

<u>基本信息</u>	
姓名	王博
职务	校党委常委、副校长，国家高能量物质前沿科学中心主任
职称	教授/博士生导师
学术兼职	军委科技委项目首席科学家，国际 IZA 学会 MOF 常务理事，中关村氢能技术联盟副理事长，中国交通部环境与可持续发展学会理事，中国化学快报、中国化学学报和 Scientific Reports 等杂志编委
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<u>教育背景</u>	
2006.01-2008.01	加州大学洛杉矶分校，化学和生物化学系，化学材料学博士
2004.09-2006.01	密歇根大学，化学系，化学材料学硕士学位
2000.09-2004.07	北京大学化学，与分子工程学院，理学学士学位
<u>工作经历</u>	
2019.11 至今	北京理工大学，教授/校党委常委、副校长
2017.10-2019.10	北京理工大学前沿交叉科学研究院，教授/执行院长
2011.09-2017.10	北京理工大学，化学与化工学院，教授/常务副院长
<u>研究方向</u>	
1.	功能多孔材料，包括金属有机框架（MOF）、共价有机框架（COF）等
2.	储能与燃料电池
3.	污染物/危化物滤除降解
4.	工业气体分离
<u>荣誉奖励</u>	

1.	国家杰出青年科学基金项目（2016）
2.	国家“万人计划”领军人才（2018）
3.	国家创新人才推进计划中青年科技创新领军人才（2016）
4.	第二批国家海外高层次人才引进计划青年项目（2012）
5.	中国化学会青年化学奖（2015）
6.	北京青年五四奖章（2019）

### 承担项目

1.	用于有害物质捕捉检测的金属有机框架薄膜化研究，国家杰出青年科学基金（21625102），2017.01-2021.12，350 万元，主持
2.	可重复使用自清洁 MOF 膜防护材料及应用研究，北京市科技计划（Z201100007520005），2020.02-2020.12，200 万元，主持
3.	面向战剂降解的氨基酸功能化仿酶金属有机框架研究，国家自然科学基金面上项目（21971017），2020.01-2023.12，65 万元，主持
4.	金属有机骨架膜材料制备技术研究，北京市科委重大研究计划（Z181100004418001），2018.01-2019.12，500 万元，主持
5.	基于纳米多孔骨架材料的 XXXX 综合防护研究，探索一代计划，2014.01-2017.12，500 万元，主持
6.	催化活化 C-H 键金属有机骨架的设计构筑及其作用机理，国家自然科学基金面上项目（21471018），2015.01-2018.12，80 万元，主持
7.	基于纳米多孔材料的二氧化碳原位催化转化，国家自然科学基金青年项目（21201018），2013.01-2015.12，30 万元，主持
8.	海外高层次人才引进计划（青年），2012.03-2017.03，300 万元，主持

### 研究成果

王博教授立足新型金属有机框架(MOF)、配位聚合物薄膜材(MOFfilter)，面向重大国家需求，从分子构筑单元的设计、合成出发，提出、发展多种孔材料成膜策略，在污染治理、绿色储能、能源气体生产与储存等领域取得了系列科研成果。现主持国家自然科学基金课题两项、北京市科委防疫物资科研专项一项、国家重点研发计划子课题一项。参与 MOF 材料的工业化量产研究，实现了 MOF 吨级中试，参与 MOF 车用高能量密度氢气、甲烷分离制备与储存技术等工业化应用研究。

已在 Nature、Science、JACS、Angew.等学术期刊上发表 60 余篇论文，

论文 SCI 他引超过 9500 次。已经获批美国授权专利 6 项，获中国授权发明专利 3 项。研究成果受到国内外学者的认可和关注，被国际专业期刊多次评述报道。空气滤膜技术已经与相关企业合作，实现规模化生产。

### 代表性论文

1.	<b>B. Wang</b> , A. P. Côté, H. Furukawa, M. O’Keeffe and O. M. Yaghi* Colossal Cages in Zeolitic Imidazolate Frameworks as Selective Carbon Dioxide Reservoirs, <i>Nature</i> , 2008, 453, 207–211.
2.	X. Ma, Y. Chai, P. Li, <b>B. Wang*</b> , Metal-Organic Framework Films and Their Potential Applications in Environmental Pollution Control, <i>Accounts Chem. Res.</i> 2019, 52, 1461–1470
3.	P. Shao, R. Yao, G. Li, M. Zhang, S. Yuan, X. Wang, Y. Zhu, X. Zhang, L. Zhang, X. Feng* and <b>B. Wang*</b> , Molecular-Sieving Membrane via Partitioning the Channels in Ultrafiltration Membrane by in-situ Polymerization, <i>Angew. Chem. Int. Ed.</i> , 2020, 59, 4401–4405
4.	D. Ma, P. Li, X. Duan, J. Li, P. Shao, Y. Zhang*, Z. Lang, L. Bao, Z. Lin* and <b>B. Wang*</b> , A Hydrolytically Stable V(IV)-Metal-Organic Framework with Photocatalytic Bacteriostatic Activity for Autonomous Indoor Humidity Control, <i>Angew. Chem. Int. Ed.</i> , 2020, 59, 3905–3909
5.	H. Wang, S. Zhao, Y. Liu, R. Yao, X. Wang, Y. Cao, D. Ma, M. Zou, A. Cao, X. Feng* and <b>B. Wang*</b> , Membrane adsorbers with ultrahigh metal-organic framework loading for high flux separations, <i>Nature Commun.</i> , 2019, 10, 4204
6.	P. Li, J. Li, X. Feng, J. Li, Y. Hao, J. Zhang, H. Wang, A. Yin, J. Zhou, X. Ma* and <b>B. Wang*</b> Metal-organic frameworks with photocatalytic bactericidal activity for integrated air cleaning, <i>Nature Commun.</i> , 2019, 10, 2177.
7.	L. Ma, Y. Liu, Y. Liu, S. Jiang, P. Li, Y. Hao, P. Shao, A. Yin, X. Feng* and <b>B. Wang*</b> , Ferrocene Linkage Facilitated Charge Separation in Conjugated Microporous Polymers, <i>Angew. Chem. Int. Ed.</i> , 2019, 58, 4221–4226.
8.	Z. Guo, Y. Zhang, Y. Dong, J. Li, S. Li, P. Shao, X. Feng* and <b>B. Wang*</b> , Fast Ion Transport Pathway Provided by Polyethylene Glycol Confined in Covalent Organic Frameworks, <i>J. Am. Chem. Soc.</i> , 2019, 141, 1923–1927
9.	S. Li, Y. Liu, J. Zhou*, S. Hong, Y. Dong, J. Wang, X. Gao, Y. Du, P. Qi, Y. Han and <b>B. Wang*</b> , Mono-Dispersed MnO Nanoparticles in Graphene-Interconnected N-Doped 3D Carbon Framework as Highly efficient Gas Cathode in Li-CO <sub>2</sub> Batteries, <i>Energy Environ. Sci.</i> , 2019, 12, 1046–1054
10.	P. Shao, J. Li, F. Chen, L. Ma, Q. Li, M. Zhang, J. Zhou, A. Yin, X. Feng* and <b>B. Wang*</b> , Flexible Films of Covalent Organic Framework with Ultralow Dielectric Constants under High Humidity, <i>Angew. Chem. Int. Ed.</i> , 2018, 57, 16501–16505.
11.	P. Shao, J. Li, F. Chen, L. Ma, Q. Li, M. Zhang, J. Zhou, A. Yin, X. Feng* and <b>B. Wang*</b> , Flexible Films of Covalent Organic Framework with

	Ultralow Dielectric Constants under High Humidity, <i>Angew. Chem. Int. Ed.</i> , 2018, 57, 16501–16505.
12.	S. Li, Y. Dong, J. Zhou*, Y. Liu, J. Wang, X. Gao, Y. Han, P. Qi and <b>B. Wang*</b> , Carbon Dioxide in the Cage: Manganese Metal-Organic Frameworks for High Performance CO <sub>2</sub> Electrodes in Li-CO <sub>2</sub> Batteries, <i>Energy Environ. Sci.</i> , 2018, 11, 1318–1325
13.	Y. Chen, F. Chen, S. Zhang, Y. Cai, S. Cao, S. Li, W. Zhao, Sh. Yuan, X. Feng, A. Cao, X. Ma* and <b>B. Wang*</b> Facile Fabrication of Multifunctional Metal-Organic Framework Hollow Tubes to Trap Pollutants, <i>J. Am. Chem. Soc.</i> , 2017, 139, 16482–16485.
14.	Y. Chen, S. Zhang, S. Cao, S. Li, F. Chen, S. Yuan, J. Zhou, X. Feng, X. Ma and <b>B. Wang*</b> Roll-to-Roll Production of Metal-Organic Framework Coatings for Particulate Matter Removal, <i>Adv. Mater.</i> , 2017, 29, 1606221. <b>Reported by Nature, Research Highlights</b>
15.	S. Wang, Q. Wang, P. Shao, Y. Han, X. Gao, L. Ma, S. Yuan, X. Ma, J. Zhou, X. Feng* and <b>B. Wang*</b> Exfoliation of Covalent Organic Frameworks into Few-Layer Redox-Active Nanosheets as Cathode Materials for Lithium-Ion Batteries, <i>J. Am. Chem. Soc.</i> , 2017, 139, 4258–4261.
16.	T. Kitao, Y. Zhang, S. Kitagawa, <b>B. Wang*</b> and T. Uemura* Hybridization of MOFs and Polymers, <i>Chem. Soc. Rev.</i> , 2017, 46, 3108-3133.
17.	J. Zhou, <b>B. Wang*</b> Emerging Crystalline Porous Materials as a Multifunctional Platform for Electrochemical Energy Storage, <i>Chem. Soc. Rev.</i> , 2017, 46, 6927–6945.
18.	S. Wang, Q. Wang, X. Feng,* <b>B. Wang*</b> and L. Yang, Explosives in the Cage: Metal-Organic Framework for Energetic Materials Sensing and Desensitization, <i>Adv. Mater.</i> , 2017, 29, 1701898.
19.	Y. Chen, X. Huang, S. Zhang, S. Li, S. Cao, X. Pei, J. Zhou, X. Feng and <b>B. Wang*</b> Shaping of Metal-Organic Frameworks: from Fluid to Shaped Bodies and Robust Foams, <i>J. Am. Chem. Soc.</i> , 2016, 138, 10810–10813.
20.	N. Ding, H. Li, X. Feng,* Q. Wang, S. Wang, L. Ma, J. Zhou and <b>B. Wang*</b> Partitioning MOF-5 into Confined and Hydrophobic Compartments for Carbon Capture under Humid Conditions, <i>J. Am. Chem. Soc.</i> , 2016, 138, 10100–10103.
21.	Y. Zhang, S. Yuan, X. Feng, H. Li, J. Zhou and <b>B. Wang*</b> Preparation of Nanofibrous Metal-Organic Framework Filters for Efficient Air Pollution Control, <i>J. Am. Chem. Soc.</i> , 2016, 138, 5785–5788. <b>(Highlighted by Emerging Applications of Metal-Organic Frameworks &amp; Covalent Organic Frameworks, ACS Virtue Issue)</b>
22.	Y. Chen, S. Li, X. Pei, J. Zhou, X. Feng, S. Zhang, Y. Cheng, H. Li, R. Han and <b>B. Wang*</b> A Solvent-Free Hot-Pressing Method for Preparing Metal-Organic Framework Coatings, <i>Angew. Chem. Int. Ed.</i> , 2016, 55, 3419 – 3423.

23.	Q. Wang, X. Feng, S. Wang, N. Song, Y. Chen, W. Tong, Y. Han, L. Yang* and <b>B. Wang*</b> Metal-Organic Framework Templated Synthesis of Copper Azide as the Primary Explosive with Low Electrostatic Sensitivity and Excellent Initiation Ability, <i>Adv. Mater.</i> , 2016, 28, 5837–5843.
24.	Y. Zhang, X. Feng,* H. Li, Y. Chen, J. Zhao, S. Wang, L. Wang and <b>B. Wang*</b> Photoinduced Postsynthetic Polymerization of a Metal–Organic Framework toward a Flexible Stand-Alone Membrane, <i>Angew. Chem. Int. Ed.</i> 2015, 54, 4259–4263. ( <b>‘hot paper’ and ‘cover story’; Reported by Nature Material, Research Highlights</b> )
25.	L. Wang, X. Feng, L. Ren, Q. Piao, J. Zhong, Y. Wang and <b>B. Wang*</b> Flexible Solid-State Supercapacitor Based on a Metal–Organic Framework Interwoven by Electrochemically-Deposited PANI, <i>J. Am. Chem. Soc.</i> , 2015, 137, 4920–4923.
26.	Y. Guo, X. Feng,* T. Han, S. Wang, Z. Lin, Y. Dong and <b>B. Wang*</b> Tuning the Luminescence of Metal-Organic Frameworks for Detection of Energetic Heterocyclic Compounds, <i>J. Am. Chem. Soc.</i> , 2014, 136, 15485–15488. ( <b>Highlighted by ACS ‘Noteworthy Chemistry’</b> )
27.	L. Tan, H. Li, Y. Qiu, D. Chen, X. Wang, R. Pan, Y. Wang, S. Zhang, <b>B. Wang*</b> and Y. Yang* Stimuli-Responsive Metal-Organic Frameworks Gated by Pillar[5]arene Supramolecular Switches, <i>Chem. Sci.</i> , 2015, 6, 1640–1644. ( <b>Cover Story</b> )
28.	Y. Guo, S. Gu, X. Feng,* J. Wang, H. Li, T. Han, Y. Dong, T. D. James, X. Jiang and <b>B. Wang*</b> 3D Cross-Correlative Matrix Temperature Detection and Non-Invasive Thermal Mapping based on a Molecular Probe, <i>Chem. Sci.</i> , 2014, 5, 4388–4393.
29.	L. Tan, H. Li, Y. Tao, S. Zhang,* <b>B. Wang*</b> and Y. Yang* Pillar[5]arene-Based Supramolecular Organic Frameworks for Highly Selective CO <sub>2</sub> -Capture at Ambient Conditions, <i>Adv. Mater.</i> 2014, 26, 7027–7031.
30.	J. Zhou, R. Li, X. Fan, Y. Chen, R. Han, W. Li, J. Zheng, <b>B. Wang*</b> and X. Li* Rational Design of a Metal-Organic Framework Host for Sulfur Storage in Fast, Long-Cycle Li-S Batteries, <i>Energ. Environ. Sci.</i> , 2014, 7, 2715–2724.