Supporting Information.

Conversion of residual organics in corn stover-derived biorefinery stream to bioenergy via a microbial fuel cell.

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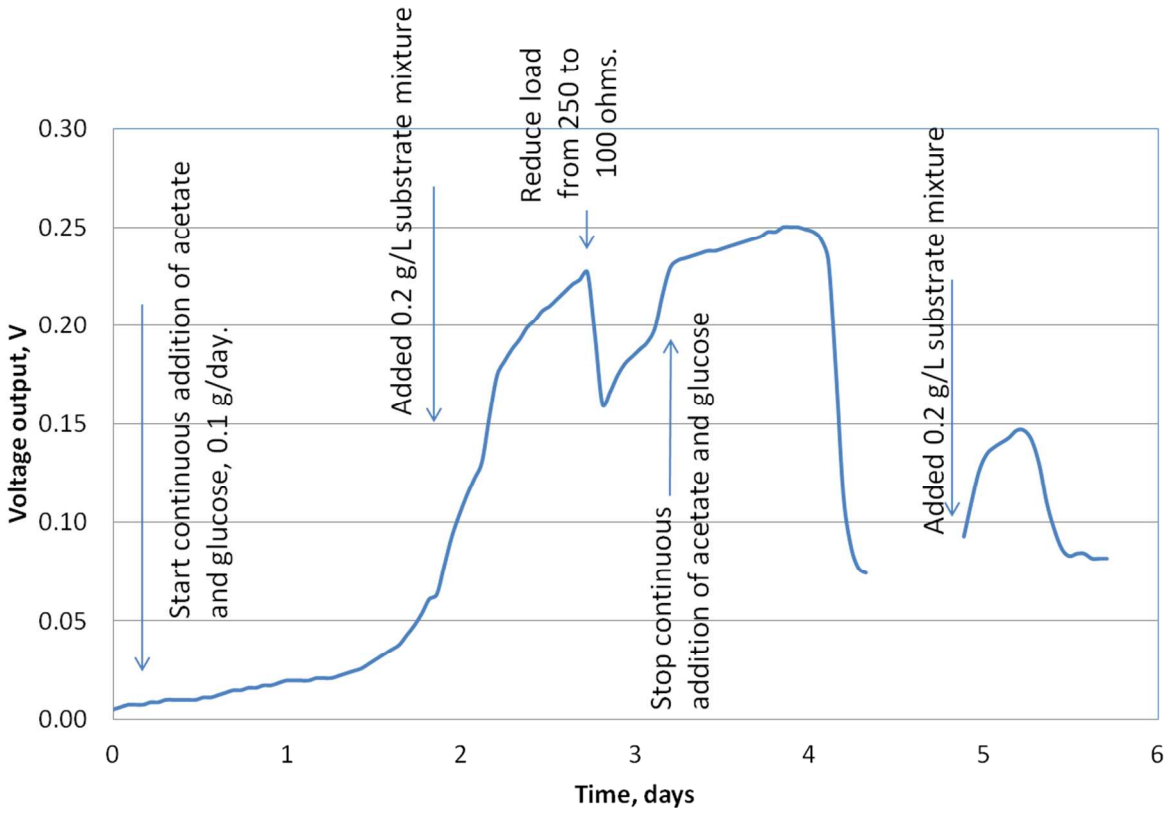

Fig S1. Increase in voltage during initial growth of anode consortium. Growth was initiated with addition of glucose and acetate (day 0), while addition of a mixture of five substrate mixture (furfural, HMF, HB, VA and HAP) was initiated on day 2.

Calculation of concentration of 'other' unknown compounds in SPW sample:

The concentration of 'other' components is an approximation based on HPLC analysis, calculated using the total area under the curve and a response factor of HB. The response

14 factor was determined to be 702513, which was a ratio of area to concentration in mg/L. The
15 retention time for HB was closest to the mean retention time for the peaks present in the SPW
16 mixture. The 'other' components were potentially aromatic compounds observed in HPLC
17 chromatogram with a UV-Vis detector. which is why HB was used as the 'representative' for
18 determining approximate concentration of 'other' organics in the sample
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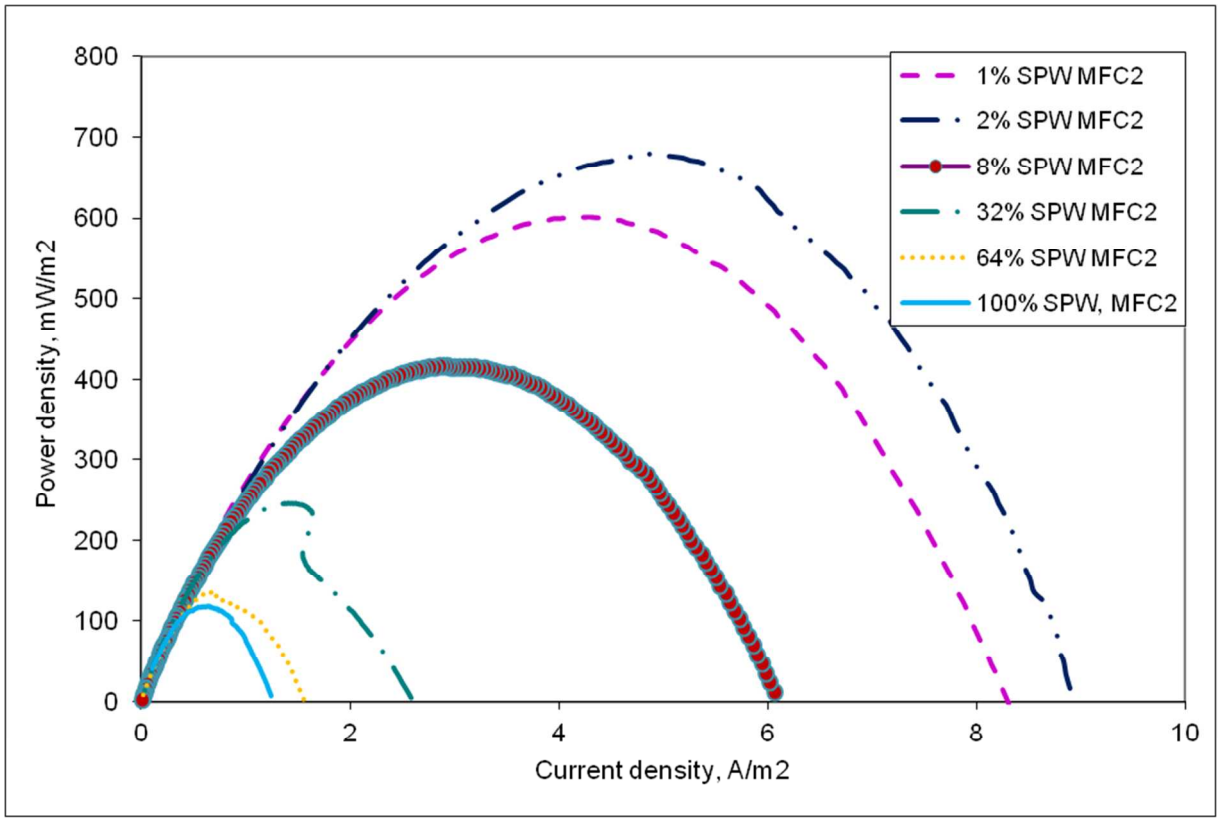

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21 Figure S2. Performance of MFC2 at different SPW loading. The general trend in power and
22 current density resulting from change in SPW loading is similar to first MFC experiment
23 (MFC1, data shown in Figure 1). The power density increased with loading up to 2% SPW in
24 MFC and then decreased up to 100%. The difference between the performance of the two
25 MFCs was the SPW loading at which the trend reversal occurred. The maximum power
26 density was observed at 8% SPW loading in case of MFC1, while it was 2% in case of MFC2.

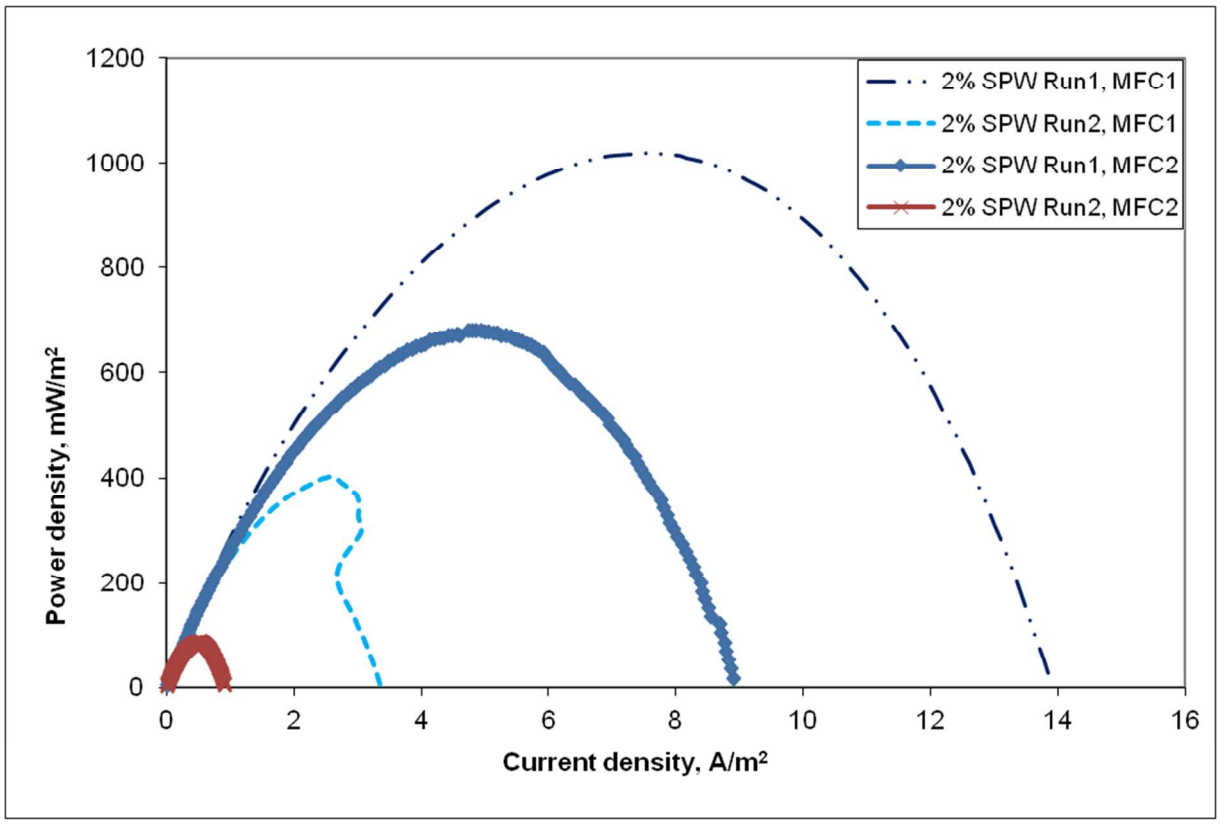

Fig S3. Power density analysis for SPW loading of 2%. Run 1 and 2 indicate first and second run with 2% SPW loading. The second run was conducted after the run with 16% SPW loading to demonstrate that reduction in power production was not due to substrate inhibition but potentially due to changes in accessibility of the anode consortia to the substrate.

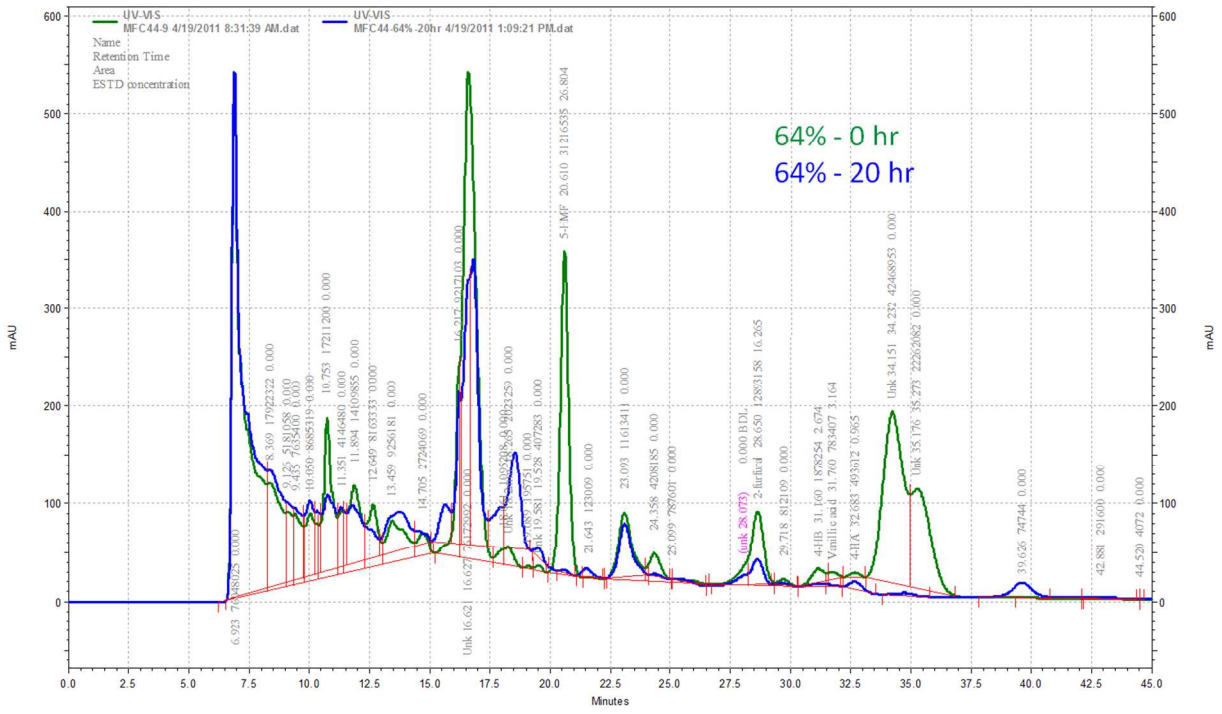

Fig S4. A chromatogram showing reduction in phenolics and furan aldehyde compounds present in 64% SPW sample after a 20-hour treatment in MFC1.

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