Supporting Information

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Dioxygen Reduction by Cobalt(II) Octaethylporphyrin at Liquid | Liquid Interfaces

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Supporting information

Figure SI-1.

Figure SI-1: Dependence of the forward current at 0 mV on the Co(OEP) concentration using Cell 1 at a scan rate of $50 \text{ mV}\cdot\text{s}^{-1}$.

Figure SI-2.

Figure SI-2: Absorption spectra of the aqueous phase after treated with excess NaI after 30 minutes of shake flask experiments in presence of $200 \mu\text{M}$ Co(OEP).

Figure SI-3.

Figure SI-3: Time profile of the formation of H_2O_2 during the shake flask experiments after 30 minutes of shake flask experiments by TB common ion in presence of $200 \mu\text{M}$ $\text{Co}(\text{OEP})$.

Figure SI-4.

Figure SI-4: CVs obtained at a water|1,2-DCE interface with cell 3 illustrated below: $x = 5$ and $y = 0$ (black line) and $x = 5$ and $y = 1$ (red line).

Cell 3

Figure SI-5.

Figure SI-5: (a) Absorption spectra of the 1,2-DCE phases shown in Figure 6: flask a (full black), flask b (full blue), flask c (dotted black) and flask d (dotted blue) (b) UV-Visible spectra of the aqueous solutions flask c (black line) and flask d (blue line) after 30 minutes shake flask experiment.

Figure SI-6.

Figure SI-6. Oxidation of [Co(OEP)] in 1,2-DCE on a platinum electrode. The potential window was calibrated by adding Fc at the end of each experiment and assuming $\text{Fc}/\text{Fc}^+ = 0.64$ V vs. SHE.