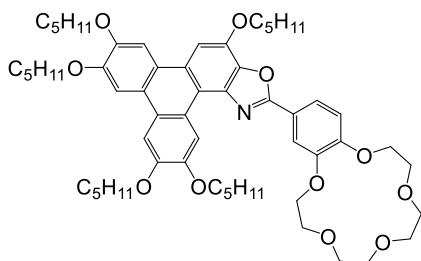


# TpOx-B15C5

TpOx-B15C5 is a UV excitable fluorescent material with a polycyclic aromatic donor-acceptor structure where the triphenoxazole core acts as a donor and the aromatic group on the two position of the oxazole (Benzo-15-crown-5) act as the acceptor group. The push-pull, donor-acceptor, structure facilitates intramolecular charge transfer in the excited state that results in a 187 nm emission Stokes Shift. TpOx-B15C5 is designed for 355 nm excitation with emission at 457 nm with quantum yield of 0.43 and undergoes fluorescent modulation upon binding metal cations in an appended crown ether moiety. TpOx-B15C5 has potential uses in metal cation sensing, fluorescent dye staining, organic electronics and photonics, and imaging applications.

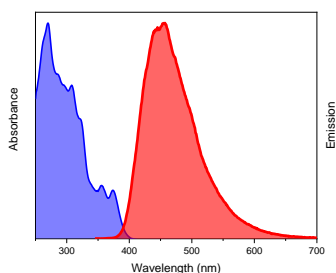
## Chemical Structure



## Chemical Data

- Catalogue Number: 922277
- Other Name: TpOx-B15C5, CT 457 11 074 01 01
- CAS #: 2377209-76-0
- Molecular Formula: C<sub>58</sub>H<sub>79</sub>NO<sub>11</sub>
- Molecular Weight: 966.27

## Absorbance and Emission spectra in Ethyl Acetate



## Photophysical Data

- In Solvent: EtOAc
- Abs  $\lambda_{\text{max}}$  (nm) = 270
- Emis  $\lambda_{\text{max}}$  (nm) = 457
- pSS (nm) = 187
- $\epsilon$  (M<sup>-1</sup> cm<sup>-1</sup>) at Abs  $\lambda_{\text{max}}$  = 86,000
- Quantum Yield ( $\Phi$ ) = 0.43
- Fluorescence Lifetime (ns) = 4.23

## Fluorescence Emission



## Material Data

- Physical State: Crystal Powder
- Appearance (Colour): Pale yellow
- Polymorph crystalline phase: Solid, Discotic Liquid Crystal, Isotropic
- Solubility: DCM, THF > 1 mg /mL, MeCN, DMSO < 1 mg /mL.