

→ *Electronic Supplementary Information for*

Probe-location dependent resonance energy transfer at lipid/ water interfaces: comparison between gel- and fluid-phase of lipid bilayer†

Moirangthem Kiran Singh*, Mohammad Firoz Khan, Him Shweta and Sobhan Sen*

Spectroscopy Laboratory, School of Physical Sciences, Jawaharlal Nehru University, New Delhi 110067, India

*E-mail: sens@mail.jnu.ac.in and kikangla2009@gmail.com

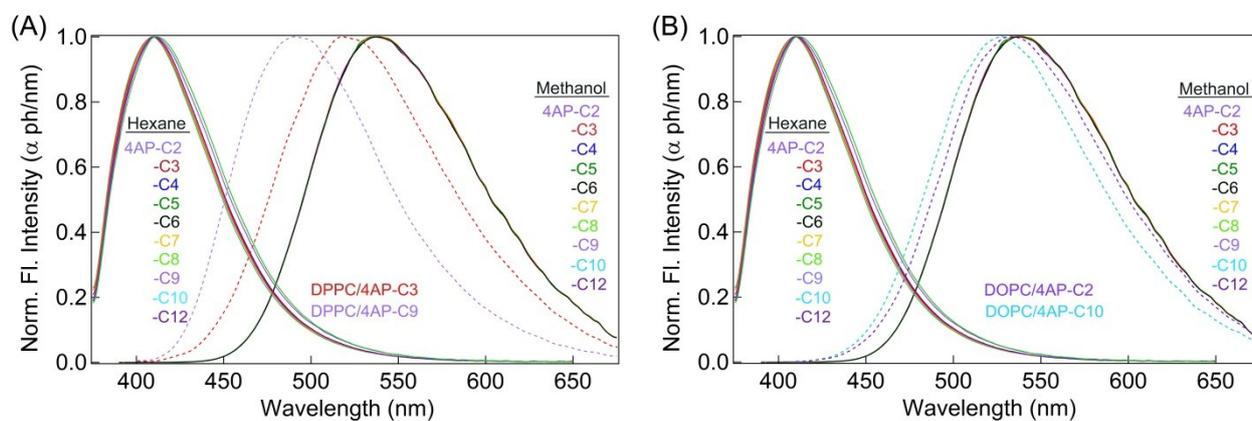


Figure S1. Corrected fluorescence spectra of 4AP-C_n molecules in methanol and n-hexane compared to the two extreme spectra of: (A) 4AP-C₃ and 4AP-C₉ at gel-phase DPPC/water interface and (B) two extreme spectra of 4AP-C₂ and 4AP-C₁₀ at fluid-phase DOPC/water interface.

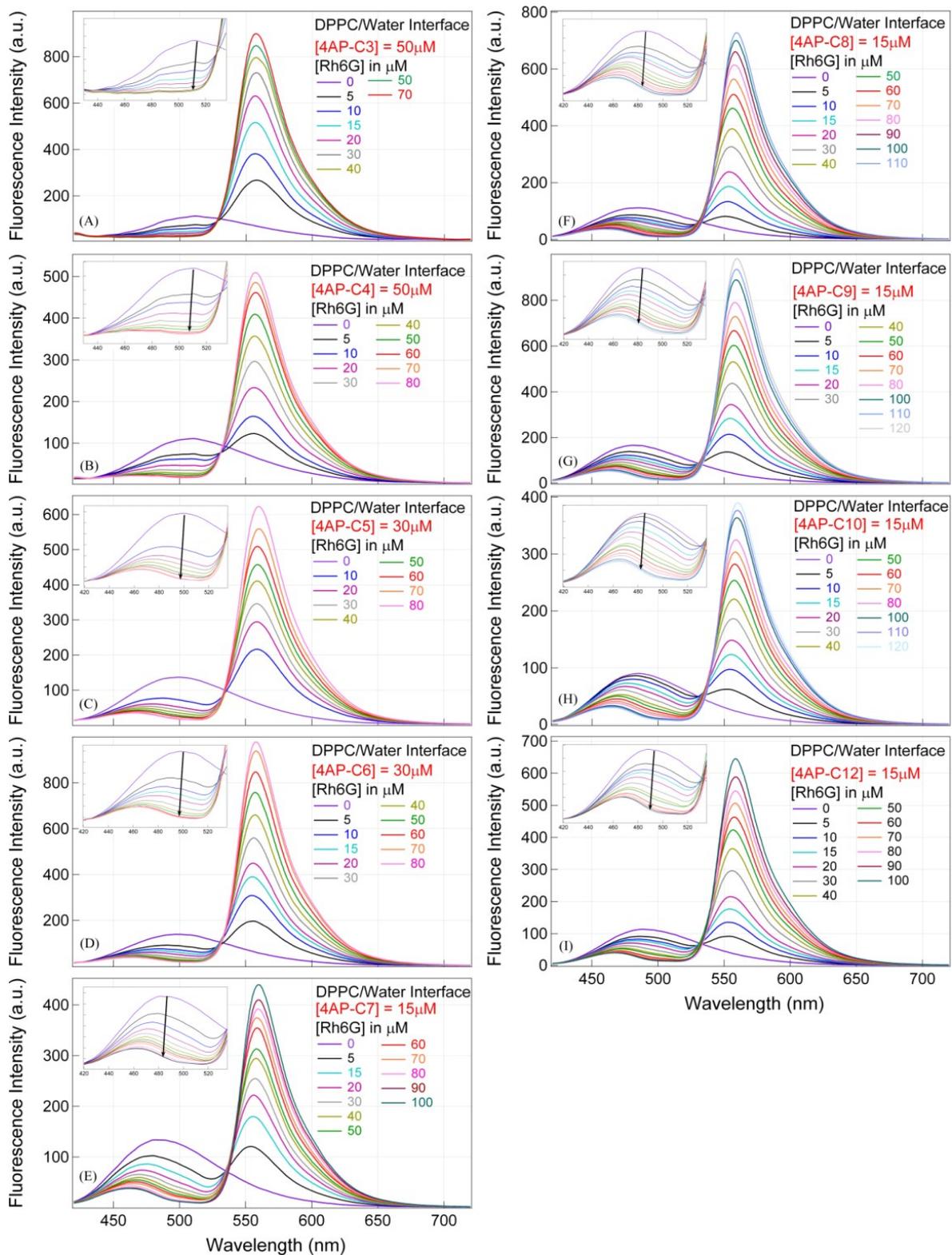


Figure S2. Fluorescence Spectra of 4AP-C_n at gel-phase DPPC/water interface in absence and presence of different concentrations of acceptor (Rh6G). Insets show expanded portions of donor fluorescence change.

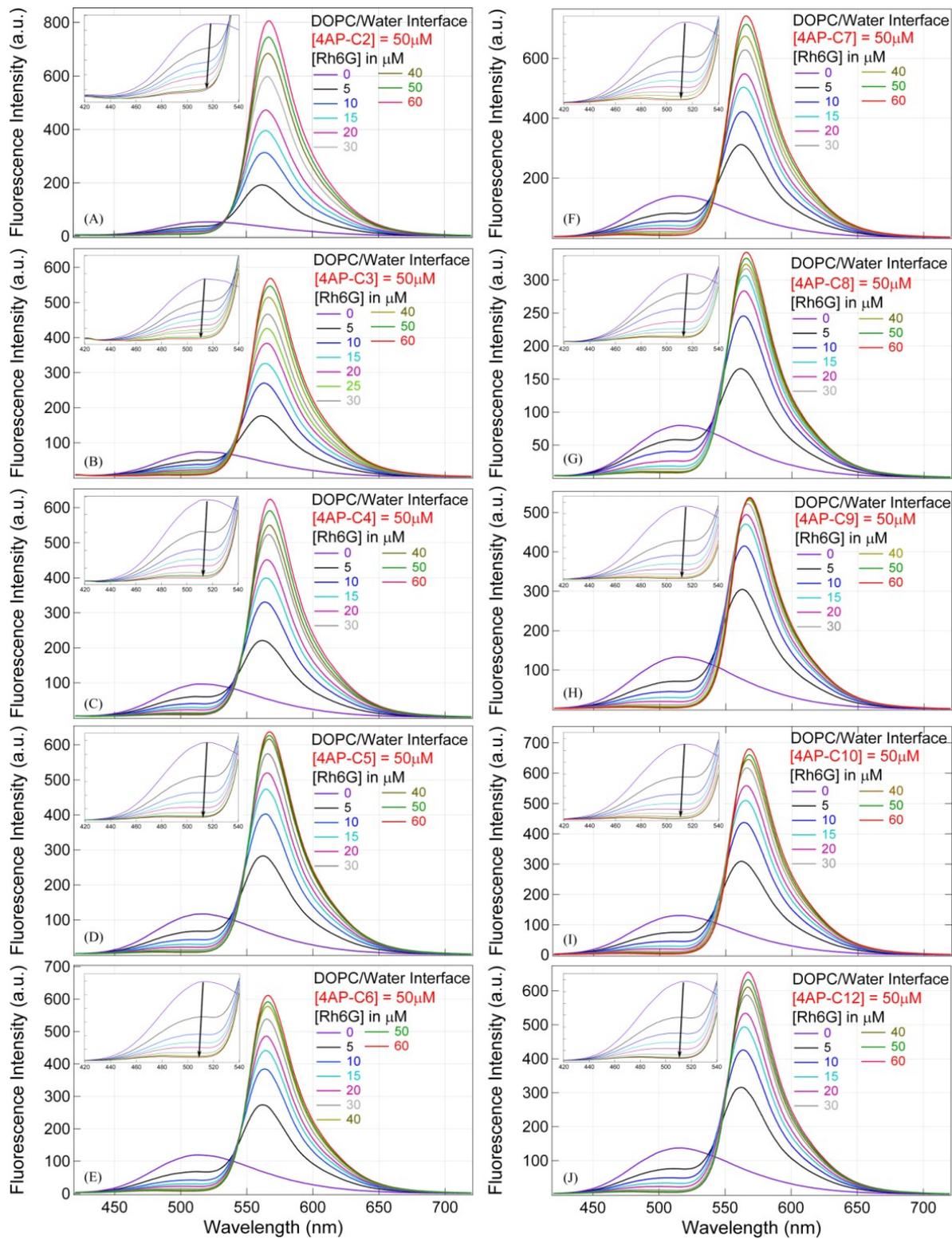


Figure S3. Fluorescence Spectra of 4AP-Cn at fluid-phase DOPC/water interface in absence and presence of different concentrations of acceptor (Rh6G). Insets show expanded portions of donor fluorescence change.

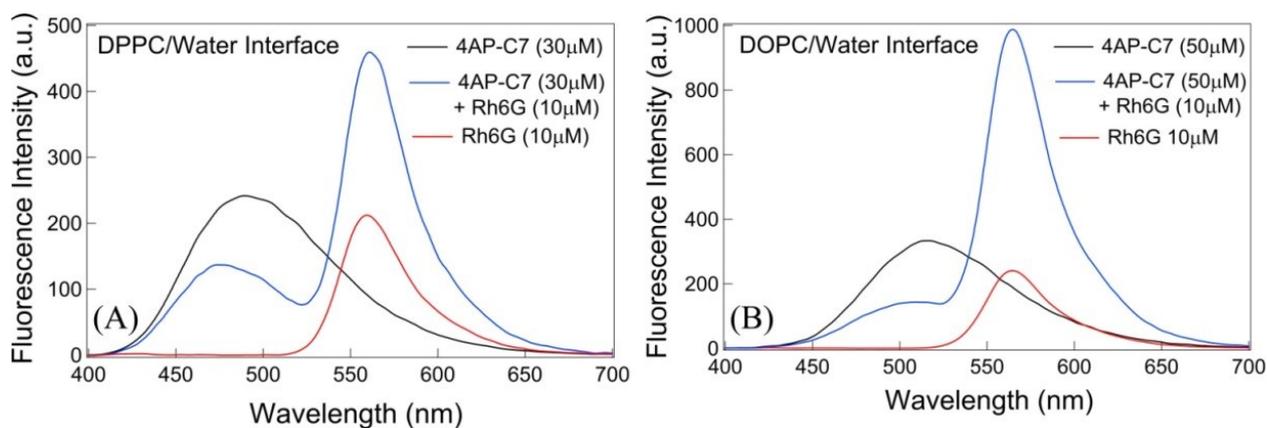


Figure S4. Example of relative differences of Rh6G fluorescence in absence and presence of donor at DPPC/water (left pane) and DOPC/water interfaces (right panel) which provide the information on the fraction of fluorescence signal increase in acceptor due to FRET from donors.

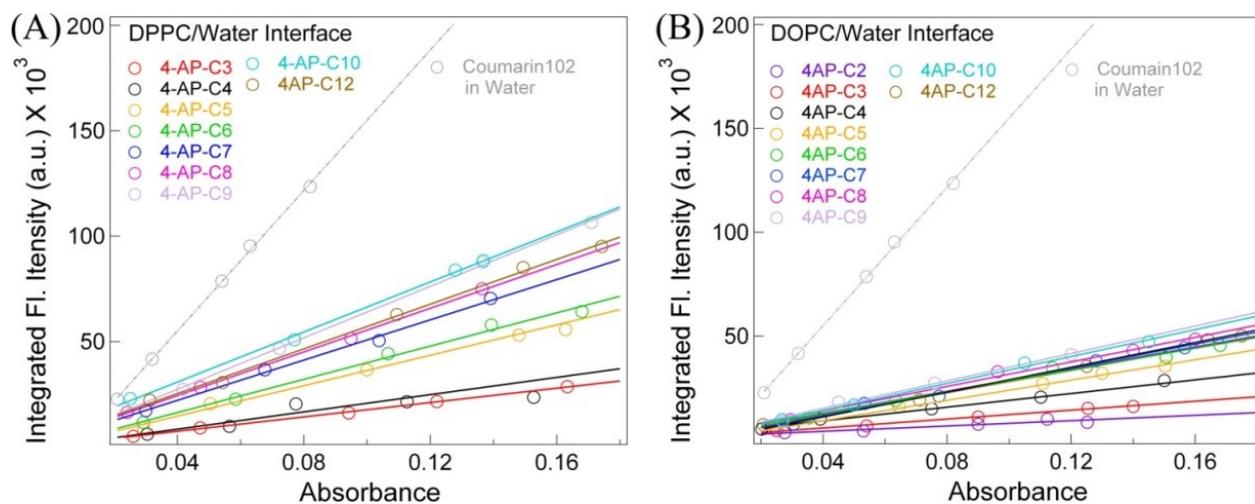


Figure S5. Linear plots of integrated fluorescence intensity with absorbance (OD) of 4AP-Cn at DPPC/water (left panel) and DOPC/water (right panel) interfaces as well as of coumarin 102 in water.

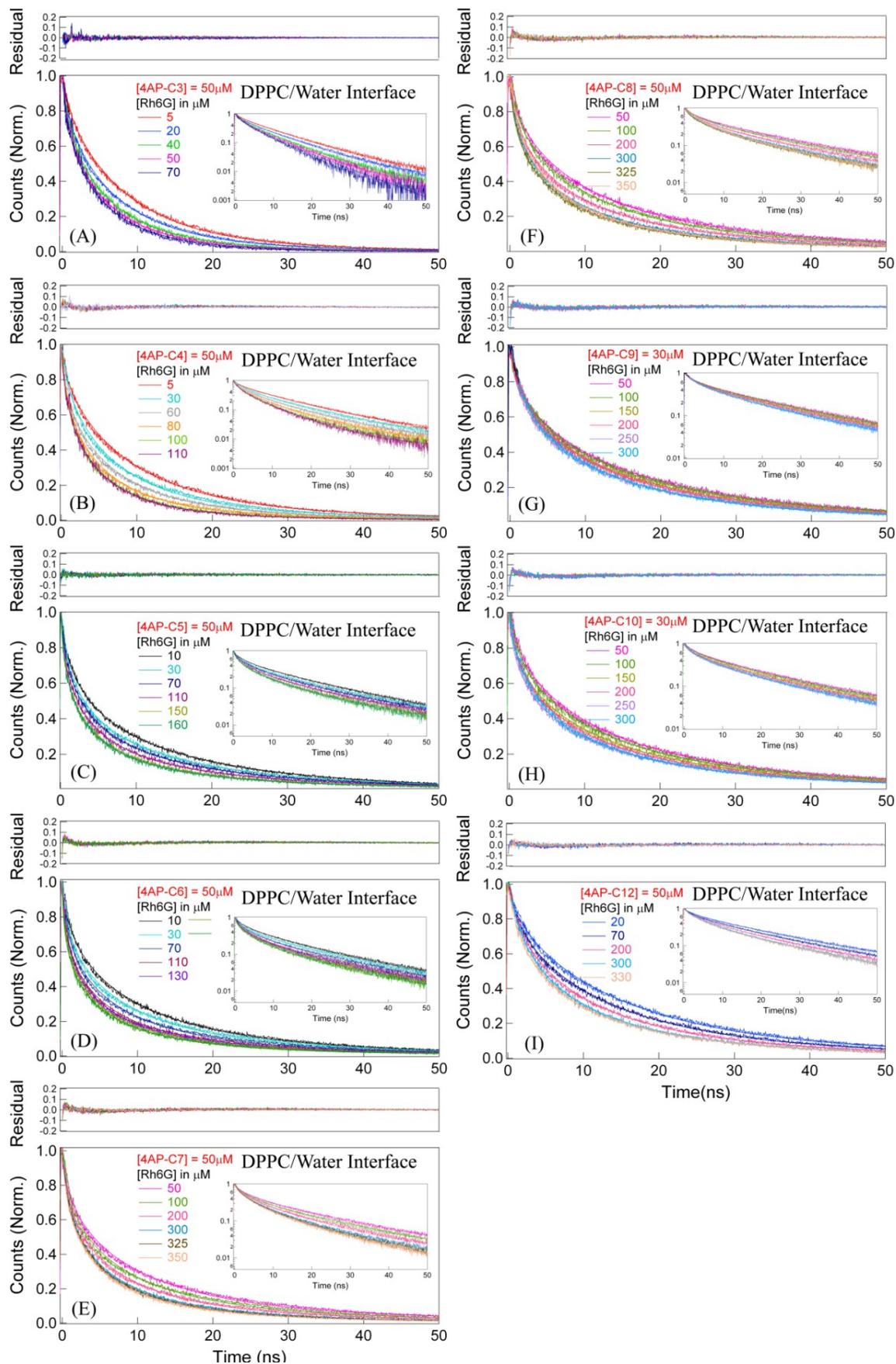


Figure S6. Fluorescence decays of 4AP-Cn (donor) at gel-phase DPPC/water interface in presence of varying concentration of acceptor (Rh6G). Plots also show the global fits to data using equation 8 which provided the closest donor-acceptor distances and the dimensionality of acceptor distributions at the two lipid/water interfaces (see Tables 1 and 2 in manuscript for final results).

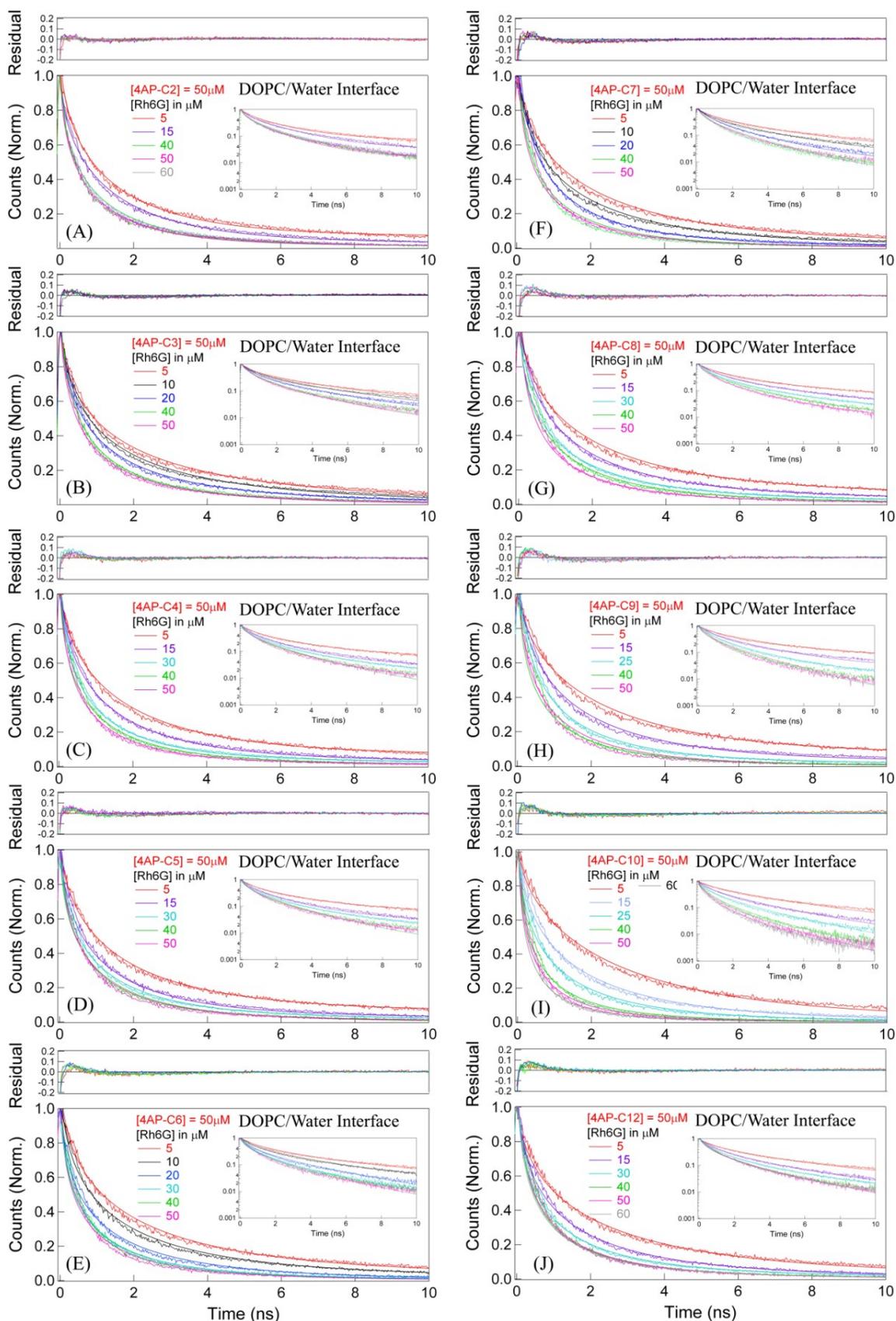


Figure S7. Fluorescence decays of 4AP-C_n (donor) at fluid-phase DOPC/water interface in presence of varying concentration of acceptor (Rh6G). Plots also show the global fits to data using equation 8 which provided the closest donor-acceptor distances and the dimensionality of acceptor distributions at the two lipid/water interfaces (see Tables 1 and 2 in manuscript for final results).