Supporting Information

Self-powered Detection of Glucose by Enzymatic Glucose/Oxygen Fuel Cells on Printed Circuit Boards

Carla Gonzalez-Solino^{1,2}, Elena Bernalte^{1,2}†, Clara Bayona Royo^{1,2}, Richard

Bennett³††, Dónal Leech³ and Mirella Di Lorenzo^{1,2*}

¹Department of Chemical Engineering, University of Bath, Bath BA2 7AY, UK

²Centre for Biosensors, Bioelectronics and Biodevices (C3Bio), University of Bath,

Bath BA2 7AY, UK

³School of Chemistry & Ryan Institute, National University of Ireland Galway,

University Road, Galway, H91 TK33, Ireland

*Corresponding author: mdl28@bath.ac.uk



Figure S1. SEM images. (A) Au electrode on PCB at 500X magnification. (B) hPG/Au at 500X magnification. (C,D) hPG/Au electrode at 5k magnification.



Figure S2. Characterisation of the biocathode BOD/hPG/Au: a) effect of pH on the ORR and b) ORR at the hPG electrodes with and without BOD.



Figure S3. I-V response of the hPG/Au electrode in the presence of 6 mM glucose in phosphate buffer pH 7.4. Potentials referred to Ag/AgCI. Scan rate 5 mV s⁻¹.



Figure S4. Comparison of Os/hPG/Au and Os/Au electrodes in phosphate buffer at a scan rate of 10 mV s⁻¹.