

A Method to Control Porosity of Lignin-Based Carbonaceous Materials by Chemical Modification of Lignin Precursors

Disclosure Number

201202921

Technology Summary

Highly porous carbon materials or activated carbons have shown great promise for a broad range of applications. Current methods for development of porosity in carbons include selection of suitable natural precursor materials and treatment with porogenic agents before carbonization. The present invention disclosed herein comprises a method of chemically modifying of lignin precursors in order to control accessible and inner surface area and pore size distribution in the final carbonaceous material (lignin carbon fibers, pyrolytic carbons, etc.). The new method results in an increase in nano and microscale porosity and a decrease in crystallinity in the final carbon product.

Inventor

RIOS, ORLANDO

Materials Science and Technology Div

Licensing Contact

DETRANA, ALEXANDER G

UT-Battelle, LLC

Oak Ridge National Laboratory

Rm 139, Bldg 4500N, 6196

1 Bethel Valley Road

Oak Ridge, TN 37831

Office Phone: (865) 576-9682

E-mail: DETRANAAG@ORNL.GOV

Note: The technology described above is an early stage opportunity. Licensing rights to this intellectual property may be limited or unavailable. Patent applications directed towards this invention may not have been filed with any patent office.