Electronic Supplementary Material (ESI) for Journal of Materials Chemistry This journal is © The Royal Society of Chemistry 2012

## **Electronic supplementary information**

## Synthesis of Fluorinated Amphiphilic Triblock Copolymer and its Application to High Temperature-Operable Fuel Cell

Dong Youb Oh,<sup>a</sup> Jea Uk Lee,<sup>b</sup> and Won Ho Jo\*<sup>a</sup>

<sup>a</sup> Department of Materials Science and Engineering, Seoul National University, Seoul 151-742, Korea

<sup>b</sup> Composite Materials Research Group, Korea Institute of Materials Science, Changwon, Gyeongnam,

642-831, Korea



**Figure. S1** <sup>1</sup>H NMR spectra of (a) FPAE macroinitiator and (b) SPSAN-*b*-FPAE-*b*-SPSAN using  $CDCl_3$  and  $DMSO-d_6$  as solvents, respectively.



Figure. S2 TGA traces of FPAE and triblock copolymer membranes.



Figure. S3 Weight loss of triblock copolymer membranes in Fenton's test.



Figure. S4 Stress-strain curves of triblock copolymer membranes and Nafion under hydrated condition.

 Table S1. Mechanical properties of triblock copolymer membranes and Nafion under hydrated condition.

Sample	Young's modulus (MPa)	Tensile strength (MPa)	Elongation at break (%)
F22S11	908	88.34	59
F22S21	523	67.85	69
F22S44	524	52.96	92
Nafion	166	25.58	172