

个人简介

李超禹，国家级高层次青年人才计划和上海市领军人才(海外)项目入选者，同济大学材料科学与工程学院青百 A 岗特聘研究员、博士生导师。2016 年底博士毕业于厦门大学化学化工学院，2018 至 2021 年间分别在美国麻省理工学院(MIT)和埃默里大学(Emory)从事博士后研究，2023 年全职加入同济大学。至今以第一作者在 *Nat. Mater.*、*Nat. Nanotechnol.*、*Nat. Commun.*、*Sci. Adv.*、*JACS(2)*、*Anal. Chem.*、*Small* 等期刊发表多篇学术论文，并撰写英文百科全书《*Encyclopedia of Nanomaterials*》其中一章节。曾获福建省优秀博士论文奖和唐敖庆化学奖学金等奖励。

研究方向

研究团队主攻方向为谱学电化学、能源电化学、表面增强拉曼光谱、单分子光谱。

主要学术成果

1. **Chaoyu Li**[†], Sai Duan[†], Baoying Wen, et al., Observation of inhomogeneous plasmonic field distribution in a nanocavity, *Nat. Nanotechnol.*, 2020, 15, 922.
2. **Chaoyu Li**[†], Jiabo Le[†], Shu Chen, et al., *In situ* probing electrified interfacial water structures at atomically flat surfaces using Raman spectroscopy, *Nat. Mater.* 2019, 18, 697.
3. **Chaoyu Li**[†], Ming Chen[†], Xinyao Lu, et al., Unconventional interfacial water structure of highly concentrated aqueous electrolytes at negative electrode polarizations, *Nat. Commun.*, 2022, 13:5330.
4. **Chaoyu Li**, Sai Duan, Jun Yi, et al., Real-time detection of single-molecule reaction by plasmon-enhanced spectroscopy, *Sci. Adv.* 2020, 6: eaba6012.
5. **Chaoyu Li**^{*}, Yang Yu, Filippo Maglia, et al., Surface changes of $\text{LiNi}_x\text{Mn}_y\text{Co}_{1-x-y}\text{O}_2$ in Li-ion batteries using *in situ* surface-enhanced Raman spectroscopy, *J. Phys. Chem. C.* 2020, 124, 4024.
6. **Chaoyu Li**[†], Jinhong Gao[†], Jun Yi[†], et al., Plasmon-enhanced ultrasensitive surface analysis using Ag nanoantenna. *Anal. Chem.* 2018, 90, 2018.
7. **Chaoyu Li**[†], Zhenwei Yang[†], Tapan Ganguly, and Jianfeng Li^{*}, Plasmon-enhanced spectroscopies with shell-isolated nanoparticles, *Small*, 2017, 13, 1601598. (Cover article)
8. **Chaoyu Li**[†], Jinchao Dong[†], Xi Jin, et al., *In situ* monitoring of electrooxidation processes at gold single crystal surfaces using shell-isolated nanoparticle-enhanced Raman spectroscopy, *J. Am. Chem. Soc.* 2015, 137, 7648.
9. **Chaoyu Li**, Meng, Meng, Shengchao Huang, et al., “Smart” Ag nanostructures for plasmon-

enhanced spectroscopies, *J. Am. Chem. Soc.* 2015, *137*, 13784.

10. **Chaoyu Li**, Senyuan Chen, Yongli Zheng, et al., *In-situ* electrochemical shell-isolated Ag nanoparticles-enhanced Raman spectroscopy study of adenine adsorption on smooth Ag electrodes, *Electrochim. Acta* 2016, 2016, *199*, 388.
11. **Chaoyu Li**, Fengru Fan, Tapan Ganguly, et al., Au⁺-cetyltrimethylammonium bromide solution: A novel precursor for seed-mediated growth of gold nanoparticles in aqueous solution, *Nano Research* 2013, *6*, 9.