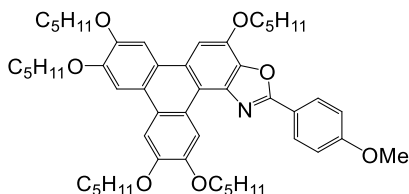


TpOx-Ph-*p*-OMe

TpOx-Ph-*p*-OMe 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 (4-methoxy-phenyl) act as the acceptor group. The push-pull, donor-acceptor, structure facilitates intramolecular charge transfer in the excited state that results in a 170 nm emission Stokes Shift. TpOx-Ph-*p*-OMe is also a photo-conducting Discotic Liquid Crystalline (DLC) material with mesophase transition onset temperature of 115°C. TpOx-Ph-*p*-OMe is designed for 355 nm excitation with emission at 440 nm with quantum yield of 0.4, high thermal, chemical and photostability. TpOx-Ph-*p*-OMe has potential uses in fluorescent dye staining, organic electronics and photonics, and imaging applications.

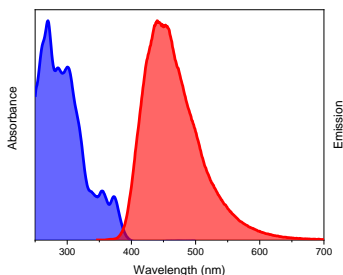
Chemical Structure



Chemical Data

- Catalogue Number: 922293
- Other Name: TpOxPh-*p*-OMe, CT 440 11 039 01 01
- CAS #: 2612025-78-0
- Molecular Formula: C₅₁H₆₇NO₇
- Molecular Weight: 806.10

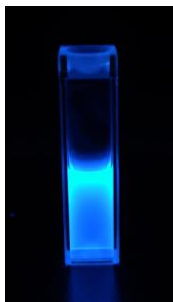
Absorbance and Emission spectra in Ethyl Acetate



Photophysical Data

- In Solvent: EtOAc
- Abs λ_{max} (nm) = 270
- Emis λ_{max} (nm) = 440
- pSS (nm) = 170
- ε (M⁻¹ cm⁻¹) at Abs λ_{max} = 97,000
- Quantum Yield (Φ) = 0.4
- Fluorescence Lifetime (ns) = 4.08

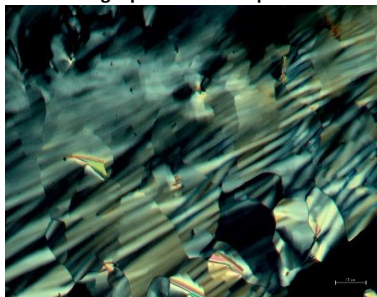
Fluorescence Emission



Material Data

- Physical State: Crystal Powder
- Appearance (Colour): Pale yellow
- Polymorph crystalline phase: Solid, Discotic Liquid Crystal, Isotropic
- Solubility: THF > 1 mg/mL, MeCN < 0.17 mg/mL, DMSO < 0.2 mg/mL, DCM > 1 mg/mL

Polarising Optical Microscope Picture



Phase Transition Data

Phase transition temperature:

- Heating Crys - Col_h – 115°C, Col_h - Iso – 186°C
- Cooling Iso - Col_h – 184°C, Col_h - Crys – 85°C