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- (71) **Applicant** (for all designated States except US):
NANYANG TECHNOLOGICAL UNIVERSITY [SG/SG]; 50 Nanyang Avenue, Singapore 639798 (SG).
- (72) **Inventors; and**
- (75) **Inventors/Applicants** (for US only): **ZHAO, Jianwei** [CN/SG]; C/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG). **LI, Lain-Jong** [—/SG]; C/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG). **CHEN, Peng** [CN/SG]; C/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG). **CHAN, Bee, Eng, Mary** [SG/SG]; C/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG).
- (74) **Agent: VIERING, JENTSCHURA & PARTNER LLP;**
P.O. Box 1088, Rochor Post Office, Rochor Road, Singapore 911833 (SG).
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(54) **Title:** METHOD OF MODIFYING ELECTRICAL PROPERTIES OF CARBON NANOTUBES USING NANOPARTICLES

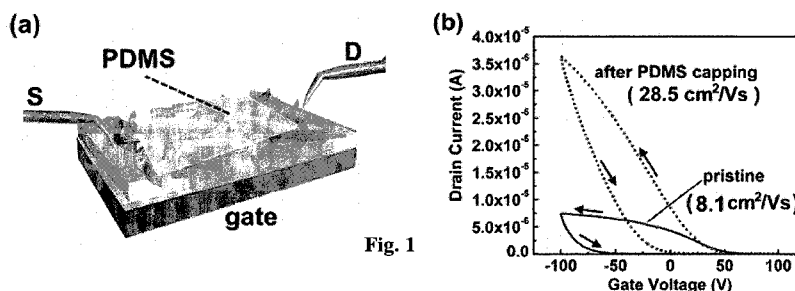


Fig. 1

(57) **Abstract:** Various embodiments relate to a method of modifying the electrical properties of carbon nanotubes. The method may include providing a substrate having carbon nanotubes deposited on a surface of the substrate, and depositing on the carbon nanotubes a coating layer comprising a mixture of nanoparticles, a matrix in which the nanoparticles are dissolved or stabilized, and an ionic liquid. A field-effect transistor including the modified carbon nanotubes is also provided.