

Title (en)  
HYBRID MATERIAL, AND METHOD FOR THE PRODUCTION THEREOF

Title (de)  
HYBRIDMATERIAL UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
MATERIAU HYBRIDE ET PROCEDE POUR SA PREPARATION

Publication  
**EP 2117709 A2 20091118 (FR)**

Application  
**EP 08775553 A 20080214**

Priority  
• FR 2008000193 W 20080214  
• FR 0701077 A 20070214

Abstract (en)  
[origin: FR2912400A1] Material in the form of a honeycomb monolith comprises an inorganic oxide polymer with organic substituents R. The monolith comprises macropores with an average size of 4-50  $\mu\text{m}$ , mesopores with an average size of 2-3 nm and micropores with an average size of 0.5-1 nm, the pores being interconnected. tetramethoxysilaneMaterial in the form of a honeycomb monolith comprises an inorganic oxide polymer with organic substituents R of formula (I). The monolith comprises macropores with an average size of 4-50  $\mu\text{m}$ , mesopores with an average size of 2-3 nm and micropores with an average size of 0.5-1 nm, the pores being interconnected. (CH<sub>2</sub>)<sub>n</sub>R 1> (I) n : 0-5; R 1>SH, pyrrolyl, NAA', alkyl, phenyl or alkylphenyl; A, A' : H, alkyl, alkylamino or optionally substituted aryl. An independent claim is also included for producing a material as above by emulsifying an oil phase in an aqueous surfactant solution, adding an aqueous solution of a metal tetraalkoxide (II) and an R-substituted metal alkoxide (III), leaving the mixture to stand until the alkoxides condense, and drying the mixture.

IPC 8 full level  
**B01J 35/04** (2006.01); **B01J 37/00** (2006.01); **C04B 35/14** (2006.01); **C04B 35/624** (2006.01); **C04B 35/80** (2006.01); **C04B 38/00** (2006.01)

CPC (source: EP US)  
**B01D 53/72** (2013.01 - US); **B01D 53/81** (2013.01 - US); **B01J 23/44** (2013.01 - EP US); **B01J 31/125** (2013.01 - US); **B01J 31/126** (2013.01 - US); **B01J 31/1608** (2013.01 - EP); **B01J 31/1633** (2013.01 - EP); **B01J 31/1675** (2013.01 - EP); **B01J 35/23** (2024.01 - US); **B01J 35/56** (2024.01 - EP US); **B01J 35/647** (2024.01 - US); **B01J 35/657** (2024.01 - US); **B01J 35/69** (2024.01 - US); **B01J 37/0217** (2013.01 - US); **B01J 37/0219** (2013.01 - US); **B01J 37/0228** (2013.01 - US); **B01J 37/0236** (2013.01 - US); **B01J 37/0244** (2013.01 - US); **C02F 1/285** (2013.01 - US); **C04B 35/14** (2013.01 - EP); **C04B 35/624** (2013.01 - EP); **C04B 35/6325** (2013.01 - EP); **C04B 38/10** (2013.01 - EP); **C07C 2/86** (2013.01 - US); **B01D 2253/204** (2013.01 - US); **B01D 2257/7027** (2013.01 - US); **B01J 2231/005** (2013.01 - US); **B01J 2231/4211** (2013.01 - EP US); **B01J 2231/4261** (2013.01 - US); **B01J 2531/005** (2013.01 - US); **B01J 2531/824** (2013.01 - EP); **C02F 2101/322** (2013.01 - US); **C04B 2111/00793** (2013.01 - EP); **C07C 2523/44** (2013.01 - US); **C07C 2531/06** (2013.01 - US)

Citation (search report)  
See references of WO 2008129151A2

Citation (examination)  
A. KELLY: "Why engineer porous materials?", PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A, vol. 364, no. 1838, 15 January 2006 (2006-01-15), The Royal Society, pages 5 - 14, Retrieved from the Internet <URL:http://rsta.royalsocietypublishing.org/content/364/1838/5.full.pdf> [retrieved on 20110318], DOI: 10.1098/rsta.2005.1686

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