Inducing the Attachment of Cable Bacteria on Oxidizing Electrodes

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# Cyclic voltammetry

Cyclic voltammetry (CV) was used to investigate the electron transfer process of the reactor. The carbon brush anode was used as the working electrode and a bare platinum wire was used as the counter electrode. An Ag/AgCl (in saturated KCl) was used as the reference electrode. Control experiments were also conducted by using the unpoised electrode. All CV experiments were performed by using a potentiostat (DLK70, Analytical Instrument Systems, NJ, USA) over a potential range between -0.8 to 0.8 mV.

SI Fig 1. Extracted cable bacteria filaments under different fields of confocal scanning microscope, (a) Alexa Fluor 488, (b) bright field images, and (c) DAPI. Red circles indicate the possible polyphosphate granules.

SI Fig 2. Voltammograms obtained at a) day 52 and day 100, b) day 100 at increasing scan rate for the anode poised at 30 mV vs Ag/AgCl.

SI Fig 3. X-Ray Energy Dispersive Spectrometry (EDS) of (a) the mineral coating on anode; and (b) the mineral encrustation of a filament.