

Title (en)

METHODS TO PRODUCE METALLIZED CARBON NANO PARTICLES

Title (de)

VERFAHREN ZUR HERSTELLUNG METALLISierter KOHLENSTOFF-NANOPARTIKEL

Title (fr)

PROCÉDÉS POUR FABRIQUER DES NANOPARTICULES DE CARBONE MÉTALLISÉES

Publication

**EP 2681154 A4 20150812 (EN)**

Application

**EP 12753033 A 20120228**

Priority

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Abstract (en)

[origin: WO2012118434A1] Methods to modify dispersed carbon nano particles using electrochemistry are disclosed. First, dispersions of CNT, graphene, graphite or the like in water or organic solvents are prepared. Secondly, said dispersions are brought in contact with a solution of ionic compounds in a liquid, such as dissolved metal salts in water, whereby the dispersion of carbon nano particles is in electrical connection with one electrode, typically the minus pole, and the second solution is in electrical connection with a second electrode, typically the plus pole. The useful voltage for converting metal salts to the respective metal is between 0 and 10 V, and the voltage may be applied continuously or in intervals, such as every millisecond with a pause of one millisecond. Using the method, metal is precipitated onto or close to the carbon nano particles. A useful method is to pump the dispersion of nano particles and to let it enter the second liquid in the form of growing drops, similar to a dropping mercury electrode. Following the electrochemical metal deposition, the metalized carbon nano particles can be separated and used in various products including composites, coatings, capacitors, cables and other products.

IPC 8 full level

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Citation (search report)

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