

Title (en)  
IMPROVED CATALYST AND PROCESS TO PRODUCE NANOCARBON MATERIALS IN HIGH YIELD AND AT HIGH SELECTIVITY AT REDUCED REACTION TEMPERATURES

Title (de)  
VERBESSERTER KATALYSATOR UND VERBESSERTES VERFAHREN ZUR HERSTELLUNG VON NANOCARBONSTOFFEN IN HOHER AUSBEUTE MIT HOHER SELEKTIVITÄT BEI REDUZIERTEN REAKTIONSTEMPERATUREN

Title (fr)  
CATALYSEUR ET PROCEDE AMELIORES PERMETTANT DE PRODUIRE DES MATERIAUX DE NANOCARBONE A UN RENDEMENT ET A UNE SELECTIVITE ELEVES A DES TEMPERATURES DE REACTION REDUITES

Publication  
**EP 1654406 A4 20070822 (EN)**

Application  
**EP 04750358 A 20040420**

Priority  
• US 2004012136 W 20040420  
• US 62884203 A 20030728

Abstract (en)  
[origin: US2005025695A1] A carbon nanofiber system is synthesized with very high purity (above 95%), selectivity of the carbon morphology, and exceptionally high yield. A custom made catalyst with a particle size of  $\leq 10$  nm and a high surface area ( $>50 \text{ m}^2/\text{g}$ ), provides a higher morphological selectivity and higher yield. The reactivity of these catalyst particles is maintained even after 24 hours reaction such that yield exceeds 200 g carbon per gram of catalyst. The catalysts which are key to the products and yields achieved are prepared to specific parameters (size distribution, composition and crystallinity) specified and via a flame synthesis process as taught in U.S. Pat. No. 6,132,653.

IPC 8 full level  
**D01F 9/12** (2006.01); **B01J 23/745** (2006.01); **B01J 23/755** (2006.01); **B01J 35/02** (2006.01); **B01J 35/10** (2006.01); **B01J 37/00** (2006.01); **B01J 37/08** (2006.01); **C01B 31/02** (2006.01); **D01F 9/127** (2006.01)

CPC (source: EP KR US)  
**B01J 23/745** (2013.01 - EP US); **B01J 23/755** (2013.01 - EP US); **B01J 35/40** (2024.01 - EP US); **B01J 35/613** (2024.01 - EP US); **B01J 37/0072** (2013.01 - EP US); **B01J 37/082** (2013.01 - EP US); **B82Y 30/00** (2013.01 - EP US); **B82Y 40/00** (2013.01 - EP US); **C01B 32/162** (2017.08 - EP US); **D01F 9/12** (2013.01 - KR); **D01F 9/127** (2013.01 - EP KR US); **B82Y 40/00** (2013.01 - KR)

Citation (search report)  
No further relevant documents disclosed

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