

ABSTRACT

The present application provides a polymer and use thereof. The polymer includes a first block represented by Formula 1 and a second block represented by Formula 2; R₁ is selected from a substituted or unsubstituted C1-C30 alkyl, a substituted or unsubstituted polyether group, a substituted or unsubstituted C1-C30 alkoxy, and a substituted or unsubstituted C6-C60 aryl; R₂ is selected from a substituted or unsubstituted polyether group, a substituted or unsubstituted C1-C30 alkyl, a substituted or unsubstituted C1-C30 alkoxy, a substituted or unsubstituted C6-C60 aryl and *-b1-S-S-b2-*; b1 and b2 are each independently selected from a substituted or unsubstituted C2-C15 chain alkyl or a substituted or unsubstituted C6-C60 aryl; and R₃ is an ionic liquid-containing group. The special molecular structure of the polymer enables the polymer to have excellent electrochemical performance and mechanical strength when applied to a composite electrolyte.

FIG. 1