Supplementary Information (SI) for Journal of Materials Chemistry A.

Thermal treatment of high-density polyethylene films to increase crystallinity for the fabrication of superior radiation-grafted anion-exchange membranes for fuel cells

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This electronic supplementary information document contains Figures that are in support of those in the main article.

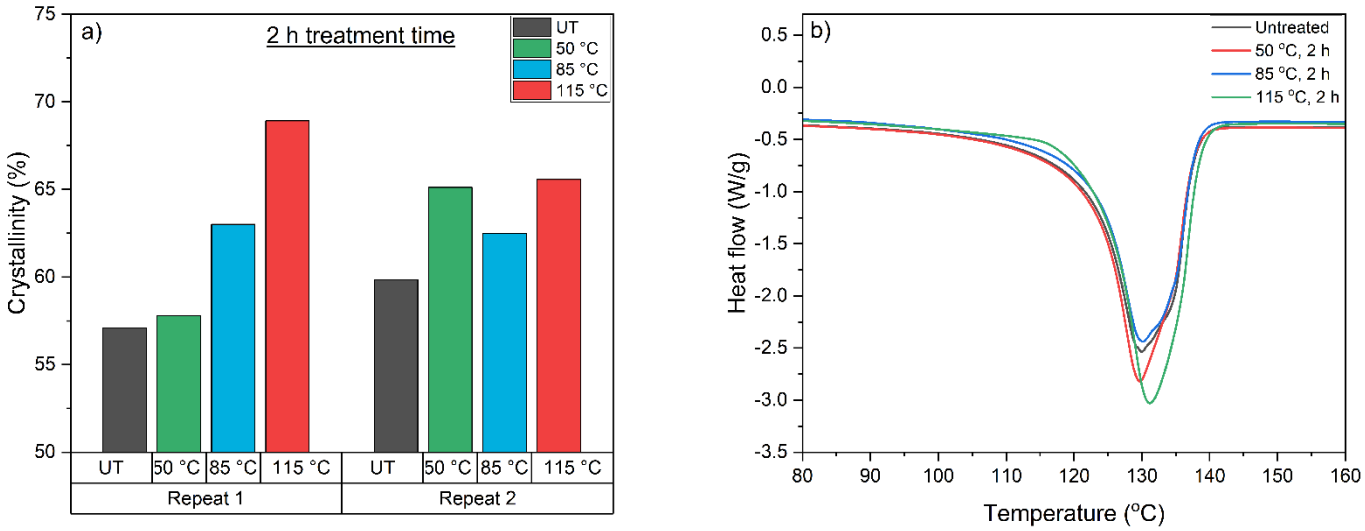

Figure S1: (a) The crystallinity of HDPE film calculated using DSC when left untreated (UT) and when treated in an oven for 2 h at 50, 85 and 115 °C. After treatment samples were cooled naturally. This measurement was repeated twice at two separate locations on each sample. (b) The endothermic melting peaks obtained from DSC in a heat cool cycle after thermal treatment of HDPE films.

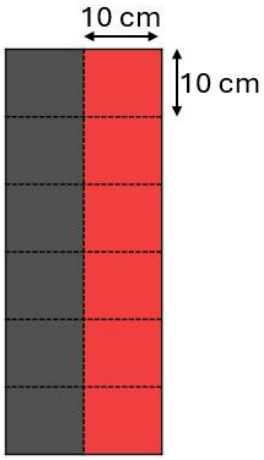

Figure S2: A cartoon depicting how a 20 cm x 60 cm section of film was cut and treated prior to preparing AEMs. The black section was cut and left untreated whilst the red section was treated (24 h at 115 °C) as a complete section and then cut into six 10 cm x 10 cm squares prior to AEM synthesis.