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(71) 申请人: 宁德时代新能源科技股份有限公司 (CONTEMPORARY AMPEREX TECHNOLOGY CO., LIMITED) [CN/CN]; 中国福建省宁德市蕉城区漳湾镇新港路 2 号 352100 (CN)。

(72) 发明人: 赵玉珍 (ZHAO, Yuzhen); 中国福建省宁德市蕉城区漳湾镇新港路 2 号 352100 (CN)。张晓峰 (ZHANG, Xiaofeng); 中国福建省宁德市蕉城区漳湾镇新港路 2 号 352100 (CN)。

(74) 代理人: 深圳中一联合知识产权代理有限公司 (SHENZHEN ZHONGYI UNION INTELLECTUAL PROPERTY AGENCY CO., LTD.); 中国广东省深圳市福田区莲花街道紫荆社区深南大道 6008 号深圳特区报业大厦 33 层 518034 (CN)。

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(54) Title: LITHIUM-ION BATTERY, CHARGING METHOD AND LITHIUM-ION BATTERY SYSTEM

(54) 发明名称: 一种锂离子电池、充电方法、锂离子电池系统

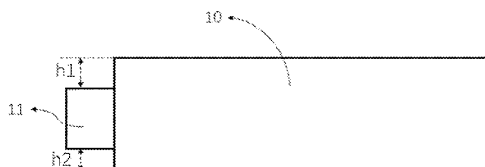


图 1

(57) Abstract: The present application relates to the technical field of lithium batteries. Provided are a lithium-ion battery, a charging method and a lithium-ion battery system. The lithium-ion battery comprises a housing, a cell and an electrolyte. The cell comprises a positive electrode sheet, a negative electrode sheet and a separator; a negative electrode active material comprises graphite; a positive electrode active material comprises a lithium-containing phosphate and a carbon layer provided on the surface of the lithium-containing phosphate; the thickness of an active material layer on a single side of the negative electrode sheet is 50 μm -95 μm , and the thickness of an active material layer on a single side of the positive electrode sheet is 60 μm -105 μm ; the Dv50 of the negative electrode active material is 10 μm -30 μm ; the degree of graphitization of the negative electrode active material is greater than or equal to 90%; the capacity L of the lithium-ion battery satisfies 500 Ah<L $\leq$ 700 Ah, and the actual gas storage space v of the lithium-ion battery satisfies v>190 cm^3 . Under normal use conditions, an explosion-proof valve of the lithium-ion battery will not be triggered open, allowing for a capability to withstand abnormal high temperature, thereby reducing the risk of lithium-ion battery scrapping due to the explosion-proof valve being triggered open.

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PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN,
TD, TG)。

本国际公布:
— 包括国际检索报告(条约第21条(3))。

(57) 摘要: 本申请涉及锂电池技术领域, 提供一种锂离子电池、充电方法、锂离子电池系统, 锂离子电池包括壳体、电芯、电解液, 电芯包括正极片、负极片、隔膜; 负极活性物质包括石墨; 正极活性物质包括含锂磷酸盐及位于含锂磷酸盐表面的碳层; 负极片的单面活性物质层的厚度在50μm-95μm, 正极片的单面活性物质层的厚度在60μm-105μm, 负极活性物质的Dv50在10μm-30μm, 负极活性物质的石墨化度大于等于90%; 锂离子电池的容量500Ah<L≤700Ah, 锂离子电池的实际储气空间v>190cm³; 该锂离子电池在正常使用条件下防爆阀不会被冲开, 具有抵抗高温异常的能力, 能够降低因防爆阀冲开而造成锂离子电池报废的风险。