

**Supplementary Information for:**

**Hydroxylated derivatives of dimethoxy-1,4-benzoquinone as redox switchable earth-alkaline metal ligands and radical scavengers**

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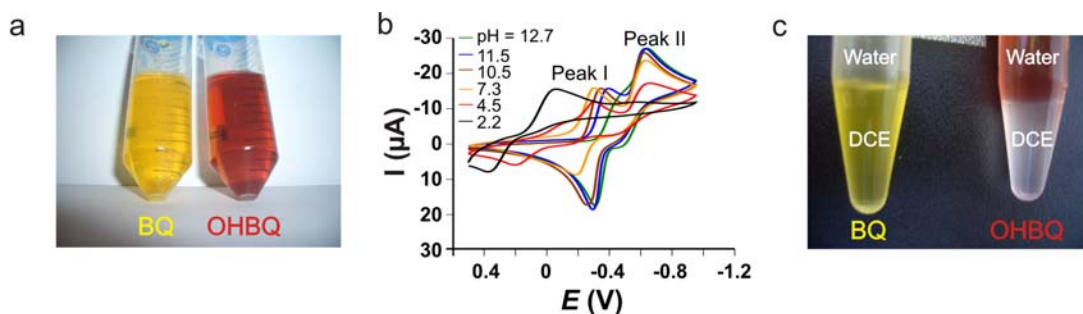


Figure S1: a) Color of 1 mM BQ dissolved in 0.5 M NaCl, pH = 7 (left); and color of 1 mM BQ initially reacted in 0.1 M NaOH for 90 min and afterwards titrated to pH of 7 (right). b) CVs of the reaction mixture recorded after incubation of 100  $\mu\text{M}$  BQ in 0.1 M NaOH for 1h followed by titration of the solution with HCl to required pH. c) Partition of native BQ between water and 1,2-dichloroethane (DCE) (left), and partition between water solution and DCE of the reaction mixture of BQ initially dissolved in 0.1 M NaOH for 90 min and afterwards titrated to pH of 7 (right). DCE is a lipophilic (water immiscible solvent) with higher density than water.

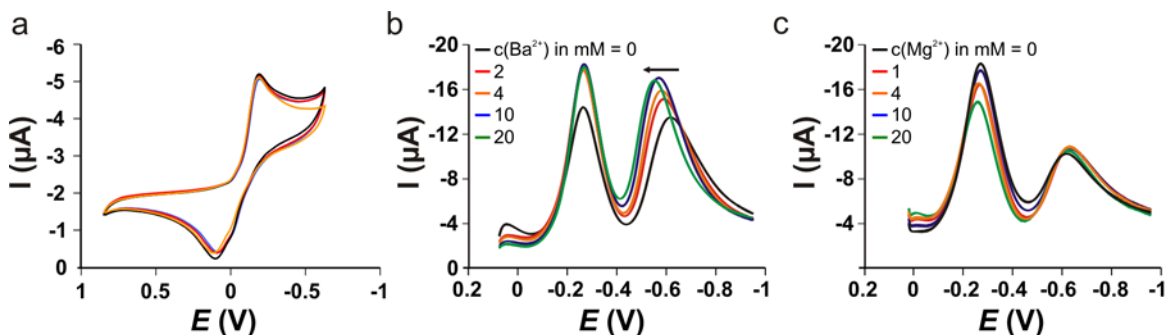


Figure S2: Chelating properties of BQ and OHBQ towards  $\text{Ca}^{2+}$ ,  $\text{Ba}^{2+}$  and  $\text{Mg}^{2+}$   
 a) CV of BQ showing its insensitivity towards  $\text{Ca}^{2+}$  ions in the aqueous solution.  $c(\text{Ca}^{2+})/\text{mM} = 0, 2; 10$  and  $50$ ,  $c(\text{BQ}) = 100 \mu\text{M}$ ,  $v = 30 \text{ mV/s}$ . Net SWV depicting the complexing abilities of BQR towards  $\text{Ba}^{2+}$  (b) and  $\text{Mg}^{2+}$  (c). BQ was initially kept in contact with 0.1 M NaOH for 1 h; pH was adjusted to 7 afterwards.