



Department: School of Chemistry & Molecular Engineering

Professional field: New energy materials and devices

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Profile

Wu Wenjun, male, PhD, associate professor, doctoral supervisor. In 2008, graduated from East China University of Science and Technology with a doctorate degree. 2016.03-2017.03, have finished my visiting scholar at the University of Edinburgh, UK. Our group mainly focuses on the development and application of related functional materials on carbon-based perovskite solar cells, dye-sensitized solar cells and supercapacitors. At present, 98 academic papers have been published in Solar RRL, ACS Applied Materials & Interfaces, Chemsuschem, Chemical Science, Carbon, Chemical Communication, etc for our research achievements with a certain internationally Influence.

Research Field

Perovskite Solar Cells, Dye-sensitized Solar Cells, Supercapacitor

Research results and selected published papers

1. L. Xu, Y. M. Li, J. J. Shi, N. Robertson, W. J. Wu*, Q. B. Meng, H. Tian, Suppressing Shallow Defect of Printable Mesoscopic Perovskite Solar Cells with a N719@TiO₂ Inorganic-Organic Core-Shell Structured Additive, Solar RRL, 2020, 2000042;
2. Y. Zhong, L. Xu, C. Li, B. Zhang, W. J. Wu, *, Needle coke: A predominant carbon black alternative for printable triple mesoscopic perovskite solar cells, Carbon, 2019, 153, 602-608;
3. L. Xu, C. Li, Y. Zhong, Z. H. Pang, W. J. Wu*, Relaying delivery of excited state electrons for fully printable perovskite solar cells via ultra-thin gradient PCBM/perovskite heterojunction, Solar Energy, 2019, 187, 352-357;
4. W. J. Wu, H. D. Xiang, W. Fan, J. L. Wang, H. F. Wang, X. Hua, Z. H. Wang, Y. T. Long, H. Tian, W. H. Zhu*, Cosensitized Porphyrin System for High-Performance Solar Cells with TOF-SIMS Analysis, ACS Applied Materials & Interfaces, 2017, 9, 16081-16090;
5. H. D. Xiang, W. Fan, J. H. Li, T. Y. Li, N. Robertson, X. R. Song, W. J. Wu*, Z. H. Wang, W. H. Zhu, H. Tian, * High-Performance Porphyrin-Based Dye-Sensitized Solar Cells with Iodine and Cobalt Redox Shuttles, Chemsuschem, 2017, 10, 938-945;
6. Y. Wang, Z. W. Zheng, T. Y. Li, N. Robertson, H. D. Xiang, W. J. Wu, * J. L. Hua, W. H. Zhu, H. Tian, D-A- π -A Motif Quinoxaline-Based Sensitizers with High Molar Extinction Coefficient for Quasi-Solid-State Dye-Sensitized Solar Cells, ACS Applied Materials & Interfaces, 2016, 8, 31016-31024;
7. Y. Wang, Z. W. Zheng, T. Y. Li, N. Robertson, H. D. Xiang, W. J. Wu, * J. L. Hua, W. H. Zhu, H. Tian, D-A- π -A Motif Quinoxaline-Based Sensitizers with High Molar Extinction Coefficient for Quasi-Solid-State Dye-Sensitized Solar Cells, ACS Applied Materials & Interfaces, 2016, 8, 31016-31024;
8. Y. S. Xie#, W. J. Wu#, H. B. Zhu, J. C. Liu, W. W. Zhang, H. Tian, W. H. Zhu*, Unprecedentedly targeted customization of molecular energy levels with auxiliary-groups in organic solar cell sensitizers, Chemical Science, 2016, 7, 544-549