

Title (en)

METHODS FOR FABRICATION OF SILICA AEROGELS WITH CUSTOM SHAPES USING FREEZE DRYING

Title (de)

VERFAHREN ZUR HERSTELLUNG VON SILICIUMDIOXIDAEROGEL MIT ANGEPASSTEN FORMEN UNTER VERWENDUNG VON GEFRIERTROCKNUNG

Title (fr)

PROCÉDÉS DE FABRICATION D'AÉROGELS DE SILICE PRÉSENTANT DES FORMES PERSONNALISÉES À L'AIDE D'UNE LYOPHILISATION

Publication

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Application

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Abstract (en)

[origin: WO2017185009A1] A method of synthesizing aerogels and cross-linked aerogels are described that incorporate freeze-drying in lieu of supercritical solvent drying. Advantages over supercritical drying include a reduction in hazard risks posed by drying at supercritical conditions as well as the ability to up-scale the process to accommodate large pieces of material without introducing risk. In addition, inexpensive and more sophisticated mold technologies, which are not impervious to supercritical conditions, can be used to produce aerogel materials according to the freeze-drying method of the invention. This introduces a level of freedom never before available for the production of aerogel components.

IPC 8 full level

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- [A] US 2014065229 A1 20140306 - GIRAY SEDA [TR], et al
- See references of WO 2017185009A1

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