Title (en)

CARBON NANOTUBE-REINFORCED NANOCOMPOSITES

Title (de)

MIT KOHLENSTOFFNANORÖHRCHEN VERSTÄRKTE NANOKOMPOSITE

Title (fr)

NANOCOMPOSITES RENFORCÉS PAR DES NANOTUBES DE CARBONE

Publication

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Application

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Priority

- US 2007065630 W 20070330
- 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 reinforcment (<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.

IPC 8 full level

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CPC (source: EP KR)

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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

Designated contracting state (EPC)

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