HYUNKI YEO

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INTEREST

Organic Chemistry, Polymer Synthesis, Characterization, and Application

EDUCATION

Purdue University **West Lafayette, IN, USA**
Ph.D.: Chemical Engineering *Aug. 2020 ~ Present*
Korea University **Seoul, Korea**
Master of Engineering: Chemical and Biological Engineering *Mar. 2018 ~ Feb. 2020*
Thesis: "Photoinduced Proton Transfer Polymerization: Practical Synthetic Tool for Soft Lithography Application"
Bachelor of Engineering: Chemical and Biological Engineering *Mar. 2012 ~ Feb. 2018*

PUBLICATION

1. **Yeo, H**.; Khan, A., Photoinduced Proton-Transfer Polymerization: A Practical Synthetic Tool for Soft Lithography Applications. *Journal of the American Chemical Society,* **2020**, 142 (7), 3479-3488
2. Hwang, J.; Lee, D. G.; **Yeo, H**.; Rao, J.; Zhu, Z.; Shin, J.; Jeong, K.; Kim, S.; Jung, H. W.; Khan, A., Proton Transfer Hydrogels: Versatility and Applications. *Journal of the American Chemical Society* **2018,** *140* (21), 6700-6709
3. **Hyun Ki Yeo.** Research Papers : Study on the Efficient White Organic Light-Emitting Diodes using the Material of Binaphthyl Group. *Journal of the Korean Oil Chemists` Society* **2012**, *29* (3), 459-465

HONORS AND AWARDS

Science Prodigy Scholarship, Korea University *Spring, 2012*
Veritas Program Scholarship, Korea University *Fall, 2017*
Research Assistant Scholarship (100%), Korea University *Spring, 2018 / Fall, 2019*
Teaching Assistant Scholarship (100%), Korea University *Fall, 2018 / Spring, 2019*
BK21Plus National Scholarship *Spring, Fall, 2018 / Spring, 2019*
Graduate Staff Assistantship, Purdue University *Spring, 2021 / Fall, 2020*

EXPERIENCE

RESEARCH

Purdue University **West Lafayette, USA**
Research Assistant (Advisor: Professor Bryan W. Boudouris) *Feb. 2020 ~ Current*
Nano-Structured Organic Materials Research Lab, Korea University **Seoul, Korea**
Undergraduate & Master course Researcher (Advisor: Professor Joona Bang) *June. 2017 ~ Feb.2020*
Functional Polymer Synthesis Lab, Korea University **Seoul, Korea**
Master course Researcher (Advisor: Professor Anzar Khan) *Mar. 2018 ~ Feb.2020*
Graduate Researcher (Advisor: Professor Anzar Khan) *Mar. 2020 ~ Jul.2020*

PROJECT

Synthesis of Anisotropic Hydrogel Nanoparticles with Uniform Aspect Ratio from Functional Block Copolymers
NRF-2015R1D1A1A01057796, National Research Foundation of Korea (MSIP) *June. 2017 ~ Oct. 2018*
Design of Smart Nano capsules for Colon-Specific Drug Delivery Applications
NRF-18R1D1A1B07048527, National Research Foundation of Korea (MSIP) *Mar. 2018 ~ Jul.2020*

TEACHING

Department of Chemical and Biological Engineering, Korea University **Seoul, Korea**
Teaching Assistant *2018 ~ 2020*
Polymer Synthesis (Prof. Anzar Khan) *Spring, 2018*
Polymer Properties (Prof. Jingyi Rao) *Fall, 2018*
Graduate School Seminar (Prof. Sang Hyuk Im, Seung-Ho Yu) *Spring, 2019*
Polymer Properties (Prof. June Huh) *Fall, 2019*

CONFERENCE PRESENTATIONS

Oral Presentation, 2019 Fall Meeting, The Polymer Society of Korea **Jeju, Korea**
Poster Session, 2019 Spring Meeting, The Polymer Society of Korea **Busan, Korea**
Poster Session, 6th International Conference on Multifunctional, Hybrid and Nanomaterials 2019 **Sitges, Spain**
Poster Session, 2018 Fall Meeting, The Polymer Society of Korea **Gyeongju, Korea**
Poster Session, 2018 Spring Meeting, The Polymer Society of Korea **Daejun, Korea**

SKILLS

Equipment: In Chromatography- Gel Permeation (GPC), Liquid (LC), Gas (GC), **In Spectroscopy-** Nuclear Magnetic Resonance (NMR),

Ultraviolet-visible (UV-Vis), Infrared (IR), X-ray photoelectron (XPS), Mass (MS),; **In Microscopy-** Field Emission Scanning Electron(FE-SEM), Transmission Electron (TEM), Atomic Force (AFM), Optic/Fluorescent,; **Others-** Thermo-gravimetric analysis (TGA), Dynamic Light Scattering (DLS), Zeta Potential Analyzer, 96 Well Microplate Reader, etc.
Synthesis: General organic synthesis and purification, Proton Transfer Polymerization, Atom Transfer Radical Polymerization (ATRP), Reversible Addition-Fragmentation Chain Transfer (RAFT) Polymerization, Ring-opening Metathesis Polymerization (ROMP), Anionic Polymerization, etc.
Software: All basic Microsoft Office Programs, Origin, ChemDraw, MestReNova, AutoCAD, Aspen Plus, Gwiddion, etc.

EXTRA-CURRICULAR ACTIVITIES

Republic of Korea Army, Capital Defense Command **Seoul, Korea**
Air Defense Artillery, Sergeant *Aug. 2014 ~ May. 2016*