

Flash-Photolytic Generation of Dienols and Dienolates from α,β -Unsaturated Esters and Kinetics of their Amine-Catalyzed Ketonization in Nonaqueous Media

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SUPPLEMENTARY INFORMATION

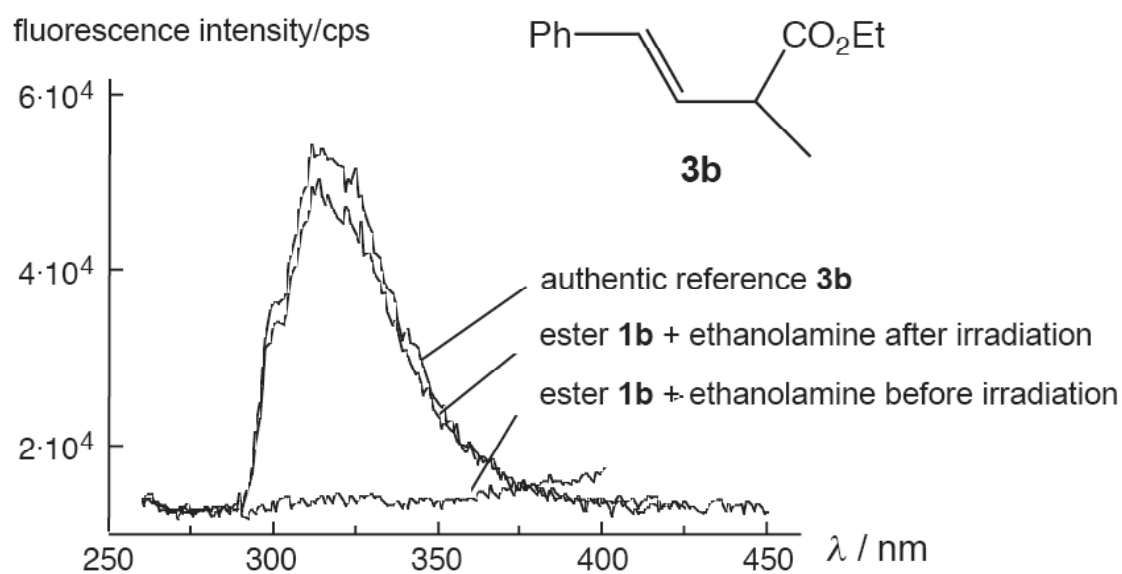


Fig. S1 Comparison of the fluorescence spectra (uncorrected) of the deconjugated ester **3b** and an irradiated sample of the conjugated ester **1b**.

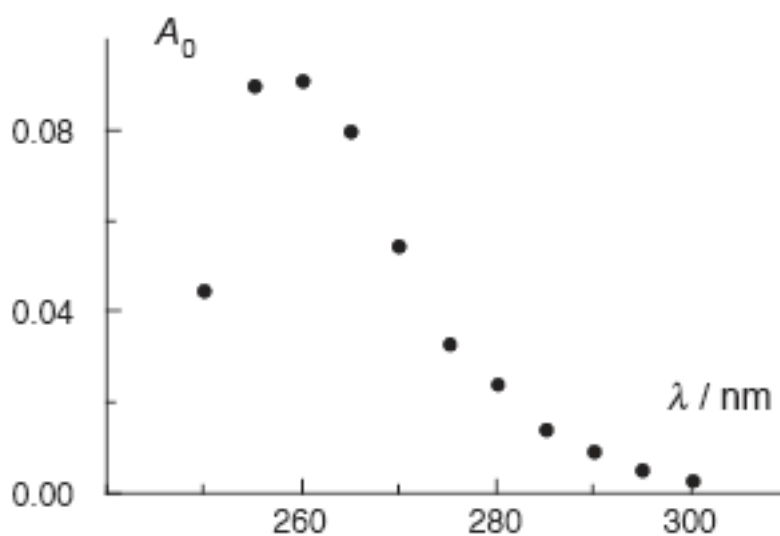


Fig. S2 Transient absorption generated by CFP of **1a** with ethanolamine (1×10^{-3} M) in acetonitrile.

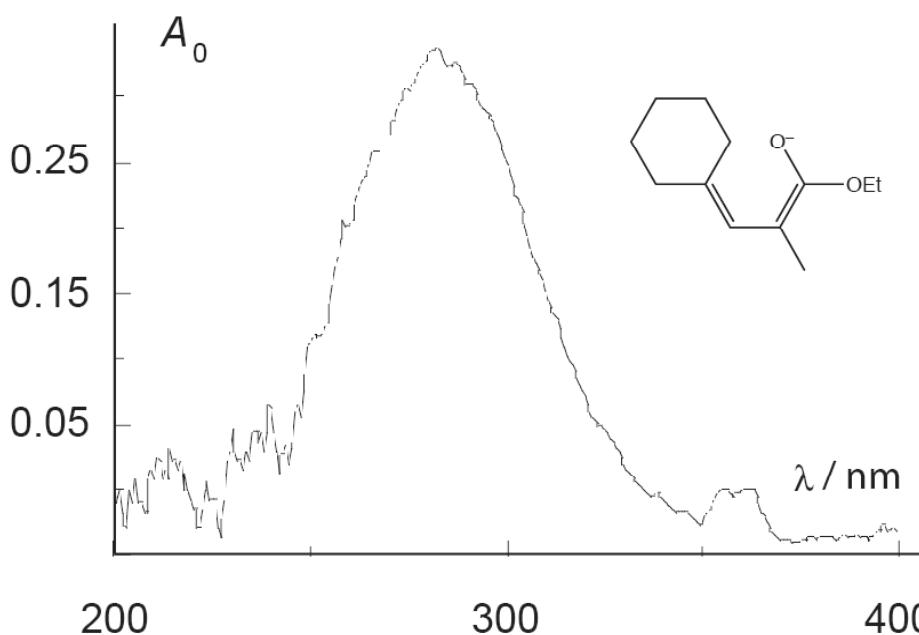


Fig. S3 Transient absorption generated by LFP of ester **1a** in aqueous base (pH 10).

Table S1: Rate data for the decay of **1b** in acetonitrile in the presence of ethanolamine (**I**) at various temperatures.

[I] ₀ /M	$k_{\text{obs}} \times 10^{-6}/\text{s}^{-1}$			
	8.3 °C	16.6 °C	26.8 °C	38.3 °C
0	0.00211	0.0023	0.0025	0.0026
0.0003	0.51	0.52		
0.0005	0.83	0.85	0.77	0.71
0.0007	1.15	1.14	1.08	0.97
0.001	1.55	1.58	1.48	1.33
0.003	4.13	4.22	3.95	3.63
0.005	6.3	6.47	5.6	5.14
0.007	7.87	8.72	7.51	6.67
0.01	9.21	10.25	10.85	9.55
0.015	12.45	13.6	14.3	14.8
0.02	14.95	16.65	17.5	19.1
0.025	15.55	19.0	21.0	22.0
0.03	16.8	20.0	23.6	23.5
0.035	16.8			
0.04	16.0			
limiting rate constant	k/s^{-1}	k/s^{-1}	k/s^{-1}	k/s^{-1}
	$2.35 \times 10^7/\text{s}^{-1}$	$3.59 \times 10^7/\text{s}^{-1}$	$6.2 \times 10^7/\text{s}^{-1}$	$8.0 \times 10^7/\text{s}^{-1}$
dissociation constant	K_{diss}/M	K_{diss}/M	K_{diss}/M	K_{diss}/M
	0.013	0.023	0.049	0.068