

Title (en)

PRODUCTION OF ORGANIC MATERIALS USING AN OXIDATIVE HYDROTHERMAL DISSOLUTION METHOD

Title (de)

HERSTELLUNG VON ORGANISCHEN MATERIALIEN IN EINEM OXIDATIVEN HYDROTHERMALEN AUFLÖSUNGSVERFAHREN

Title (fr)

PRODUCTION DE MATIÈRES ORGANIQUES AU MOYEN D'UN PROCÉDÉ DE DISSOLUTION HYDROTHERMIQUE OXYDATIVE

Publication

EP 2714855 A4 20141112 (EN)

Application

EP 12793493 A 20120604

Priority

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- US 2012040746 W 20120604

Abstract (en)

[origin: WO2012167252A1] Methods of producing organic materials such as petroleum materials and aromatic acids, phenols, and aliphatic poly-carboxylic acids using an oxidative hydrothermal dissolution (OHO) process are disclosed. The OHD method includes contacting an organic solid with an oxidant in a reactor containing superheated water to form at least one solubilized organic solute. The reaction breaks down the macromolecular structure of the organic solid into lower molecular weight fragments. These lower molecular weight fragments are soluble in water. These water-soluble fragments are referred to as dissolved organic solids, solubilized organics, or solubilized organic solutes. The solubilized fragments can then be used as raw materials for various chemical processes or as liquid fuels. If the solubilized fragments are dissolved carbohydrates such as low molecular weight sugars or oxidized low molecular weight sugars, the dissolved carbohydrates may be fermented to produce alcohols or used in other processes to produce a variety of other products.

IPC 8 full level

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Citation (search report)

- [X1] WO 2010093785 A2 20100819 - UNIV SOUTHERN ILLINOIS [US], et al
- See references of WO 2012167252A1

Designated contracting state (EPC)

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