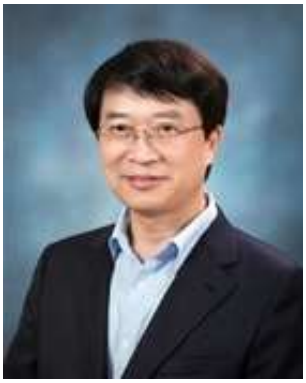
Frontier Chemistry Center
フロンティア化学教育研究センター

講演会

演 題：**My academic life with Polymer Synthesis for 40 years**



講 師：**Prof. Jae-Suk Lee**

School of Materials Science and Engineering,
Gwangju Institute of Science and Technology
(GIST), Korea

日 時：2024 年 6 月 10 日（月）14:30~16:00

場 所：材料・化学棟　中会議室（MC102）

Abstract: My major is polymer synthesis, especially anionic polymerization is main method for polymer synthesis from PhD candidate under Prof. Nakahama at Tokyo Tech for 40 years. However, some methods for polymer synthesis as like radical, condensation, C-C coupling polymerization are used at GIST in Korea, because basic and applied topics were carried out together at my lab. Main basic polymer synthesis was “Founding and utilization of living anionic polymerization of isocyanates”.[1,2] This presentation will highlight the anionic polymerization of isocyanates. Furthermore, the nano materials[3,4] from block copolymers prepared by living anionic polymerization. Some research topics are extended from the anionic polymerization, such as 1D photonic crystal,[5,6] self-emulsion polymerization,[7,8] and Polymerization of TMCP (Two-monomer-connected precursors).[9,10] Additionally, the polymer synthesis of electrolytes for proton and anion exchange membranes, battery materials, and functional nano filter materials.[11-13] Finally, remain research topics in my lab will be presented. Also the future perspective on control of polyisocyanates would be suggested.

References: 1) *J. Am. Chem. Soc.* **2005**, *127*, 4132−4133; 2) *Angew. Chem. Int. Ed.* **2022**, *61*, e202212398; 3) *Adv. Mater.* **2012**, *24,* 385-390; 4) *Adv. Mater.* **2012**, *24*, 1062-1066; 5) *Macromolecules*, **2018**, *51*, 3458-3466; 6) *ACS Applied Materials & Interfaces*, **2022**, *14*, 44753−44761; 7) *Materials Horizons*, **2018**, *5*, 1120-1129; 8) *J. of Polymer Science Part A: Polymer Chemistry*, **2019**, *57*, 1165-1172; 9) *Nature Communications*, **2016**, *7*, 12803; 10) *Chemistry of Materials*, **2020**, *32*, 8606−8618; 11) *ACS Applied Materials & Interfaces*, **2021**, *13*, 531−540; 12) *Macromolecules,* **2018**, *51,* 2293-2301; 13) *ACS Applied Nano Materials*, **2021**, *4*, 2375–2385.

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