Supporting Information

Preparation and investigation of 1-(3-aminopropyl)imidazole functionalized polyvinyl chloride/poly (ether ketone cardo) membranes for HT-PEMFCs

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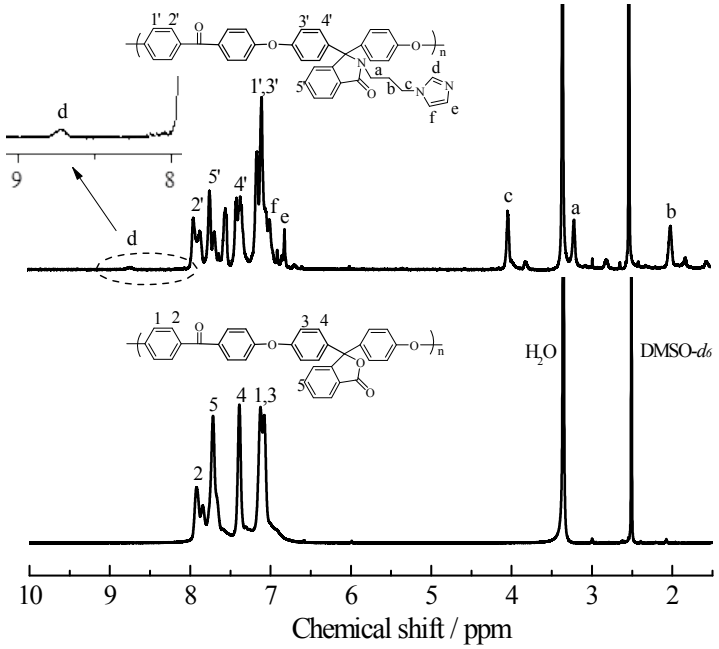

Fig. S1 ^{1}H NMR spectra of PEK-C and PEK-C/APIm polymers

The chemical structures of PEK-C and PEK-C/APIm were confirmed by ^{1}H NMR in DMSO-d_6. The characteristic peaks ranging from 6.5 to 8.0 ppm were assigned to aromatic phenyl in PEK-C, which is in a good agreement with the literature.[1-3] For PEK-C/APIm, the characteristic absorptions at 1.99, 3.19 and 4.02 ppm (H_b, H_a and H_c) were attributed to different methylene groups in the APIm side-chain,[4] while the characteristic peaks at 6.89, 7.02 and 7.92 ppm (H_e, H_f and H_d) resulted from the end group of imidazole. The ^{1}H NMR results indicate that 1-(3-aminopropyl) imidazole (APIm) can successfully react with PEK-C polymer through the reaction between the amino group and lactone group via lactamation reaction.

References:

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