ABSTRACT OF THE DISCLOSURE

THERMAL RUNAWAY SUPPRESSION ELEMENT AND THE RELATED APPLICATIONS

This invention provides a thermal runaway suppression element for lithium batteries and the related applications. The thermal runaway suppression element includes a composite salt layer provided by a eutectic mixture containing at least two single inorganic salts. The composite salt layer has a melting point between 90 to 150 ℃. At least one of the single inorganic salts comprises a cation, which is an amphoteric metal ion or an alkali metal ion. The thermal runaway suppression element is disposed inside or outside the lithium battery. When the temperature of the lithium battery reaches to 90 to 150 ℃, the composite slat layer will be molten and reacts with the electrochemical reaction system to passivate the active materials and decrease ionic and electronic conductivity. Therefore, the thermal runaway event and its derived problem are efficiently solved.

Figure 2A