

METHOD FOR MANUFACTURING MICRO AND NANOFIBERS FROM LIGNINS AND OTHER RESIN COMPOUNDS

Description:

Carbon fibers are a material of extraordinary importance due to the wide variety of their applications in the field of materials engineering. Among them, its uses can be highlighted in catalysis, in adsorption and absorption beds, in fuel cell electrodes, in gas storage, nanoelectronics and composite materials, in separation processes and any other application where surface materials are required. very high specific. The process for making carbon fibers requires the spinning of a precursor into fibers that are transformed into carbon fibers after suitable heat treatment. A low cost precursor for general purpose carbon fiber production is lignin. Thus, the present invention describes a process for manufacturing lignin micro and nanofibers at room temperature from lignin or other resinous compounds and without the addition of polymers (binders) that greatly increase the cost of the spinning process.

Keywords:

[Manufacturing](#), [Polymers](#), [Microfiber](#), [Nanofiber](#), [Lignin](#), [Resins](#), [Carbon](#), [Catalytic Particles](#)

Sectors:

[Chemistry](#)

Areas:

[Synthesis and procedures](#), [Industrial](#)



Advantages:

Compared with other advances, the present invention has a series of advantages, to be highlighted: • It is cheaper compared to other procedures. • The fibers obtained can be simple or hollow, although they can also be of the coaxial type. The fibers obtained can be doped with catalytic particles, or incorporate other materials whose object is to modify the final structure and the properties of the carbon fibers obtained from those of lignin.

Uses and Applications:

This technology is useful for the manufacture of carbon fibers from the heat treatment of lignin fibers, valid for the field of materials engineering.

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