SUPPORTING INFORMATION for

The nanostructure of three-dimensional scaffolds enhances the current density of microbial bioelectrochemical systems

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Supporting Information Figures

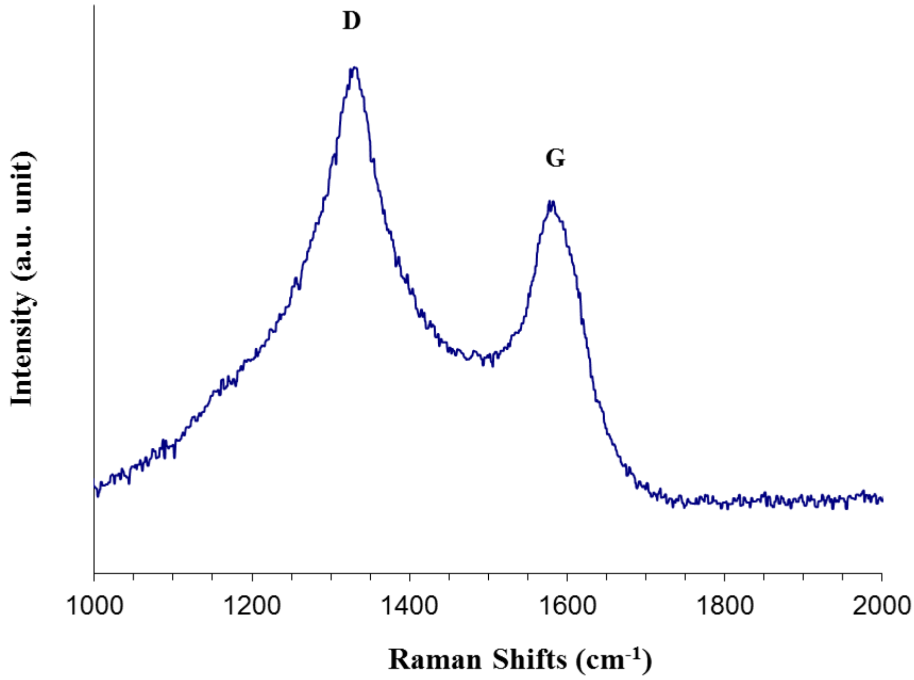

Figure S1: Raman Spectra of as synthetised NanoWeb-RVC.

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The Raman of RVC on nanoweb shows a high D band with the G:D ratio equalling approximately 0.8. The reason for this low ratio in twofold; firstly the highly twisted nature of the MWNTs within the nanoweb is indicative of a large amount of 5,7 ring defects on the CNT sidewall. These 5,7 ring defects give rise to part of the D band signal, whilst also contributing to an increase in the FWHM of both peaks. Secondly, the open pore structure of the nanoweb allows for some of the light from the Raman laser to pass through the CNT layer and interact with amorphous (sp^3 dominated) base layer. This combination of signals along with significant scattering of light caused by the MWNT structure leads to the low signal intensity and extremely broad peaks.

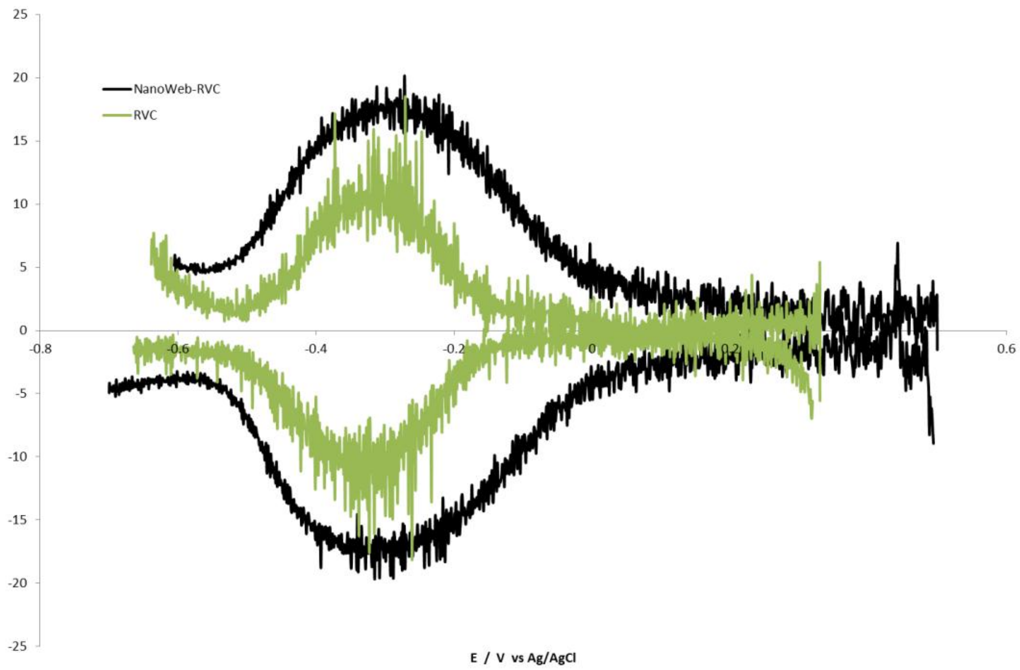

Figure S2: First derivative analysis of turnover cyclic voltammograms in turnover conditions shown in Figure 4 in the main text. All conditions are the same as in figure 4 in the main text.

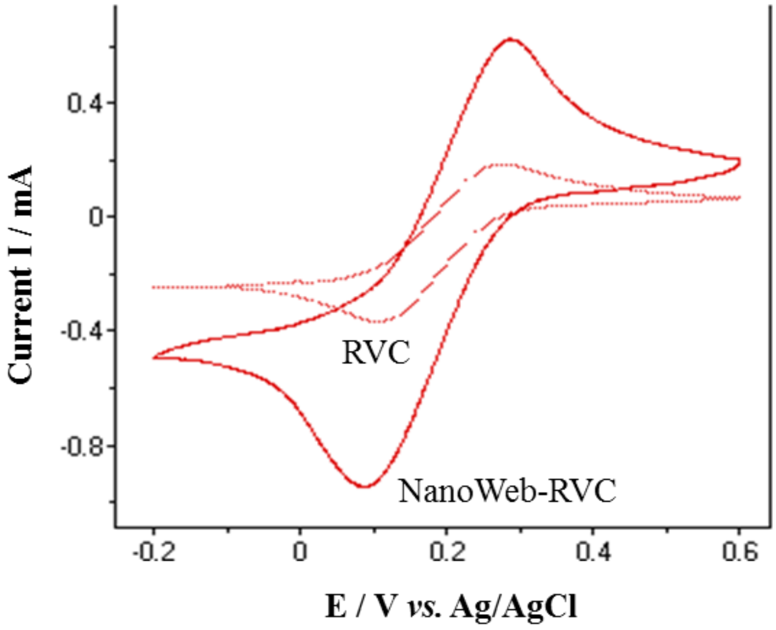

Figure S3: Cyclic voltammogram of ferricyanide on NanoWeb-RVC and non-modified RVC. Experiments performed in a standard three-electrode cell with a 0.1M $NaNO_3$ solution containing 10mM ferricyanide at a scan rate of 5 mV s^{-1}.