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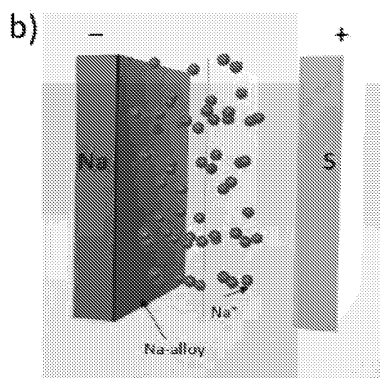
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(54) Title: ELECTROLYTE FOR USE IN SODIUM-SULFUR BATTERIES

Figure 1



(57) Abstract: The present disclosure relates to an electrolyte comprising: a) a sodium salt; b) an additive comprising at least one additional metallic/metalloid cation having a standard reduction potential which is at least 2.5V more positive than that of sodium cation; wherein said sodium salt and said additive are dispersed in a solvent comprising at least one alkyl carbonate, and wherein the concentration of said metallic/metalloid cation in the electrolyte is 15 mM to 250 mM. The present disclosure also relates to a sodium-sulfur cell comprising a sodium anode, a microporous sulfur cathode, and the electrolyte as described herein. The present disclosure further provides a method of improving cycling life of a sodium-sulfur cell, wherein the sodium-sulfur cell comprising a sodium anode, a sulfur cathode, and an electrolyte containing a sodium salt dispersed in an alkyl carbonate solvent.

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