

## Shengqian Ma (马胜前)

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### Biographical Sketch



Shengqian Ma obtained his B.S. degree from Jilin University, China in 2003, and graduated from Miami University (Ohio) with a Ph.D. degree under the supervision of Hong-Cai Joe Zhou (currently at Texas A&M University) in 2008. After finishing two-year Director's Postdoctoral Fellowship at Argonne National Laboratory, he joined the Department of Chemistry at University of South Florida (USF) as an Assistant Professor in August 2010. He was promoted to an Associate Professor with early tenure in 2015 and to a Full Professor in 2018. In August 2020, he joined the Department of Chemistry at University of North Texas (UNT) as the Robert A. Welch Chair in Chemistry, and has been appointed as the University Distinguished Research Professor since September 2025.

He is the recipient of 2014 *NSF CAREER Award* and the 2024 *Edith and Peter O'Donnell Award* in Physical Sciences from the Texas Academy of Medicine, Engineering, Science & Technology (TAMEST). He received the 2024 UNT *University Distinguished Research Professorship Award* as well as the 2015 USF *Faculty Outstanding Research Achievement Award* and 2018 *Outstanding Faculty Award*. He has been selected as the Clarivate/Thomson Reuters *Highly Cited Researcher* for twelve consecutive years (2014-2025); he was also awarded the *IUPAC-2015 Young Chemist Travel Award* and the *2009 IUPAC Prize for Young Chemists* from International Union of Pure & Applied Chemistry (IUPAC); he received the *Young Investigator Award* from American Chemical Society (ACS) Division of Inorganic Chemistry and the *Director's Postdoctoral Fellowship* from Argonne National Laboratory in 2008 as well.

His current research interest focuses on the development of functional porous materials including metal-organic frameworks (MOFs), covalent organic frameworks (COFs), porous organic polymers (POPs), and microporous carbon materials for energy, biological,

environmental-related applications. He has published more than 400 papers with the total citations over 57000 and the H-index of 130.

## Education

2003 Jilin University, Changchun, China, BS in Applied Chemistry

2008 Miami University, Oxford, OH, PhD in Chemistry (Advisor: Hong-Cai Joe Zhou)

## Professional Experience

2001-2003 *Undergraduate Research Assistant, State Key Laboratory of Inorganic Synthesis and Preparative Chemistry, Jilin University, China (Supervisor: Feng-Shou Xiao)*

2003-2008 *Graduate Research Assistant, Department of Chemistry & Biochemistry, Miami University, Oxford, OH (Advisor: Hong-Cai Joe Zhou)*

2008-2010 *Director's Postdoctoral Fellow, Argonne National Laboratory, Argonne, IL (Supervisor: Dijia Liu)*

2010-2015 *Assistant Professor, Department of Chemistry, University of South Florida, Tampa, FL*

2015-2018 *Associate Professor, Department of Chemistry, University of South Florida, Tampa, FL*

2018-2020 *Full Professor, Department of Chemistry, University of South Florida, Tampa, FL*

2020-2025 *Full Professor and Welch Chair in Chemistry, Department of Chemistry, University of North Texas, Denton, TX*

2025-present *University Distinguished Research Professor and Welch Chair in Chemistry, Department of Chemistry, University of North Texas, Denton, TX*

2022-present *Director, Center of Functional Materials (CFM) in Advanced Materials and Manufacturing Processes Institute (AMMPI) at UNT*

## Honors and Awards

- **Web of Science/Clarivate Highly Cited Researcher (2025)**
- **2025 Top 2% of Scientists on Stanford University List**
- **UNT *University Distinguished Research Professorship Award* (2025)**
- **Web of Science/Clarivate Highly Cited Researcher (2024)**
- **2024 Top 2% of Scientists on Stanford University List**
- **2024 Edith and Peter O'Donnell Award in Physical Sciences from TAMEST (2024)**
- **Web of Science/Clarivate Highly Cited Researcher (2023)**

- **2023 Top 2% of Scientists on Stanford University List**
- **Web of Science/Clarivate Highly Cited Researcher (2022)**
- **2022 Top 2% of Scientists on Stanford University List**
- **Web of Science/Clarivate Highly Cited Researcher (2021)**
- **2021 Top 2% of Scientists on Stanford University List**
- **Featured on Author Spotlight of *CCS Chemistry* (2021)**
- **Web of Science/Clarivate Cited Researcher (2020)**
- **Featured on Author Profile of *Angewandte Chemie* (2019)**
- **Gordon Lectureship, Department of Chemistry and Biochemistry, Miami University (2019)**
- **Web of Science/Clarivate Highly Cited Researcher (2019)**
- **Web of Science/Clarivate Highly Cited Researcher (2018)**
- **Outstanding Faculty Award, University of South Florida (2018)**
- **Web of Science/Clarivate Highly Cited Researcher (2017)**
- **Web of Science/Clarivate Highly Cited Researcher (2016)**
- ***Inorganic Chemistry Frontiers* 'Emerging Investigator' (2016)**
- **Web of Science/Clarivate/Thomson Reuters Highly Cited Researcher (2015)**
- **Faculty Outstanding Research Achievement Award, University of South Florida (2015)**
- **Young Chemist Travel Award from IUPAC (2015)**
- **Web of Science/Clarivate/Thomson Reuters Highly Cited Researcher and The World's Most Influential Scientific Minds (2014)**
- **NSF CAREER Award (2014)**
- **Visiting Scholar of National Research Council of Taiwan (2014)**
- **ChemComm 'Emerging Investigator' (2014)**
- **Faculty Research & Development Award, University of South Florida (2011, 2013, 2014)**
- **2009 IUPAC Prize for Young Chemists from IUPAC (2009)**
- **Young Investigator Award from ACS Division of Inorganic Chemistry (2008)**
- **Director's Postdoctoral Fellowship of Argonne National Laboratory (2008-2010)**
- **Chinese Government Award for Outstanding Self-financed Students Abroad of Year 2007 (2008)**
- **Sigma Xi Grant-in-Aid of Research Award from Sigma Xi, The Scientific Research Society (2007-2008)**

- **Dissertation Scholarship**, Miami University (2007-2008)
- **Marjorie Post Farrington Scholarship**, Miami University (2007-2008)
- **Graduate Student Achievement Award**, Miami University (2006-2007)
- **Student Initiative Fund Award**, Miami University (2007)
- **Student Travel Award** from the ACS Division of Inorganic Chemistry (2007)
- **The Miami Co-Op Book Store Award**, Miami University (2004)
- **The William Hale Charch Scholarship**, Miami University (2003-2004)
- **Outstanding Undergraduate Scholarship**, Jilin University (2000-2003)

## PUBLICATIONS

### Peer Reviewed PAPERS (Total Citations: +57000; H-index: 130)

1. "Rational Design of Bimetallic 2D Covalent Organic Frameworks for Interlayer Electrocatalytic Urea Production from N<sub>2</sub> and CO<sub>2</sub>" Maiti, S.; Dhakal, K.; Song, Y.; Kafle, A.; Ranabhat, D.; Chen, L.; Ko, H.-Y.\*; Gupta, A.; Roknuzzaman, R.; Verma, G.; Biradha, K.; D'Souza, F.\*; Alshahrani, T.; Ma, S.\* *Chem. Mater.*, **2026**, *38*, in press.
2. "Mechanochemical Synthesis of Pincer Nanotraps for Efficient Rhodium Recovery" Yanpei Song, Y.\*; Ren, J.; Wang, H.; Fan, W.; Wright, J. T.; Meulenberg, R. W.; Wang, N.\*; AlShahrani, T.; Ma, S.\* *Nature Commun.*, **2026**, *17*, DOI : 10.1038/s41467-026-72569-4.
3. "Programming Heterofunctional Active Sites via In Situ Reticular Editing of Metal-Macrocyclic Frameworks" Ren, J.; Song, Y.; Ye, Y.; VanNatta, P.; Zhang, Y.; Al-Enizi, A.; Nafady, A.; Tan, K.; Ma, S.\* *J. Am. Chem. Soc.* **2026**, *148*, 17218-17227.
4. "Single-Site Nickel-Anchored Photosensitive Covalent Organic Framework for Metallaphotocatalytic C-S/C-N Cross-Coupling Reactions" Xiong, Y.-Y.; Deng, S.; Wang, H.; Liu, S.-H.; VanNatta, P.; Lin, J.-L.; Liu, J.; Sun, C.; Guo, X.; Chen, C.-X.\*; Nafady, A.; Al-Enizi, A. M.; Ma, S.\* *Angew Chem. Int. Ed.*, **2026**, *138*, e8517866.
5. "The Rise of Generative AI for Metal–Organic Framework Design and Synthesis" Duan, C.; Nandy, A.; Pal, S. C.; Yang, X.; Gao, W.; Du, Y.; Kraß, H.; Kang, Y.; Bernales, V.; Ye, Z.; Pyle, T.; Yang, R.; Gu, Z.; Schwaller, P.; Ma, S.; Sun, S.; Aspuru-Guzik, A.; Moosavi, S. M.; Wexler, R.; Zheng, Z. *Matter*, **2026**, *9*, 102748.
6. "Polar-Nonpolar Synergistic Incorporation in Metal - Organic Frameworks for Promoting Methane Separation From Natural Gas" Wang, K.; Zhang, H.; Jiang, Y.\*; Yang, S.; Cao, H.; Wang, W.; Wang, Q.; Cui, P.; Al-Enizi, A. M.; Nafady, A.; Ma, S.\* *Adv. Funct. Mater.*, **2026**, *36*, e74758.

7. "An International Laboratory Comparison Study on Approximating the Enthalpy of Adsorption via the Clausius-Clapeyron Approach" Heinselman, K. N.; Quine, C. M.; Hurst, K.; Cho, J.; Wenny, M. B.; Mason, J. A.; Verma, G.; Ma, S.; Compton, D.; Stadie, N. P.; Sengupta, D.; Islamoglu, T.; Farha, O. K.; Zlotea, C.; Agafonov, A.; Asgari, M.; Al-Shakhs, A.; Lozano-Castello, D.; Fairen-Jimenez, D.; Furukawa, H.; Yabuuchi, Y.; Broom, D. P.; Benham, M. J.; Villajos, J. A.; Balderas-Xicohtencatl, R.; Fackelmann, I.; Hirscher, M.; Hoover, W. J.; Morris, W.; Wang, T. C.; Parilla, P. A.; Gennett, T.; Shulda, S. *ChemPhysChem*, **2026**, 27, e202500332.
8. "Photodynamic therapy and its evolving innovation" Phipps, J.; Fan, W.; Kapoor, M.; Huynh, D.; Ma, S.\* *Chem. Commun.*, **2026**, 62, 3194-3209.
9. "Hydroperoxide-Mediated Photochargeable Molecular Cage for Post-Irradiation Dark Catalysis" Yuan, J.-P.; Guan, Z.-J.; Li, W.-T.; Yuan, L.; Xing, H.; Al-Enizi, A. M.; Nafady, A.; Zheng, H.; Ma, S.\*; Fang, Y.\* *CCS Chemistry*, **2026**, DOI: 10.31635/ccschem.025.202506995.
10. "Graphene-inspired porous polymer network for ethane/ethylene separation and methane purification" Festus, K.; Guo, F.; Ullah, S.; Maiti, S.; Mondal, A.; Bakhmutov, V.; Podder, U.; Sikdar, A.; Roknuzzaman, R.; Lin, H.; Fang, L.; Ma, S.; Thonhauser, T.; Wang, H.; Wang, Q.; Zhou, H.-C. *Nature Commun.*, **2026**, 17, DOI: 10.1038/s41467-026-70471-7.
11. "Effects of Nonstoichiometry on the Ambient Oxidation of Cubic Mo<sub>2</sub>C and Impact on CO Hydrogenation" Amagbor, S.; Maruf, A. A.; Adesope, Q.; Khan, M. H.; Rathnayake Mudiyansele, R.; Pudasaini, A.; Ashrafian, A.; Dhungana, M.; Sonnier, K.; Chen, L.; Golden, T.; Ma, S.; Kelber, J. J. *Phys. Chem. C* **2026**, 130, 942-952.
12. "Efficient Separation of C<sub>2</sub>H<sub>6</sub>/C<sub>2</sub>H<sub>4</sub> and C<sub>3</sub>H<sub>8</sub>/C<sub>2</sub>H<sub>6</sub>/CH<sub>4</sub> Light Hydrocarbons Using Robust Porous Polymer Networks for C<sub>2</sub>H<sub>4</sub> and CH<sub>4</sub> Purification" Festus, K.; Mondal, A.; Guo, F.-A.; Maiti, S.; Lin, H.; Bakhmutov, V.; Wang, H.; Ma, S.; Fang, Lei; Wang, Q.; Zhou, H.-C. *ACS Appl. Mater. Interfaces* **2026**, 18, 2444-2454.
13. "A general protocol for engineering metal-oxo-chain standing frameworks" Guo, J.\*; Zhao, Z.; Qin, Y.; Li, S.; Ban, Z.; Ji, Y.; VanNatta, P.; Zhang, Y.\*; Zhao, M.\*; Alshahrani, T.; Ma, S.\* *Natl. Sci. Rev.*, **2026**, 13, nwag018.
14. "Flexible Units in Covalent Organic Frameworks Promote Photocatalytic Uranium Extraction from Wastewater" Hao, M.; Lei, M.; Zhao, J.; Xie, Y.; Gu, H.; Chen, Z.; Yang, H.; Waterhouse, G. I. N.; Ma, S.\*; Wang, X.\* *CCS Chemistry*, **2026**, DOI: 10.31635/ccschem.025.202506940.
15. "Metal-Organic Framework Featuring Monodispersed Silver Cation Sites for Highly Efficient and Selective Extraction of Aqueous Iodide Anions" Cao, X.; Zhang, J.; Pan, J.; Li,

- Y.; Ma, Y.; Du, X.; Feng, L.; Huang, B.; Yuan, Y.\*; Mao, L.\*; Wang, N.\*; Al-Enizi, A. M.; Nafady, A.; Ma, S.\* *Adv. Sci.*, **2026**, *13*, 17224.
16. "Ultra-rapid Preparation of Large-area High-crystallinity Covalent Organic Framework Membranes" Pan, Y.; Yu, G.; Gao, L.; Li, X.; Yang, L.; Gao, H.; Wang, T.; Zhang, W.\*; Ma, S.\*; Meng, H.\* *Nature Commun.*, **2026**, *17*, 857.
  17. "Receptor-targeted metal-organic frameworks: Recent progress in synthesis, modifications, and applications in targeted drug delivery" Poursadegh, H.; Javanbakht, S.; Gassensmith, J. J.; Ma, S.\*; Davachi, S. M.\* *Adv. Colloid Interface Sci.*, **2026**, *348*, 103744.
  18. "Microenvironment Modulation of Single Cobalt Sites in Covalent Organic Frameworks with Serrated Stacking of Metalloporphyrins for Boosting Electrocatalytic Water Oxidation" Chen, X.; Liu, J.; Lv, C.; Yan, Y.; Liu, H.; Peng, Y.-L.; Zhao, Y.\*; AlShahrani, T.; VanNatta, P. E.; Ma, S.\* *Adv. Funct. Mater.*, **2026**, *36*, e11972.
  19. "Monitoring Enzyme Clustering in a Highly Crystalline Metal-Organic Framework by Small-Angle Neutron Scattering" Wang, X.; He, L.\*; Qian, S.; Su, S.; Farha, O. K.\*; Ma, S.\* *Angew Chem. Int. Ed.*, **2026**, *138*, e22967. (VIP)
  20. "Metallization cross-linking and electronic state engineering of zeolitic imidazole framework: Boosting the electroanalytical response of physiological biomolecules" Wang Sun, W.; Wang, N.; Liu, J.; Sun, G.; Phipps, J.; Alshahrani, T.; Ma, S.\*; Wang, Y.\* *Sci. China Chem.*, **2026**, *69*, 1784-1793.
  21. "Synthesis of adaptive MOFs with dynamic crystal robustness based on solid-state disulfide exchange for durable gas separation application" Chen, C.-X.; Cui, X.; Xiong, Y.-Y.; Lan, P. C.; Tan, K.; Wei, Z.-W.; Niu, Z.; Shan, C.; Yang, L.; Ma, S.\* Su, C.-Y.\* *Nat. Synth.*, **2026**, *5*, 129-138.
  22. "Coordination Pore-Space Engineering in Robust Cage-Like Metal-Organic Frameworks for Highly Efficient CO<sub>2</sub> Capture from Flue Gas" He, Z.; You, J.; Zhang, L.\*; Xiong, Y.-Y.; Chen, C.-X.\*; Zhang, H.; Wang, Q.; Al-Enizi, A. M.; Nafady, A.; Ma, S.\* *Adv. Funct. Mater.*, **2026**, *36*, e24748.
  23. "Systematic Tuning of the Electronic Effects in Covalent Organic Frameworks for Promoting Photocatalysis" Gu, H.; Chen, P.; Xie, Y.; Zhao, Y.; Hao, M.; Chen, Z.; Yang, H.\*; Waterhouse, G.; Al-Enizi, A.; Nafady, A.; Wang, X.\*; Ma, S.\* *ACS Cent. Sci.* **2025**, *11*, 2448-2459.
  24. "Covalent organic framework membranes with asymmetric wettability for efficient photocatalytic H<sub>2</sub>O<sub>2</sub> synthesis" Qiao, C.; Xian, W.; Lai, Z.; Huang, Z.; Guo, Q.; Wang, S.; Dai, Z.; Xiong, Y.; Meng, X.; Ma, S.; Sun, Q. *Angew. Chem. Int. Ed.*, **2025**, *64*, e202519513.

25. "Energy-Autonomous KCl Extraction from Brine via Biomimetic Covalent-Organic-Framework Membranes and Redox-Driven Ion Transport" Guo, Q.; Guo, H.; Xing, Z.; Lai, Z.; Yi, J.; Wang, S.; Zhang, L.; Ma, S.; Sun, Q. *Nature Commun.*, **2025**, *16*, 11484.
26. "Solvent-induced conformational changes in color-tunable hydrogen-bonded organic frameworks" Hu, L.; Lin, C.; Zeng, D.; Qin, X.; Lai, X.-L.; Gong, L.\*; Ye, Y.\*; Alshahrani, T.; Ma, S.\* *Chem. Commun.*, **2025**, *61*, 17882-17885.
27. "Asymmetric Diamine Synthesis for Covalent Organic Frameworks: Boosted Photocatalytic Performance by Restricting  $\beta$ -Ketoenamine Bond Twist" Wang L.; Ma, D.; Liu, A.; Du, H.\*; Fu, Y.\*; Al-Enizi, A. M.; Nafady, A.; Ma, S.\*; Wang, Q.\* *Angew Chem. Int. Ed.*, **2025**, *64*, e202518097.
28. "Creating electrochemical accessibility in covalent organic frameworks for uranium extraction via electrodeposition" Song, Y.; Hou, L.; Lan, P. C.; Xing, Z.; Sun, Q.\*; Lv, J.; Li, J.; Zhang, D.; Dai, Z.; AlShahrani, T.; Ma, S.\* *Nature Commun.*, **2025**, *16*, 7093. (Highlighted by [Nuclear Engineering International](#))
29. "Advances in metal-organic frameworks for cardiovascular therapy: from structural design to preclinical applications" Ge, X.; Liu, Y.; Zhao, X.; Nafady, A.; Bhattacharya, G.; Mai, J.; Al-Enizi, A. M.; Pettigrew, R. I.\*; Ma, S.\* *Coord. Chem. Rev.*, **2025**, *544*, 216971. (Invited contribution to the Special issue for the 9th International Conference on Metal-Organic Frameworks and Open Framework Compounds)
30. "In-situ synthesis of layered double hydroxides with tunable basal spacing for efficient iodide over iodate adsorption selectivity" Liu, X.; Xiao, M.; Chen, P.; Zhou, Y.; Xie, Y.; Hao, M.; Mao, L.; Yang, H.\*; Waterhouse, G. I. N.; Ma, S.\*; Wang, X.\* *Sci. China Chem.*, **2025**, *68*, 2424-2432.
31. "Interpenetrated Three-Dimensional Covalent Organic Framework for Selective Adsorption of C<sub>2</sub>H<sub>2</sub> over CO<sub>2</sub> and C<sub>2</sub>H<sub>4</sub>" Maiti, S.; Tan, K.; Geng, S.; Gupta, A. K.; VanNatta, P. E.; Yuan, D.; Zhang, Z.; Verma, G.; AlShahrani, T.; Ma, S.\* *Macromolecul. Rapid Commun.* **2025**, *46*, e00317.
32. "Engineering the Microporous Environment of Flexible Metal-Organic Frameworks with Bifunctionality for Promoting the Separation of Ethylene from a Ternary Mixture" Kang Wang, K.; Jiang, Y.\*; Zhang, H.; Jia, S.; Wang, Q.; Cui, P.; AlShahrani, T.; Ma, S.\* *Angew Chem. Int. Ed.*, **2025**, *64*, e202508419.
33. "Insight into charged drug release from metal-organic frameworks" Phipps, J.; Pinzon, L.; Fan, W.; Neupane, S.; Walsh, P.; Tian, A.; Biggin, T. Almodovar, J.; AlShahrani, T.; Ma, S.\* *Nanoscale*, **2025**, *17*, 16523-16533.

34. "Three-in-one approach to fabricate a porous porphyrin-heptazine polymer for highly efficient visible light photocatalysis" Zhang, W.; Lu, Z.; Adhikarib, D.; Li, S.; AlShahrani, T.; Ma, S.\* *EES Catal.*, **2025**, *3*, 1128-1133.
35. "Pore engineering in metal-organic frameworks and covalent organic frameworks: strategies and applications" Song, Y.; Ma, S.\* *Chem. Sci.*, **2025**, *16*, 11740-11767. (Invited Review)
36. "Designing metal-organic frameworks for the selective removal of  $^{99}\text{TcO}_4^-$  from nuclear wastewater" Lei, M.; Hao, M.; Chen, Z.; Yang, H.; Waterhouse, G. N. I.; Ma, S.; Wang, X.\* *Sci. China Chem.*, **2025**, *68*, 1639-1641.
37. "Novel zinc Metalloporphyrin based metal-organic framework for Quantitative & Reusable Sensing of nitrobenzene" Magnuson, Z.; Wolfe, B.; Mayers, J. M.; Wojtas, L.; Zhang, W.; Ma, S.; Larsen, R. W. *Inorg. Chimica Acta*, **2025**, *586*, 122785.
38. "Highly Robust Zr-MOF Platform Featuring Aromatic-Rich Cores for Efficient Paraffin/Olefin Separation" Verma, G.; Roknuzzaman, R.; Tan, K.; Kapoor, M.; Pham, T.; Maiti, S.; Phipps, J.; Kumar, S.; Alshahrani, T.; Ma, S.\* *Energy Fuels*, **2025**, *39*, 11308-11315. (Invited contribution to the special issue "In Honor of Prof. Jingbo Louise Liu Recipient of 2024 ACS Energy and Fuels Division Mid-Career Award")
39. "Advancing porous materials for radioiodine capture" Rong, Q.; Hao, M.; Chen, Z.; Yang, H.; Waterhouse, G. N. I.; Ma, S.; Wang, X.\* *Nanotechnology*, **2025**, *36*, 252501.
40. "Construction of hollow H-CuS/NiS<sub>2</sub>@CuS S-Scheme heterostructure photocatalyst with an excellent hydrogen evolution performance" Zhou, T.; Li, J.; Han, X.; Song, Y.; Liu, M.; Liu, J.; He, W.-W.\*; AlShahrani, T.; Ma, S.\* *ChemistryEurope*, **2025**, e202500073.
41. "Synthesis of Self-assembled Porous Naphtalene Dianhydride-TiO<sub>2</sub> Composites for Photocatalytic Hydrogen Production" Chen, Y.; Kong, D.; Chen, L.; VanNatta, P.; Li, H.; Cheng, J.; Ma, C.; Liu, P.; Song, Y.; Chen, S.\*; Chen, C.-X.\*; AlShahrani, T.; Ma, S.\* *Small*, **2025**, *21*, 2501964.
42. "Covalent Organic Framework Nanosheets for the Assembly of Efficient Membrane Bioreactors" Han, J.; Xing, Z.; Guo, Q.; Wu, D.; Lai, Z.; Cheng, X.; Dai, Z.; Xiong, Y.; Meng, X.; Ma, S.; Xiao, F.-S.; Sun, Q. *Angew Chem. Int. Ed.*, **2025**, *64*, e202505957.
43. "Engineering Bipolar Covalent Organic Framework Membranes for Selective Acid Extraction" Wu, D.; Xing, Z.; Guo, Q.; Lai, Z.; Yi, J.; Meng, Q.-W.; Wang, S.; Dai, Z.; Ma, S.; Sun, Q. *Angew Chem. Int. Ed.*, **2025**, *64*, e202503945.

44. "Creating Sodium Ion Channels via De Novo Encapsulation of Ionophores for Enhanced Water Energy Harvesting" Guo, Q.; Xing, Z.; Guo, H.; Lai, Z.; Yi, J.; Wu, D.; Dai, Z.; Ma, S.; Sun, Q. *Adv. Mater.*, **2025**, *64*, 2420636.
45. "Fragmented Ultrathin Carbon Buffed Copper Clusters for Selective Hydrogenation of N-Heteroarenes under Ambient Pressure" Shu, Y.; Zhou, X.; Yang, J.; Lan, F.; Li, W.; Zhang, Z.; Li, W.; Guan, Q.\*; Ma, S.\* *J. Am. Chem. Soc.* **2025**, *147*, 15578–15590.
46. "Nanospace Engineering of Metal-Organic Frameworks for Adsorptive Gas Separation" Gong, L.; Pal, S. C.; Ye, Y.\*; Ma, S.\* *Acc. Mater. Res.* **2025**, *6*, 499-511.
47. "Regulation Ion Binding Sites in Covalent Organic Framework Membranes for Enhanced Selectivity Under High Ionic Competition" Meng, Q.-W.; Li, J.; Xing, Z.; Xian, W.; Lai, Z.; Dai, Z.; Wang, S.; Zhang, L.; Yin, H.; Ma, S.; Sun, Q. *ACS Nano*, **2025**, *19*, 12080-12089.
48. "Expanded Synthesis of 3D Covalent Organic Frameworks via Linker Exchange for Efficient Photocatalytic Aerobic Oxidation" Zhang, W.; Lu, Z.; Chen, C.; VanNatta, P. E.; Yang, C.; Al-Enizi, A. M.; Nafady, A.; Ma, S.\* *Small*, **2025**, *21*, 2502316.
49. "Integration of CdS Nanoparticle and Molecular Cobalt Catalyst into Metal-Organic Frameworks for Highly Efficient Photocatalytic Amine Oxidation" Chen, L.; Liu, Z.; Kong, D.; Tang, Q.; Tan, L.-L.; Liang, Z.-M.; Chen, Y.\*; Chen, C.-X.\*; Ma, S.\* *ACS Catal.*, **2025**, *15*, 4858–4869.
50. "Creation of dopant-plasmon synergism in double perovskites for bias-free photoelectrochemical synthesis of bromohydrins and hydrogen peroxide" Li, L.; Luo, Q.\*; Wang, Y.; Zhang, X.; Wen, Y.; Wang, N.\*; AlShahrani, T.; Ma, S.\* *Angew Chem. Int. Ed.*, **2025**, *64*, e202424395.
51. "Pressure-Modulated Luminescence Enhancement and Quenching in a Hydrogen-Bonded Organic Framework" Wang, S.; VanNatta, P. E.; Wang, B.; Liu, Z.; Al-Enizi, A. M.; Nafady, A.; Ma, S.\*; Yan, H.\* *Small*, **2025**, *21*, 2411362.
52. "Efficient Capture of  $\text{ReO}_4^-$  from Water by Imidazolium-Based Cationic Polymeric Nanotraps" Li, X.; Liu, W.; Wang, H.; He, Y.; Liu, W.; Li, H.; Jin, L.; Su, C.; Li, Y.\*; AlShahrani, T.; Ma, S.\* *Chemistry – An Asian J.*, **2025**, *20*, e202401419.
53. "Modulating the Coordination Environment of Atomically Dispersed Nickel for Efficient Electrocatalytic  $\text{CO}_2$  Reduction at Low Overpotentials and Industrial Current Densities" Sun, Y.; Liu, X.; Tian, J.; Zhang, Z.; Li, Y.; Xie, Y.; Hao, M.; Chen, Z.; Yang, H.\*; Waterhouse, G. I. N.; Ma, S.\*; Wang, X.\* *ACS Nano*, **2025**, *19*, 4528–4540.

54. "From Radioactive Effluent to Drinking Water: Efficient Removal of Trace  $^{99}\text{TcO}_4^-/\text{ReO}_4^-$  by Cationic Porous Aromatic Framework" Pang, L.-S.; Liao, X.; Zhao, C.-Y.; Li, C.-P.\*; Liu, Z.\* **Ma, S.\*** *Adv. Sci.*, **2025**, *12*, 2414604.
55. "Efficient oral insulin delivery with sustained release by folate-conjugated metal-organic framework nanoparticles" Zou, J.-J.; Chen, Q.; Phipps, J.; Zhao, Y.; Qin, X.; Tai, W.; **Ma, S.\***; Tian, J.\* *Matter*, **2025**, *8*, 101948.
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