# CARBONOUS MATERIALS WITH ADVANCED PROPERTIES

## Description:

Due to their unique chemical, mechanical, electrical and magnetic properties, carbon fibers or other fibrillar structures (membranes / meshes / nets) are currently used in numerous applications of extraordinary technological and industrial importance. The present invention refers to carbonaceous fibrillar materials with optimized properties, among others there are materials with specific surface and high oxidation resistance, to the procedures for obtaining said particles or materials with optimized properties, as well as to applications of said particles or materials. The procedures for obtaining these materials described in this invention are from a mixture of at least one carbonaceous precursor and at least one chemical agent.

**Keywords:**
Carbon, Biomass, Catalysts, Carbonaceous Materials, Waste

**Sectors:**
Environment and Energy, Chemistry

**Areas:**
Environmental and Forestry, Industrial, Chemistry, Energy methods and procedures, Materials, Synthesis and procedures

## Advantages:

The present invention provides a response and solution to the unsolved problems in the state of the art for the transformation and recovery of biomass or industrial waste; mainly through the use of cheaper precursors and / or simpler and cheaper preparation processes and, at the same time, less polluting.

## Uses and Applications:

The present technology is part of the field of man-made materials, particularly those of a carbonaceous nature. They have multiple applications, among which are, their use as catalysts (for the revaluation of biomass waste and the production of biofuels in the field of biorefinery, etc.); as adsorbents in the environmental sector (for the treatment of water -organic matter, heavy metals, nitrates, nitrites, etc.- or of gaseous effluents -SO2, NOx, VOCs, etc.-); or as electrodes, for example, for wastewater treatment or energy storage and conversion (electronic devices, transport sector, environment, etc.).

**Patent Number:** ES2531462B2
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**Filing Date:** 28/06/2014
**Protection Level:** National (Spain)
**Processing Status:** Spanish patent