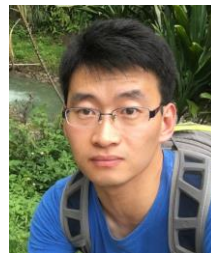


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Education

- Apr. 2010 - Doctor of Science in Chemistry
Mar. 2013 **Hokkaido University**, Japan
- Aug. 2007 - Master of Science in Bionanotechnology
Aug. 2009 **Hanyang University**, South Korea
- Sept. 2003 - Bachelor of Engineering in Chemical Engineering and Technology
Jul. 2007 **Qufu Normal University**, China

Professional Experience

- Jun. 2024 - present **Professor**
Institute of Evolution and Marine Diversity and Department of Marine Bioengineering, Ocean University of China, China
- Apr. 2018 – Jun. 2024 **Professor**
Department of Bioengineering, Ocean University of China, China
- May 2018 - Mar. 2021 **Visiting Scientist**
Bioengineering Laboratory, RIKEN, Japan
- Apr. 2017- Mar. 2018 **Foreign Research Fellow** with Professor Mizuo MAEDA
Bioengineering Laboratory, RIKEN, Japan
- Apr. 2014 - Mar. 2017 **Postdoctoral Fellow** with Professor Mizuo MAEDA
Bioengineering Laboratory, RIKEN, Japan
- Apr. 2013 - Mar 2014 **JSPS Postdoctoral Fellow (PD)** with Professor Yadong YIN
Department of Chemistry, University of California, Riverside, USA
- Apr. 2012 - Mar 2013 **JSPS Research Fellow (DC2)** with Professor Kuniharu IJIRO
Graduate School of Chemical Science and Engineering, Hokkaido University, Japan
- Sep. 2012 - Mar. 2013 **Research Assistant** with Professor Lingxin Chen
Yantai Institute for Coastal Zone Research, Chinese Academy of Sciences, China

Professional Service

Member of the Council
(2021-present)

**Coastal Zone Sustainable Development Branch,
Chinese Society for Oceanology and Limnology**

Youth Editorial Board Member
(2025-present)

Nano-Micro Letters

Selected Honors and Awards

- 2024 Supervisor for Excellent PhD Student Achievement, Ocean University of China
- 2022 Materials and Devices Joint Research Award, Japan Network Joint Research Center for Materials and Devices
- 2022 Young Scientist Leadership for Innovative Research Development of Universities in Shandong Province, China
- 2019 Outstanding Supervisor of Bachelor's Thesis, Ocean University of China
- 2018 Young Elite Scientist Sponsorship, Shandong Provincial Association for Science and Technology, China
- 2017 RIKEN Incentive Research Award, RIKEN
- 2017 Special Postdoctoral Program (SPDR) Fellowship, RIKEN
- 2012-2014 JSPS Research Fellowship, Japan Society for the Promotion of Science
- 2012 Chinese Government Award for Outstanding Self-Financed Students Abroad, China Scholarship Council
- 2010-2012 Special Grant Program Fellowship for International Students, Hokkaido University
- 2008 "BK21" Scholarship, Korean Ministry of Education, Science and Technology

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2. Q. Zhang, M. Lu, R. Ou, H. Lin, G. Xuan*, X. Wang, X. Xu, W. Zhang, **G. Wang***. Nanodot-Inspired Precise Bacterial Gene Suppression in a Smart Hydrogel Bandage for Underwater Wound Healing. *Advanced Science* 2025, 2415169 (DOI: 10.1002/advs.202415169)
3. Q. Zhang, X. Leng, L. Peng, H. Lin, G. Xuan*, W. Zhang, H. Mitomo, K. Ijro, **G. Wang***. Streamlining Bacterial Gene Regulation via Nucleic Acid Delivery with Gold Nanoclusters. *Small* 2025, 2411723 (DOI: 10.1002/smll.202411723)
4. N. Liu, Y. Ji, F. Tang, J. Fu, R. Wang, Z. Zhang, L. Chen, **G. Wang***. Flash Elimination of Nano-/Microplastics from Complex Matrices with Record Efficiency and Sustainability. *Chemical Engineering Journal* 2025, 163238 (DOI: 10.1016/j.cej.2025.163238)
5. C. Tan, M. Lu, T. Zhou, Z. Fang, J. Zhou, X.-F. Wang*, **G. Wang***, Y.-W. Lin*, J. Rocha*. Improved Pleiotropic Antibacterial Activity of Ag(I)-Thiolate Coordination Polymers via Iodide Encapsulation in Multinuclear Silver. *Materials Today Bio* 2025, 101673 (DOI: 10.1016/j.mtbio.2025.101673)
6. F. Liu, **G. Wang***. OligoA-Tailed DNA Densely Functionalizes Gold Nanoparticles and Nanorods in Minutes without Thiol-Modification: Unlocking Cross-Disciplinary Applications. *Biomaterials Science* 2025, 13, 2503-2513 (DOI: 10.1039/D5BM00022J)
7. X. Wang, H. Ding, Y. Sun, Y. Ma, **G. Wang**, J. Chen, J. Choo*, L. Chen*. CRISPR/HCR-Powered Ratiometric Fluorescence Aptasensor for Ochratoxin A Detection. *Food Chemistry* 2025, 468, 142437. (DOI: 10.1016/j.foodchem.2024.142437)

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8. H. Yin, Q. Zhang, S. Hu, X. Sun, L. Peng, H. Zhao, Q. Kong*, H. Mitomo*, Y. Matsuo, K. Ijro, **G. Wang***, Hierarchical Au Nanoflowers Formed in an Ionic Liquid/Water System for Bacterial Inhibition. *ACS Applied Nano Materials* 2024, 7, 16998-17008.

9. L. Wang, Z. Wang, F. Liu, X. Zhang, J. Huang*, **G. Wang***, Programmable Plasmonic Hydrogel Thermometers Actuated by DNA Breathing. *Advanced Materials Technologies* 2024, 2400243.
10. X. Zhang, Y. Tian, Y. Shi, J. Liu, C. Zhao, C.-C. Chang, T. Takarada, M. Maeda, **G. Wang***, Naked-Eye LAMP Assay of M. Tuberculosis in Sputum by In Situ Au Nanoprobe Identification: For Invitro Diagnostics of Tuberculosis. *ACS Infectious Diseases* 2024, 10, 2668-2678. (Front Cover, DOI: 10.1021/acsinfecdis.4c00013)
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12. M. Huang, C. Si, C. Qiu*, **G. Wang***, Microplastics Analysis: From Qualitative to Quantitative. *Environmental Science: Advances* 2024, 3, 1652-1668. (Front Cover, Invited contribution, DOI: 10.1039/d4va00244j)
13. Q. Zhang, J. Fu, H. Lin, G. Xuan, W. Zhang, L. Chen, **G. Wang***. Shining Light on Carbon Dots: Toward Enhanced Antibacterial Activity for Biofilm Disruption. *Biotechnology Journal* 2024, 19: 2400156. (DOI: 10.1002/biot.202400156)
14. Y. Shi, S. Nakamura, H. Mitomo, Y. Yonamine, **G. Wang**, K. Ijro. Plasmonic Circular Dichroism-Based Metal Ion Detection Using Gold-Nanorod-DNA complexes. *Chemical Communications* 2024, 60, 11794-11797. (DOI: 10.1039/d4cc04017a)

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17. J. Fu, N. Liu, Y. Peng, **G. Wang***, X. Wang, Q. Wang, M. Lv, L. Chen*. An Ultra-Light Sustainable Sponge for Elimination of Microplastics and Nanoplastics. *Journal of Hazardous Materials* 2023, 456, 131685 (DOI: 10.1016/j.jhazmat.2023.131685; Highlighted in Hakai Magazine: <https://hakaimagazine.com/news/sponging-up-plastic-pollution/>)

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20. F. Liu, H. Wu, Q. Chen, J. Gao, **G. Wang***. Demonstration of a Magic Reaction: Accelerating DNA Functionalization of Gold Nanoparticles by Freezing. *Journal of Chemical Education* 2023, 100, 2009–2014 (Front Cover, DOI: 10.1021/acs.jchemed.3c00022)
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2020

42. Y. Shi, Q. Li, Y. Zhang, **G. Wang***, Y. Matsuo, X. Liang, T. Takarada, K. Ijiro, M. Maeda. Hierarchical Growth of Au Nanograss with Intense Built-In Hotspots for Plasmonic Applications. *Journal of Materials Chemistry C* 2020, 8, 16073-16082 (Peer-Reviewed, DOI: 10.1039/D0TC04294C)
43. W. Diao, **G. Wang***, L. Wang, L. Zhang, S. Ding, T. Takarada, M. Maeda, X. Liang. Opposite Effects of Flexible Single-Stranded DNA Regions and Rigid Loops in DNAzyme on Colloidal Nanoparticle Stability for "Turn-On" Plasmonic Detection of Lead Ions. *ACS Applied Bio Materials* 2020, 3, 7003-7010. (DOI: 10.1021/acsabm.0c00873)
44. L. Wang, **G. Wang***, Y. Shi, L. Zhang, R. An, T. Takarada, M. Maeda, X. Liang. Accelerated Non-Crosslinking Assembly of DNA-Functionalized Nanoparticles in Alcoholic Solvents: Towards Application in Identification of Clear Liquors. *Analyst* 2020, 145, 3229-3235. (Inside Front Cover, DOI: 10.1039/D0AN00029A)
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2019

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47. L. Zhang, C. Zhao, Y. Zhang, L. Wang, **G. Wang***, N. Kanayama, T. Takarada,* M. Maeda, X. Liang. Chemically Fuled Plasmon Switching of Gold Nanorods by Single Base Pairing of Surface-Grafted DNA. *Langmuir* 2019, 35, 11710-11716. (Supplementary Cover, DOI: 10.1021/acs.langmuir.9b01537)
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1. A method for the separation and identification of microplastics in matrices based on olive oil emulsions
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2. A Carbon Dot Delivery System for Exogenous Nucleic Acid Delivery into Bacteria and Its Gene Interference Applications
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4. A Preparation Method for Food-Borne Ionic Liquid-Based Gold Nanoflowers as Antibacterial Agents
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6. A Colorimetric Sensor and Detection System for Mycotoxins in Food and Its Application
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