

New Material tackles one of the biggest barriers to scaling artificial intelligence

Certificate of Analysis

1M Remark: (Locked) Flu-TPA-QCN
a TADF emitter with exceptional second-order optical nonlinearity

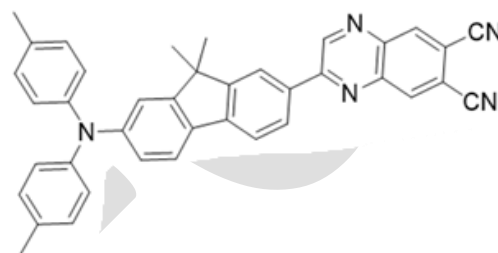
1M Material: Locked TPA-QCN, Flu-TPA-QCN

Chemical Name: 2-(7-(di-p-tolylamino)-9,9-dimethyl-9H-fluoren-2-yl)quinoxaline-6,7-dicarbonitrile

Chemical Formula: $C_{39}H_{29}N_5$

Molecular Weight: 567.6960

Chemical Structure:



Lot No.: YY30099P

Appearance: Purple-red solid

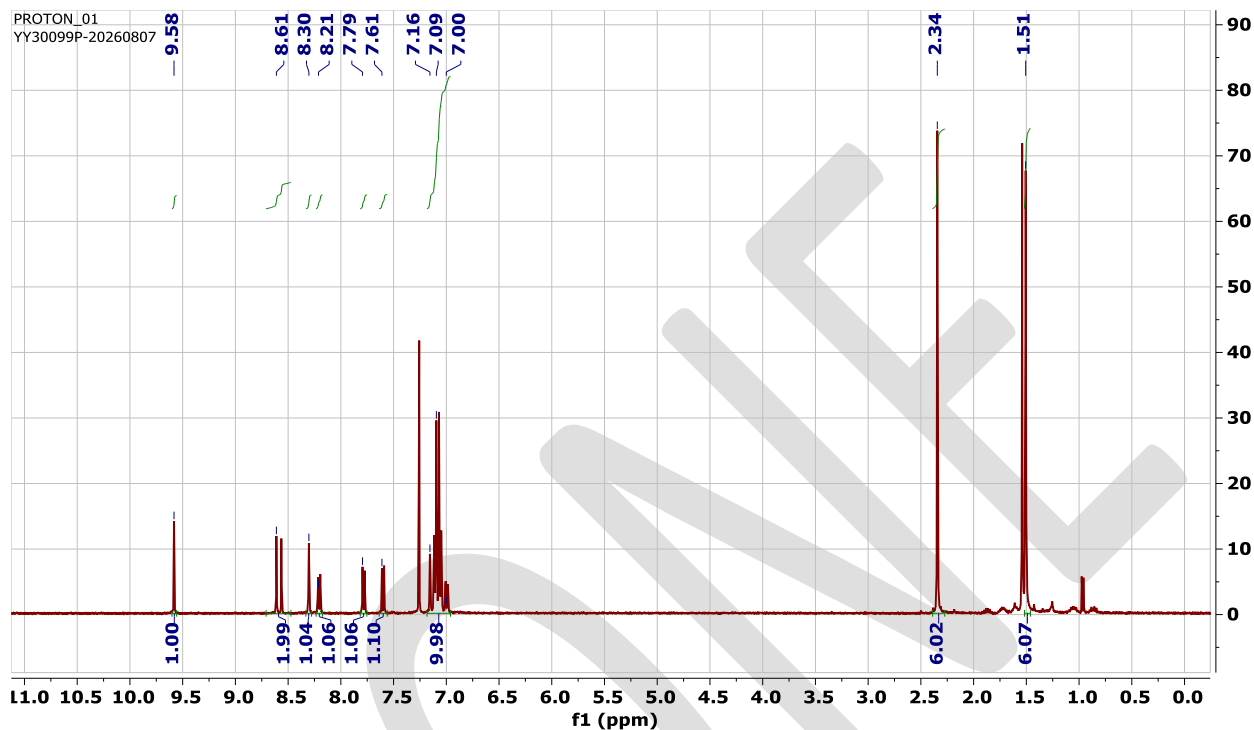
Solubility: Soluble $CHCl_3$, and other selected organic solvents

Purity: 99% (NMR)

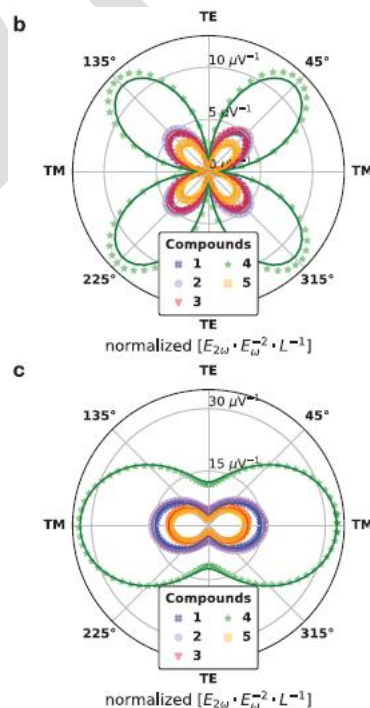
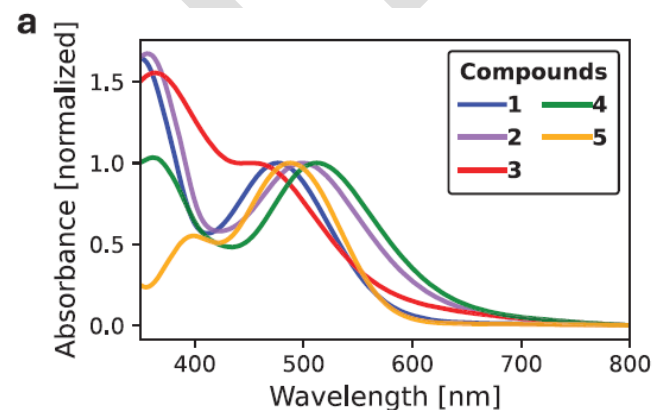
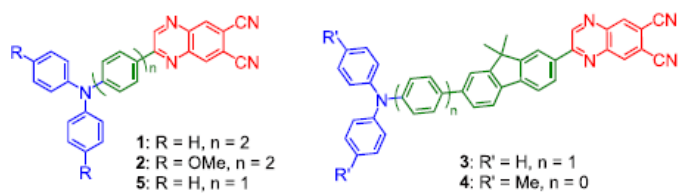
Application: A self-aligning organic film gives high-performance second-order nonlinear optical applications, such as frequency conversion and electro-optic devices, offering strong optical nonlinearity through a scalable, poling-free thin-film fabrication process.

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NMR (internal reference)



Reference: *Adv. Optical Mater.* **2026**, *14*, e02212



a) Normalized absorption spectra. b,c) SHG polarimetry data (TE and TM pump) at $\lambda_{\text{pump}} = 1550$ nm, incidence angle 45° .

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