

Supplementary Materials

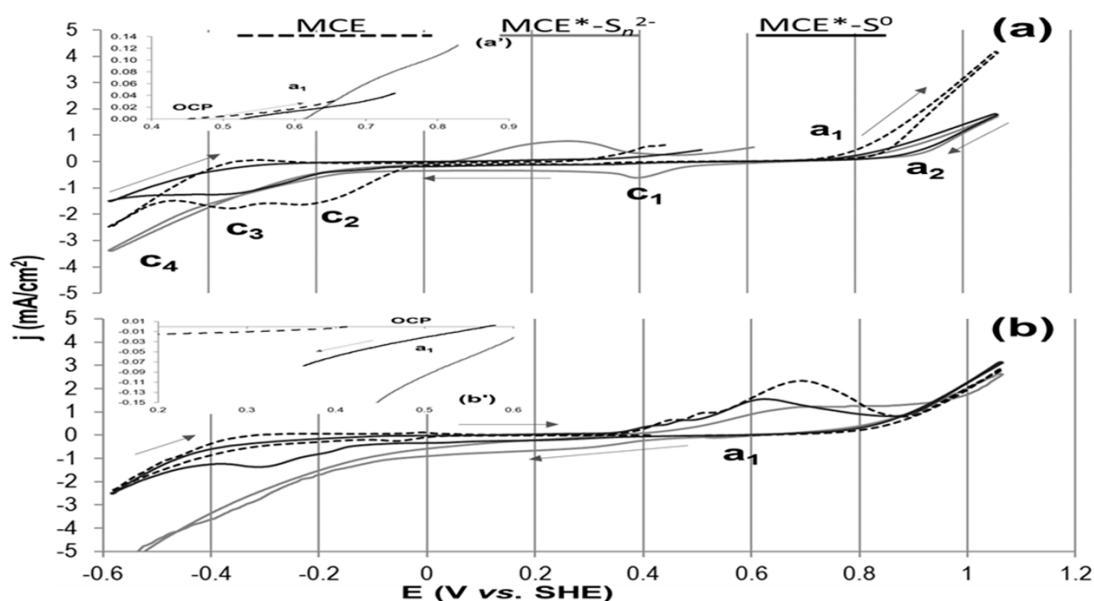


Figure S1: Voltammograms in positive (a) and negative (b) potential sweep of pristine MCE (dotted line), and electrooxidized EMC at 695 mV, $\text{MCE}^*-\text{S}_n^{2-}$ (gray line), and at 915 mV, MCE^*-S^0 (black line), in ATCC-125 medium pH 2. Scan rate: 20 mV/s with stirring; the potential scan was initiated at the OCP.

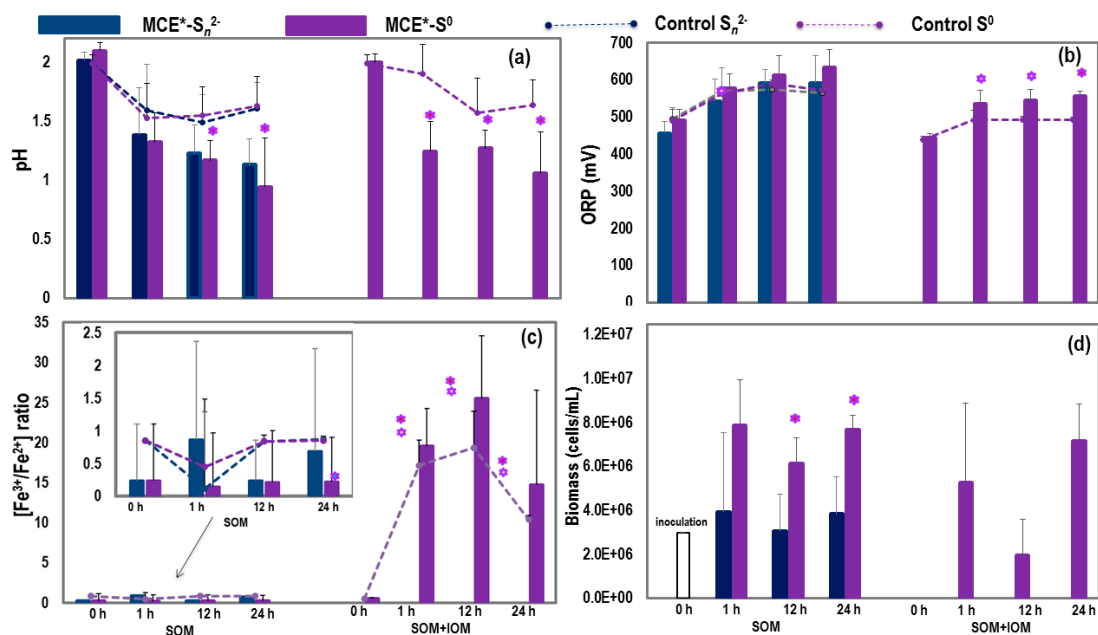


Figure S2: Certain characteristics of the media as electrolyte (after 1, 12 and 24 h of the exposure of $\text{MCE}^*-\text{S}_n^{2-}$ (blue) and MCE^*-S^0 (purple) to SOM or SOM+IOM media (abiotic controls; dotted lines) and cultures (biotic; columns): pH (a); ORP (b), soluble $\text{Fe}^{3+}/\text{Fe}^{2+}$ (c), and biomass of non-attached bacteria (d). Data: Average values ($n=3$) and standard deviation (error bars). *: Values significantly different from both, controls and surficial SRS ($-\text{S}_n^{2-}$ or $-\text{S}^0$)