

Department Seminar
September 25th 2023, 13:00
Lunch Room C303



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**Design and Synthesis of Molecules with
Unique Electronic Function: CPL-Emissive
and π -Extended Helicenes and Radical-
Substituted Molecular Wire**

Helicenes have helically twisted molecular orbitals (MOs) and have attracted attention for their chiroptical properties, but unsubstituted helicene is non-emissive. We designed and synthesized circularly polarized luminescence (CPL)-emissive helicenes with high emission quantum yield and high dissymmetry factor. We also synthesized π -extended helicenes, which show polyene-like electronic structures at the inner rim and the ultrafast decay dynamics attributable to the low-lying conical intersection.

Large enhancement of the single-molecular conductance of a molecular wire through a radical substituent will also be presented.



CHEM Host: Mogens Brøndsted and Bo W. Laursen