

# Exploring Guest Loading and Reactivity in Assembled bis-Urea Macrocycles

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Porous organic crystals have applications as nanocontainers for reactions, in sensing, and for molecular separations. The Shimizu group utilizes the columnar assembly of bis-urea macrocycles to afford porous molecular crystals. Herein, we will examine the effect of organizing triphenylamines (TPAs) into the bis-urea macrocyclic building block to give functional materials. Upon activation, these crystals undergo guest exchange in single-crystal-to-single-crystal transformations, which generates a series of isoskeletal host-guest complexes

that can be directly compared. This presentation will examine the loading of guests and probe subsequent reactions of guests within the nanochannels including [2+2] photocycloadditions, oxidations, electron transfer processes, and polymerizations.

Students, meet the speaker after the seminar in a student/postdoc session from 4:45-5:15 pm

Date: Friday, Oct 14, 2022

Time: 3:30-4:30 pm

Location: Clark Hall 112