

“Extra stabilization” of pyrene based molecular couple by γ -cyclodextrin in excited electronic state

Prasun Ghosh, Soumik Mandal, Tarasankar Das, Arnab maity, Parna Gupta* and Pradipta Purkayastha*

Department of Chemical Sciences, Indian Institute of Science Education and Research, Kolkata, Mohanpur Campus, Mohanpur 741252, WB, India.

Method of calculation of binding constants from the Job's plots:

One type of complexation between guest and host has been observed in γ -CD. For 1:1 guest-host complex: $G + H \rightleftharpoons [G-H]$, G and H denote guest and host, respectively.

The equilibrium constant (K_d) is given by,

$$K_d = \frac{[G-H]}{[G][H]} = \frac{\text{Absorbance of complex}}{(\text{Absorbance of free G})[CD]_{\text{at the intersecting point}}}$$

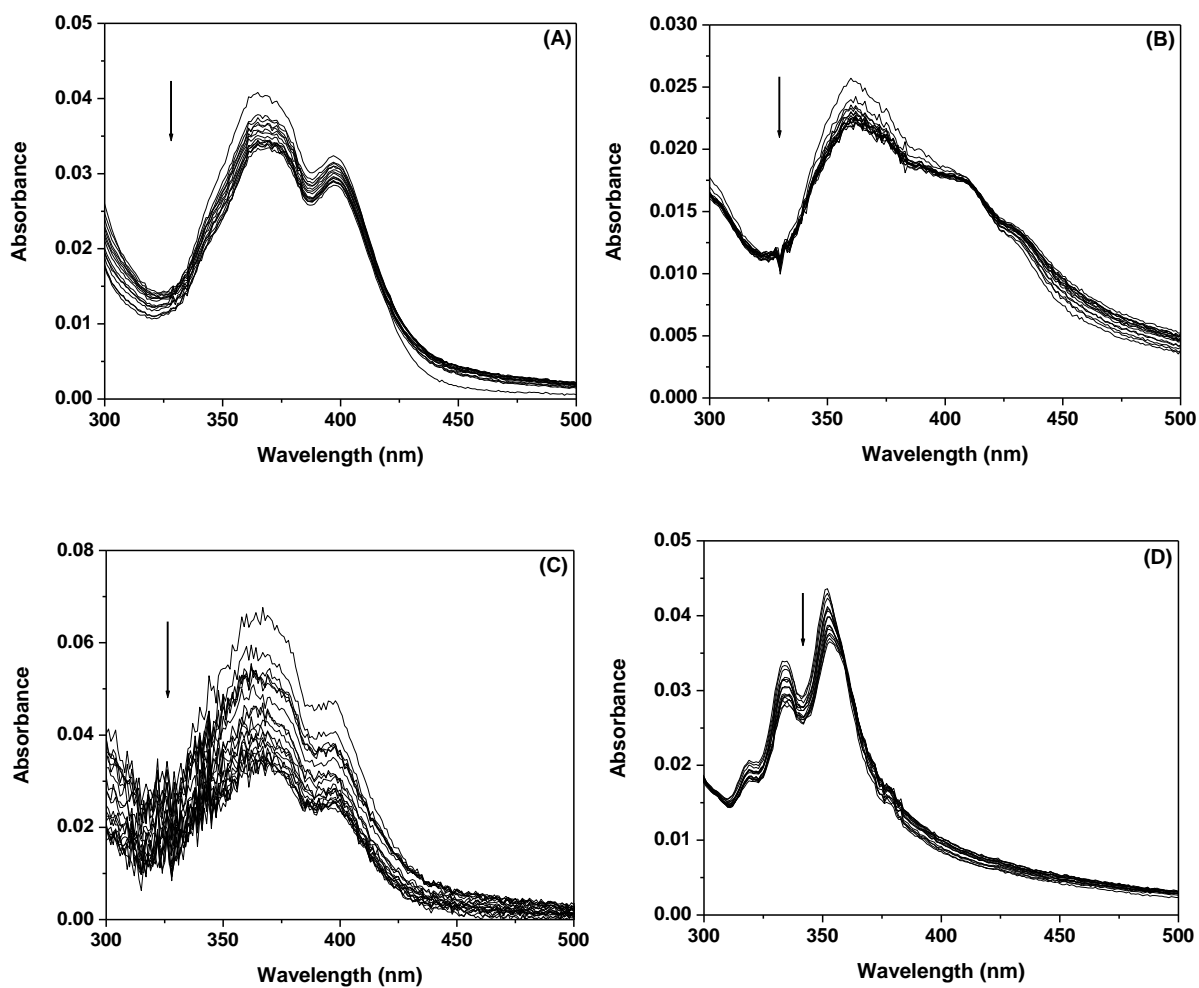


Fig. S1. Absorption spectra of (A) **1**, (B) **2**, (C) **3** and (D) **4** in presence of γ -CD. The arrows indicate decrease in absorbance at 360 nm with increase in concentration of γ -CD. Absorbance values at this wavelength have been used in the Job's method to calculate the stoichiometry and binding constants.

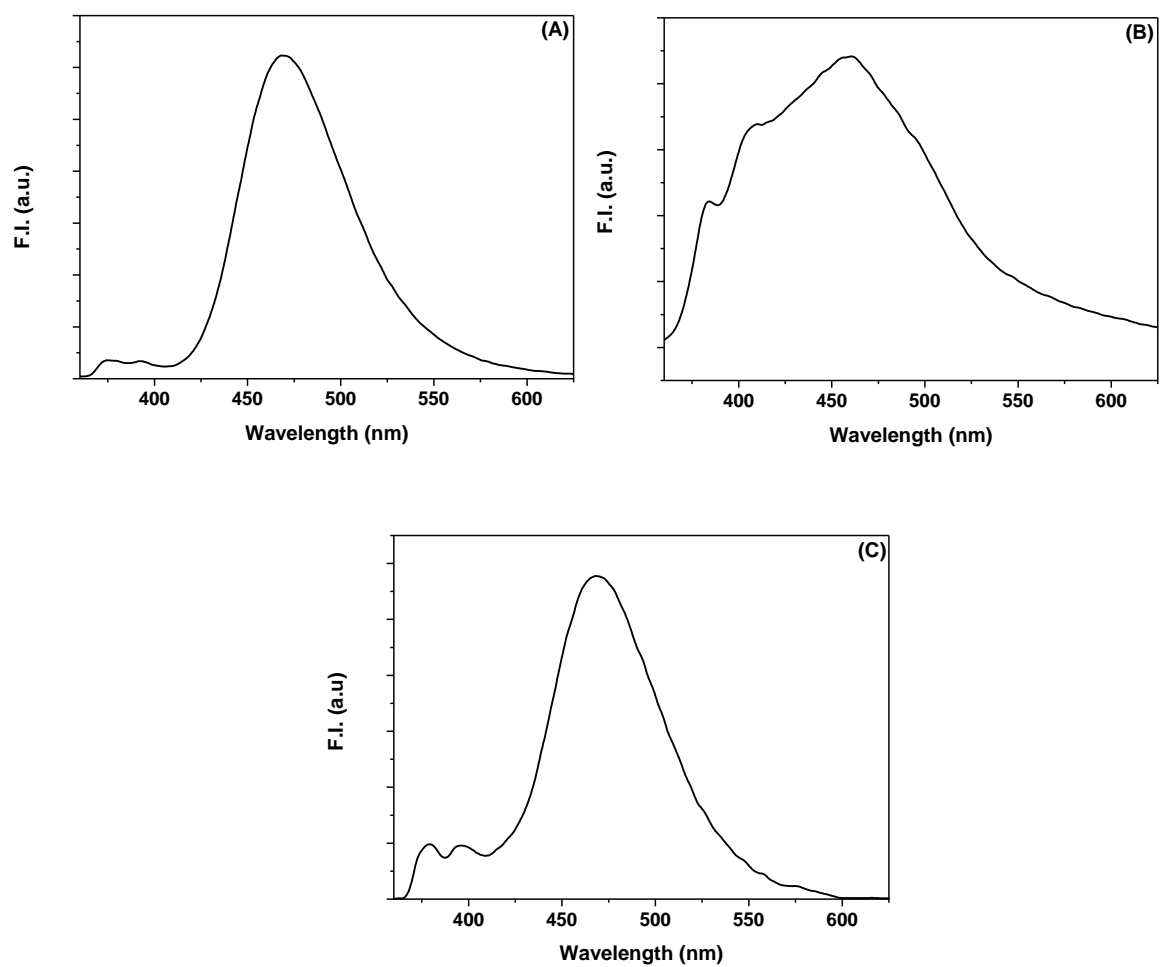


Fig. S2. Fluorescence spectra of (A) **1**, (B) **2** and (C) **3**. The excitation wavelength is 335 nm.