

# Ion transfer and adsorption behavior of ionizable drugs affected by PAMAM dendrimers at the water|1,2- dichloroethane interface

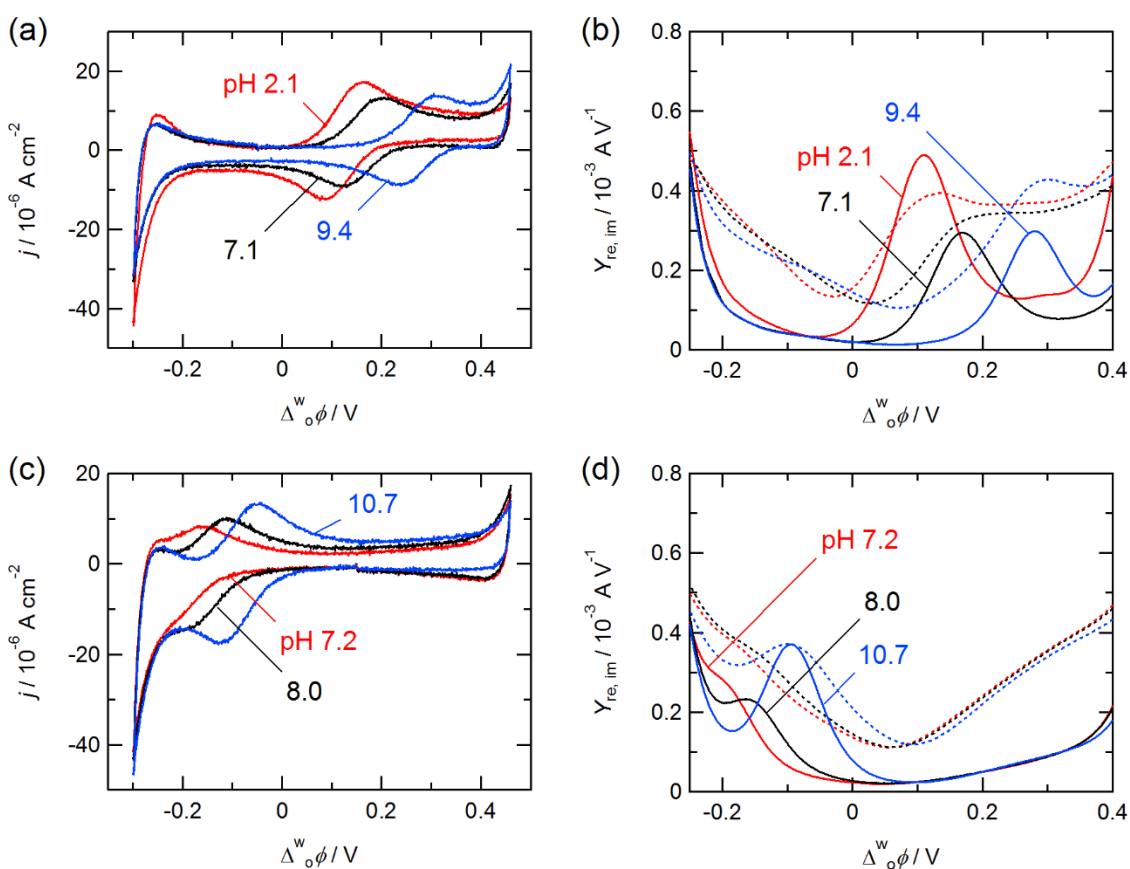
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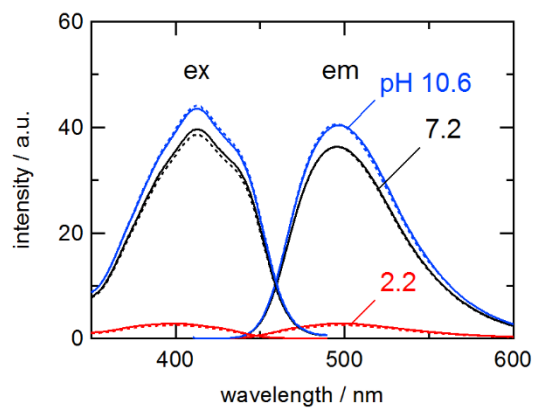
Supplementary data

**Ion Transfer and Adsorption Behavior of Ionizable Drugs Affected by PAMAM Dendrimers at the Water|1,2-Dichloroethane Interface**

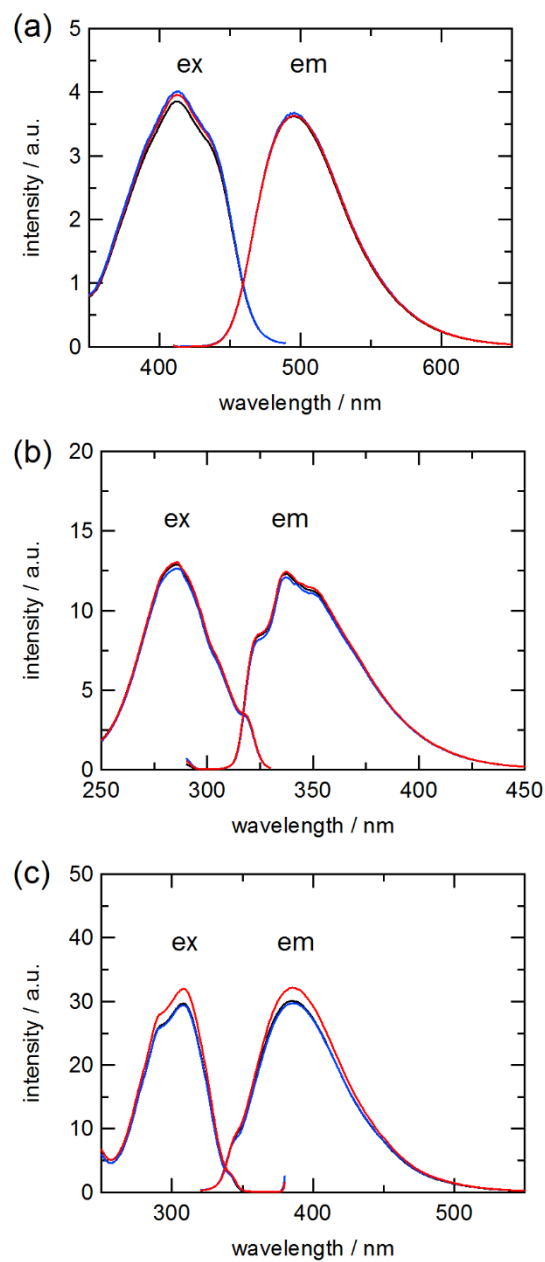
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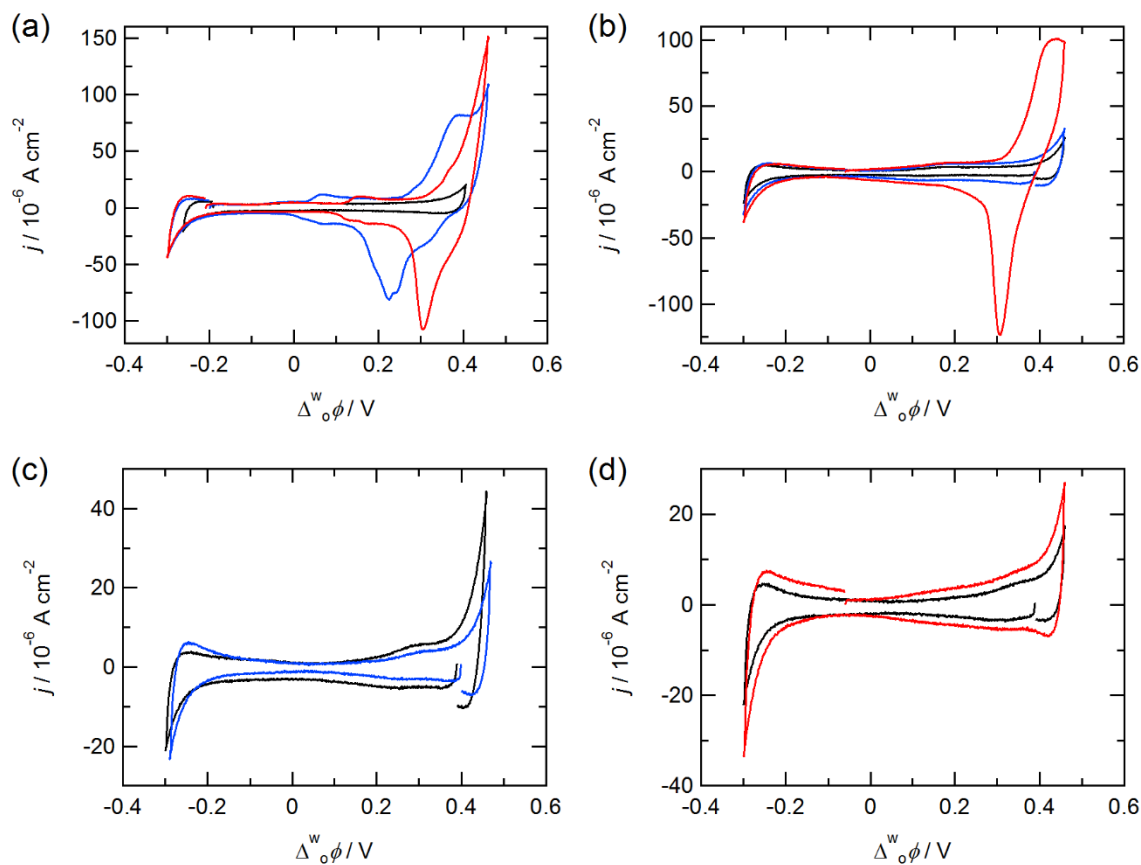
**Fig. S1** Cyclic and ac voltammograms for (a, b) the PRO and (c, d) WAR systems at various pHs. The potential sweep rates were (a, c)  $100 \text{ mV s}^{-1}$  and (b, d)  $5 \text{ mV s}^{-1}$ , respectively. (b, d) The solid and dashed lines are the real ( $Y_{\text{re}}$ ) and imaginary components ( $Y_{\text{im}}$ ) of the admittance, respectively. The concentration of PRO and WAR was  $1.0 \times 10^{-4} \text{ mol dm}^{-3}$ .



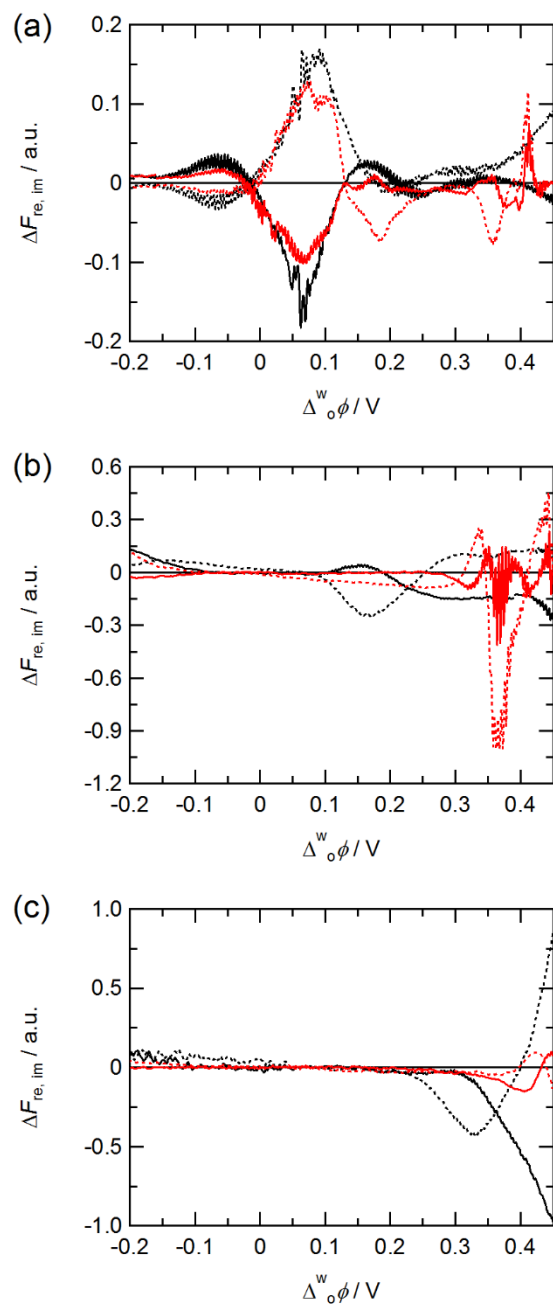
**Fig. S2** Excitation and emission spectra of DIP in the aqueous solution at various pHs. The dashed and solid lines are spectra in the absence and presence of the equimolar G4 PAMAM dendrimer, respectively. The concentration of DIP and dendrimer was  $1.0 \times 10^{-5} \text{ mol dm}^{-3}$ . The excitation wavelength was 404 nm.



**Fig. S3** Excitation and emission spectra of (a) DIP at pH 7.2, (b) PRO at pH 7.1 and (c) WAR at pH 7.1 in the aqueous solution. The black, blue and red lines denote the drug, drug-G3.5 PAMAM dendrimer, and drug-G4 PAMAM dendrimer systems, respectively. The concentration of drugs and dendrimers was  $1.0 \times 10^{-5}$  mol dm<sup>-3</sup>.



**Fig. S4** Cyclic voltammograms measured for DIP in the absence and presence of the dendrimers at (a) pH 2.1, (b) 7.1, (c) 9.5 and (d) 10.7. The black, blue and red lines denote the DIP, DIP-G3.5 PAMAM dendrimer, and DIP-G4 PAMAM dendrimer systems, respectively. The potential sweep rate was  $100 \text{ mV s}^{-1}$ . The concentration of DIP and dendrimers was  $1.0 \times 10^{-5} \text{ mol dm}^{-3}$ .



**Fig. S5** PMF responses measured for DIP at pH **(a)** 2.2, **(b)** 7.3 and **(c)** 10.7 in the presence of the equimolar G4 PAMAM dendrimer. The black lines depict the data measured in the absence of the dendrimer. The potential sweep rate was  $5 \text{ mV s}^{-1}$ . The amplitudes of ac potential modulation were **(a)** 10 mV and **(b, c)** 20 mV at 1 Hz. The solid and dashed lines refer to the real ( $\Delta F_{\text{re}}$ ) and imaginary components ( $\Delta F_{\text{im}}$ ) of PMF, respectively. The concentration of DIP and the dendrimer was  $1.0 \times 10^{-5} \text{ mol dm}^{-3}$ .