

Title (en)
LOCALIZED SUPERCONCENTRATED ELECTROLYTES FOR SILICON ANODES

Title (de)
LOKALISIERTE SUPERKONZENTRIERTE ELEKTROLYTEN FÜR SILIZIUMANODEN

Title (fr)
ÉLECTROLYTES SUPERCONCENTRÉS LOCALISÉS POUR ANODES DE SILICIUM

Publication
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Application
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Priority
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Abstract (en)
[origin: WO2020150154A1] Localized superconcentrated electrolytes (LSEs) for use in systems with silicon-based or carbon/silicon composite-based anodes are disclosed. The LSEs include an active salt, a nonaqueous solvent in which the active salt is soluble, and a diluent in which the active salt has a solubility at least 10 times less than solubility of the active salt in the nonaqueous solvent. Systems including the LSEs also are disclosed.

IPC 8 full level
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Citation (search report)
• [XP] US 2019148775 A1 20190516 - ZHANG JI-GUANG [US], et al
• [XAI] US 2015118581 A1 20150430 - TAKASE HIRONARI [JP], et al
• [XAI] US 2012321940 A1 20121220 - KAWASAKI DAISUKE [JP], et al
• [XAI] US 2016190646 A1 20160630 - KIM DONGYOUNG [KR], et al
• [XAI] CN 104900916 A 20150909 - GUANGZHOU TINCI MATERIALS TECH CO LTD
• [Y] US 2018115020 A1 20180426 - MAEDA KATSUMI [JP]
• [Y] WO 2016207017 A1 20161229 - BASF SE [DE]
• [Y] US 2012141883 A1 20120607 - SMART MARSHALL C [US], et al
• [XI] US 2017352908 A1 20171207 - NOGUCHI TAKEHIRO [JP], et al
• [XAI] EP 3038194 A1 20160629 - SAMSUNG SDI CO LTD [KR]
• [XAI] EP 2757626 A1 20140723 - SAMSUNG SDI CO LTD [KR]
• [Y] WO 2018054933 A1 20180329 - BASF SE [DE]
• [Y] WO 2018054710 A1 20180329 - BASF SE [DE]
• See references of WO 2020150154A1

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