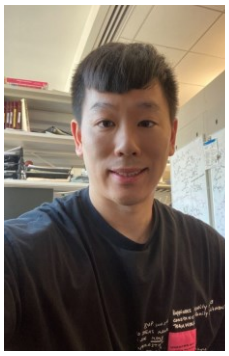
Thursday, February 19 2026 @ 3:30 pm – ASRC 5TH Floor Data Visualization Room



Thiophene *S,S*-dioxides as versatile synthetic building blocks in complex synthesis

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Abstract: The *de novo* synthesis of polysubstituted benzene rings is an attractive strategy that avoids the need for lengthy synthetic manipulations of pre-formed arenes. One approach to such structures involves cascade Diels-Alder / retro-Diels Alder chemistry, where the extrusion of small molecules such as N_2 (from pyridazines) or CO_2 (from pyrones) can drive the cascade. A class of diene that has been largely overlooked to date in such chemistry are thiophene *S,S*-dioxides. Thiophene S,S-dioxides (TDOs), which are dearomatized sulfur heterocycles prepared by oxidation of thiophenes, serve as highly effective substrates for inverse electron-demand Diels-Alder reactions. This seminar will outline my recent efforts to utilize TDOs in target-oriented synthesis, leading to comprehensive syntheses of the illudalane sesquiterpene[1] and Strychnos indole alkaloid families.[2] These investigations prompted the creation of the first asymmetric cycloadditions involving TDOs, employing a chiral auxiliary.

Biography: Kun Ho (Kenny) Park has a background in research that focuses on the development of efficient synthetic route, utilizing newly developed methods with the goal of streamlined synthesis of various biologically active compounds. He completed his undergraduate studies at the University of California at Berkeley, where he earned a B.S. in chemistry, before pursuing a master's degree at Seoul National University. At Seoul National University, he worked in Professor David Yu-Kai Chen's laboratory on the total synthesis of complex alkaloids. Following his master's, he began a DPhil program at the University of Oxford. During his time there, he worked with Professor Edward Anderson on developing a novel diene motif, thiophene-S,S-dioxides, for use in an inverse-electron demand cycloaddition reactions. He is currently working as a postdoctoral researcher at Memorial Sloan Kettering Cancer Center in the lab of Professor Derek S. Tan, focusing on the synthesis of innovative prodrugs for the novel CAR-T platform SEAKER (synthetic enzyme armed killer).

Refreshments will be provided at 3:15 pm in ASRC 5th Floor Data Visualization Room

Join Meeting in-person at CDI 4.352