

Curriculum Vitae

Dr. Heng Wang

Born on May. 30th, 1987, at Fuzhou, Jiangxi Province, China;
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Research and Education Experience

- Aug. 2016 ~ present, **Postdoctoral Scholar** Department of Chemistry
University of South Florida, Tampa, USA.
Supervisor: Assoc. Prof. Xiaopeng Li
Job duties: design, synthesis and self-assembly of giant supramolecules and its application as anti-biotics, catalyst and photoelectric devices (*pub* 1-6)
- Apr. 2016 ~ Aug. 2016, **Postdoctoral Scholar** Department of Chemistry and Biochemistry
Texas State University, San Marcos, USA.
Supervisor: Dr. Xiaopeng Li
Job duties: design, synthesis and self-assembly of giant supramolecules
- Jan. 2015 ~ Mar. 2016, **Postdoctoral Scholar** Institute for Catalysis (ICAT)
Hokkaido University, Sapporo, Japan.
Supervisor: Prof. Tamaki Nakano
Job duties: synthesis, structure and function of chiral polymers, conductive polymers, and supramolecular crystals (*pub* 28-30)
- Sep. 2009 ~ Jan. 2015, **Ph. D.** *Polymer Chemistry and Physics*, Peking University, Beijing.
Supervisor: Prof. Xinhua Wan
Dissertation: “*Synthesis of Optically Active Helical Polymer Asymmetric Catalysts*” (*pub* 31-33)
- Sep. 2005 ~ Jun. 2009, **B. S.** *Chemistry*, Peking University, Beijing.
Supervisor: Prof. Xinhua Wan
Thesis: “*Synthesis and Characterization of a New Near-Infrared Chiroptical Switch Based on Anthraquinone Imides Group*”

Recent Research Interests

Design and synthesis of giant supramolecules; Application of supramolecules/polymers as anti-biotics, (photo)catalyst and/or photoelectric devices.

Publications

1. **Wang, H.**,[#] Liu, C.-H.,[#] Wang, K., Wang, M., Yu, H., Sneha Kandapal, S., Brzozowski, R., Xu, B.-Q., Wang, M., Lu, S., Hao, X.-Q., Eswara, P., Nieh,^{*} Cai, J.^{*} Li, X.^{*}, “Assembling Pentatopic Terpyridine Ligands with Three Types of Coordination Moieties into a Giant Supramolecular Hexagonal Prism: Synthesis, Self-Assembly, Characterization, and Antimicrobial Study”, *J. Am. Chem. Soc.*, **2019**, *141*, 16108–16116. ([#]: equal contribution to the work)
2. **Wang, H.**, Li, Y., Yu, H., Song, B., Lu, S., Hao, X.-Q., Zhang, Y., Wang, M., Hla, S.-W., Li, X.^{*}, “Combining Synthesis and Self-Assembly in One Pot to Construct Complex 2D Metallo-Supramolecules Using Terpyridine and Pyrylium Salts”, *J. Am. Chem. Soc.*, **2019**, *141*, 13187–13195.
3. **Wang, H.**,[#] Qian, X.[#] Wang, K., Su, M., Haoyang, W.-W., Jiang, X., Brzozowski, R., Wang, M., Gao, X., Li, Y., Xu, B., Eswara, P., Hao, X.-Q., Gong, W.^{*}, Hou, J.-L.^{*}, Cai, J.^{*}, Li, X.^{*}, “Supramolecular Kandinsky Circles with High Antibacterial Activity.” *Nat. Commun.*, **2018**, *9*, 1815. ([#]: equal contribution to the work)
4. Yin, G.-Q.[#], **Wang, H.**,[#] Wang, X.-Q., Song, B., Chen, L.-J., Wang, L., Hao, X.-Q., Yang, H.-B.^{*}, Li, X.^{*}, “Self-Assembly of Emissive Supramolecular Rosettes with Increasing Complexity Using Multitopic Terpyridine Ligands”, *Nat. Commun.*, **2018**, *9*, 567. ([#]: equal contribution to the work)
5. Zhang, Z.[#], **Wang, H.**,[#] Wang, X., Li, Y., Song, S., Bolarinwa, O., Reese, R. A., Zhang, T., Wang, X.-Q., Cai, J., Xu, B., Wang, M.^{*}, Liu, C.^{*}, Yang, H.-B., Li, X.^{*}, “Supersnowflakes: Stepwise Self-Assembly and Dynamic Exchange of Rhombus Star-Shaped Supramolecules”, *J. Am. Chem. Soc.*, **2017**, *139*, 8174–8185. ([#]: equal contribution to the work)
6. Tang, J.-H., Ni R., He, Y.-Q., Vanderlinden, R. T., Li Y., Shi, B., Li Z.-Y., **Wang, H.**,^{*} Li, X., Sun, Y.,^{*} Zhong, Y.-W.,^{*} Stang, P. J.^{*}, “Metal–Organic Pt(II) Hexagonal-Prism Macrocycles and Their Photophysical Properties”, *Inorg. Chem.*, **2019**, *58*, 13376-13381.
7. Gu, Y., Alt, E. A., **Wang, H.**, Li, X., Willard, A. P., Johnson J. A.^{*}. “Photoswitching topology in polymer networks with metal–organic cages as crosslinks”, *Nature*, **2018**, *560*, 65–69.
8. Zhang, Z., **Wang, H.**, Shi, J., Xu, Y., Wang, L., Shihadeh, S., Zhao, F.-J., Hao, X.-Q., Wang, P., Liu, C., Wang, M.^{*}, Li, X.^{*}, “Stepwise Self-Assembly and Dynamic Exchange of Supramolecular Nanocages Based on Terpyridine Building Blocks. Invited Contribution”, *Macromol. Rapid Commun.*, **2018**, *39*, 1800404.
9. Zhang, Z., **Wang, H.**, Shi, J., Wang, P., Liu, C., Wang, M.^{*}, Li, X.^{*}, “Stepwise Self-Assembly and Dynamic Exchange of Supramolecular Snowflakes” *Isr. J. Chem.*, **2018**, *58*, 1–12.

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11. Fan, X., Zhang, D., Jiang, S., **Wang, H.**, Lin, L.-T., Zheng, B., Xu, W.-H., Zhao, Y., Hay, B. P., Chan, Y.-T., Yang, X.-J., Li, X., Wu, B.*, “Construction and interconversion of anion-coordination-based (‘aniono’) grids and double helicates modulated by counter-cations”, *Chem. Sci.*, **2019**, *10*, 6278-6284.
12. Zhang, Z., Zhao, Z., Hou, Y., **Wang, H.**, Li, X., He G., Zhang, M.*, “Aqueous Platinum(II) Cage-Based Light-Harvesting System for Photocatalytic Cross-Coupling Hydrogen Evolution Reaction.”, *Angew. Chem. Int. Ed.*, **2019**, *58*, 8862-8866.
13. He, Y., Zhang, Y., Wojtas, L., Akhmedov, N. G., Thai, D., **Wang, H.**, Li, X., Guo, H*, Shi, X.*, “Construction of a cross-layer linked G-octamer via conformational control: a stable G-quadruplex in H-bond competitive solvents”, *Chem. Sci.*, **2019**, *10*, 4192-4199
14. Song, B., Kandapal, S., Gu, J., Zhang, K., Reese, A., Ying, Y., Wang, L., **Wang, H.**, Li, Y., Wang, M., Lu, S., Hao X.-Q.*, Li, X.*, Xu, B.*, Li, X.*, “Self-assembly of polycyclic supramolecules using linear metal-organic ligands”, *Nat. Commun.*, **2018**, *9*, 4575.
15. Wang, L., Liu, R., Gu, J., Song, B., **Wang, H.**, Jiang, X., Zhang, K., Han, X., Hao X.-Q., Bai, S., Wang, M.*, Li, X.*, Xu, B.*, Li, X*, “Self-assembly of supramolecular fractals from generation 1 to 5”, *J. Am. Chem. Soc.*, **2018**, *140*, 12819–12828.
16. Chang, X., Zhou Z., Shang, C., Wang, G., Wang, Z., Qi, Y., Li, Z.-Y., **Wang, H.**, Cao, L., Li, X., Fang Y.*, Stang, P. J.*, “Coordination-Driven Self-Assembled Metallacycles Incorporating Pyrene: Fluorescence Mutability, Tunability, and Aromatic Amine Sensing”, *J. Am. Chem. Soc.*, **2019**, *141*, 1757–1765.
17. Cao, L.*, Wang, P., Miao, M., Duan, H., **Wang, H.**, Dong, Y., Ma, R., Zhang, B., Wu, B., Li, X., Stang, P. J., “Diamondoid Frameworks via Supramolecular Coordination: Structural Characterization, Metallogel Formation, and Adsorption Study.” *Inorg. Chem.*, **2019**, DOI: 10.1021/acs.inorgchem.9b00484
18. Zhao, Z., Zhang, Z., **Wang, H.**, Li, X., Zhang, M.*, “Multicomponent Porphyrin-based Tetragonal Prismatic Metallacages and Their Photophysical Properties”, *Isr. J. Chem.*, **2019**, *59*, 1–8.
19. Sun Y.*, Zhang, F., Jiang, S., Wang, Z., Ni, R., **Wang, H.**, Zhou W., Li, X., Stang, P. J.*, “Assembly of Metallacages into Soft Suprastructures with Dimensions of up to Micrometers and the Formation of Composite Materials”, *J. Am. Chem. Soc.*, **2018**, *140*, 17297–17307.
20. Sun, Y.*, Yao, Y., **Wang, H.**, Chen, C., Fu, W., Saha, M. L., Zhang, M., Datta, S., Zhou, Z., Yu, H., Li, X., Stang, P. J.*, “Self-assembly of metallacages into multidimensional suprastructures with tunable emissions”, *J. Am. Chem. Soc.*, **2018**, *140*, 12819–12828.
21. Tang, J.-H., Sun, Y., Gong, Z.-L., Li, Z.-Y., Zhou, Z., **Wang, H.**, Li X., Saha, M., L.*, Zhong Y.-W.*, Stang, P. J.*, “Temperature-Responsive Fluorescent Organoplatinum(II) Metallacycles”, *J. Am. Chem. Soc.*, **2018**, *140*, 7674–7680.
22. Lu, C., Zhang, M.*, Tang, D., Yan, X., Zhang, Z.-Y., Zhou, Z., Song, B., **Wang, H.**, Li, X., Yin, S.*, Sepehrpour, H., Stang, P. J.*, “Fluorescent Metallacage-Core Supramolecular Polymer Gel Formed by

- Orthogonal Metal Coordination and Host–Guest Interactions” *J. Am. Chem. Soc.*, **2018**, *140*, 7674–7680.
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 24. Cao, L.*, Wang, P., Miao, X., Dong, Y., **Wang, H.**, Duan, H., Yu, Y., Li, X., Stang, P. J.*, “Diamondoid supramolecular coordination frameworks from discrete adamantanoid platinum (II) cages”, *J. Am. Chem. Soc.*, **2018**, *140*, 7005–7011.
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 27. **Wang, H.**, Wang, Y., Ye, X., Hayama, H., Sugino, H., Nakano, H., Nakano, T.*, “ π -Stacked Poly(vinyl Ketone)s with Accumulated Push–Pull Triphenylamine Moieties in the Side Chain”, *Polym. Chem.*, **2017**, *8*, 708–714.
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 29. Wang, Y., Haradab, T., Shiotac, Y., Yoshizawac, K., **Wang, H.**, Wang, S., Ye, X., Ogasawarad, M., Nakano, T.*, “Isolation and Phototransformation of Enantiomerically Pure Iridium(III) Bis[(4,6-difluorophenyl)pyridinato-n,c²]picolinate”, *RSC Adv.*, **2017**, *7*, 29550–29553.
 30. **Wang, H.**; Li, N.; Yan, Z.; Zhang, J.; Wan, X.*, “Synthesis and Property of a Novel Cu(II)–pyridineoxazoline Containing Polymeric Catalyst for Asymmetric Diels–Alder Reaction”, *RSC Advances*, **2015**, *5*, 2882–2890.
 31. **Wang, H.**; Li, N.; Zhang, J.; Wan, X.*, “Synthesis and Properties of a Novel Pyridineoxazoline Containing Optically Active Helical Polymer as a Catalyst Ligand for Asymmetric D-A Reaction”, *Chirality*, **2015**, *27*, 523–531.
 32. **Wang, H.**; Li, N.; Zhang, J.; Wan, X.*, “Synthesis and Property of Novel Helical 3-Vinylpyridine Polymers Containing Proline Moieties for Asymmetric Aldol Reaction”, *RSC Advances*, **2015**, *5*, 52410–52419.
 33. Li, N.; **Wang, H.**; Zhang, J.; Wan, X.*, “Controlled Synthesis of Chiral Polymers for the Kinetic Resolution of Racemic Amino Acids”, *Polym. Chem.*, **2014**, *5*, 1702–1710.

References

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