Figure S1.



Figure S2



Figure S3



Figure S4



**Captions of Supplementary Figures**

Figure S1. Plots of electrical conductivity versus concentration of CTAB in presence of Reactive Red 223 at 298K ($∎$), 308K ($∘$), 318K ($∆)$ and 328K ($∇).$ 3(b). Plot of electrical conductivity versus concentration of CTAB in presence of Reactive Red 223 at 298K

Figure S2. (a) Simple UV/Visible absorption spectra of pure Reactive red 223 (b)Simple UV/Visible absorption spectra of Reactive red 223 in the presence of different CTAB concentration (mol.dm-3)

Figure S3.(a) Plot of simple absorbance of Reactive red 223 as a function of CTAB concentration. (b) Plot of differential absorbance of Reactive red 223 as a function of CTAB concentration.

Figure S4. Relationship between (ΔA)-1 and (Cs +Csmo)-1 for the calculation of partition coefficient (Kx)for RR223/CTAB system. (b) Plot for calculation of binding constant (Kb) for RR223/CTAB system.