Curriculum Vitae

NGUYEN THI HIEN, Ph.D in Energy and Environmental Engineering

1. PERSONAL INFORMATION

Full name : **NGUYEN THI HIEN**

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2. JOB & EDUCATION

- ✧ Lecturer at Faculty of Environment and Labour Safety, Ton Duc Thang University, Ho Chi Minh city, Viet Nam (current position)
- ✧ Postdoctoral researcher at Sejong University, Seoul, South Korea (2021 – 2022)
- ✧ PhD in Energy and Environmental Engineering at Korea Institute of Science and Technology (KIST school), University of Science and Technology (UST), Seoul, South Korea (2021)
- ✧ Master of Science in Environmental Engineering at Pusan National University, Busan, South Korea (2016)
- ✧ Bachelor of Environmental Engineering at Vietnam National University Ho Chi Minh city - Ho Chi Minh City University of Technology (HCMUT), Vietnam (2013)

3. RESEARCH SKILLS

- TOC, LC-OCD, IC, FCM, qPCR, HPLC, NGS

4. PROJECTS

- Đánh giá sự ảnh hưởng của hệ thống xử lý nước thải đô thị lên cộng đồng vi sinh vật bám dính trên hạt vi nhựa, vai trò: Chủ nhiệm.
- Spatial organization of microbial communities linked to plastic debris in the Saigon River, Vietnam, Principal Investigator.

5. PUBLICATION

✧ PAPERS

- **Nguyen, H. T.,** Kim, Y., Choi, J.-W., Cho, K., Jeong, S., Assimilable organic carbon removal strategy for aquifer storage and recovery applications, Environmental Research, 2020, 191: 110033. https://doi.org/10.1016/j.envres.2020.110033
- **Nguyen, H. T.,** Kim, Y., Choi, J.-W., Jeong, S., Cho, K., Soil microbial communities-mediated bioattenuation in simulated aquifer storage and recovery (ASR) condition: Long-term study, Environmental Research, 2021, 197: 111069. https://doi.org/10.1016/j.envres.2021.111069
- **Nguyen, H. T.,** Cho, K., Jang, A., Jeong, S., Cost analysis and scheduling of the desalination vessel using reverse osmosis technology, Membrane and Water Treatment, 2021, 12.4: 177-185. https://doi.org/10.12989/mwt.2021.12.4.177
- **Nguyen, H. T.,** Adil, S., Cho, K., Jeong, S., Kim, E.-J., Improvement of carbamazepine removal through biodegradation coupled with peroxymonosulfate-based Fenton oxidation, Journal of Environmental Chemical Engineering, 2022, 10.4: 108150. https://doi.org/10.1016/j.jece.2022.108150
- Choi, W., **Nguyen, H. T.,** Kim, E.-J., Cho, K., Investigation of microplastic biofilm communities originated from freshwater, Journal of Korean Society of Water and Wastewater, 2022, 36.2: 97-106.
- **Nguyen, H. T.,** Choi, W., Kim, E-J., Cho, K., Microbial community niches on microplastics and prioritized environmental factors under various urban riverine conditions, Science of The Total Environment, 2022, 157781. https://doi.org/10.1016/j.scitotenv.2022.157781
- **Nguyen, H. T.,** Lee, M, Y., Hong, J, K., Hong, S., Chen, M., Jin, H., Climate warming-driven changes in the flux of dissolved organic matter and its effects on bacterial communities in the Arctic Ocean: A review, Frontiers in Marine Science, 2022, 1905. https://doi.org/10.3389/fmars.2022.968583
- Truong, H., B., Bui, T. H., Lee, Y-I., **Nguyen, H. T.**, Cho, Y., Jin, H., Magnetic visible-light activated photocatalyst CuFe2O4/Bi2WO6/mpg-C3N4 for the treatment of natural organic matter, Chemical Engineering journal, 2022, 139777. https://doi.org/10.1016/j.cej.2022.139777
- **Nguyen, H. T.,** Lee, Y.K., Kwon, J-H., Jin, H., Microplastic biofilms in water treatment systems: Fate and risks of pathogenic bacteria, antibiotic-resistant bacteria, and antibiotic resistance genes, Science of The Total Environment, 2023, 164523. https://doi.org/10.1016/j.scitotenv.2023.164523
- Pham, D. A., Trinh, T. P. D., Nguyen, A. V. H., Tran, L. M., Ha, B. N. K., **Nguyen, H. T.,** Tran, H. T. T., Trinh, B-S., Typical pathogens on plastic debris in downstream of Sai Gon and Dong Nai rivers: an initial observation. VNUHCM Journal of Earth Science and Environment, 2023, 7.1: 659-668. https://doi.org/10.32508/stdjsee.v7i1.729

- **Nguyen, H. T**., Choi, W., Jeong, S., Bae, H., Oh, S., & Cho, K. (2024). Comprehensive assessment of chlorination disinfection on microplastic-associated biofilms. Journal of Hazardous Materials, 134751. https://doi.org/10.1016/j.jhazmat.2024.134751

✧ **PATENTS**

- Jeong, S., Choi, J.-W., Cho, K., **Nguyen, H.T.,** Kim, Y., Jang, A., Lee, S., Lee, S., Aquifer storage and recovery system including aerobic reactor using microbes from underground aquifer, United States patent, Patent No.: US 10745306 B2, 18 Aug 2020.
- Jeong, S., Cho, K., Choi, J.-W., Hong, S. W., Lee, S., Kim, E.-J., Chung, J. S., **Nguyen, H.T.,** Kim, Y., Aquifer storage and recovery system using natural coagulant, United States patent, Patent No.: US 11142472 B2, 12 Oct 2021.
- Cho, K., Kim, E.-J., **Nguyen, H.T.,** 윤현욱, Microplastic biofilm formation device in nature (성상별 미세플라스틱 생물막 형성장치), Republic of Korea patent, Patent No.: 제 10-2336101 호, 2 Dec 2021.

6. CONFERENCES

- Oral Presentation (lead author, presenter), "Evaluation of simultaneous nitrification, denitrification and carbon removal by using flat-panel air-cathode microbial fuel cells", 2015, the 8th advanced engineering technology for environment and energy, Dalian University, China.
- Poster (lead author, presenter), "Simultaneous Nitrification, Denitrification and carbon removal in Flat-Panel air-cathode microbial fuel cells", 2015, Busan Global Water Forum, Busan, South Korea.
- Oral Presentation (lead author, presenter), "Simultaneous Nitrification, Denitrification and carbon removal in Flat-Panel air-cathode microbial fuel cells", 2015, Korean Society of Environmental Engineers, Busan, South Korea.
- Oral presentation (lead author, presenter), Simulated assimilable organic carbon removal using Pseudomonas jinjuensis species for aquifer storage and recovery application, 2018, Korean Society of Environmental Engineers, Deajeon, South Korea.
- Oral presentation (lead author, presenter), Assimilable organic carbon removal in simulated aquifer storage and recovery system, 2019, Korean Society of Environmental Engineers, Busan, South Korea.
- Oral presentation (lead author, presenter), Impacts of chlorine treatment on bacteria in microplastic biofilms, International Conference on Environmental Technology and Innovation (ICETI), 29-30 Nov 2023, Ho Chi Minh city, Viet Nam.