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<u>Rearch group websites</u> (reserved link)

# Education and Professional Experience

SHENG Minqi (male), born in 1983, associate professor. Gained doctorate degree of engineering from Shanghai University in 2011 and held a postdoctoral post during Jan.2013-Jan.2016 at Soochow University. Oct. 2011 to present teaches at Soochow University, and appointed as associate professor in 2014. He has published more than 50 papers including ACS nano, Nano research, Ultrasonics sonochemistry, Electrochemistry Communications, Applied Surface Science, Surface coatings & technology and so on. The SCI-indexed papers are cited more than 500 times (cited by others more than 480 times). He is a member of American Society of Corrosion Engineers (NACE).

### Research Interests

- 1. Properties and preparation of metal-based functional materials
- 2. Metallic corrosion electrochemistry
- 3. Solid inorganic chemistry

# Research Projects

- 1. Performance testing and evaluation for materials under thermal-mechanical coupling and irradiation, National MCF Energy R&D Program (2018YFE0306105), Participant
- 2. Fundamental research on electrodeposition of nanocrystalline Co-based W alloy coating under ultrasonic-field, National Natural Science Foundation (NSFC) (51204115), Host
- 3. The preparation of Ni/n-Si negative electrode materials by electrodeposition-gamma ray irradiation and their electrochemistry properties, Natural Science Foundation of Jiangsu Province (BK20141193), Host
- 4. Controllable preparation and lithium storage performance of Ni/n-Si composite materials, China Postdoctoral Science Foundation (2013M541719), Host
- 5. Preparation and electrocatalytic HER performance Co-based boride/CNTs film composite self-supporting electrodes, Open Fund of Guangdong Province Characteristic Key Discipline (2018ESI20), Host
- 6. Design and preparation of nickel-based alloy coating with high hardness and corrosion resistance, Suzhou Hanyi Chemical Co. LTD (2020), Host

## Selected Publications

- 1. Qiong Wu, **Minqi Sheng\***, Jialun Shi, Qiongyu Zhou, Fan Liao, Fan Lv, CoWO<sub>4</sub>/CoP<sub>2</sub> nanoflakes grown on carbon nanotube film as an efficient electrocatalyst for water splitting in alkaline media[J], *Applied Surface Science*, 2020, 514: 145919 (IF: 6.18)
- 2. **Minqi Sheng**, Binbin Jiang, Bin Wu, Fan Liao, Xin Fan, Haiping Lin\*, Youyong Li, Yeshayahu Lifshitz\*, Shuit-Tong Lee, Mingwang Shao\*, Approaching the volcano top: iridium/silicon nanocomposites as efficient electrocatalysts for the hydrogen evolution reaction[J], *ACS Nano*, 2019, 13:2786-2794 (IF: 14.59)
- 3. **Minqi Sheng\***, Qiong Wu, Yu Wang, Fan Liao, Qiongyu Zhou, Jixin Hou, Wenping Weng, Network-like porous Co-Ni-B grown on carbon cloth as efficient and stable catalytic electrodes for hydrogen evolution[J], *Electrochemistry Communications*, 2018, 93: 104-108 (IF: 4.33)
- 4. **Minqi Sheng**, Wenping Weng\*, Yu Wang, Qiong Wu, Songyan Hou, Co-W/CeO<sub>2</sub> composite coatings for highly active electrocatalysis of hydrogen evolution reaction[J], *Journal of Alloys and Compounds*, 2018, 743: 682-690 (IF: 4.65)
- 5. Bin Wu, **Minqi Sheng\***, Suning Gao, Yu Wang, Fan Liao, Single-source precursor to Ag/NiO composite forrechargeable charge storage[J], *Journal of Alloys and Compounds*, 2017, 692: 34-39 (IF: 4.65)
- 6. Lili Zhu, Qian Cai, Fan Liao, **Minqi Sheng\***, Bing Wu, Mingwang Shao\*, Ru-modified silicon nanowires as electrocatalysts for hydrogen evolution reaction[J], *Electrochemistry Communications*, 2015, 52: 29-33 (IF: 4.33)
- 7. Binbin Jiang, Lulu Yang, Fan Liao, **Minqi Sheng\***, Haozhe Zhao, Haiping Lin\*, Mingwang Shao\*, A stepwise-designed Rh-Au-Si nanocomposite that surpasses Pt/C hydrogen evolution activity at high overpotentials[J], *Nano research*, 2017, 10(5): 1749-1755 (IF: 8.18)
- 8. Bin Wu, Zhangqing Lin, **Minqi Sheng\***, Songyan Hou, Jifang Xu, Visible-light activated ZnO/CdSe heterostructure-based gas sensors with low operating temperature[J], *Applied Surface Science*, 2016, 360B: 652-657 (IF: 6.18)
- 9. **Minqi Sheng**, Yi Wang, Qingdong Zhong, Hongyan Wu, Qiongyu Zhou, Hai Lin, The effects of nano-SiO<sub>2</sub> additive on the zinc phosphating of carbon steel[J], *Surface coatings & technology*, 2011, 3(205): 3455-3460. (IF: 3.78)
- 10. **Minqi Sheng**, Chao Wang, Qingdong Zhong\*, Yinyin Wei, Yi Wang, Ultrasonic irradiation and its application for improving the corrosion resistance of phosphate coatings on aluminum alloys[J], *Ultrasonics sonochemistry*, 2010, 17(1): 21-25. (IF: 6.51)

#### Awards

Higher education Teaching Achievement Award of Soochow University, the second prize(ranking 1st),2012