个人简历

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教育工作经历

10/2015 至今: 美国犹他大学化学系博士后，合作导师： Prof. Peter. J. Stang. (*JACS* 主编).

05/2015 – 10/2015: 浙江大学化工系博士后，合作导师： 谢涛教授 (国家千人).

09/2011 – 03/2015: 浙江大学化学系博士，导师：黄飞鹤教授(杰青).

09/2008 – 06/2011: 扬州大学化学化工学院硕士，导师：颜朝国教授.

09/2004 – 06/2008: 扬州大学化学化工学院化学教育专业学士.

主要荣誉

2015，浙江大学优秀毕业生
2014, 博士生国家奖学金，浙江大学优秀研究生，三好研究生；浙江省化学会创新奖
2013, 博士生国家奖学金，浙江大学优秀研究生，三好研究生
2013，全国高分子化学年会优秀墙报奖
2012，全国超分子暨大环会议优秀墙报奖

发表文章 (*H*-index 20): 迄今共发表SCI 论文43篇，其中IF > 6的论文27篇。以第一作者和通讯作者论文24篇，其中包括化学类一区15篇（1篇*JACS*，3篇*Chemical Science*，10 篇*Chem. Commun*，1篇*Org. Lett.*），总引用超过1659次，单篇被引用最高239次。

一作及通讯论文：

1. **Yao, Y.**; Xue, M.; Chen, J.; Zhang, M.; Huang, F.* "An Amphiphilic Pillar[5]arene: Synthesis, Controllable Self-Assembly in Water, and Application in Calcein Release and TNT Adsorption" *J. Am. Chem. Soc.* **2012**, *134*, 15712−15715. (一区；影响因子：13.3；引用 239 次)
2. **Yao, Y.**; Xue, M.; Zhang, Z.; Zhang, M.; Wang, Y.; Huang, F.* "Gold nanoparticles stabilized by an amphiphilic pillar[5]arene: preparation, self-assembly into composite microtubes in water and application in green catalysis" *Chem. Sci.* **2013**, *4*, 3667–3672. (一区；影响因子：9.144；引用79次)
3. **Yao, Y.**; Wang, Y.; Huang, F.* "Synthesis of various supramolecular hybrid nanostructures based on pillar[6]arene modified gold nanoparticles/nanorods and their application in pH- and NIR-triggered controlled release" *Chem. Sci.* **2014**, *5*, 4312-4316. (一区；影响因子：9.144；引用35次)
4. **Yao, Y.**; Chi, X.; Zhou, Y.; Huang, F.* "A bola-type supra-amphiphile constructed from a

water-soluble pillar[5]arene and a rod–coil molecule for dual fluorescent sensing" *Chem. Sci.* **2014**, *4*, 2778–2782. (一区；影响因子：9.144；引用69次)

5. **Yao, Y.**; Xue, M.; Chi, X.; Ma, Y.; He, J.; Abliz, Z.; Huang, F.* "A new water-soluble pillar[5]arene: synthesis and application in the preparation of gold nanoparticles" *Chem. Commun.* **2012**, *48*, 6505–6507. (一区；影响因子：6.567；引用90次)
6. **Yao, Y.**; Zhou, Y.; Dai, J.; Yue, S.; Xue, M.* "Host–guest recognition-induced color change of water-soluble pillar[5]arene modified silver nanoparticles for visual detection of spermine analogues" *Chem. Commun.* **2014**, *50*, 869–871. (一区；影响因子：6.567；引用31次)
7. **Yao, Y.**; Jie, K.; Zhou, Y.; Xue, M.* "Reversible assembly of silver nanoparticles driven by host–guest interactions based on water-soluble pillar[*n*]arenes" *Chem. Commun.* **2014**, *50*, 5072–5074. (一区；影响因子：6.567；引用15次)
8. **Yao, Y.**; Wei, P.; Yue, S.; Li, J.; Xue, M.* "Amphiphilic pillar[5]arenes: influence of chemical structure on self-assembly morphology and application in gas response and λ-DNA condensation" *RSC Adv.* **2014**, *4*, 6042-6047. (二区；影响因子：3.289；引用10次)
9. **Yao, Y.**; Li, J.; Dai, J.; Chi, X.; Xue, M.* "A water-soluble pillar[6]arene: synthesis, host–guest chemistry, controllable self-assembly, and application in controlled release" *RSC Adv.* **2014**, *4*, 9039-9043. (二区；影响因子：3.289；引用13次)
10. **Yao, Y.**; Jie, K.; Zhou, Y.; Xue, M.* "Water-soluble pillar[6]arene stabilized silver nanoparticles: preparation and application in amino acid detection" *Tetrahedron Lett.* **2014**, *55*, 3195-3199. (三区；影响因子：2.347；引用10次)
11. **Yao, Y.**; Wang, Y.; Zhao, R.; Shao, L.; Tang, R.*; Huang, F.* "Improved in vivo tumor therapy via host–guest complexation" *J. Mater. Chem. B*, **2016**, **4,** 2691-2696. (二区；影响因子：4.872；引用3次)
12. **Yao, Y.**; Sun, Y.; Han, Y.; Yan, C.-G.* "Preparation of resorcinarene-functionalized gold nanoparticles and their catalytic activities for reduction of aromatic nitro compounds" *Chin. J. Chem.*, **2010**, *28*, 705-712. (SCI；引用25次)
13. Zhou, Y.; **Yao, Y.***; Xue, M. "Well-defined nano-sunflowers formed by self-assembly of a rod-coil amphiphile in water and their morphology transformation based on a water-soluble pillar[5]arene" *Chem. Commun.* **2014**, *50*, 8040-8042. (一区；影响因子：6.567；引用10次)
14. Zhou, Y.; Li, Z.; Chi, X.; Thompson, C.; **Yao, Y.*** "Formation of a [2]pseudorotaxane based on a pillar[5]arene and a rigid guest in solution and in the solid state" *Chem. Commun.* **2014**, *50*, 10482-10484. (一区；影响因子：6.567；引用10次)
15. Shi, B.; Xia, D.; **Yao, Y.*** "A water-soluble supramolecular polymer constructed by pillar[5]arene-based molecular recognition" *Chem. Commun.* **2014**, *50*, 13932-13935. (一区；影响因子：6.567；引用 23 次)
16. Yue, S.; Zhou, Y.; **Yao, Y.**;* Xue, M,* "Pillar[n]arenes: From Synthesis, Host-Guest Chemistry to Self-Assembly Properties and Applications" *Acta Chim. Sinica*. **2014**, *72*, 1053-1069. (SCI；影响因子：0.8；引用 7 次)
17. Zhou, Y.; Jie, K.; Shi, B.; **Yao, Y.*** "A γ-ray and dual redox-responsive supramolecular polymer constructed by a selenium containing pillar[5]arene dimer and a neutral guest" *Chem. Commun.*, **2015**, *51*, 11112-11114. (一区；影响因子：6.567；引用 11 次)
18. Jie, K.; Zhou, Y.; Shi, B.; **Yao, Y.*** "A Cu^{2+} specific metallohydrogel: preparation, multi-responsiveness and pillar[5]arene-induced morphology transformation" *Chem. Commun.***, 2015,** *51***,** 8461-8464. (一区；影响因子：6.567；引用 6 次)

19. Shi, B.; Jie, K.; Zhou, Y.; Xia, D.; **Yao, Y.*** "Formation of fluorescent supramolecular polymeric assemblies *via* orthogonal pillar[5]arene-based molecular recognition and metal ion coordination" *Chem. Commun.*, **2015,** *51*, 4503-4506. (一区；影响因子：6.567；引用 22 次)
20. Zhou, Y.; Jie, K.; Thompson, C.; **Yao, Y.*** "An Ag_2O-responsive [2]pseudorotaxane based on the pillar[5]arene/bis(imidazolium) dication molecular recognition motif" *Tetrahedron Letters*, **2015**, *16*, 2091–2093. (三区；影响因子：2.347，引用 3 次)
21. Xia, D.; Li, Y.; Jie, K.; Shi, B.; **Yao, Y.*** "A Water-Soluble Cyclotriveratrylene-Based Supra-amphiphile: Synthesis, pH-Responsive Self-Assembly in Water, and Its Application in Controlled Drug Release" *Org. Lett.*, **2016**, 18, 2910–2913. (一区；影响因子：6.732)
22. Xu. H.; **Yao, Y.*** "Supramolecular amphiphilies based on water-soluble pillar[5]arene/paraquat derivatives and their self-assembly behaviour in water" *Supramolecular Chemistry* **2017**, *3*, 161-166. (四区；影响因子：2.214)
23. Sun. Y.; Wang, J.; **Yao, Y.*** "First water-soluble pillar[5]arene dimer: synthesis and construction of a reversible fluorescent supramolecular polymer network in water" *Chem. Commun.*, **2017,** *53*，165-167. (一区；影响因子：6.567)
24. Zhou. Y.; Jie, K.; **Yao, Y.*** "A cavity extended water-soluble resorcin[4]arene: synthesis, pH-controlled complexation with paraquat, and application in controllable self-assembly" *New J. Chem.*, **2017**, *41*, 916-919. (三区；影响因子：3.277)

其他论文：

25. Jie, K.; Zhou, Y.; **Yao, Y.**; Huang, F.* "Macrocyclic amphiphiles" *Chem. Soc. Rev.*, **2015,** *44*, 3568-3587.
26. Jie, K.; Zhou, Y.; **Yao, Y.**; Shi, B.; Huang, F.* "CO_2-Responsive Pillar[5]arene-Based Molecular Recognition in Water: Establishment and Application in Gas-Controlled Self-Assembly and Release" *J. Am. Chem. Soc.*, **2015**, *137*, 10472–10475.
27. Ji, X.; **Yao, Y.**; Li, J.; Yan, X.; Huang, F.* "A Supramolecular Cross-Linked Conjugated Polymer Network for Multiple Fluorescent Sensing" *J. Am. Chem. Soc.*, **2013**, *135*, 74–77.
28. Yu, G.; Ma, Y.; Han, C.; **Yao, Y.**; Tang, G.; Ma, Z.; Gao, C.; Huang, F.* "A Sugar-Functionalized Amphiphilic Pillar[5]arene: Synthesis, Self-Assembly in Water, and Application in Bacterial Cell Agglutination" *J. Am. Chem. Soc.*, **2013**, *135*, 10310–10313.
29. Yan, X.; Li, S.; Cook, T. R.; Ji, X.; **Yao, Y**.; Pollock, J. B.; Shi, Y.; Yu, G.; Li, J.; Huang, F.*; Stang, P. J.* "Hierarchical Self-Assembly: Well-Defined Supramolecular Nanostructures and Metallohydrogels via Amphiphilic Discrete Organoplatinum(II) Metallacycles" *J. Am. Chem. Soc.*, **2013**, *135* , 14036–14039.
30. Dong, S.; Zheng, B.; **Yao, Y.**; Han, C.; Yuan, J.* "LCST-Type Phase Behavior Induced by Pillar[5]arene/Ionic Liquid Host–Guest Complexation" *Adv. Mater.* **2013**, *25*, 6864–6867.
31. Li, L.; **Yao, Y.**; Sun, J.; Yan, C.-G.* "Preparation and application of tubular assemblies based on amphiphilic tetramethoxyresorcinarenes" *RSC Adv.*, **2015,** *5*, 102454-102461.
32. Zhou, Y.; **Yao, Y.**; Huang, F.* "Four pillar[5]arene constitutional isomers: Synthesis, crystal structures, and host-guest complexation of their derivatives with paraquat in water" *Chin. J. Chem.*, **2015**, *33*, 356–360.
33. Gao, L.; **Yao, Y.**; dong, S.; Yuan, J.* "Host–guest complexation between 1,4-dipropoxypillar[5]arene and imidazolium-based ionic liquids" *RSC Adv.*, **2014**, *4*, 35489-35492.
34. Jie, K.; **Yao, Y.**; Chi, X.; Huang, F.* "A CO_2-responsive pillar[5]arene: synthesis and

self-assembly in water" *Chem. Commun.*, **2014**, *50*, 5503-5505.

35. Yu, G.*; Yang, J.; Xia, D.; **Yao, Y.** "An enzyme-responsive supra-amphiphile constructed by pillar[5]arene/acetylcholine molecular recognition" *RSC Adv.*, **2014**, *4*, 18763-18771.
36. Wang, P.; Yao, Y.; Xue, M. "A novel fluorescent probe for detecting paraquat and cyanide in water based on pillar[5]arene/10-methylacridinium iodide molecular" *Chem. Commun.*, **2014**, *50*, 5064-5067.
37. Sun, J.; Zhang, L.-L.; **Yao, Y.**; Yan, C.-G.* "Synthesis, crystal structures and complexing properties of tetramethoxyresorcinarene functionalized tetraacylhydrazones" *J. Incl. Phenom. Macro.*, **2014**, *79*, 485-494.
38. Gao, L.; Zheng, B.; **Yao, Y.**; Huang, F.* "Responsive reverse giant vesicles and gel from self-organization of a bolaamphiphilic pillar[5]arene" *Soft Matter*, **2013**, *9*, 7314-7319.
39. Chi, X.; Xue, M.; **Yao, Y.**; Huang, F.* "Redox-Responsive Complexation between a Pillar[5]arene with Mono(ethylene oxide) Substituents and Paraquat" *Org. Lett.*, **2013**, *15*, 4722–4725.
40. Ma, Y.; Chi, X.; Yan, X.; Liu, J.; **Yao, Y**.; Chen, W.; Huang, F.*; Hou, J.-L.* "*per*-Hydroxylated Pillar[6]arene: Synthesis, X-ray Crystal Structure, and Host–Guest Complexation" *Org. Lett.*, **2012**, *14* , 1532–1535.
41. Sun, Y.; **Yao, Y.**; Yan, C.-G.*; Han, Y.; Shen, M.* "Selective Decoration of Metal Nanoparticles inside or outside of Organic Microstructures *via* Self-Assembly of Resorcinarene" *ACS Nano*, **2010**, *4*, 2129–2141.
42. Sun, Y.; Yan, C.-G.*; **Yao, Y.**; Han, Y.; Shen, M. * "Self-assembly and metallization of resorcinarene microtubes in water" *Adv. Funct. Mater.*, **2008**, *18*, 3981-3990.
43. Yan, C.-G.*; Chen, W.; Chen, J.; Jiang, T.; **Yao, Y.** "Microwave irradiation assisted synthesis, alkylation reaction, and configuration analysis of aryl pyrogallol[4]arenes" *Tetrahedron*, **2007**, *63*, 9614-9620.

研究方向

柱[5]芳烃在水体系中的组装及应用

● Preparation and characterization of amphiphilic pillar[5]arenes.
● Investigation of their self-assembly properties and applications in water.
● Self-assembly of the nanoparticles into hybrid materials.
●Construction of supramolecular amphiphilie through host-guest interactions.

金属配位驱动的自组装

Reference

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