

ABSTRACT

IN-SITU POLYMERIZED SOLID ELECTROLYTE, PREPARATION METHOD AND USE THEREOF

The present application relates to the field of lithium battery materials, particularly to an in-situ polymerized solid electrolyte, preparation method and use thereof. An in-situ polymerized solid electrolyte includes the following raw materials for preparation in parts by mass: 35-40 parts of an ionic liquid, 35-40 parts of vinyl ethylene carbonate, 25-28 parts of a lithium salt, and 0.05-0.1 parts of a photoinitiator. The in-situ polymerized solid electrolyte of the present application achieves key performance enhancements in all-solid-state lithium batteries, including improved safety, extended cycle life, improved energy density, and power density, and improved overall performance and reliability of the battery by combining the advantages of multiple components.