

Controlled Emission with Pyridin

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During early '50s, electroluminescence of organic compounds, namely acridine and carbazole derivatives, was observed for the first time. Despite this fact, a new branch of organic chemistry, organic electronics, began to develop in late '80s. The interest in organic materials is mainly due to several advantages over inorganic materials. These include lower price and toxicity, facile property tuning by simple structural modifications as well as easier fabrication. Organic emissive and color-changing materials found wide applications. D- π -A chromophores with various shapes [1] belong to such materials with variable donors, acceptors and π bridges and manifold applications in OLEDs, OPVs, NLO, and emissive materials for sensors. Triphenylamine (TPA) is widely used as central unit of D- π -A molecules. Upon its decoration with various number of peripheral pyridine acceptors as well as various peripheral donors, we have prepared push-pull compounds, with various emissions [2,3] (Figure 1).

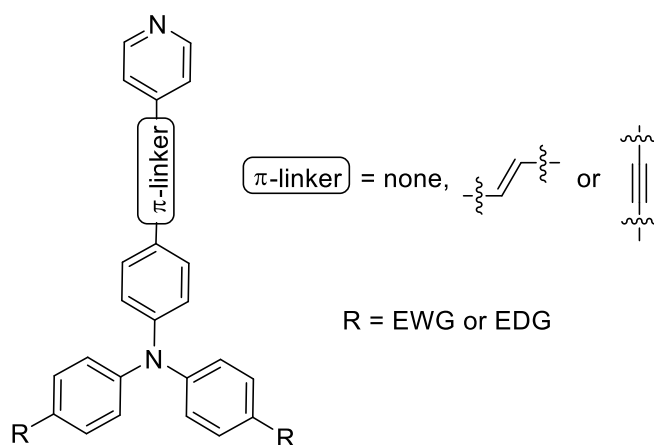


Figure 1. Pyridine-TPA fluorophores.

Acknowledgement: This work has been supported from European Regional development Fund-Project "Organic redox couple based batteries for energetics of traditional and renewable resources (ORGBAT)" No.CZ.02.1.01/0.0/0.0/16_025/0007445.

References:

- [1] Klikar, M.; Solanke, P.; Tydlitát, J.; Bureš, F. Alphabet-Inspired Design of (Hetero)Aromatic Push–Pull Chromophores. *Chem. Rec.* **2016**, *16*, 1886–1905.
- [2] Tydlitát, J.; Achelle, S.; Rodríguez-López, J.; Pytela, O.; Mikysek, T.; Cabon, N.; Robin-le Guen, F.; Miklík, D.; Růžicková, Z.; Bureš, F. *Dyes Pigm.* **2017**, *146*, 467–478.
- [3] Tydlitát J.; Fecková, M.; le Poul, P.; Pytela, O.; Klikar, M.; Rodríguez-López, J.; Robin-le Guen, F.; Achelle, S. *Eur. J. Org. Chem.* **2019**, 1921–1930.