Title (en)

HIGH POWER DENSITY AND LOW-COST LITHIUM-ION BATTERY

Title (de)

KOSTENGÜNSTIGE LITHIUM-IONEN-BATTERIE MIT HOHER LEISTUNGSDICHTE

Title (fr)

BATTERIE A IONS DE LITHIUM A TRES FORTE DENSITE DE PUISSANCE ET BAS COUT

Publication

EP 4364213 A1 20240508 (FR)

Application

EP 22743576 A 20220629

Priority

- FR 2107016 A 20210630
- FR 2107017 A 20210630
- FR 2114448 A 20211223
- FR 2114445 A 20211223
- IB 2022056051 W 20220629

Abstract (en)

[origin: WO2023275779A1] A lithium-ion battery comprising at least one stack which successively comprises: a first electronic current collector, a first porous electrode made of a material selected from the group comprising Nb2-xM1O5-δM3δ, Nb18- xM1 xW16-yM2 yO93-δ M3 δ, Nb16-xM1 xW5-yM2yO55-δM3 δ, Nb2O5-δ with 0 ≤ δ ≤ 2, Nb18W16O93-δ with 0 ≤ δ ≤ 2, Nb16W5O55-δ with 0 ≤ δ ≤ 2, Li4Ti5O12 and Li4Ti5-xMxO12 with M = V, Zr, Hf, Nb, Ta and 0 ≤ x ≤ 0.25, a porous separator made of an electronically insulating inorganic material, a second porous electrode made of a phosphate or a lithium oxide, and a second electronic current collector, wherein the electrolyte of the battery is a liquid charged with lithium ions sealed in the porous layers, each of the three porous layers being binder-free and having a porosity of between 20% and 70% by volume.

IPC 8 full level

H01M 4/04 (2006.01); **H01M 4/02** (2006.01); **H01M 4/131** (2010.01); **H01M 4/1391** (2010.01); **H01M 4/485** (2010.01); **H01M 4/505** (2010.01); **H01M 4/525** (2010.01); **H01M 4/58** (2010.01); **H01M 10/0525** (2010.01); **H01M 10/34** (2006.01)

CPC (source: EP IL KR)

H01M 4/0404 (2013.01 - EP IL KR); **H01M 4/0407** (2013.01 - EP IL KR); **H01M 4/131** (2013.01 - EP IL KR); **H01M 4/136** (2013.01 - KR); **H01M 4/1391** (2013.01 - EP IL KR); **H01M 4/1397** (2013.01 - KR); **H01M 4/485** (2013.01 - EP IL KR); **H01M 4/505** (2013.01 - EP IL KR); **H01M 4/525** (2013.01 - EP IL KR); **H01M 4/5825** (2013.01 - EP IL KR); **H01M 10/0525** (2013.01 - EP IL KR); **H01M 10/347** (2013.01 - EP IL KR); **H01M 50/431** (2021.01 - KR); H01M 2004/021 (2013.01 - EP IL KR); H01M 2220/20 (2013.01 - EP IL KR); H01M 2300/0071 (2013.01 - EP IL KR); Y02E 60/10 (2013.01 - EP KR)

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

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