基本简历

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个人简介

吴华，教授，博士生导师，南京农业大学理学院教师，主要从事功能配合物材料研究。1993 年毕业于哈尔滨师范大学化学化工学院，2006 年和 2011 年分别获得东北师范大学获硕士和博士学位。2012 年 8 月入职南京农业大学理学院工作，2016 年荣获江苏省“青蓝工程”中青年学术带头人。其主要研究工作是致力于具有超级电容器、锂电池性能及具有光学性质、生物学活性、磁学及优异催化性能的新型有机-无机杂化材料的设计合成与性质研究。主要研究方向有：（1）基于多金属氧酸的有机-无机杂化材料的设计与合成及在电池方向应用；（2）微米及纳米孔金属-有机晶体材料的合成及在锂电、环境污染物降解去除；（3）基于多金属氧盐的农药分子设计合成与抗菌活性研究。主持承担了国家自然科学基金面上项目、江苏自然科学基金面上项目、中国博士后基金项目、中央高校基本科研业务经费、江苏省博士后基金、国家配位化学重点实验室开放课题等多项科研项目。近年来，在 ***J. Am. Chem. Soc.***、***ACS Appl. Mater. Interfaces.*** 、***Chem. Commun.***, ***Dalton Trans.***, ***Cryst. Growth Des.***, ***Journal of Power Sources***.、***CrystEngComm*** 等国际期刊上发表论文多篇。

科研项目

1. 主持国家自然科学基金面上项目 1 项
2. 主持江苏省自然科学基金面上项目 1 项
3. 主持中央高校基本科研业务经费 1 项
4. 主持江苏省博士后科学基金 1 项
5. 主持中国博士后科学基金 1 项
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7. 主持南京大学配位化学重点实验室开放基金 1 项
8. 主持黑龙江省教育厅课题 1 项（11535035 ）

所获奖项

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教学信息

主要从事无机化学、无机及分析化学实验、研究生讨论班、学科导论等课程。

课题组成员信息

汪快兵：副教授，博士研究生，毕业于南京大学。主要从事微/纳米配合物粒子、配合物单晶材料（MOFs）的可控制备与生物性能研究及其在超级电容器、锂离子电池、电催化方面的应用研究。主持江苏省青年基金等项目，论文主要发表在 ACS Applied Materials & Interfaces，Small，Journal of Power Sources，Chemsitry-A European Journal 等期刊。

毛菲菲：讲师，博士研究生，毕业于中国科学院福建物质结构研究所物理化学专业，主要从事非线性光学晶体材料方面研究。论文主要发表在 Angew. Chem., Int, Ed.、Chem. Mater.、Inorg. Chem.等。

发表文章

[1] Li Qingqing, Liu Jiadi, Ren Zhujuan, Wang Zikai, Mao Feifei, **Wu Hua***, Zhou Rong, Bu Yuanqing*, Catalytic degradation of antibiotic by Co nanoparticles encapsulated in nitrogen-doped nanocarbon derived from Co-MOF for promoted peroxymonosulfate activation. ***Chemical Engineering Journal***, 2022, 429, 132269.

[2] Wang Kuaibing, Wang Saier, Liu Jiadi, Guo Yuxuan, Mao Feifei, **Wu Hua***, Zhang Qichun* Fe-Based Coordination Polymers as Battery-Type Electrodes in Semi-Solid-State Battery-Supercapacitor Hybrid Devices, ***ACS Applied Materials & Interfaces***, 2021, 13, 15315-15323.

[3] Wang Zikai, Bi Rong, Liu Jiadi, Wang Kuaibing, Mao Feifei, **Wu Hua***, Bu Yuanqing, Song Ninghui, Polyoxometalate-based Cu/Zn-MOFs with diverse stereo dimensions as anode materials in lithium ion batteries. ***Chemical Engineering Journal***, 2021, 404, 127117.

[4] Wang Saier, Wang Shuaishuai, Guo Xu, Wang Zikai, Mao Feifei, Su Lianghu, **Wu Hua*,** Wang Kuaibing*, Zhang, Qichun*, An asymmetric supercapacitor with an interpenetrating crystalline Fe-MOF as the positive electrode and its congenetic derivative as the negative electrode. ***Inorganic Chemistry Frontiers***, 2021, 22, 4878-4886.

[5] Liu Jiadi, Li Qingqing, **Mao Feifei***, Wang Kuaibing, **Wu Hua***, 2D MOFs-based Materials for the Application of Water Pollutants Removing: Fundamentals and Prospects. ***Chemistry-An Asian Journal***, 2021, 16, 3585-3598.

[6] Wang Kuaibing, Li Qingqing, Ren Zhujuan, Li Chao, Chu Yang, Wang Zikai, Zhang Mingdao，**Wu Hua***，2D Metal-Organic Frameworks (MOFs) for High-Performance BatCap Hybrid Devices. ***Small***, 2020, 2001987.

[7] Wang Kuaibing, Lv Bo, Wang Zikai, **Wu Hua***, Xu Jiangyan, Zhang Qichun*, Two-fold interpenetrated Mn-based metal-organic frameworks (MOFs) as battery-type electrode materials for charge storage, ***Dalton Transactions***, 2020, 49, 411-417.

[8] Wang Kuaibing, Bi Rong, Huang Menglu, Lv Bo, Wang Huijian, Li Chao, **Wu Hua***, Zhang Qichun*. Porous Cobalt Metal-Organic Frameworks as Active Elements in Battery-Supercapacitor Hybrid Devices. ***Inorganic Chemistry***, 2020, 59, 6808-6814.

[9] Liu Jiadi, Wang Zikai, Bi Rong, Mao Feifei, Wang Kuaibing, **Wu Hua***, Wang Xin, A polythreaded Mn-II-MOF and its super-performances for dye adsorption and supercapacitors, ***Inorganic Chemistry Frontiers***, 2020, 7, 718-730.

[10] Mao Feifei, Liu Jiadi, Hu, Hu Jinyu, **Wu Hua***, From $Ag_2Zr(IO_3)_6$ to $LaZr(IO_3)_5F_2$: A Case of Constructing Wide-band-gap Birefringent Materials through Chemical Cosubstitution. ***Chemistry-An Asian Journal***, 2020, 15, 3487-3493.

[11] Mao Fei-Fei, Hu Jin-Yu, Li Bing-Xuan, **Wu Hua***, $Bi_4O(I_3O_{10})(IO_3)_3(SeO_4)$: trimeric condensation of IO_4^{3-} monomers into the $I_3O_{10}^{5-}$ polymeric anion observed in a three-component mixed-anion NLO material. ***Dalton Transactions***, 2020, 49, 15597-15601.

[12] Wang Saier, Bi Rong, Liu Jiadi, Shi Ying, Wang Kuaibing, Mao Feifei, **Wu Hua***, A self-penetrated three-dimensional zinc(II) coordination framework based on 4,4 ',4 "-(1,3,5-triazine-2,4,6-triyl)tribenzoic acid and 1,3-bis-[(imidazol-1-yl)methyl]benzene ligands: synthesis, structure and properties. ***Acta Crystallographica Section C-Structural Chemistry,*** 2020, 76, 10.

[13] Wang Zikai, Chen Jiaqi, Bi Rong, Dou Wen, Wang Kuaibing, Mao Feifei, **Wu Hua***, Wang Shuaishuai. Supercapacitor and oxygen evolution reaction performances based on morphology-dependent Co-MOFs. ***Journal of Solid State Chemistry,*** 2020, 283, 121128.

[14] Wang, K.; Wang, Z.; Wang, S. Yang, C. Xi, R. Zhang, X. Wu H.* Layered Cu^{I}-MOFs containing $[Mo_8O_{26}]^{4-}$ clusters as supercapacitor electrode materials. ***Chemical Engineering Journal.*** 2019, 367, 239–248.

[15] Zhang Xiu-Du, Zhao Yue, Chen Kai, Guo Jin-Han, Wang Peng, **Wu Hua***, Sun Wei-Yin*, Cucurbit[6]uril-based supramolecular assemblies incorporating metal complexes with multiaromatic ligands as structure-directing agent for detection of aromatic amines and nitroaromatic compounds. ***Sensors and Actuators B-Chemical.*** 2019, 282, 844-853.

[15] Zhang Xiu-Du, Zhao Yue, Chen Kai, Wang Peng, Kang Yan-Shang, **Wu Hua***, **Sun Wei-Yin***, Cucurbit[6]uril-based multifunctional supramolecular assemblies: synthesis, removal of Ba(II) and fluorescence sensing of Fe(III). ***Dalton Transactions***, 2018, 47, 3958-3964.

[16] Wang, K.; Cao, X.; Wang, S.; Zhao, W.; Xu, J.; Wang, Z.; **Wu, H. *** Interpenetrated and polythreaded Co^{II}-organic frameworks as a supercapacitor electrode material with ultrahigh capacity and excellent energy delivery efficiency. ***ACS Appl. Mater. Interfaces.*** **2018**, 10, 9104−9115.

[17] Wang, K.; Wang, Z.; Wang, X.; Zhou, X.; Tao, Y.; **Wu, H.*** Flexible long-chain-linker constructed Ni-based metal-organic frameworks with 1D helical channel and their pseudo-capacitor behavior studies. ***Journal of Power Sources***., **2018**, *377*: 44–51.

[18] Wang, K.; Wang, X.; Zhang, D.; Wang, H.; Wang, Z.; Zhao, M.; Xi, R. Wu H.* Interpenetrated nano-MOFs for ultrahigh-performance supercapacitors and excellent dye adsorption performance. ***CrystEngComm***, 2018, 20 , 6940–6949.

[19] Zhang, X.; Xi, R.; Yin, S.; Cao, X.; Zhang, Y.; Lin, L.; Chen, R.; **Wu, H.*** Three inorganic-organic hybrid complexes based on isopolymolybdate and derivatives of 1H-4-nitroimidazole. ***Journal of Solid State Chemistry.***, **2018**, *258*: 737–743.

[20] Shi, C.; Wang, Z.; Chen, Y.; **Wu, H.*** Structural diversity of four coordination polymers based on 5-nitro-1,2,3-benzenetricarboxylic acid (H_3nbta): Solvothermal syntheses, structural characterizations and properties. ***Journal of Solid State Chemistry*., 2017**, *253*: 35-42.

[21] Tao, Y.; Zhou, X.; Wang, Z.; Shi, Y.; Guo, Y.; **Wu, H.*** Two Cd^{II}-containing coordination polymers based on trinuclear and dodecanuclear clusters. ***Inorganic Chemistry Communications***., **2016**, *70*, 90–94.

[22] **Wu, H.***; Shi, C.; Zhao, Y.; Jiang, Y.; Tao, Y. Three coordination polymers based on different carboxylates, metals and a tri(4-imidazolylphenyl)amine ligand. ***Journal of Molecular Structure***., **2015,** *1086*, 276– 281.

[23] **Wu, H.***; Lu X; Yang, C.-L.; Dong, C.-X.; Wu, M.-S. Diverse topologies of seven d^{10} coordination polymers constructed from a long ligand and different carboxylates. ***CrystEngComm***., **2014**, 992 – 1000.

[24] **Wu, H.*** Lu, X.-L.; Lü, B.; Dong, C.-X.; Wu, M.-S. A novel three-dimensional Ag^{I} coordination polymer based on mixed naphthalene-1,5-disulfonate and aminoacetate ligands. ***Acta Cryst. C69***. **2013.**

[25] **Wu, H.;** Yang, J.* Liu, Y.-Y.; Ma, J.-F.* pH-Controlled assembly of two unusual entangled motifs based on a tridentate ligand and octamolybdate clusters: 1D + 1D → 3D poly-pseudorotaxane and 2D → 2D → 3D polycatenation. ***Crystal Growth & Design.***, **2012**, *12*, 2272–2276.

[26] **Wu, H.;** Yang, J.* Ma, J.-F.* Liu, Y.-Y.; Xie, T.-F. Syntheses, structures and photoelectronic properties of a series of tri- and tetra-nuclear metal complexes based on a ligand. ***Polyhedron***, **2012**, *31*, 136–142.

[27] **Wu, H.;** Yang, J.* Su, Z.-M.; Stuart, R. B.; Ma, J.-F.* An Exceptional 54-fold interpenetrated coordination polymer with 10^3-srs network topology. ***J. Am. Chem. Soc.***, **2011**, *133*, 11406–11409.

[28] **Wu, H.;** Liu, H.-Y.; Liu, Y.-Y.; Yan, J.* Liu, B.; Ma, J.-F.* An unprecedented 2D - 3D metal–organic polyrotaxane framework constructed from cadmium and a flexible star-like ligand. ***Chem. Commun***., **2011**, 47, 1818–1820.

[29] **Wu, H.;** Liu, H.-Y.; Yang, J.* Liu, B.; Ma, J.-F.*，Liu, Y.-Y.; Liu, Y.-Y. Series of coordination polymers based on different carboxylates and a tri(4-imidazolylphenyl) amine ligand: entangled structures and photoluminescence. ***Crystal Growth & Design***, **2011**, *11*, 2317–2324.

[30] **Wu, H.; Liu, H.-Y.; Liu, B.; Yang, J.* Liu, Y.-Y.; Ma, J.-F.* Bai, H.-Y.** Two unprecedented 3D metal–organic polyrotaxane frameworks based on a new flexible tri(imidazole) ligand.

CrystEngComm, **2011**, *13*, 3402–3407.

[31] **Wu, H.;** Liu, B.; Yang, J.* Liu, H.-Y.; Ma, J.-F.* A new type of entangled motif: from 2D polyrotaxane layers to a 3D polythreaded framework. ***CrystEngComm***, **2011**, *13*, 3661–3664.

[32] **Wu, H.;** Ma J.-F.* Liu, Y.-Y.; Yang, J.* Liu, H.-Y. Diverse topologies of six coordination polymers constructed from a tris(4-imidazo lylphenyl)amine ligand and different carboxylates. ***CrystEngComm***, **2011**, *13*, 7121-7128.

[33] **Wu, H.;** Dong, X.-W.; Liu, H.-Y.; Ma, J.-F.* Liu, Y.-Y.; Liu, Y.-Y.; Yang, J.* Construction of a series of inorganic–organic hybrid coordination polymers based on hexamethylenetetramine and sulfonate ligands. ***Inorganica Chimica Acta,*** **2011**, 373, 19–26.

[34] Liu, H.-Y.; **Wu, H.;** Yang, J.* Liu, Y.-Y.; Liu, B.; Liu, Y.-Y.; Ma, J.-F.* pH-Dependent assembly of 1D to 3D octamolybdate hybrid materials based on a new flexible bis-[(pyridyl)-benzimidazole] ligand. ***Crystal Growth & Design*****, 2011,** *11*, 2920–2927.

[35] Liu, H.-Y.; **Wu, H.;** Yang, J.* Liu, Y.-Y.; Ma, J.-F.* Bai, H.-Y. Solvothermal assembly of a series of organic-inorganic hybrid materials constructed from keggin polyoxometalate clusters and copper(I)-organic frameworks. ***Crystal Growth & Design,*** **2011,** *11*, 1786-1797.

[36] **Wu, H.;** Dong, X.-W.; Ma, J.-F.* Liu, H.-Y. Yang, J.* Bai, H.-Y. Influence of anionic sulfonate-containing and nitrogen-containing mixed-ligands on the structures of silver coordination polymers. ***Dalton Trans***., **2009**, 3162–3174.

[37] **Wu, H.;** Dong, X.-W.; Liu, H.-Y. Ma, J.-F.* Li, S.-L. Yang, J. Liu, Y.-Y. Su, Z.-M. Influence of anionic sulfonate-containing co-ligands on the solid structures of silver complexes supported by 4,4¢-bipyridine bridges. ***Dalton Trans.***, 2008, 5331–5341.