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(71) Applicant: FUCHS SE [DE/DE]; Einsteinstraße 11, 68169 Mannheim (DE).

(72) Inventor: KE, Ruisi.

(74) Agent: MEPAT PATENTANWÄLTE PARTG DR. MEHL-MIKUS, GOY, DR. DROBNIK MBB; Eisenlohrstraße 24, 76135 Karlsruhe (DE).

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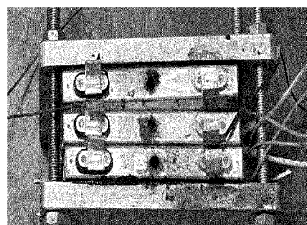
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Fig. 1



(57) Abstract: The present invention relates to the technical field of safety protection of commercial lithium-ion batteries, and in particular, to a battery thermal protection system and application thereof. The battery thermal protection system consists of multifunctional coatings coated on a surface of an aluminum housing of each cell of a commercial lithium-ion battery and a fluid between cells in a module. The multifunctional coatings are one or a combination of an organic coating, an inorganic coating, and an organic-inorganic hybrid coating, and the number of layers of the multifunctional coatings is 1-10. Damage of thermal runaway of a single cell to adjacent cells and a whole battery set can be greatly reduced, and propagation of the thermal runaway is blocked.

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