Curriculum Vitae

NGOC XUAN DAT MAI

Center for Innovative Materials & Architectures (INOMAR), VNU-HCM

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EDUCATION

Gachon University, South Korea, 2017

Master of Engineering in Dept. of Nano Science and Technology (all courses are taught in English)

Major: Chemical and Biological Engineering

Supervisor: Jaehuyn Hur

HCMC University of Science, Vietnam National University, Vietnam, 2014

BSc of Biotechnology in Dept. of Biology

Major: Biomaterials

Supervisor: Dai Hue Ngan, Nguyen Thi Bach Hue

WORKING EXPERIENCES

Gachon University, South Korea Mar 2015 – Mar 2017

Thesis: Synthesis and characterizations of smart, recyclable and reformable hydrogel-based photocatalysts.

(1) Soft Functional Nanomaterial laboratory

HCMC University of Science, Vietnam National University Jan 2014 – July 2014

Thesis: Evaluation physical properties and antibacterial activities of PVA – Chitosan blend film.

(1) Physical Organic Chemistry laboratory, Faculty of Chemistry.

(2) Research Center for Bioactive Natural Products.

RESEARCH EXPERIENCES

Photocatalyst for water treatment

(1) Synthesis and characterizations of TiO_2/agarose hydrogel-based photocatalyst

Disperse TiO_2 NPs in agarose matrix solution, followed by heating, and characterize samples using FT-IT, SEM, TGA, and BET. UV lamp was used to check photocatalytic activity. Furthermore, based on the thermal-reversibility, some other properties of hybrid sample were evaluated: recycling, reconstruction.

(2) Synthesis and characterizations of Prussian blue/chitosan hybrid membrane applied on solar photo-Fenton catalytic

Synthesis Prussian Blue NPs and disperse in chitosan solution to prepare hybrid membrane. Initial NPs and hybrid membranes were characterized by FT-IR, BET, XRD, and SEM. UV lamp and Xenon lamp were used to evaluate the degradation activity.

Instrumentation expertise

(1) UV lamp and Xenon lamp in photocatalytic experiments

(2) Teflon autoclave reactor (hydrothermal synthesis)

(3) Probe sonicator

(4) FT-IR and UV-vis operation

KEY SKILLS

Communication skills	*Computer skills*
Native Vietnamese speaker	MS Word, MS Excel and PowerPoint
Intermediate in English (IELTS 6.0)	Origin and Illustrator

RESEARCH PUBLICATIONS *(∗ co-first author)*

1. **Ngoc Xuan Dat Mai**, Duckshin Park ∗, Juyeon Yoon, Jaehyun Hur. Comparative study of hydrogel-based recyclable photocatalysts. *Journal of Nanoscience and Nanotechnology,* **2018***,* 18 (2), 1361-1364.

2. **Ngoc Xuan Dat Mai**, Juyeon Yoon ∗, Ji Hyeon Kim, Il Tae Kim, Hyung Bin Son, Joonwon Bae, Jaehyun Hur. Hybrid hydrogel and aerogel membranes based on chitosan/Prussian blue for photo-Fenton-based wastewater treatment using sunlight. *Science of Advanced Materials*, **2017**, 9 (9), 1484-1487.

3. **Ngoc Xuan Dat Mai**, Joonwon Bae ∗, Il Tae Kim, Sung Hoon Park, Go-Woon Lee, Ji Hyeon Kim, Daeho Lee, Hyung Bin Son, Young-Chul Lee, Jaehyun Hur. A recyclable, recoverable, and reformable hydrogel-based smart photocatalyst. *Environ. Sci.: Nano*, **2017**, 4, 955-966.

POSTER PRESENTATIONS

1. **Ngoc Xuan Dat Mai,** Jaehyun Hur. Comparison of solar photo-Fenton catalytic activity of hydrogel- and aerogel-based chitosan/Prussian blue as highly recyclable feature for water treatment. *Materials Challenges in Alternative and Renewable Energy (MCARE 2017)*, LOTTE Hotel, Jeju Island, Korea, Feb 20-24, 2017.

2. **Ngoc Xuan Dat Mai**, Duckshin Park, Juyeon Yoon, Jaehyun Hur. Comparative study of hydrogel-based recyclable photocatalysts. *14th International Conference on Nano Science and Nano Technology (ICNST-2016)*, Mokpo National University, Muan, Korea, Nov 10-11, 2016.

3. **Ngoc Xuan Dat Mai**, Jaehyun Hur. Agarose-based – A novel photocatalytic for recyclable wastewater treatment. *2016 Fall General Meeting and Conference (International Symposium)*, KiChE, DCC, Daejeon, Korea, Oct 19-24, 2016.

AWARDS AND HONORS

President Scholarship of Gachon University Academic Excellent Student.