

Catalysis Science & Technology

## Supplementary Information

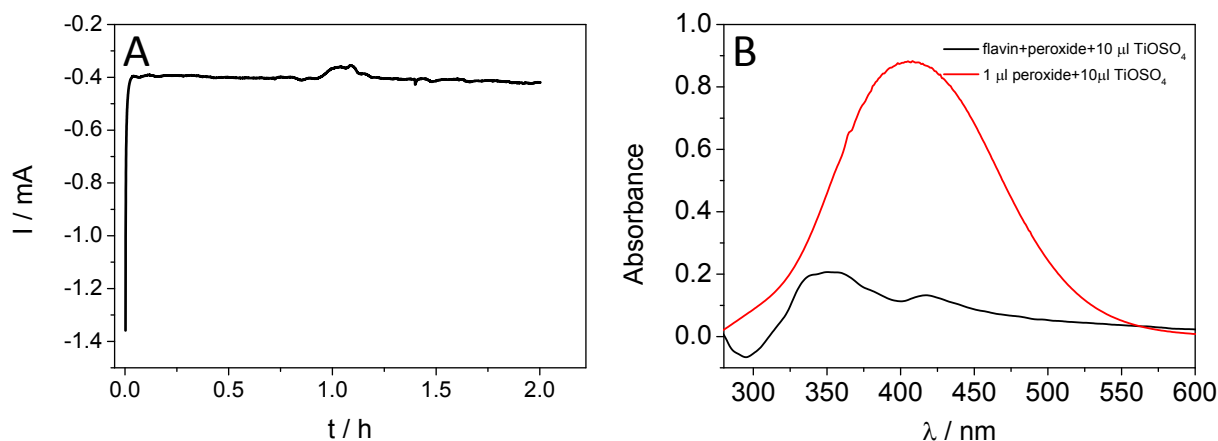
# Electrocatalytic behavior of freely-diffusing and immobilized synthetic flavins in aqueous media

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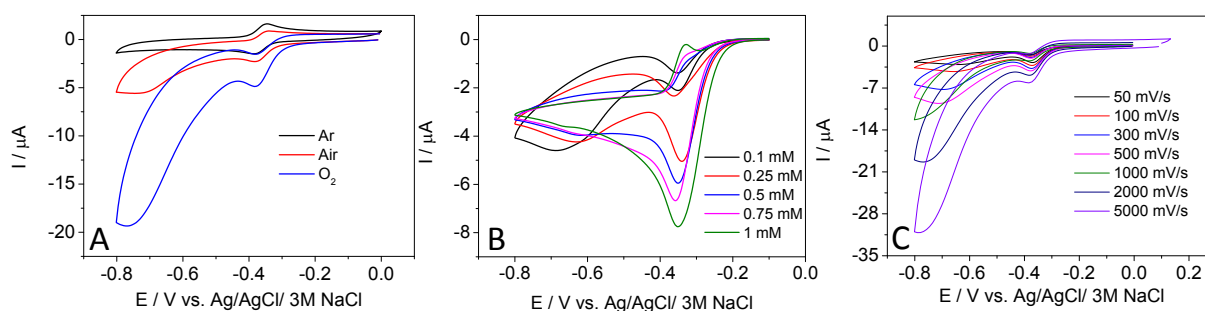
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**Fig. S1** (A) Chronoamperometric curve recorded during the exhaustive electrolysis of flavin **1**. ( $E = -0.4$  V,  $t = 2$  h,  $c_{\text{FL1}} = 0.5$  mM). (B) UV-vis spectra of the electrolyzed sample after adding  $\text{TiOSO}_4$  (black curve), and UV-vis spectra of  $\text{H}_2\text{TiO}_4$  complex (red curve).



**Fig. S2** (A) Comparison of CVs for flavin **2** (GC electrode,  $\text{pH} = 7.0$ ,  $0.1$  M phosphate buffer solution, varying  $\text{O}_2$  concentration ( $c_{\text{FL1}} = 0.1$  mM,  $\nu = 2$   $\text{Vs}^{-1}$ )). (B) Comparison of the CV traces for the synthetic flavin **2** at different flavin concentrations ( $c_{\text{O}_2} = 2.25$  mM,  $\nu = 0.1$   $\text{Vs}^{-1}$ ). (C) Scan rate-dependence of the catalytic current during CV measurements ( $c_{\text{FL2}} = 0.1$  mM,  $c_{\text{O}_2} = 2.25$  mM).