



2,4,5-Tri(hetero)arylimidazoles: Design, Synthesis and Characterization as Novel TPA Chromophores and Optical Chemosensors

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2,4,5-Tri(hetero)aryl-imidazoles are a versatile class of compounds with a wide range of applications in diverse areas such as medicinal or materials chemistry due to their biological activity, as well their optoelectronic properties. Our earlier studies showed that the optical and thermal properties of these derivatives could be tuned by substitution of aryl groups at positions 2, 4 and 5 by 5-membered heterocycles such as thiophene and furan. This raises the potential for several innovative applications of these π -conjugated systems in nonlinear optics (e.g. second harmonic generators (SHG)), chemosensors, OLEDs and DNA intercalators.¹

Recent results from our research group concerning the design, synthesis and characterization of novel 2,4,5-tri(hetero)aryl-imidazoles **1** (Figure 1), as two-photon absorption (TPA) chromophores and/or as optical chemosensors will be presented and discussed.

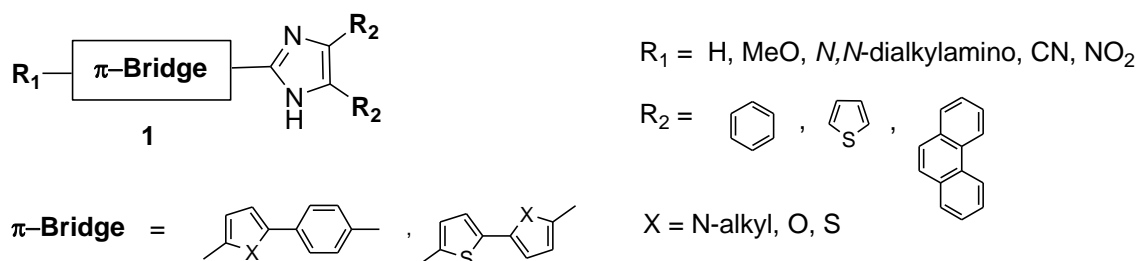


Figure 1: Structure of novel 2,4,5-tri(hetero)arylimidazoles.

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