SUPPORTING INFORMATION (7 pages)

WAVELENGTH-DEPENDENT STEREODIFFERENTIATION IN THE FLUORESCENCE QUENCHING OF ASYMMETRIC NAPHTHALENE-BASED DYADS BY AMINES

Sergio Abad,[1] Uwe Pischel,*[2] Miguel A. Miranda*[1]

[1] Instituto de Tecnología Química, Universidad Politécnica de Valencia, Av. de los Naranjos s/n, E-46022 Valencia, Spain. Tel.: +34 96 3877 807, Fax: +34 96 3877 809, Email: mmiranda@qim.upv.es

[2] REQUIMTE/Departamento de Química, Faculdade de Ciências, Universidade do Porto, Rua Campo Alegre, 4169-007 Porto, Portugal. Tel.: +351 22 608 2885, Fax: +351 22 608 2959, Email: upischel@fc.up.pt

Contents

- ***Data for measurements in air-equilibrated solutions***

Photophysical parameters of the dyads and the relevant model compounds in aerated *n*-hexane

	Φ_f (λ_{exc} = 290 nm)[a]	Φ_f (λ_{exc} = 325 nm)[a]	τ_f/ ns (λ_{exc} = 290 nm)[b]	τ_f/ ns (λ_{exc} = 325 nm)[b]
(*S*,*S*)-NPX-NAP	0.13	0.17	5.4	5.5
(*S*,*R*)-NPX-NAP	0.13	0.19	5.4	5.5
NPX-M[c]	0.16	0.22	5.4	5.5
NAP-M[d]	0.02	---	7.5	---

[a] Fluorescence quantum yield, measured with (*S*)-naproxen as standard (Φ_f = 0.47 under nitrogen); 5 % error.

[b] Fluorescence lifetime measured at λ_{obs} = 347 nm; 5 % error.

[c] (*S*)-enantiomer.

[d] (*R*)-enantiomer.

Quenching data of the dyads and relevant model compounds by triethylamine in aerated *n*-hexane

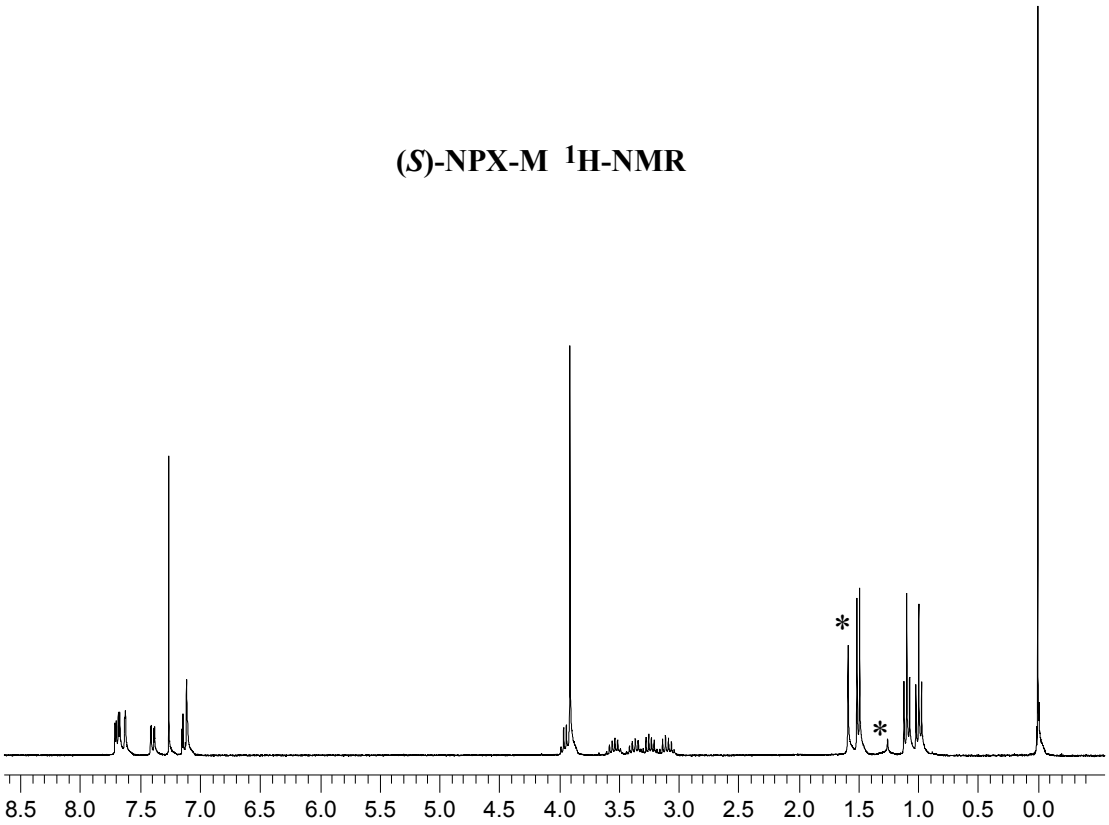
	k_q/ $M^{-1}s^{-1}$ (λ_{exc} = 290 nm) NAP	k_q/ $M^{-1}s^{-1}$ (λ_{exc} = 325 nm) NPX	k_{SSET}/ $M^{-1}s^{-1}$ (λ_{exc} = 290 nm)
(*S*,*S*)-NPX-NAP	7.3×10^8	1.6×10^8 [a] 1.4×10^8 [b]	4.5×10^8
(*S*,*R*)-NPX-NAP	1.3×10^9	1.3×10^8 [a] 1.1×10^8 [b]	4.5×10^8
NPX-M	---	---	---
NAP-M	4.5×10^9	---	---

[a] Steady-state measurements.

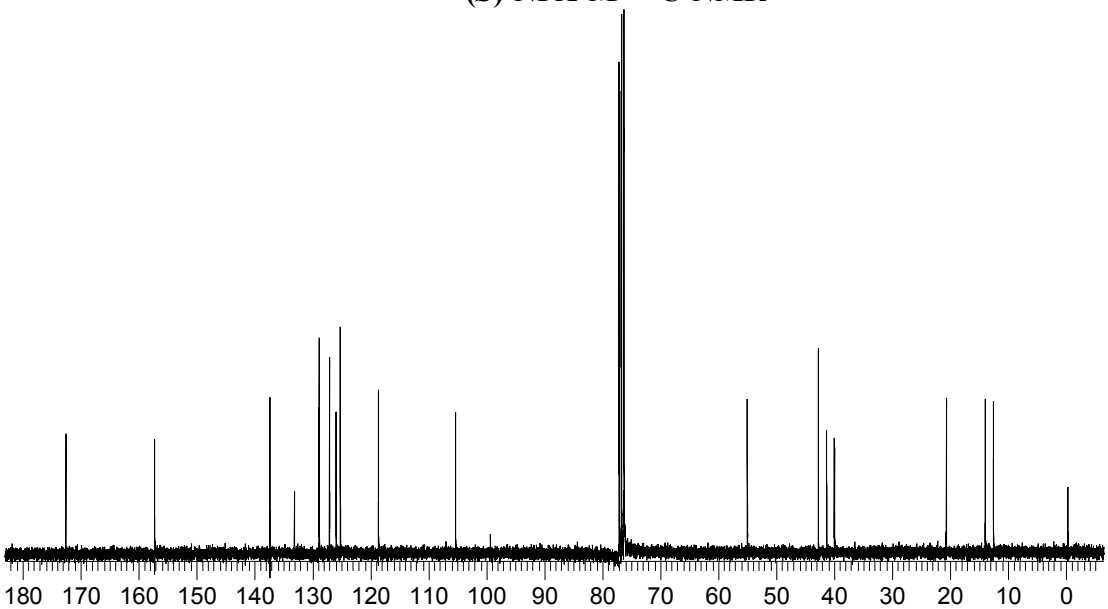
[b] Time-resolved measurements.

- ***NMR spectra of model compounds and dyads***

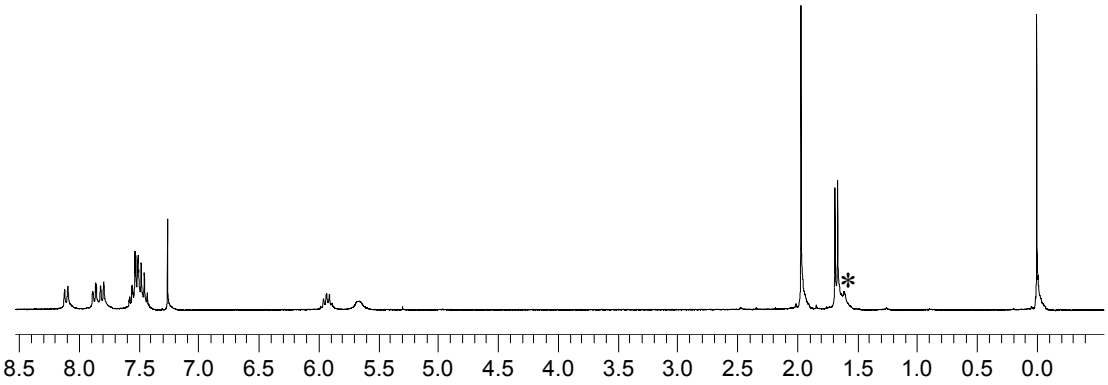
(*S*)-NPX-M ^{1}H-NMR



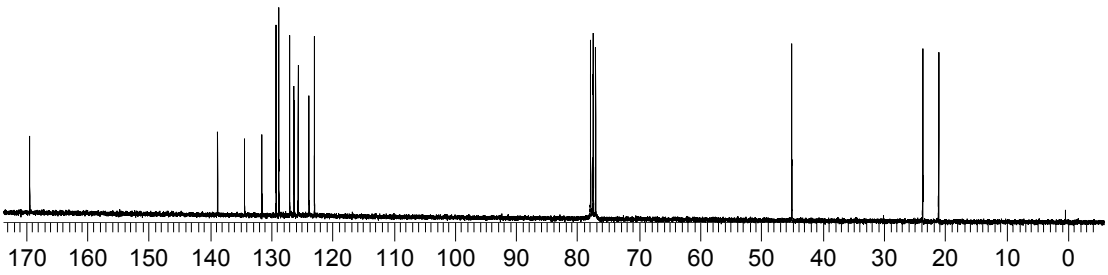
(*S*)-NPX-M ^{13}C-NMR



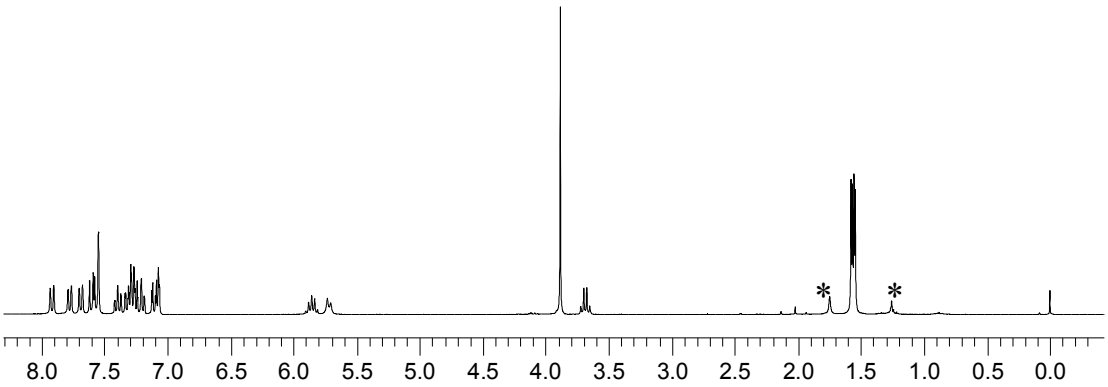
(*R*)-NAP-M ^{1}H-NMR



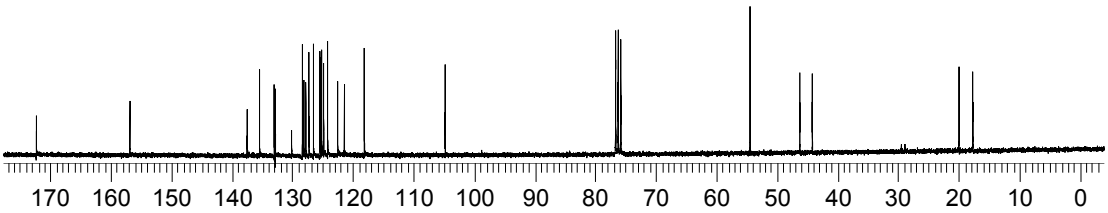
(*R*)-NAP-M ^{13}C-NMR



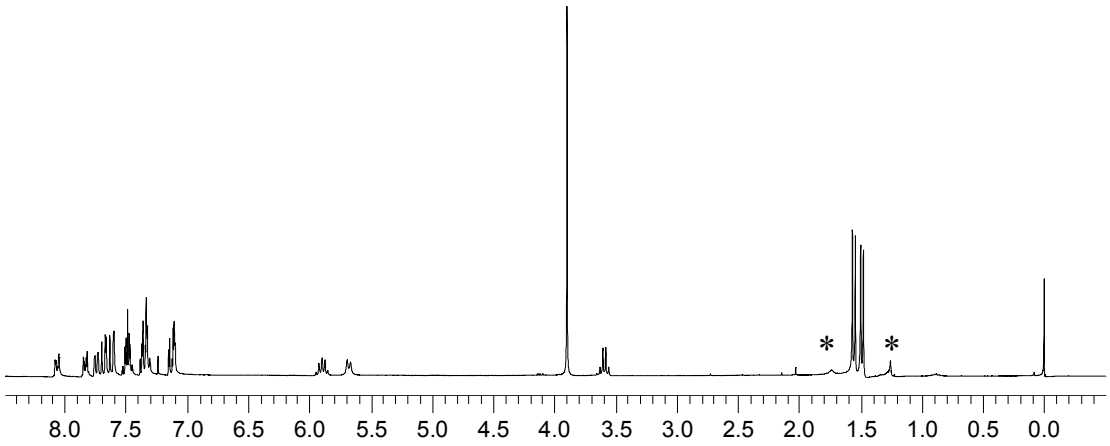
(*S*,*S*)-NPX-NAP ^{1}H-NMR



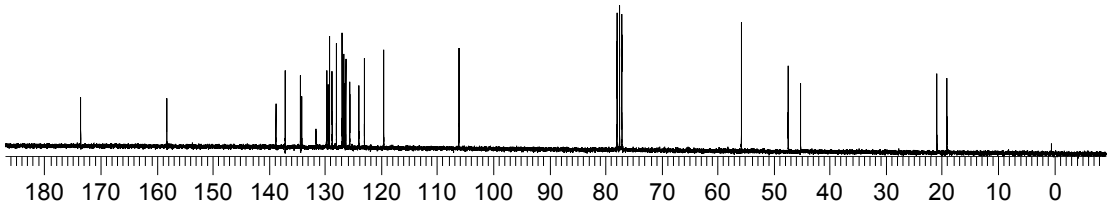
(*S*,*S*)-NPX-NAP ^{13}C-NMR



(*S,R*)-NPX-NAP ^{1}H-NMR



(*S,R*)-NPX-NAP ^{13}C-NMR



* solvent traces

- ***AM1 optimized folded conformations of (S,S)- and (S,R)-NPX-NAP***

(S,S)-NPX-NAP ***(S,R)-NPX-NAP***