



庞强

副教授 硕士研究生导师

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教育背景

吉林大学理学博士（2013-2018）硕博连读
美国威斯康辛大学麦迪逊分校（2016-2017）联合培养博士
吉林大学理学学士（2009-2013）

研究领域

主要从事新型电池电极材料的开发、设计及电化学反应机理的研究
（锂离子电池、钠离子电池、锌离子电池、超级电容器等）。
欢迎同学们依托实验室申报大创项目
欢迎同学们报考电池方向研究生

代表性成果

论文类:

1. **Qiang Pang**, Congli Sun, Yanhao Yu, et al., $\text{H}_2\text{V}_3\text{O}_8$ Nanowire/Graphene Electrodes for Aqueous Rechargeable Zinc Ion Batteries with Ultrahigh Rate Capability and Large Capacity, **Advanced Energy Materials**, 2018, accepted.
2. **Qiang Pang**, et al., Understanding the mechanism of byproduct formation with *in operando* synchrotron techniques and its effects on the electrochemical performance of $\text{VO}_2(\text{B})$ nanoflakes in aqueous rechargeable zinc batteries, **J. Mater. Chem. A**, 2020, 8, 9567-9578.
3. **Qiang Pang**, et al., Aluminium Pre-intercalated Orthorhombic V_2O_5 As High-performance Cathode Material For Aqueous Zinc-ion Batteries, **Applied Surface Science**, 2020.02.
4. **Qiang Pang**, et al., Hierarchical Aluminum Vanadate Microspheres with Structural Water: High-Performance Cathode Materials for Aqueous Rechargeable Zinc Batteries, **ChemPlusChem**, 2020.09.
5. **Qiang Pang**, et al., High-Capacity and Long-Lifespan Aqueous $\text{LiV}_3\text{O}_8/\text{Zn}$ Battery Using Zn/Li Hybrid Electrolyte, **Nanomaterials**, 2021.05.
6. **Qiang Pang**, et al., Realizing Reversible Storage of Trivalent Aluminum Ions

- Using VOPO₄·2H₂O Nanosheets as Cathode Material in Aqueous Aluminum Metal Batteries, *Journal of Alloys and Compounds*, 2021.06.
7. **Qiang Pang**, Yingying Zhao, Xiaofei Bian, et al., Hybrid graphene@MoS₂@TiO₂ microspheres for use as a high performance negative electrode material for lithium ion batteries, *J. Mater. Chem. A*, 2017, 5, 3667-3674.
 8. **Qiang Pang**, Yingying Zhao, Yanhao Yu, et al., Ultrafine VS₄ Nanoparticles Anchored on Graphene Sheets as a High-Rate and Stable electrode Material for Sodium Ion Batteries, *ChemSusChem*, 2018, 11, 735-742.
 9. **Qiang Pang**, Yu Gao, Yingying Zhao, et al., Improved Lithium-Ion and Sodium-Ion Storage Properties from Few-Layered WS₂ Nanosheets Embedded in a Mesoporous CMK-3 Matrix, *Chem. Eur. J.* 2017, 23,7074 -7080.
 10. **Qiang Pang**, Qiang Fu, Yuhui Wang, et al., Improved Electrochemical Properties of Spinel LiNi_{0.5}Mn_{1.5}O₄ Cathode Materials by Surface Modification with RuO₂ Nanoparticles, *Electrochimica Acta* 2015, 152, 240-248.
 11. Dongxu Yu, **Qiang Pang** (共同一作), Yu Gao, et al., Hierarchical flower-like VS₂ nanosheets – A high rate-capacity and stable anode material for sodium-ion battery, *Energy Storage Materials* 2018, 11, 1-7.
 12. Yingying Zhao, **Qiang Pang**, et al., Self-Assembled CoS Nanoflowers Wrapped in Reduced Graphene Oxides as the High-Performance Anode Materials for Sodium-Ion Batteries, *Chem. Eur. J.* 2017, 23,13150 –13157.
 13. Yingying Zhao, **Qiang Pang**, et al., Co₉S₈/Co as a High-Performance Anode for Sodium-Ion Batteries with an Ether-Based Electrolyte, *ChemSusChem* 2017, 10,1–9.
 14. Xiaofei Bian, **Qiang Pang**, et al., Improved Electrochemical Performance and Thermal Stability of Li-excess Li_{1.18}Co_{0.15}Ni_{0.15}Mn_{0.52}O₂ Cathode Material by Li₃PO₄ Surface Coating, *Electrochimica Acta* 2015, 174, 875-884.
 15. Xiaofei Bian, Qiang Fu, **Qiang Pang**, et al., Multi-Functional Surface Engineering for Li-Excess Layered Cathode Material Targeting Excellent Electrochemical and Thermal Safety Properties, *ACS Appl. Mater. Interfaces*, 2016, 8 (5), pp 3308–3318.
 16. XiaofeiBian, ShaoxiongGe, **QiangPang**, et al., A novel lithium difluoro(oxalate) borate and lithium hexafluoride phosphate dual-salt electrolyte for Li-excess layered cathode material. *Journal of Alloys and Compounds*, 736, 136-142.
 17. Yingying Zhao, Zhixuan Wei, **Qiang Pang**, et al., Angelina Sarapulova, Helmut Ehrenberg, Bingbing Liu, Gang Chen, NASICON-Type Mg_{0.5}Ti₂(PO₄)₃ Negative Electrode Material Exhibits Different Electrochemical Energy Storage Mechanisms in Na-Ion and Li-Ion Batteries, *ACS Appl. Mater. Interfaces*, 2017, 9 (5), pp 4709–4718.
 18. Yanming Ju, Yuan Meng, Yingjin Wei, Xiaofei Bian, **Qiang Pang**, Yu Gao, Fei Du, Bingbing Liu, Gang Chen, Li⁺/Mg²⁺ Hybrid-Ion Batteries with Long Cycle Life and High Rate Capability Employing MoS₂ Nano Flowers as the Cathode Material, *Chem. Eur. J.* 2016, 22,18073 –18079.
 19. Dashuai Wang, Yanhui Liu, Xing Meng, Yingjin Wei, Yingying Zhao, **Qiang Pang**, Gang Chen, Two-dimensional VS₂ monolayers as potential anode materials

for lithium-ion batteries and beyond: first-principles calculations , **J. Mater. Chem. A**, 2017, 5, 21370.

代表性项目

主持国家自然科学基金 1 项
主持博士后面基金 1 项
主持大连海事大学青年教师科技创新项目 3 项

荣誉奖励

入选大连海事大学“星海工程”第三层次

社会兼职

Journal of Alloys and Compounds, Ceramics International, Journal of The Electrochemical Society 等国际期刊审稿人