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【Summary】Wei Xia is Assistant Professor of the Eastern Institute of Technology, Ningbo, China. He holds a Ph.D. degree from Peking University and worked as Postdoctoral Associate and Associate Research Fellow in Western University and Southern University of Science and Technology, respectively. His research interests include electrochemical energy storage and conversion, crystal structure, and neutron scattering. He has published over 50 papers in international peer-reviewed journals, including *Chemical Reviews*, *Journal of the American Chemical Society*, *Energy & Environmental Science*, *Angewandte Chemie-International Edition*, *Advanced Materials* and *Nano Letters*, with over 8000 citations and H-index of 32.

## Education

2011-2016: Peking University, Ph.D. (Advanced Materials and Mechanics)
2014: Argonne National Laboratory, Visiting Student
2007-2011: University of Science and Technology Beijing, Bachelor (Material Physics)

## Work Experience

2022.07-Present: Eastern Institute of Technology, Ningbo, Assistant Professor
2022.02-2022.06: Southern University of Science and Technology, Associate Research Fellow
2019.09-2022.02: Western University, Postdoctoral Associate & Visiting Professor
2019.03-2019.09: Southern University of Science and Technology, Associate Research Fellow
2016.07-2019.02: Battery R&D Center of World Top 500 Company, Engineer

## Research Field

Solid-State Batteries, Neutron Scattering, Automated Synthesis and Structural Analysis of Crystalline Materials

## Awards and Honors

2023: World Top 2% Scientists
2021: Shenzhen Overseas High-Caliber Personnel (Level C)
2016: Outstanding PhD thesis of Peking University

## 10 Representative Papers (‡co-first author; *corresponding author)

[1] Pengcheng Yu, Haochang Zhang, Fiaz Hussain, Jing Luo, Wen Tang, Jiuwei Lei, Lei Gao, Denys Butenko, Changhong Wang, Jinlong Zhu, Wen Yin, Hao Zhang, Songbai Han*, Ruqiang Zou*, Wei Chen, Yusheng Zhao, **Wei Xia***, Xueliang Sun*, Lithium metal compatible antifluorite electrolytes for solid-state batteries, ***Journal of the American Chemical Society***, 2024, 10.1021/jacs.4c02170.

[2] Jin-Xiu Chen, Jin-Hao Zhang, Xiao-Zhong Fan, Fang-Fang Wang, Wen Tang, **Wei Xia***, Yusheng Zhao*, Long Kong*, ***Energy & Environmental Science***, 2024, 10.1039/D3EE03809B.
[3] Fiaz Hussain, Pengcheng Yu, Jinlong Zhu, Hui Xia*, Yusheng Zhao*, **Wei Xia***. Theoretical prediction of spinel $Na_2In_xSc_{0.\ 666-x}Cl_4$ and rock-salt $Na_3In_{1-x}Sc_xCl_6$ superionic conductors for all-solid-state sodium-ion batteries. ***Advanced Theory and Simulations***, 2023, 6(1): 2200569.
[4] **Wei Xia**‡, Yang Zhao‡, Feipeng Zhao‡, Keegan Adair, Ruo Zhao, Shuai Li, Ruqiang Zou*, Yusheng Zhao*, Xueliang Sun*, Antiperovskite electrolytes for solid-state batteries, ***Chemical Reviews,*** 2022, 122(3): 3763-3819.
[5] Hao Zhang‡, **Wei Xia**‡, Haoming Shen, Wenhan Guo, Zibin Liang, Kexin Zhang, Yingxiao Wu, Bingjun Zhu, Ruqiang Zou*, Antiperovskite intermetallic nanoparticles for enhanced oxygen reduction, ***Angewandte Chemie International Edition***, 2020, 59(5): 1871-1877.
[6] **Wei Xia**‡, Chong Qu‡, Zibin Liang, Bote Zhao, Shuge Dai, Bin Qiu, Yang Jiao, Qiaobao Zhang, Xinyu Huang, Wenhan Guo, Dai Dang, Ruqiang Zou*, Dingguo Xia*, Qiang Xu*, Meilin Liu*, High-performance energy storage and conversion materials derived from a single metal-organic framework/graphene aerogel composite, ***Nano Letters***, 2017, 17(5): 2788-2795.
[7] Qi-Long Zhu‡, **Wei Xia**‡, Tomoki Akita, Ruqiang Zou*, Qiang Xu*, Metal-organic framework-derived honeycomb-like open porous nanostructures as precious-metal-free catalysts for highly efficient oxygen electroreduction, ***Advanced Materials***, 2016, 28(30), 6391-6398.
[8] **Wei Xia**, Asif Mahmood, Zibin Liang, Ruqiang Zou*, Shaojun Guo*, Earth-abundant nanomaterials for oxygen reduction, ***Angewandte Chemie International Edition***, 2016, 55(8): 2650-2676.
[9] **Wei Xia**‡, Asif Mahmood‡, Ruqiang Zou*, Qiang Xu*, Metal-organic frameworks and their derived nanostructures for electrochemical energy storage and conversion, ***Energy & Environmental Science***, 2015, 8(7): 1837-1866.
[10] **Wei Xia**, Ruqiang Zou*, Li An, Dingguo Xia, Shaojun Guo*, A metal-organic framework route to in situ encapsulation of Co@$Co_3O_4$@C core@bishell nanoparticles into a highly ordered porous carbon matrix for oxygen reduction, ***Energy & Environmental Science***, 2015, 8(2): 568-576.

**Paper List** (‡co-first author; *corresponding author)

[54] Pengcheng Yu, Haochang Zhang, Fiaz Hussain, Jing Luo, Wen Tang, Jiuwei Lei, Lei Gao, Denys Butenko, Changhong Wang, Jinlong Zhu, Wen Yin, Hao Zhang, Songbai Han*, Ruqiang Zou*, Wei Chen, Yusheng Zhao, **Wei Xia***, Xueliang Sun*, Lithium metal compatible antifluorite electrolytes for solid-state batteries, ***Journal of the American Chemical Society***, 2024, 10.1021/jacs.4c02170.
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[51] Ruigang Wang, Zepeng Liu, Lian Xiang*, Yong Sun, **Wei Xia**, Analysis of atomic thermal vibration of CrN based on rietveld refinement method, ***Phys. Status Solidi B***, 2024, 261(3), 2300195.
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[49] Fiaz Hussain, Jinlong Zhu*, Yusheng Zhao, **Wei Xia***, Vacancy mediated fast sodium-conduction in halide sodalites: a theoretical study, ***Materials Today Chemistry***, 2023, 33, 101746.
[48] Jia-Yue Duan, Jin-Xiu Chen, Fang-Fang Wang, Jin-Hao Zhang, Xiao-Zhong Fan, Liping Wang, Yingze Song, **Wei Xia***, Yusheng Zhao*, Long Kong*, Ambiently fostering solid electrolyte interphase for low-temperature lithium metal batteries, ***Journal of Energy Chemistry***, 2023, 87, 473-478.
[47] Wen Tang, **Wei Xia***, Fiaz Hussain, Jinlong Zhu, Songbai Han, Wen Yin, Pengcheng Yu, Jiuwei Lei, Denys S Butenko, Liping Wang, Yusheng Zhao, A dual-halogen electrolyte for protective-layer-free all-solid-state lithium batteries, ***Journal of Power Sources***, 2023, 568, 232992.
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[45] Fiaz Hussain, Hamza Maqbool, Songbai Han, Liping Wang, Jinlong Zhu*, Yusheng Zhao, **Wei Xia***, $Na_2FeS_2$ cathode for sodium-ion batteries: a theoretical study, ***ACS Applied Energy Materials***, 2023, 6(14), 7563-7570.
[44] Fiaz Hussain, Pengcheng Yu, Jinlong Zhu, Hui Xia*, Yusheng Zhao*, **Wei Xia***, Theoretical prediction of spinel $Na_2In_xSc_{0.666-x}Cl_4$ and rock-salt $Na_3In_{1-x}Sc_xCl_6$ superionic conductors for all-solid-state sodium-ion batteries, ***Advanced Theory and Simulations***, 2023, 6(1), 2200569.
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[18] **Wei Xia**, Ruqiang Zou*, Li An, Dingguo Xia, Shaojun Guo*, A metal-organic framework route to in situ encapsulation of Co@$Co_3O_4$@C core@bishell nanoparticles into a highly ordered porous carbon matrix for oxygen reduction, *Energy & Environmental Science*, 2015, 8(2), 568-576.
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