

Curriculum Vitae

Dr. Heng Wang

Born on May. 30th, 1987, at Fuzhou, Jiangxi Province, China;

Male; Married.

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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*)

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- 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-

10. Tang, J.-H., Li, Y., Wu, Q., Wang, Z., Hou, S., Tang, K., Sun, Y., Wang, H., **Wang, H.**, Lu, C., Wang, X., Li, X., Wang, D., Yao, J., Lambert, C. J.,* Tao, N.,* Zhong Y.-W.,* Stang, P. J.,* “Single-molecule level control of host-guest interactions in metallocycle-C₆₀ complexes”, *Nat. Commun.*, **2019**, *10*, 4599.
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.
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- Orthogonal Metal Coordination and Host–Guest Interactions” *J. Am. Chem. Soc.*, **2018**, *140*, 7674–7680.
23. Zhou, Z., Liu, J., Rees, T. W., **Wang, H.**, Li, X., Chao, H.*, Stang, P. J.*, “A heterometallic Ru-Pt metallacycle for two-photon photodynamic therapy”, *Proc. Natl. Acad. Sci. U.S.A.*, **2018**, *115*, 5664–5669.
 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.
 25. Sun, Y., Li, S., Zhou, Z., Saha, M. L., Datta, S., Zhang, M., Yan, X., Tian, D., **Wang, H.**, Wang, L., Li, X., Liu, M., Li, H., Stang, P.*, “Alanine-Based Chiral Metallogels via Supramolecular Coordination Complex Platforms: Metallogelation Induced Chirality Transfer”, *J. Am. Chem. Soc.*, **2018**, *140*, 3257–3263.
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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.
 28. **Wang, H.**; Pietropaolo, A., Wang, W., Chou, C., Hisaki, I., Tohnai, N., Miyata, M., Nakano, T.*, “Right-handed 2/1 Helical Arrangement Benzene Molecules in Cholic Acid Crystal Established by Experimental and Theoretical Circular Dichroism Spectroscopy”, *RSC Advances*, **2015**, *5*, 101110–101114.
 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,c*²]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

Assoc. Prof. Xiaopeng Li