

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  
**EP 20740852 A 20200113**

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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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**H01M 4/364** (2013.01 - EP KR); **H01M 4/386** (2013.01 - EP KR); **H01M 4/587** (2013.01 - EP KR); **H01M 4/622** (2013.01 - EP KR); **H01M 10/052** (2013.01 - KR); **H01M 10/0525** (2013.01 - EP); **H01M 10/0567** (2013.01 - EP KR); **H01M 10/0568** (2013.01 - EP KR); **H01M 10/0569** (2013.01 - EP KR); **H01M 10/4235** (2013.01 - EP KR); **H01M 4/366** (2013.01 - EP); **H01M 2300/0034** (2013.01 - EP); **H01M 2300/0037** (2013.01 - EP KR); **H01M 2300/004** (2013.01 - EP); **Y02E 60/10** (2013.01 - EP)

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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