

Title (en)

MATERIALS AND PROCESS FOR REVERSIBLE ADSORPTION OF CARBON DIOXIDE

Title (de)

MATERIALIEN UND VERFAHREN ZUR REVERSIBLEN ADSORPTION VON KOHLENDIOXYD

Title (fr)

MATÉRIAUX ET PROCÉDÉ POUR L'ADSORPTION RÉVERSIBLE DU DIOXYDE DE CARBONE

Publication

EP 2874728 A1 20150527 (EN)

Application

EP 13741993 A 20130717

Priority

- US 201261672331 P 20120717
- EP 2013065070 W 20130717

Abstract (en)

[origin: WO2014012963A1] A solid material is disclosed for reversibly adsorbing carbon dioxide. The material comprises a porous carrier material. Deposited on the carrier material is a salt that is capable of reacting with carbon dioxide. Optionally the solid material further contains a particulate, water-insoluble inorganic material. The material can be used in a process for recovering carbon dioxide from a carbon dioxide containing gas mixture. The gas mixture can be atmospheric air. The process comprises a temperature swing between an adsorption temperature (T1) and a desorption temperature (T2). The difference between (T2) and (T1) is less than 200 °C.

IPC 8 full level

A01G 9/18 (2006.01); **B01D 53/04** (2006.01); **B01D 53/62** (2006.01); **E03B 3/28** (2006.01)

CPC (source: EP)

A01G 7/00 (2013.01); **A01G 9/18** (2013.01); **B01D 53/0462** (2013.01); **B01D 53/62** (2013.01); **B01J 20/043** (2013.01); **B01J 20/06** (2013.01); **B01J 20/20** (2013.01); **B01J 20/28045** (2013.01); **B01J 20/28057** (2013.01); **B01J 20/3204** (2013.01); **B01J 20/3236** (2013.01); **B01J 20/3433** (2013.01); **B01J 20/3483** (2013.01); **B01D 53/02** (2013.01); **B01D 2251/30** (2013.01); **B01D 2251/306** (2013.01); **B01D 2251/40** (2013.01); **B01D 2251/606** (2013.01); **B01D 2253/112** (2013.01); **B01D 2253/25** (2013.01); **B01D 2257/504** (2013.01); **B01D 2257/80** (2013.01); **B01D 2259/40088** (2013.01); **B01J 2220/42** (2013.01); **Y02A 50/20** (2017.12); **Y02C 20/40** (2020.08); **Y02P 60/20** (2015.11)

Citation (search report)

See references of WO 2014012963A1

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2014012963 A1 20140123; AU 2013292075 A1 20150129; CA 2878664 A1 20140123; EP 2874728 A1 20150527

DOCDB simple family (application)

EP 2013065070 W 20130717; AU 2013292075 A 20130717; CA 2878664 A 20130717; EP 13741993 A 20130717