

Block copolymers with stable radical and fluorinated groups by ATRP

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Supporting Information

We assembled coin cells with a radical polymer cathode (blended with conductive carbon and polyvinylidene fluoride (PVDF)), a lithium anode and LiCF_3SO_3 in tetraethylene glycol dimethyl ether (TEGDME) as electrolyte to demonstrate that a coin cell is possible with our multifunctional polymers. Carbon and PVDF will help to increase conductivity and stability of the cathode, respectively. Figure SI-1 shows a scheme of the coin cell composition and a charge-discharge curve at a constant current of 0.1 mA.

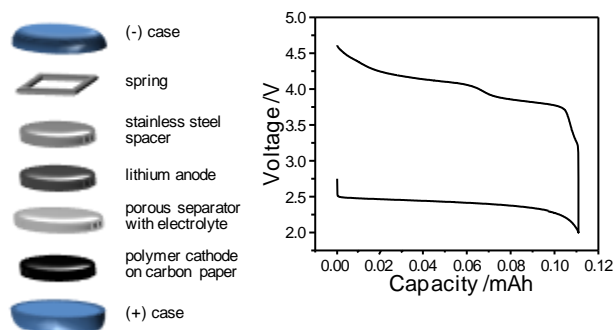


Figure SI-1: Setup of coin cells fabricated with a PTMA-*b*-P3FEMA containing cathode and charge-discharge curve at a constant current of 0.1 mA.

Plateaus of almost constant voltage during charging and discharging processes over a wide range of capacity (low total capacity due to low weight of the polymer cathode) appear in the charge-discharge curve. This shows that the fluorinated block in radical block copolymers does not prevent oxidation of the PTMA groups as would be necessary for potential battery applications.