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(54) **Title:** TRANSPARENT CONDUCTIVE NANO-COMPOSITES

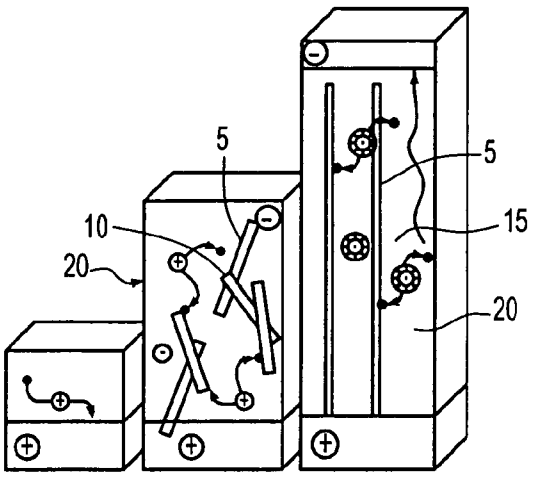

FIG. 1A

(57) **Abstract:** The present invention, in one embodiment, provides a method of forming an organic electric device that includes providing a plurality of carbon nanostructures; and dispersing the plurality of carbon nanostructures in a polymeric matrix to provide a polymeric composite, wherein when the plurality of carbon nanostructures are present at a first concentration an interface of the plurality of carbon nanostructures and the polymeric matrix is characterized by charge transport when an external energy is applied, and when the plurality of carbon nanostructures are present at a second concentration the interface of the plurality of carbon nanostructures and the polymeric matrix are characterized by exciton dissociation when an external energy is applied, wherein the first concentration is less than the second concentration.

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USPC - 977/932
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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USPC - 977/932,949-954

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Carbon Nanotubes: Science and Applications, M.Meyyappan (Ed.), 2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2006/0118768 A1 (LIU et al) 08 June 2006 (08.06.2006) entire document	1, 9, 11 --- 2-8, 10, 12-27
Y	MEYYAPPAN, M. (Ed.) Carbon Nanotubes: Science and Applications. CRC Press, 2005, ISBN 0-8493-2111-5, pgs. 167,168,259,261	2-5, 7, 10, 12-27
Y	XU et al. Carbon nanotube effects on electroluminescence and photovoltaic response in conjugated polymers. Applied Physics Letters. Vol. 87, Iss. 26, id. 263118 2005 (abstract)	6, 10
Y	US 2006/0092370 A1 (LU) 04 May 2006 (04.05.2006) paragraph [0016]	8, 14, 15
Y	CASSELL et al. Large scale CVD synthesis of single-walled carbon nanotubes. J. Phys. Chem. B 1999 pgs. 6484-6492	15
Y	RINZLER et al. Large-scale purification of single-walled carbon nanotubes: process, product, and characterization. Appl. Phys. A 67 1998 pgs. 29-37	16, 17, 26
Y	DROR et al. Carbon Nanotubes Embedded in Oriented Polymer Nanofibers by Electrospinning. Langmuir 19 2003 pgs. 7012-7020	19, 27

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