-H., Wu Z., Binder A., Brown S., Li L., Guo Y., Dai S. Three-phase catalytic system: water-hydrophobic ionic liquid-nanostructured VOPO₄-SiO₂ solid acid for efficient 5-hydroxymethylfurfural production. ChemSusChem, 2014, 7, 1703.
6. Tian C.C., Chai S.H., Zhu X., Wu Z.L., Binder A., Bauer J.C., Brown S., Chi M.F., Veith G.M., Guo Y.L., Dai S. In situ growth synthesis of heterostructured LnPO₄-SiO₂ (Ln = La, Ce, and Eu) mesoporous materials as supports for small gold particles used in catalytic CO oxidation. J. Mater. Chem., 2012, 48, 25227.