

Title (en)  
CARBON NANOTUBE-REINFORCED NANOCOMPOSITES

Title (de)  
MIT KOHLENSTOFFNANORÖHRCHEN VERSTÄRKTE NANOKOMPOSITE

Title (fr)  
NANOCOMPOSITES RENFORCÉS PAR DES NANOTUBES DE CARBONE

Publication  
**EP 2019750 A4 20090902 (EN)**

Application  
**EP 07759819 A 20070330**

Priority

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- US 78823406 P 20060331
- US 81039406 P 20060602
- US 81931906 P 20060707
- US 69345407 A 20070329

Abstract (en)  
[origin: WO2007115162A2] A combination of MWNTs (herein, MWNTs have more than 2 walls) and DWNTs significantly improves the mechanical properties of polymer nanocomposites. A small amount of DWNTs reinforcement (<1wt.%) significantly improves the flexural strength of epoxy matrix nanocomposites. A same or similar amount of MWNTs reinforcement significantly improves the flexural modulus (stiffness) of epoxy matrix nanocomposites. Both flexural strength and flexural modulus of the MWNTs and DWNTs-coreinforced epoxy nanocomposites are further improved compared with same amount of either DWNTs or MWNTs-reinforced epoxy nanocomposites. In this epoxy/DWNTs/MWNTs nanocomposite system, SWNTs may also work instead of DWNTs. Besides epoxy, other thermoset polymers may also work.

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Citation (search report)

- [X] WO 2005028174 A2 20050331 - UNIV RICE WILLIAM M [US], et al
- [X] WO 2005012171 A2 20050210 - UNIV RICE WILLIAM M [US], et al
- See references of WO 2007115162A2

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**US 2007065630 W 20070330**; CA 2647727 A 20070330; EP 07759819 A 20070330; JP 2009503306 A 20070330; KR 20087026669 A 20081030