

CONTACT INFORMATION	Department of Civil & Environmental Engineering The George Washington University Science and Engineering Hall 800 22nd St NW Washington, DC, 20052	<i>E-mail:</i> lmql23@gwu.edu <i>Tel:</i> +1 (571)274-9402 <i>MengqiaoLi.github.io</i> <i>Google Scholar Profile</i> <i>ORCID:</i> 0000-0002-0567-9716
EDUCATION	The George Washington University Department of Civil and Environmental Engineering Ph.D. in Environmental Engineering Research Focus: Transformation of engineered nanomaterials in aquatic systems and rational design of novel catalysts in nanoscales 01/2019 – present University of Science and Technology of China Hefei National Laboratory for Physical Sciences at the Microscale M.Sc. in Chemistry Thesis: Designing TiO ₂ -supported PdPt alloys for photocatalytic water-donating selective alkyne semihydrogenation 09/2015 – 11/2018 University of Science and Technology of China School of the Gifted Young B.Sc. in Material Physics Thesis : Photocatalytic properties of ultrathin two-dimensional nanosheets of GaSe _{1-x} S _x 09/2011 – 06/2015	Professor Danmeng Shuai Professor Yujie Xiong Professor Yi Xie
PUBLICATIONS	<ul style="list-style-type: none"> • M. Li, Q. Zheng, D. P. Durkin, H. Chen*, D. Shuai*, Achieving continuous solar-driven photocatalytic production of Hydrogen Peroxide <i>via</i> chlorine-doped graphitic carbon nitride. On submission • M. Li, H. Shen, T. Diba, M. Zhang, J. M. Zara, N. Altan-Bonnet, D. Shuai*, Toxicity evaluation of fresh and aged graphitic carbon nitride: Transformation processes make a difference. On submission • M. Zhang, S. Ghosh, M. Li, N. Altan-Bonnet*, D. Shuai*, Emerging pathogens of vesicle-cloaked virus clusters resist disinfection. On submission • H. Shen, A. J. Gulbrandson, S. Park, M. Li, D. Shuai, P. C. Trulove, D. P. Durkin*, Antimicrobial biocomposites fiber-welded with lignocellulose containing silver nanoparticles. <i>Macromol. Mater. Eng.</i>, 2022, 2100872. • M. Li, D. Liu, X. Chen, Z. Yin, H. Shen, A. Aiello, K. R. McKenzie Jr, N. Jiang, X. Li, M. J. Wagner, D. P. Durkin*, H. Chen*, D. Shuai*, Radical-driven decomposition of graphitic carbon nitride nanosheets: light exposure matters. <i>Environ. Sci. Technol.</i>, 2021, 55: 12414. • C. Zhang, Y. Li*, M. Li, D. Shuai, X. Zhou, X. Xiong, C. Wang*, Q. Hu, Continuous photocatalysis <i>via</i> photo-charging and dark-discharging for sustainable environmental remediation: Performance, mechanism, and influencing factors. <i>J. Hazard. Mater.</i>, 2021, 420: 126607. • Z. Zhou, M. Li, C. Kuai, Y. Zhang, V. F. Smith, F. Lin, A. Aiello, D. P. Durkin*, H. Chen*, D. Shuai*, Fe-based single-atom catalysis for oxidizing contaminants of emerging concern by activating peroxides. <i>J. Hazard. Mater.</i>, 2021, 418: 126294. • Y. Feng, L. Tao, Y. He, Q. Jin, C. Kuai, Y. Zheng, M. Li, Q. Hou, Z. Zheng, F. Lin*, and H. Huang*, Chemical-enzymatic fractionation to unlock the potential of biomass-derived carbon materials for sodium ion batteries. <i>J. Mater. Chem. A</i>, 2019, 7: 26954. • M. Li, H. Huang, J. Low, C. Gao, R. Long*, Y. Xiong*, Recent progress on electrocatalyst and photocatalyst design for nitrogen reduction. <i>Small Methods</i>, 2019, 3: 1800388. • M. Li, N. Zhang, R. Long*, W. Ye, C. Wang, Y. Xiong*, PdPt alloy nanocatalysts supported on TiO₂: maneuvering metal-Hydrogen interactions for light-driven and water-donating selective alkyne semihydrogenation. <i>Small</i>, 2017, 13: 1604173. 	

- N. Zhang, X. Li, Y. Liu, R. Long, **M. Li**, S. Chen, Z. Qi, C. Wang, L. Song, J. Jiang, Y. Xiong*, Defective tungsten oxide hydrate nanosheets for boosting aerobic coupling of amines: synergistic catalysis by oxygen vacancies and Brønsted acid sites. *Small*, **2017**, 13: 1701354.

* Corresponding authors

|| Equal contribution

PATENT

- Y. Xiong **M. Li**, N. Zhang, R. Long, Methods of light-driven and water-donating selective alkyne semihydrogenation. CN 106905113 B *Small*, **2017**, 13: 1604173.

HONORS AND AWARDS

- C. Ellen Gontter Environmental Chemistry Award 2021
- SNO (Sustainable Nanotechnology Organization) Student Award 2021
- ACS-CSW (Chemical Society of Washington) Student Travel Award 2021
- Graduate Research Assistantship 2019 – 2021
- Stipend Fellowship 2019 – 2021
- National Scholarship for Graduate Students (top 5%) 2017
- First-class Academic Scholarship 2015 – 2017
- HFNL Fellowship 2015 – 2017
- 2011 Excellent New Student Award 2011

CONFERENCE PRESENTATIONS

- 2021 SNO (Sustainable Nanotechnology Organization) Conference **M. Li**, D. Liu, X. Chen, Z. Yin, H. Shen, A. Aiello, K. R. McKenzie Jr, N. Jiang, X. Li, M. J. Wagner, D. P. Durkin, H. Chen, D. Shuai, *Insight into the role of light exposure in radical-driven decomposition of graphitic carbon nitride* **Poster**
- 2021 ACS Fall C. Ellen Gontter Graduate Student Award Symposium (**Invited**), **M. Li**, D. Liu, X. Chen, Z. Yin, H. Shen, A. Aiello, K. R. McKenzie Jr, N. Jiang, X. Li, M. J. Wagner, D. P. Durkin, H. Chen, D. Shuai, *Radical-driven decomposition of graphitic carbon nitride: light exposure matters* **Oral**
- 95th ACS Colloid and Surface Science Symposium, **M. Li**, D. Shuai, *Dilemma of activity and stability: Intrinsic photoreactivity promotes 2D nanomaterial decomposition under radical attack* **Oral**
- 2021 ACS Spring, **M. Li**, D. Liu, X. Chen, Z. Yin, H. Shen, A. Aiello, K. R. McKenzie Jr, N. Jiang, X. Li, M. J. Wagner, D. P. Durkin, H. Chen, D. Shuai, *Radical-driven decomposition of graphitic carbon nitride: light exposure matters* **Oral**
- 2021 ACS Spring, Z. Zhou, **M. Li**, C. Kuai, Y. Zhang, V. F. Smith, F. Lin, A. Aiello, D. P. Durkin, H. Chen, D. Shuai, *Single-Atom Catalysis for Oxidizing Contaminants of Emerging Concern via High-Valent Fe Species* **Poster**
- 2018 CCS in Hangzhou, **M. Li**, Y. Xiong, *PdPt alloy nanocatalysts supported on TiO₂: maneuvering metal-hydrogen interactions for light-driven and water-donating selective alkyne semihydrogenation* **Poster**

RESEARCH EXPERIENCE	GRADUATE RESEARCH ASSISTANT, THE GEORGE WASHINGTON UNIVERSITY		
	Supervisor: Professor Danmeng Shuai	01/2019 – present	
	<ul style="list-style-type: none">• Fate and transformation of graphitic carbon nitride nanosheets in aquatic environments• Toxicity study of fresh and aged graphitic carbon nitride nanosheets• Applications of single-atom catalysts in environmental remediation• Fabrication of bioactive membranes for indoor air purification		
	GRADUATE RESEARCH ASSISTANT, UNIVERSITY OF SCIENCE AND TECHNOLOGY OF CHINA		
	Supervisor: Professor Yujie Xiong	09/2015 – 11/2018	
	<ul style="list-style-type: none">• Photocatalytic CO₂ conversion by controlled hierarchical nanostructures• Photocatalytic hydrogen transfer from water for selective alkyne semihydrogenation with the TiO₂-Pd_xPt_{1-x} hybrid structures• Catalytic properties of defective WO₃·H₂O nanosheets for aerobic couplings reactions		
	UNDERGRADUATE RESEARCH, UNIVERSITY OF SCIENCE AND TECHNOLOGY OF CHINA		
	Supervisor: Professor Yi Xie & Professor Xiaodong Zhang	09/2013 – 06/2015	
	<ul style="list-style-type: none">• Photocatalytic water splitting through ultrathin two-dimensional nanosheets of GaSe_{1-x}S_x• National training program of innovation and entrepreneurship for undergraduates: photothermal properties of ultrathin two-dimensional nanosheets of transition metal chalcogenides		
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TEACHING EXPERIENCE	<ul style="list-style-type: none">• Teaching assistant for Environmental Engineering I (CE 3520)• Guest Lecturer: Introduction to membrane filtration and membrane reactors• Teaching assistant for Principles of Environmental Engineering (CE 6503)• Guest Lecturer: Introduction to photocatalysts and associated applications• Assisting in Environmental Engineering Laboratory• Assisting in Environmental Engineering I: Water Resources and Water Quality (CE 3520)• In-home and online tutoring for high school students	<ul style="list-style-type: none">2022 Spring2021 Fall2021 Fall2021 Spring2021 Spring2020 Spring2014 – 2018	
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	PROFESSIONAL SERVICE	JOURNAL REVIEWER	
		<ul style="list-style-type: none">• Journal of Hazardous Materials• Journal of Controlled Release• RSC Advances• Ecotoxicology and Environmental Safety• Environmental Nanotechnology, Monitoring & Management• Materials Letters• Chinese Chemical Letters• Chemical Journal of Chinese Universities	
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	CHARACTERIZATION SKILLS	<ul style="list-style-type: none">• Transmission Electron Microscopy• Scanning Electron Microscopy• Confocal Laser Scanning Microscopy	
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