Electronic Supplementary Information (ESI†)

Rhodamine 6G and 800 J-Heteroaggregates with Enhanced Acceptor Luminescence (HEAL) adsorbed in transparent SiO_2 GLAD thin films

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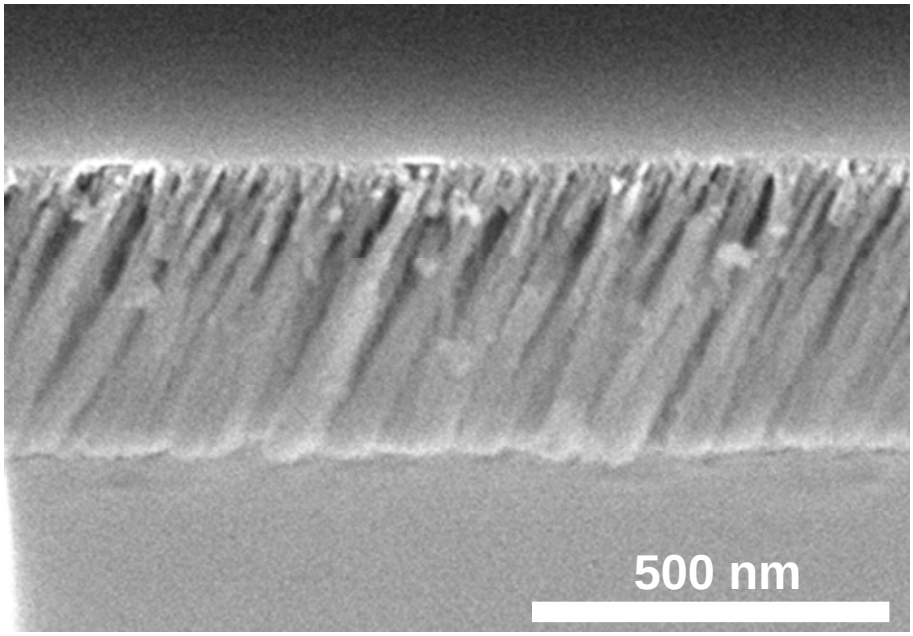
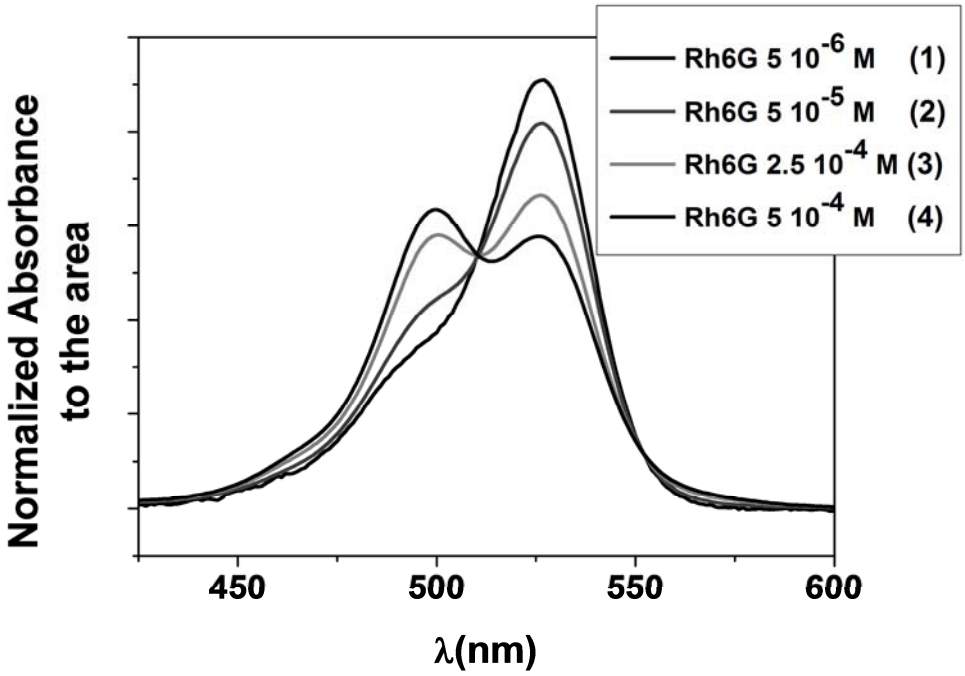
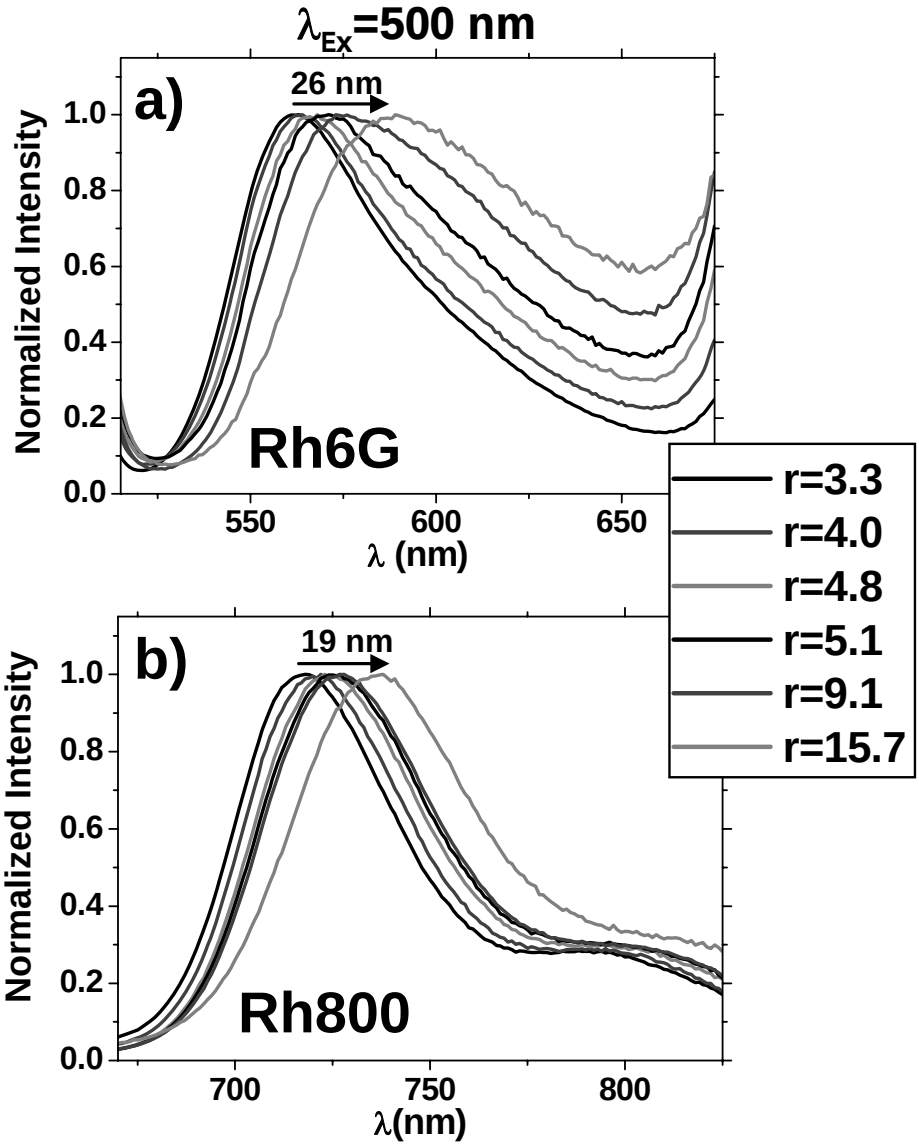


S1. Cross section SEM micrograph of a typical SiO_2 thin film prepared by GLAD.



S2. Normalized representation under the same area of the absorbance spectra showed in Figure 2 a). An isosbestic point at 510 nm can be clearly identified.



S3. Normalized representation of the series of emission bands showed in Figure 3a) attributed to Rh6G (a) and Rh800 (b) molecules, obtained by excitation at 500 nm.

S4. Calculation of Förster Distance

Calculated R_0 values for a possible RET process between the Rh6G dye (donor) and the Rh800 (acceptor). The emission spectra of the donor (Rh6G) and the absorbance spectra of the acceptor (Rh800) have been taken from diluted aqueous solutions (10^{-6} M) of each dye. The calculation has been made using the formula: $R_0^6 = \frac{9000\ (\ln 10)\ \kappa^2 Q_D}{128\ \pi^5 N\ n^4} J$ where Q_D is the quantum yield of the donor, J is the spectral overlap between the donor emission and the acceptor absorption, n is the refractive index of the media (in our case is water with n=1.33) and κ^2 is the orientation factor, that for random orientation is usually assumed κ^2=2/3.

	Q_D	**J (10^{-14} cm^3 M^{-1})**	**R_0 (Å)**
Rhodamine 6G	**0.90** [1]	**6.1**	**46.5**

(1) D. Magde, R. Wong, P. G. Seybold, Photochemistry and Photobiology, 75 (2002), 327.