

Supplementary Materials

Chemical doping of a silica matrix with a new organic dye from the group of heterocyclic compounds – chemical, optical and surface characteristics

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¹H NMR spectra

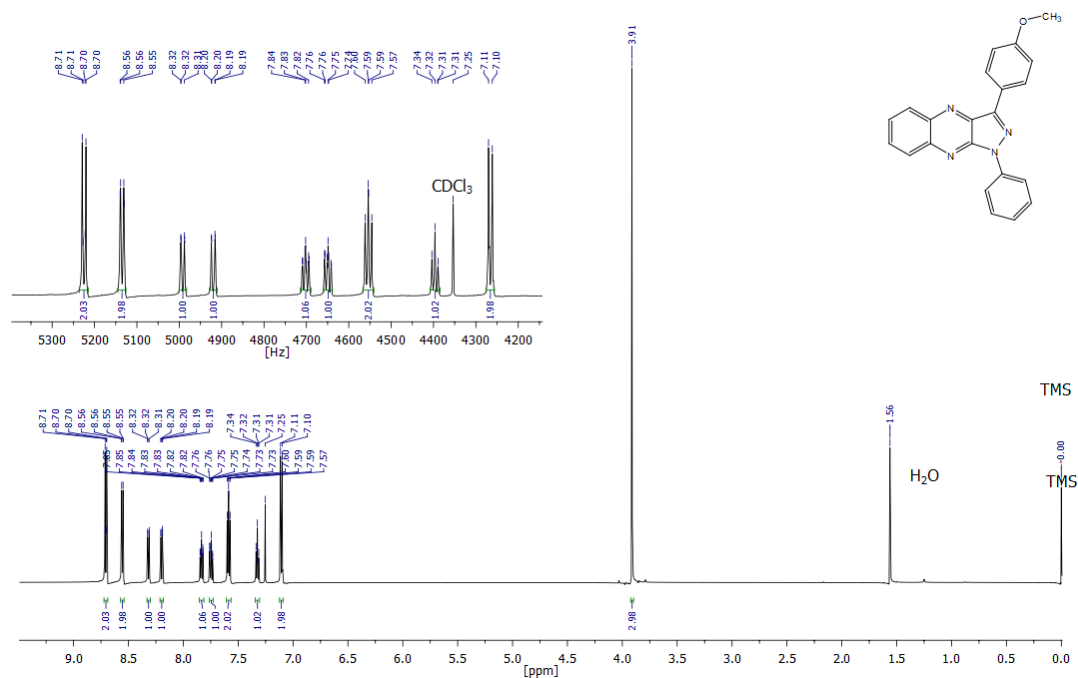


Figure S1. ¹H NMR spectra for PQXOMe

¹H NMR (400 MHz, DMSO-*d*) 8.51 (d, *J* = 8.6 Hz, 2H), 8.45 (d, *J* = 7.8 Hz, 2H), 8.31 (d, *J* = 8.4 Hz, 1H), 8.18 (d, *J* = 8.4 Hz, 1H), 7.97 - 7.94 (m, 1H), 7.87 - 7.85 (m, 1H), 7.64 (t, *J* = 7.7 Hz, 2H), 7.38 (t, *J* = 7.3 Hz, 1H), 7.02 (d, *J* = 8.6 Hz, 2H), 3.46 (s, -OH + H₂O from DMSO-*d*)

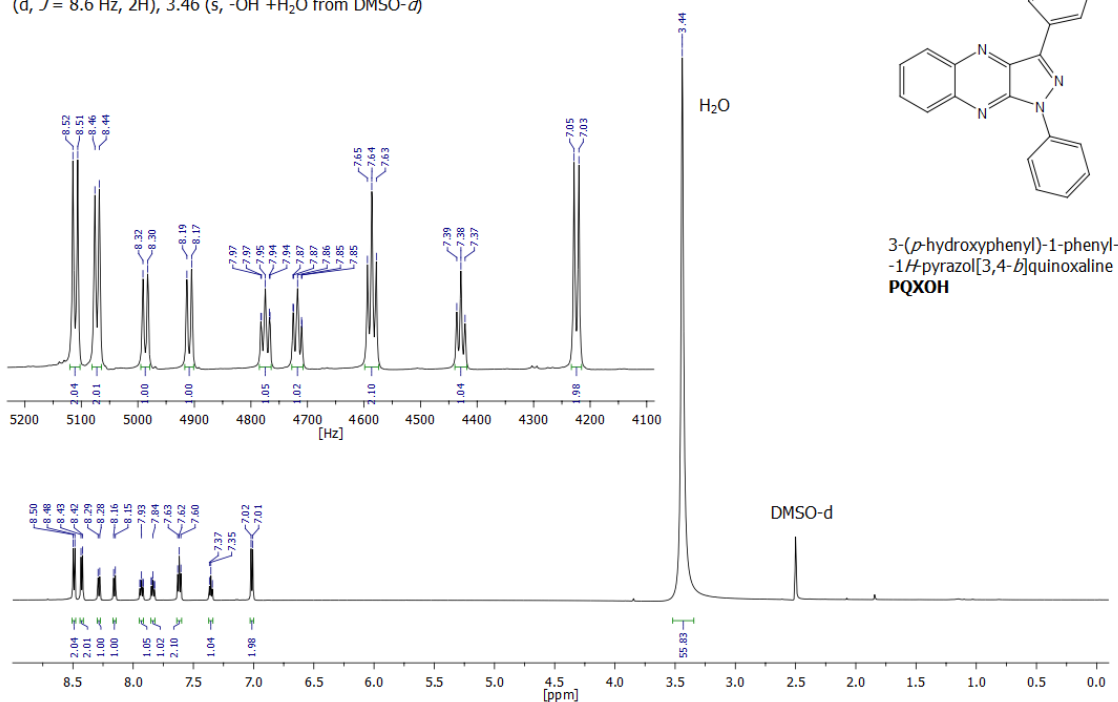


Figure S2. ¹H NMR spectra for PQXOH

¹³C NMR spectra

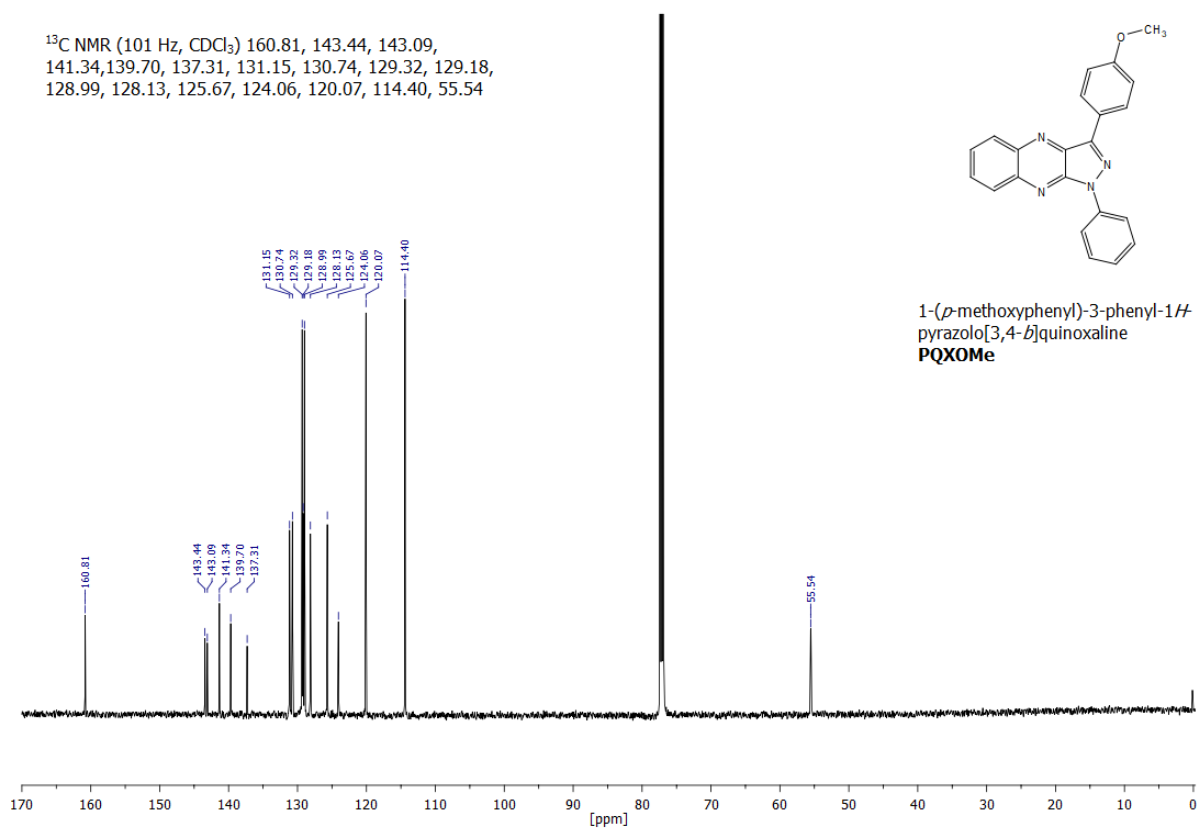


Figure S3. ¹³C NMR spectra for PQXMe

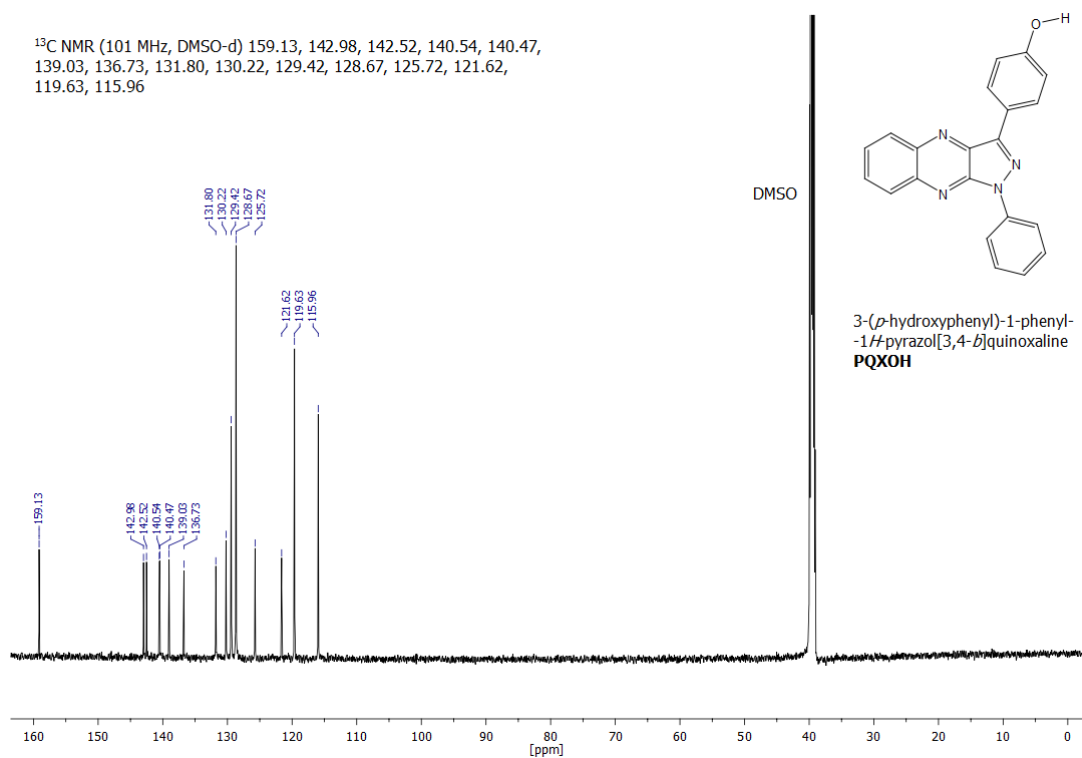


Figure S4. ¹³C NMR spectra for PQXOH

FTIR spectra

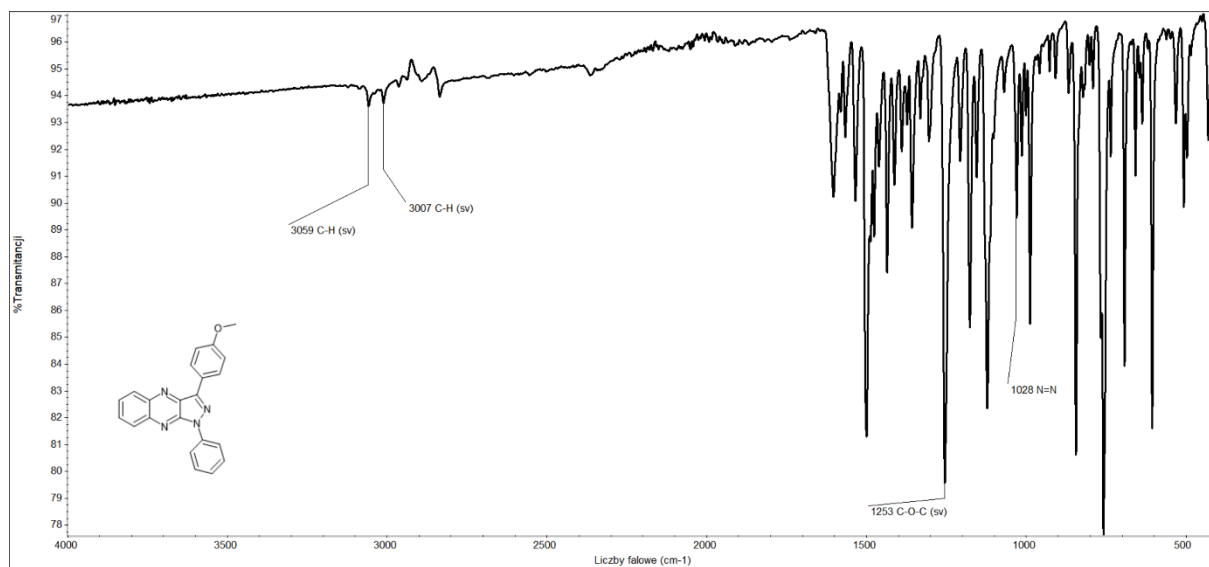


Figure S5. FTIR spectra for PXMOMe

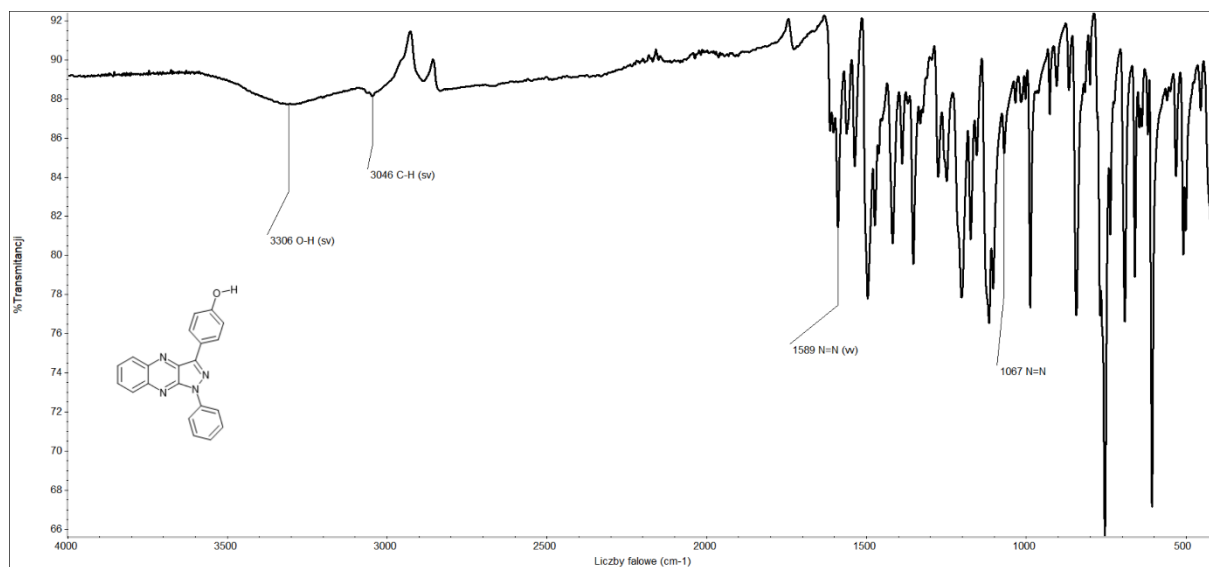


Figure S6. FTIR spectra for PXXOH

Absorption and photoluminescence

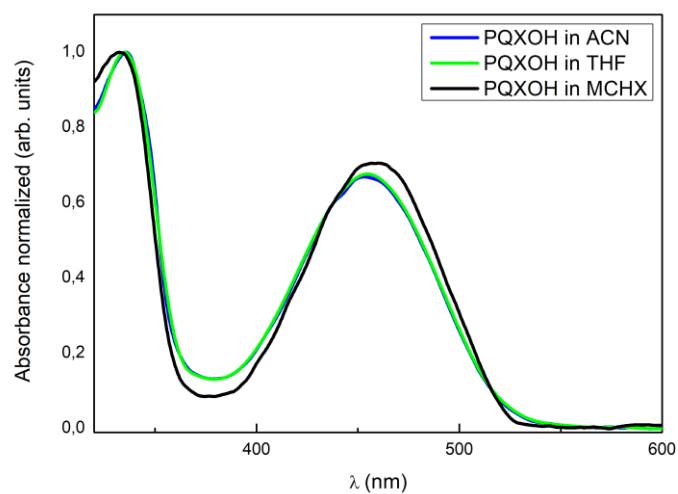


Figure S7. Normalized absorbance for PQXOH dye in solvents of different polarity

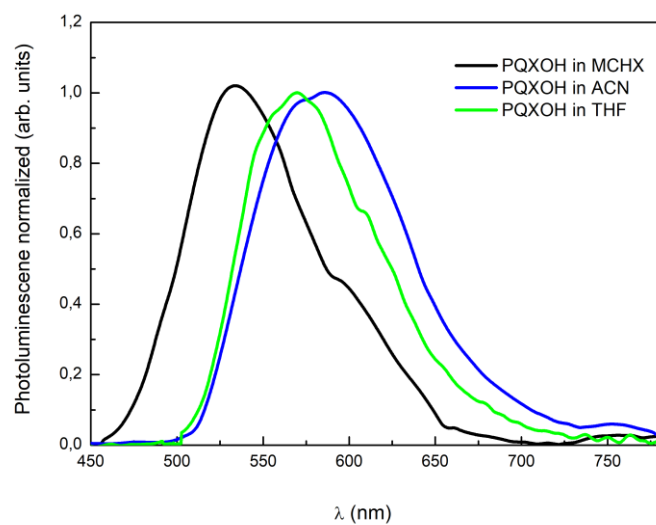


Figure S8. Normalized photoluminescence for PQXOH dye in solvents of different polarity ($\lambda_{\text{ex}}=365$ nm)