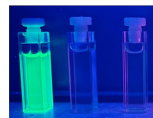
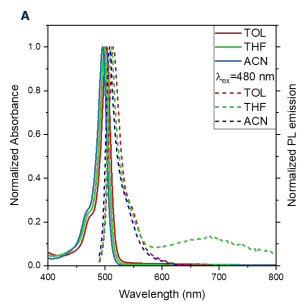
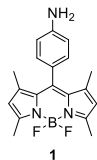


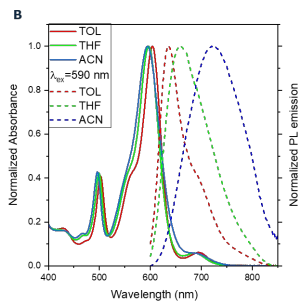
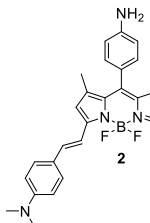
Functionalisation of chiral hemicucurbiturils with fluorescent groups

- ✓ Successfully synthesized two BODIPY derivatives have amino groups as the specific linking sites for functionalization with chiral mixed-HC[8] (Figure 1).
- the absorption bands of dyes **1** and **2** experience a slight blue shift.
- the fluorescence emission of BODIPY dye **2** is strongly influenced by solvent polarity.
- BODIPY dye **2** exhibits a significant Stokes shift, which increases together with solvent polarity.
- The quantum yields of both BODIPY dyes significantly decrease in polar solvents.



Toluene THF ACN

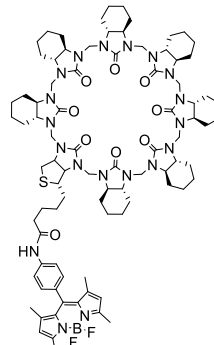
- ✓ Successfully synthesized both enantiopure mixed-HC[8] macrocycles with BODIPY dyes **1** (**1-HC[8]**) and **2** (**2-HC[8]**) and have initially studied the photophysical properties of these conjugates (Figure 2).
- **1-HC[8]** conjugates show no affected by solvent compared to BODIPY dye **1**.
- **2-HC[8]** conjugates exhibit color changes with various solvents and have dual-emission fluorescence from the BODIPY dye moieties, induced by the mixed-HC[8] macrocycle.



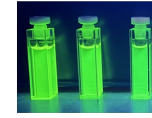
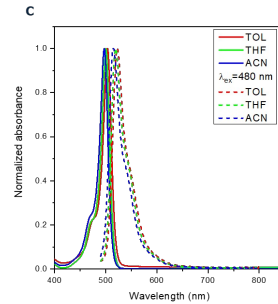
Toluene THF ACN

- ✓ These conjugates will continue to be used to study binding chemistry with various guests and hold potential for developing novel chemosensors and smart materials.
- ✓ The STSM provided me with a valuable opportunity to work and expand my knowledge in constructing new materials, contributing to ongoing research in the field of supramolecular chemistry and chemosensor development.

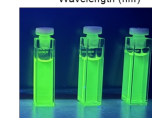
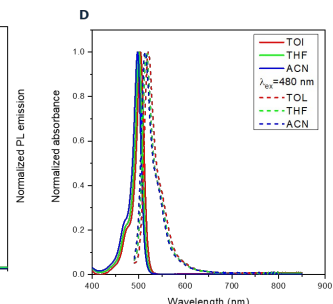
Figure 1. Chemical structures and the normalized absorption and fluorescence spectra of BODIPY dyes **1** (A) and **2** (B) in different solvents.



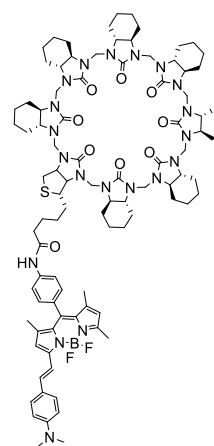
(*S,S*)- and (*R,R*)-**1-HC[8]**



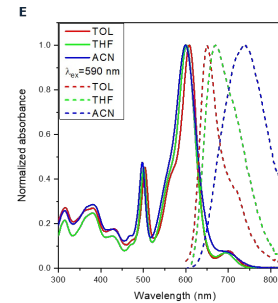
Toluene THF ACN



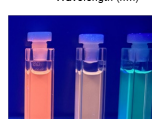
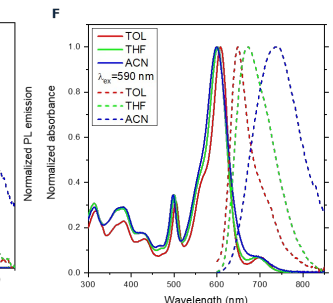
Toluene THF ACN



(*S,S*)- and (*R,R*)-**2-HC[8]**



Toluene THF ACN



Toluene THF ACN

Figure 2. Chemical structures and the normalized absorption and fluorescence spectra of four conjugates: (*S,S*)-**1-HC[8]** (C), (*R,R*)-**1-HC[8]** (D) and (*S,S*)-**2-HC[8]** (E), (*R,R*)-**2-HC[8]** (F) in different solvents.