

Title (en)

POROUS POLYMERIC CARBON SORBENTS AND METHODS OF MAKING AND USING SAME

Title (de)

PORÖSE POLYMERE KOHLENSTOFFSORPTIONSMITTEL UND VERFAHREN ZU IHRER HERSTELLUNG UND VERWENDUNG

Title (fr)

SORBANTS CARBONÉS POLYMÈRES POREUX, LEURS PROCÉDÉS DE FABRICATION ET D'UTILISATION

Publication

**EP 4323104 A1 20240221 (EN)**

Application

**EP 21723565 A 20210414**

Priority

US 2021027371 W 20210414

Abstract (en)

[origin: WO2022220828A1] Porous polymeric carbon sorbents, including particularly polymeric carbon sorbents for CO<sub>2</sub> capture for flue gas from power plants, for gases from other post combustion CO<sub>2</sub> emission outlets, for gas storage, for direct air capture of CO<sub>2</sub>, and methods of making and using same. The porous carbon material can be prepared by heating plastic with an additive. The additive can be selected from metal hydroxide, metal carbonate, metal bicarbonate, metal oxalate, metal acetate, metal acetylacetonate or mixtures thereof. By controlling the preparation, such as the temperature of preparation, the porous carbon sorbent can be controlled to be rigid or flexible.

IPC 8 full level

**B01J 20/20** (2006.01); **B01D 53/02** (2006.01); **B01J 20/28** (2006.01); **B01J 20/30** (2006.01)

CPC (source: EP)

**B01J 20/20** (2013.01); **B01J 20/28011** (2013.01); **B01J 20/28057** (2013.01); **B01J 20/28069** (2013.01); **B01J 20/28078** (2013.01); **B01J 20/2809** (2013.01); **B01J 20/3078** (2013.01); **B01D 53/02** (2013.01); **B01D 2253/202** (2013.01); **B01D 2257/504** (2013.01); **B01J 2220/4893** (2013.01); **Y02C 20/40** (2020.08)

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**WO 2022220828 A1 20221020**; AU 2021441253 A1 20231123; CA 3215512 A1 20221020; EP 4323104 A1 20240221

DOCDB simple family (application)

**US 2021027371 W 20210414**; AU 2021441253 A 20210414; CA 3215512 A 20210414; EP 21723565 A 20210414