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Salicylideneaniline-Functionalized Poly(m-phenyleneethynylene)s as Fluorescent Turn-On Chemosensors for Cations

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Two different series of conjugated polymer, poly(*m*-phenyleneethynylenes) (*m*-PPEs) containing different amounts of salicylideneaniline moieties (50% and 100%) have been synthesized via a post-functionalization of aniline group on *m*-PPEs backbone. PPEs are successfully prepared in excellent yield (90-99%) and spectroscopically characterized the structure by ^{1}H, ^{13}C NMR and FTIR exhibited signals that reasonably correlate with the desired polymer. The resulting polymers displayed weak orange emission at 560 nm and undergo remarkable turn-on bright blue fluorescent emission at 450 nm response to Fe^{2+}, Fe^{3+}, Al^{3+} and Cr^{3+} without any change with other cations.

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