

Supporting Information

New highly fluorescent pH indicator for ratiometric RGB imaging of pCO₂

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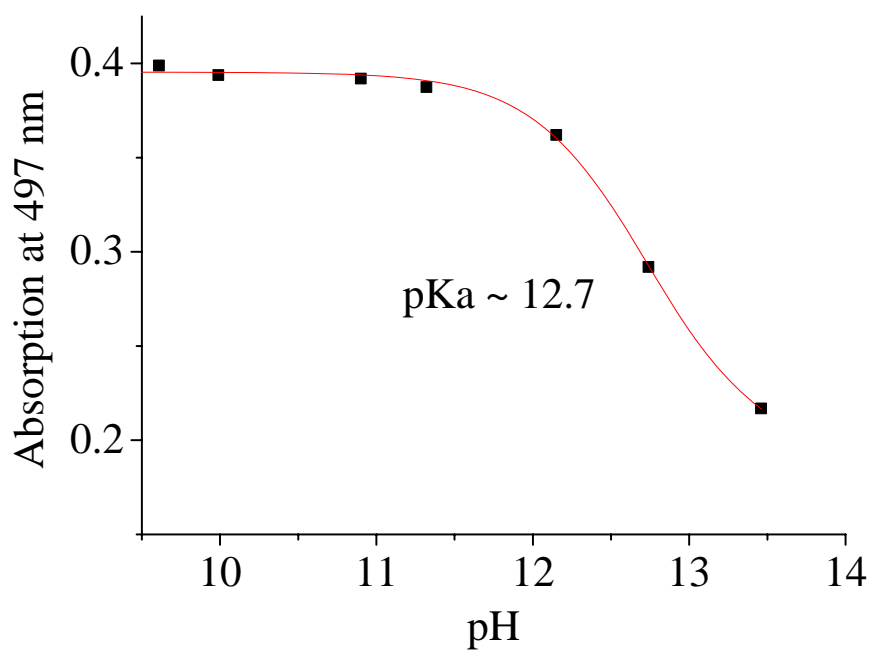


Figure S1. pKa value estimation carried out in a mixture of tetrahydrofuran and buffer (1:1).

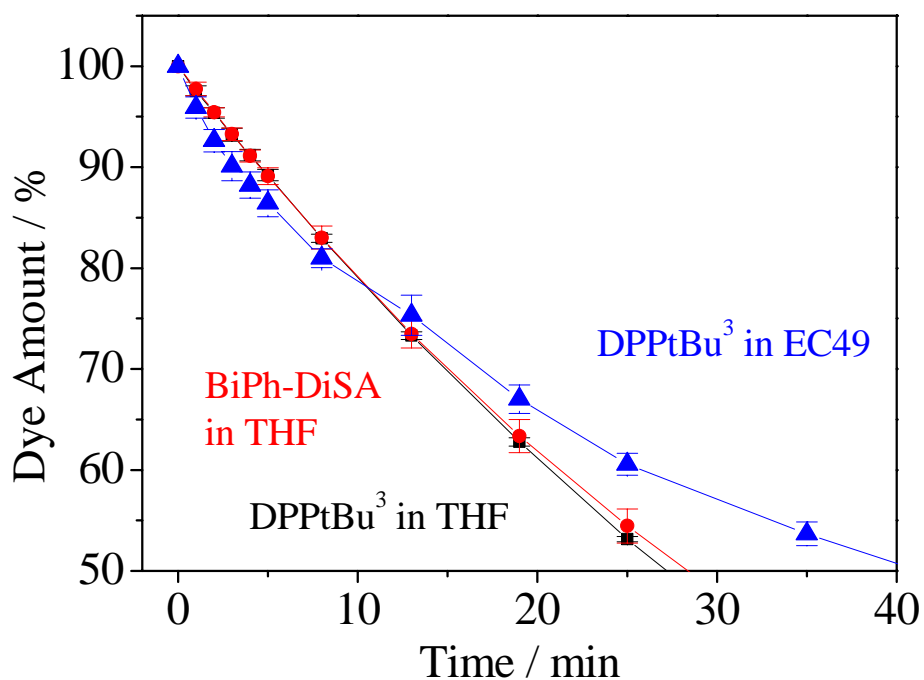


Figure S2. Photodegradation profiles for DPPtBu³ and BiPh-DiSA dissolved in air-saturated tetrahydrofuran (red dots and black squares, respectively) and for DPPtBu³ embedded in ethyl cellulose (blue triangles) obtained from the absorption spectra of the protonated form. The data points represent an average value from 3 independent experiments.

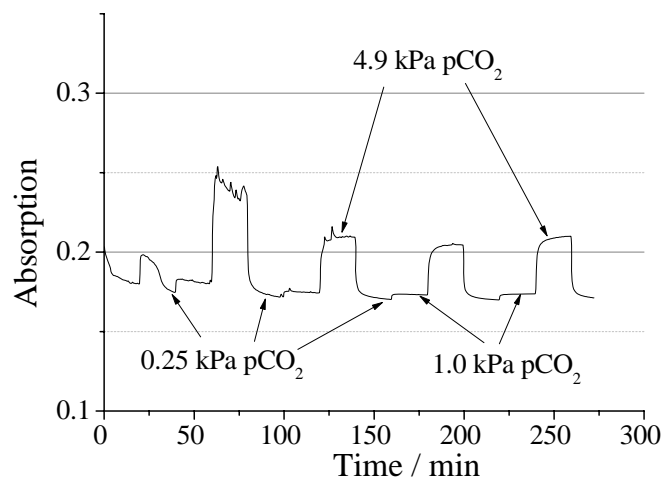


Figure S3. Absorption of the protonated form (505 nm) at alternating levels of pCO₂ (0.25 kPa, 1.0 kPa and 5.0kPa) at 25°C under dry conditions.

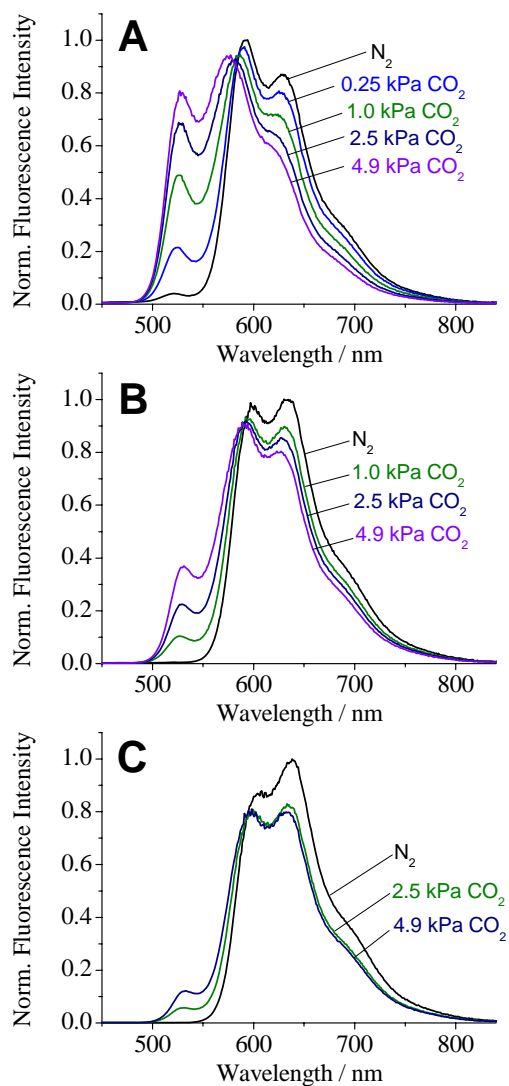


Figure S4. Emission ($\lambda_{\text{exc}} = 430 \text{ nm}$) spectra for 0.25% w/w (A), 0.75% w/w (B) and 1.5% w/w (C) of DPPtBu³ in ethyl cellulose (EC 49) at 25 °C.