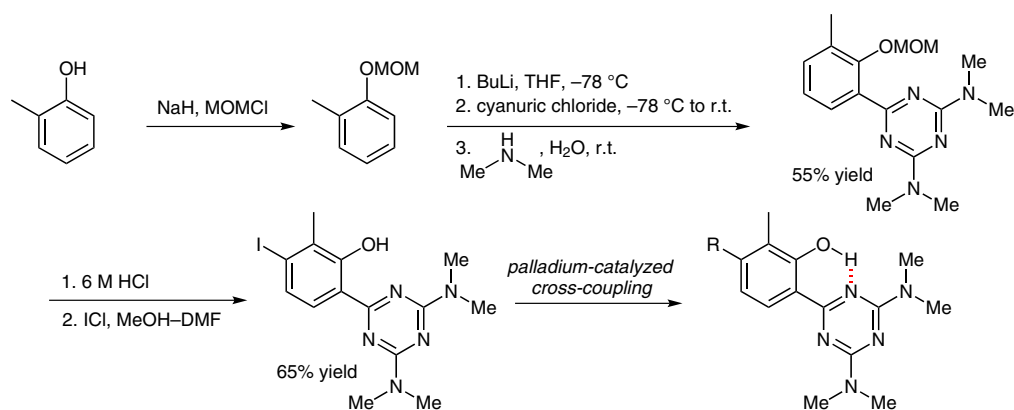


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Synthetic Routes to Fluorescent Dyes Exhibiting Large Stokes Shifts
J. Org. Chem. **2012**, *77*, 8851–8863.

Large Stokes Shift from Triazine–*o*-Phenol Dyes



Selected chromophores:

R	Yield of the cross-coupling step	Quantum yield, Φ	Stokes shift, cm^{-1}
H	–	0.28	10900
	31%	0.25	9100
	90%	0.23	9700
	40%	0.21	12000
	41%	0.46	6000
	48%	0.46	570

Significance: Fluorescent dyes exhibiting large Stokes shifts are of great interest for a multitude of applications. The authors report a straight-forward synthesis of a series of phenol–triazine dyes that exhibit hydrogen bonding in the ground state and undergo excited state intramolecular proton transfer (ESIPT), leading to the observation of large Stokes shifts.

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Synfacts 2013, 9(1), 0038 Published online: 17.12.2012
DOI: 10.1055/s-0032-1317886; **Reg-No.:** S13412SF

Comment: An exception to the observation of a large Stokes shift is the perylene-substituted dye; in this case, the perylene is responsible for the emission observed and the energy transfer occurs from the keto form to the perylene moiety. Also noteworthy is the large range of absorption and emission maxima exhibited by the family of dyes in this report.