

Title (en)  
SYSTEMS AND METHODS USING ANODES

Title (de)  
ANODEN VERWENDENDE SYSTEME UND VERFAHREN

Title (fr)  
SYSTÈMES ET PROCÉDÉS UTILISANT DES ANODES

Publication  
**EP 2831313 A1 20150204 (EN)**

Application  
**EP 13769321 A 20130313**

Priority  
• US 201261617390 P 20120329  
• US 201213474598 A 20120517  
• US 2013031064 W 20130313

Abstract (en)  
[origin: WO2013148216A1] There are provided methods and systems for an electrochemical cell including an anode and a cathode where the anode is contacted with a metal ion that converts the metal ion from a lower oxidation state to a higher oxidation state. The metal ion in the higher oxidation state is reacted with hydrogen gas, an unsaturated hydrocarbon, and/or a saturated hydrocarbon to form products.

IPC 8 full level  
**H01M 2/14** (2006.01)

CPC (source: CN EP)  
**C25B 1/00** (2013.01 - CN); **C25B 1/02** (2013.01 - CN); **C25B 3/27** (2021.01 - CN); **C25B 9/00** (2013.01 - CN EP); **C25B 11/02** (2013.01 - EP); **C25B 15/08** (2013.01 - CN EP)

Cited by  
US2023109269A1; US12007322B2; US10556848B2; US10844496B2

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Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2013148216 A1 20131003**; CN 104271810 A 20150107; CN 104271810 B 20170503; CN 107254689 A 20171017;  
EP 2831313 A1 20150204; EP 2831313 A4 20150610; EP 2831313 B1 20170503; EP 3219829 A1 20170920; JP 2015522706 A 20150806;  
JP 2017075398 A 20170420; JP 6039054 B2 20161207

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**US 2013031064 W 20130313**; CN 201380024643 A 20130313; CN 201710352177 A 20130313; EP 13769321 A 20130313;  
EP 17150726 A 20130313; JP 2015503281 A 20130313; JP 2016196127 A 20161004