

Title (en)  
POLAR POLYSILOXANE ELECTROLYTES FOR LITHIUM BATTERIES

Title (de)  
POLARE POLYSILOXANELEKTROLYTEN FÜR LITHIUMBATTERIEN

Title (fr)  
ÉLECTROLYTES DE POLYSILOXANE POLAIRE POUR BATTERIES AU LITHIUM

Publication  
**EP 3601299 A1 20200205 (EN)**

Application  
**EP 17902302 A 20170324**

Priority  
US 2017024186 W 20170324

Abstract (en)  
[origin: WO2018174919A1] Synthesis and electrochemical properties of a new class of polymer electrolytes based on polar polysiloxane polymers is described. Unlike ethylene oxide-based polymers, these materials are oxidatively stable up to at least 4.2 V, the operating voltage of high energy cells that use cathode materials such as lithium nickel cobalt aluminum oxide (NCA) and lithium nickel cobalt manganese oxide (NCM). Use of these polymers electrolytes as an alternative to PEO in solid-state lithium batteries is described.

IPC 8 full level  
**C07F 7/08** (2006.01); **H01B 1/12** (2006.01); **H01G 9/022** (2006.01); **H01M 10/0525** (2010.01)

CPC (source: EP KR)  
**C08L 83/04** (2013.01 - KR); **C08L 83/10** (2013.01 - KR); **H01B 1/20** (2013.01 - KR); **H01G 9/022** (2013.01 - KR); **H01G 11/06** (2013.01 - EP); **H01G 11/54** (2013.01 - KR); **H01G 11/56** (2013.01 - EP); **H01M 4/382** (2013.01 - EP); **H01M 4/386** (2013.01 - EP); **H01M 4/505** (2013.01 - EP); **H01M 4/525** (2013.01 - EP); **H01M 4/587** (2013.01 - EP); **H01M 4/622** (2013.01 - EP KR); **H01M 10/052** (2013.01 - KR); **H01M 10/0525** (2013.01 - EP); **H01M 10/0565** (2013.01 - EP KR); **H01M 10/0568** (2013.01 - EP); **H01M 2300/0022** (2013.01 - EP); **H01M 2300/0025** (2013.01 - EP); **H01M 2300/0082** (2013.01 - KR); **H01M 2300/0085** (2013.01 - EP); **Y02E 60/10** (2013.01 - EP)

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Designated extension state (EPC)  
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**WO 2018174919 A1 20180927**; CN 110997684 A 20200410; CN 110997684 B 20230217; EP 3601299 A1 20200205; EP 3601299 A4 20201209; KR 102364303 B1 20220217; KR 20200043309 A 20200427

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**US 2017024186 W 20170324**; CN 201780089708 A 20170324; EP 17902302 A 20170324; KR 20197030139 A 20170324