基本信息

姓　　名	**赵伟**	
职　　称	预聘副教授/特别研究员（博导）	
学术兼职	无	
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教育背景

2011.09-2016.07	中国科学院大学化学研究所，有机化学专业，理学博士
2007.09-2011.07	东北林业大学，化学专业，化学学士

工作履历

2020.07-至今	北京理工大学化学与化工学院，预聘副教授，博士生导师
2016.11-2020.01	美国印第安纳大学博士后，合作导师 Prof. Amar Flood

研究方向

1	阴离子配位化学
2	超分子体系的精确构筑，包括高级自组装与超分子聚合物的制备
3	新型多功能超分子自适应材料的设计与制备

荣誉奖励

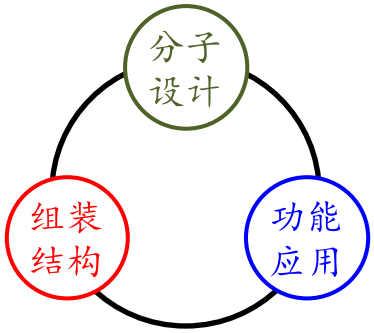
1	Student Travel Award, RE^3 Workshop，美国路易维尔（2017）
2	Outstanding Poster Award, The 5th Notre Dame-Purdue Symposium on Soft Matter & Polymers，美国圣母大学（2018）
3	Best Oral Presentation Award, 6th Annual Symposium on Materials Research, 美国印第安纳大学（2019）

承担项目

1	国家自然科学基金青年科学基金项目，磷酸根离子选择性配位脲基分子笼的设计与合成（22101024），2022.1–2024.12，主持

2	北京理工大学青年教师学术启动计划，2020.7–2023.12，主持
3	美国自然科学基金 SBIR 附属项目，Birght and Lightfast Fluorescent Pigments for Paints, Polymers, and Inks，6.8 万美元，主持，已结题

研究兴趣

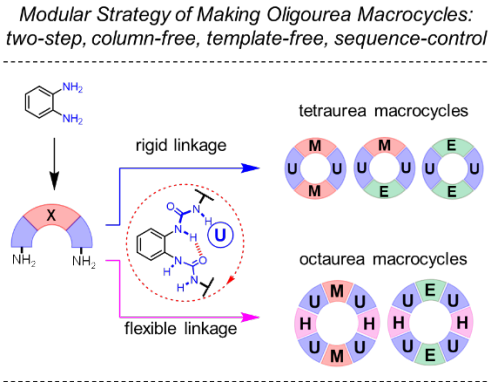


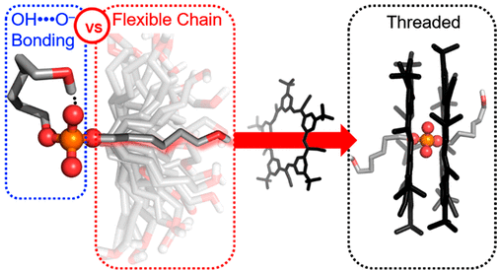
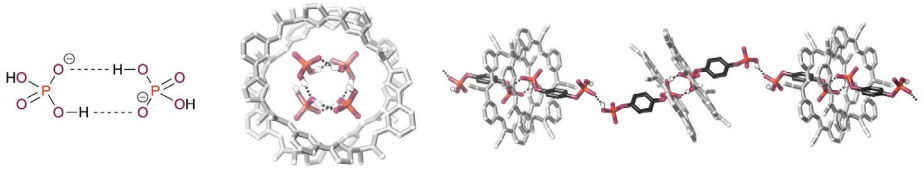
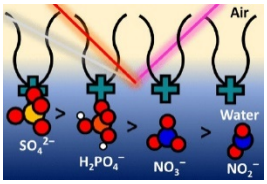
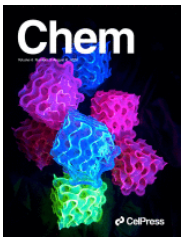
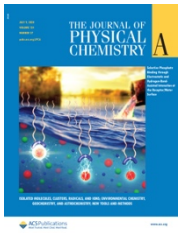
在国内外学术刊物上发表学术论文 20 余篇，包括 *Chem. Soc. Rev., Science, Chem, J. Am. Chem. Soc., Angew. Chem. Int. Ed.*等。主要研究方向侧重于阴离子配位化学及应用。旨在以阴离子化学为核心，探索“分子设计”、“组装结构”和“材料性质”三者之间的相互关系，通过在分子层面上的微观调控来实现对合成（组装）材料宏观性质的精确调控。

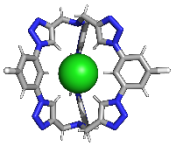
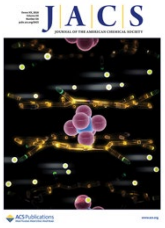
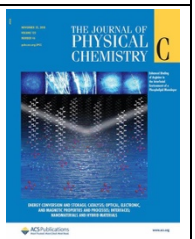
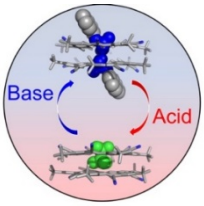
每年招收硕博研究生 1-2 名，欢迎对超分子化学有兴趣、热爱科研、喜欢交流的同学加入我们！

发表论文

22	Zhao, G.; Chen, S.-Q.; **Zhao, W.***; Li, B.; Zhang, W.; Zheng, B., Yang, X.-J.; Wu, B.* Modular Synthesis of Tetraurea and Octaurea Macrocycles Encoded with Specific Monomer Sequences. *CCS Chem*. **2021**
21	Zhu, D.; Jiang, S.; **Zhao, W.**; Yan, X.; Xie, W.; Xiong, Y.; Wang, S.; Cai, W.; Gao, Y.; Ren A. A novel ratiometric fluorescent probe for sensitive and selective detection of Cu^{2+} based on Boranil derivatives. *Inorganica Chimica Acta* **2021**, *524*, 120438.
20	Fadler, R. E.; Al Ouahabi, A.; Qiao, B.; Carta, V.; König, N. F.; Gao, X.; **Zhao, W.**; Zhang, Y.; Lutz, J.-F.; Flood, A. H., Chain Entropy Beats Hydrogen Bonds to Unfold and Thread Dialcohol Phosphates inside Cyanostar Macrocycles to form [3]Pseudorotaxanes. *J. Org. Chem.* **2021**, *86,* 4532–4546.



	
19	**Zhao, W.**; Flood, A. H.; White, N. G. Recognition and applications of anion–anion dimers based on *anti*-electrostatic hydrogen bonds (AEHBs). *Chem. Soc. Rev.* **2020**, 49, 7893–7906.  Anti-Electrostatic hydrogen bonds: Understanding, recognition and applications
18	Neal, J. F.; Saha, A.; Zerkle, M.; **Zhao, W.**; Rogers, M.; Flood, A. H.; Allen, H. C., Molecular recognition and hydration energy mismatch combine to inform ion binding selectivity at aqueous interfaces, *J. Phys. Chem. A* **2020**, *124*, 10171–10180. 
17	Benson, C. R.; Kacenauskaite, L.; VanDenburgh, K. L.; **Zhao, W.**; Qiao, B.; Sadhukhan, T.; Pink, M. Chen, J.; Borgi, S.; Chen, C. H.; Davis, B. J.; Simon, Y. C.; Raghavachari, K.; Laursen, B. W.; Flood, A. H. Plug-and-play Optical Materials from Fluorescent Dyes and Macrocycles. *Chem* **2020**, *6*, 1978–1997. (cover) 
16	Grooms, A. J.; Neal, J. F.; Ng, K. C.; **Zhao, W.**; Flood, A. H.; Allen, H. C. Thermodynamic Signatures of the Origin of Anti-Hofmeister Selectivity for Phosphate at Aqueous Interfaces. *J. Phys. Chem. A* **2020**, *124*, 5621–5630. (cover) 
15	**Zhao, W.**; Tropp, J.; Qiao, B.; Pink, M.; Azoulay, J. D.; Flood, A. H. Tunable Adhesion from Stoichiometry-controlled and Sequence-defined Supramolecular Polymers Emerges Hierarchically from Cyanostar-stabilized Anion-anion Linkages. *J. Am. Chem. Soc.* **2020**, *142*, 2579-2591. Highlighted in *JACS* spotlights: Supramolecular polymers stick it with stoichiometry, *J. Am. Chem. Soc.* **2020**, *142*, 3275.

14	Liu, Y.; **Zhao, W.**; Chen, C. H.; Flood, A. H. Chloride Capture using a C–H Hydrogen-bonding Cage. *Science*, **2019**, *365*, 159–161. 
13	**Zhao, W.**; Qiao, B.; Tropp, J.; Pink, M.; Azoulay, J. D.; Flood, A. H. Linear Supramolecular Polymers Driven by Anion-Anion Dimerization of Difunctional Phosphonate Monomers inside Cyanostar Macrocycles. *J. Am. Chem. Soc.* **2019**, *141*, 4980–4989. (cover) 
12	Neal, J. F.; **Zhao, W.**; Grooms, A. J.; Smeltzer, M. A.; Shook, B. M.; Flood, A. H.; Allen, H. C. Interfacial Supramolecular Structures of Amphiphilic Receptors Drive Phosphate Recognition. *J. Am. Chem. Soc.* **2019**, *141*, 7876–7886.
11	Liu Y.; Parks, F. C.; **Zhao, W.**; Flood, A. H. Sequence-controlled Stimuli-Responsive Single-Double Helix Conversion between 1:1 and 2:2 Chloride-Foldamer Complexes. *J. Am. Chem. Soc,* **2018,** *140*, 15477–15486.
10	Qiao, B.; Leverick, G.; **Zhao, W.**; Johnson, J.; Flood, A. H.; Shao-Horn, Y. Supramolecular Regulation of Anions Enhances Conductivity and Transference Number of Lithium in Liquid Electrolytes. *J. Am. Chem. Soc,* **2018,** *140*, 10932–10936. (cover) 
9	Neal, K.; **Zhao, W.**; Grooms, A.; Flood, A. H.; Allen, H. C. Arginine-phosphate Recognition Enhanced in Phospholipid Monolayers at Aqueous Interfaces. *J. Phys. Chem. C* **2018**, *122*, 26362–26371. (cover) 
8	**Zhao, W.**[†]; Qiao, B.[†]; Chen, C. H.; Flood, A. H. High-Fidelity Multistate Switching with Anion-Anion and Acid-Anion Dimers of Organophosphates in Cyanostar Complexes. *Angew. Chem. Int. Ed.* **2017**, *56*, 13083–13087. 
7	Yang, L.; **Zhao, W.**; Che, Y.; Wang, Y.; Jiang, H. Influence of Terminal Substituents on the Halide Anion Binding of Foldamer-based Receptors. *Chin. Chem. Lett.* **2017**, *28*, 1659–1662.
6	**Zhao, W.**; Huang, F.; Wang, Y.; Li, Q.; Shang, J.; Che, Y.; Jiang, H. Aryl-triazole Foldamers with Ethynyl Spacers as Effective Receptors for Halides and Oxyanions. *Tetrahedron Lett.* **2016**, *57*, 1691–1694.
5	Huang, F.; **Zhao, W.**; Che, Y.; Jiang, H. Review and Prospect of Molecular Machines: Introduction to Nobel Prize in Chemistry 2016. *Chin. J. Chem.*

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4	Wang, Y.; **Zhao, W.**; Bie, F.; Wu, L.; Li, X.; Jiang, H. Ruthenium(II) Complexes of Aryl-triazole Foldamers as Receptors for Anions. *Chem. Eur. J.* **2016**, *22*, 5233–5242.
3	Shang, J.†; **Zhao, W.**†; Li, X.; Wang, Y.; Jiang, H. Aryl-triazole Foldamers Incorporating Pyridinium Motif for Halide Anions Binding in Aqueous Media. *Chem. Commun.* **2016**, *52*, 4505–4508.
2	**Zhao, W.**; Wang, Y.; Shang, J.; Che, Y.; Jiang, H. Acid/Base-Mediated Uptake and Release of Halide Anions with a Preorganized Aryl-triazole Foldamer. *Chem. Eur. J.* **2015**, *21*, 7731–7735.
1	Shang, J.; Si, W.; **Zhao, W.**; Che, Y.; Hou, J.; Jiang, H. Preorganized Aryl-triazole Foldamers as Effective Transmembrane Transporters for Chloride Anion. *Org. Lett.* **2014**, *16*, 4008−4011.