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Electrostatic Stabilization of Multi-Walled Carbon Nanotubes Dispersed in Nonaqueous Media

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### **ACCEPTED MANUSCRIPT**

## Electrostatic Stabilization of Multi-Walled Carbon

## Nanotubes Dispersed in Nonaqueous Media

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#### ABBREVIATIONS AND SYMBOLS

NMP: 1-methyl-2-pyrrolidone; DMF: N,N'-dimethylformamide; THF: tetrahydrofuran; UV-vis: Ultraviolet-visible; CNT: Carbon nanotubes; DMSO: dimethyl sulfoxide; TOAB: tetra-n-octylammonium bromide; GC-MS: Gas chromatography-mass spectrometry; CCVD: Catalytic chemical vapour deposition; EDX: Energy-dispersive X-ray spectroscopy; XPS: X-ray photoelectron spectroscopy; k: Velocity constant of coagulation;  $\eta$ : Medium viscosity; W: Stability ratio;  $k_B$ : Boltzmann constant; T: Absolute temperature; DLVO: Derjaguin-Landau-Verwey-Overbeek; CCC: Critical coagulation concentration;  $\psi$ : Electric surface potential;  $\epsilon$ : Relative permittivity;  $\epsilon_0$ : Vacuum permittivity;  $\epsilon_0$ : A: Avogadro number;  $\epsilon$ : Elementary charge;  $\epsilon$ : Counter-ion charge; A: Hamaker constant; DN: Donor number; AN: Acceptor number; BHT: 2,6-di-tert-butyl-4-methylphenol.

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