Title (en)

LOW-ENERGY ELECTROCHEMICAL BICARBONATE ION SOLUTION

Title (de)

ENERGIEARMES ELEKTROCHEMISCHES HYDROGENCARBONATION

Title (fr)

SOLUTION D'IONS BICARBONATES ÉLECTROCHIMIQUE À BASSE ÉNERGIE

Publication

EP 2240629 A4 20130424 (EN)

Application

EP 09822881 A 20090128

Priority

US 2009032301 W 20090128

Abstract (en)

[origin: WO2010087823A1] A low-energy electrochemical method and system of forming bicarbonate ion solutions in an electrochemical cell utilizing carbon dioxide in contact with an electrolyte contained between two ion exchange membranes in an electrochemical cell. On applying a low voltage across an anode and cathode in electrical contact with the ion exchange membranes, bicarbonate ions form in the electrolyte without forming a gas, e.g., chlorine or oxygen at the electrodes.

IPC 8 full level

C25B 1/00 (2006.01); **B01D 61/44** (2006.01)

CPC (source: EP US)

B01D 61/44 (2013.01 - EP US); **C25B 1/00** (2013.01 - EP US); **C25B 1/14** (2013.01 - EP US); **C25B 1/22** (2013.01 - EP US)

Citation (search report)

- [X] WO 9900178 A1 19990107 - ELECTROSYNTHESIS CO INC [US]
- [X] US 4197421 A 19800408 - STEINBERG MEYER [US]
- [A] WO 2007041872 A1 20070419 - OLOMAN COLIN [CA], et al
- See references of WO 2010087823A1

Cited by

US10556848B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2010087823 A1 20100805; CA 2696075 A1 20100728; CN 101878328 A 20101103; EP 2240629 A1 20101020; EP 2240629 A4 20130424; US 2011042230 A1 20110224

DOCDB simple family (application)

US 2009032301 W 20090128; CA 2696075 A 20090128; CN 200980101161 A 20090128; EP 09822881 A 20090128; US 98978109 A 20090128