

## Preparation and flash memory performance based on fluorene-triphenylamine copolymer (PF-TPA)/MWCNTs

Qun Yang,<sup>a</sup> Xiankai Jiang,<sup>a</sup> Ying Xin,<sup>a</sup> Xiaofeng Zhao,<sup>c</sup> Jiahe Huang,<sup>a</sup> Shuhong Wang,<sup>\*a</sup> Rongrong Zheng,<sup>b</sup> Dongge Ma,<sup>d</sup> and Cheng Wang<sup>\*a,b</sup>

<sup>a</sup> Key Laboratory of Functional Inorganic Material Chemistry, Heilongjiang University, Harbin 150080, P. R. China

<sup>b</sup> School of Chemical Engineering and Materials, Heilongjiang University, Harbin 150080, P. R. China

<sup>c</sup> School of electronic engineering, Heilongjiang University, Harbin 150080, P. R. China

<sup>d</sup> School of Materials Science and Engineering, South China University of Technology, Guangzhou 510640, P. R. China

E-mail address: wangc\_93@163.com, openair@163.com

### 1.1 The micro-structure analysis of CNTs

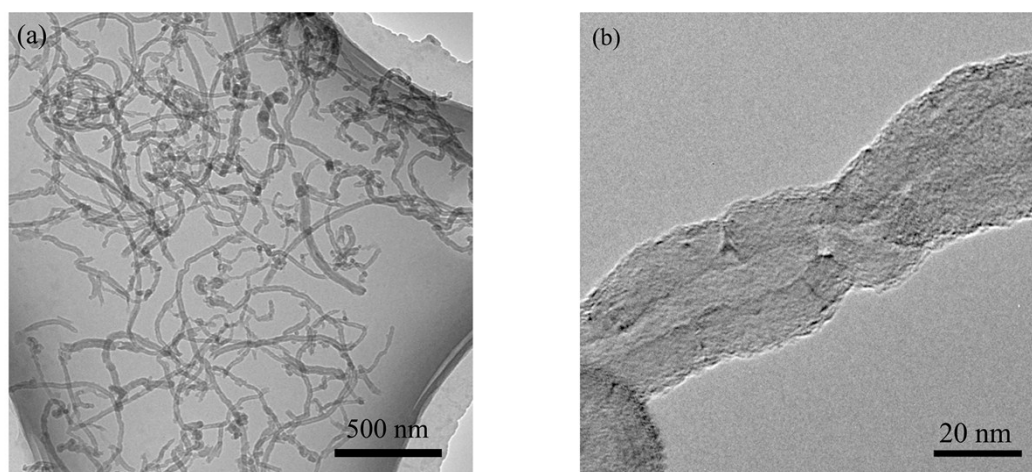


Figure S1 TEM of CNTs: (a) low magnification and (b) high magnification.

## 1.2 The characterization of PF-TPA

### 1.2.1 IR spectra of PF-TPA

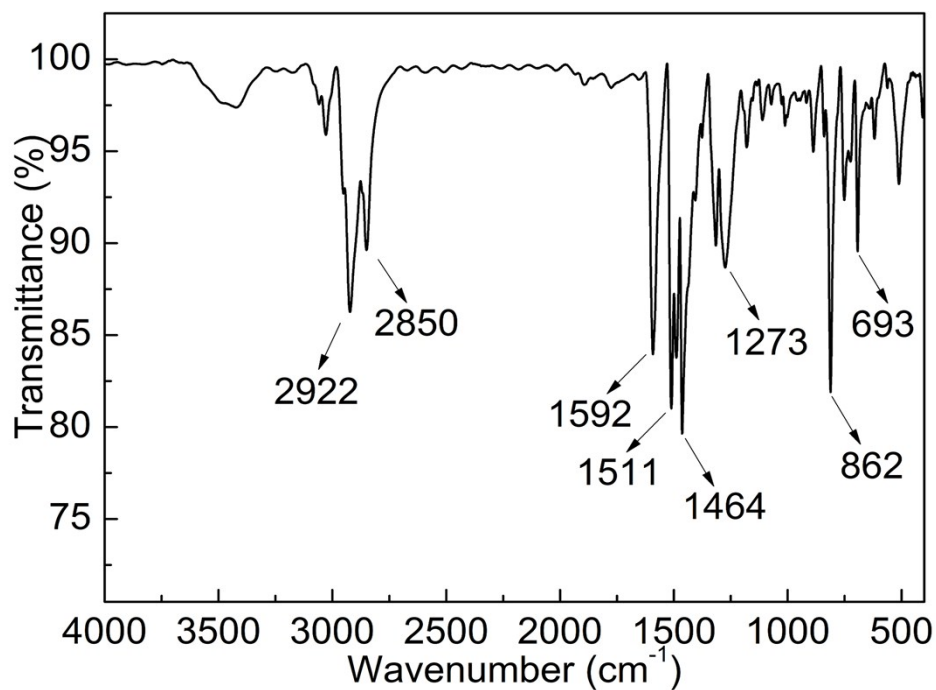


Figure S2 The FT-IR spectra of PF-TPA.

### 1.2.2 <sup>1</sup>H-NMR spectra of PF-TPA

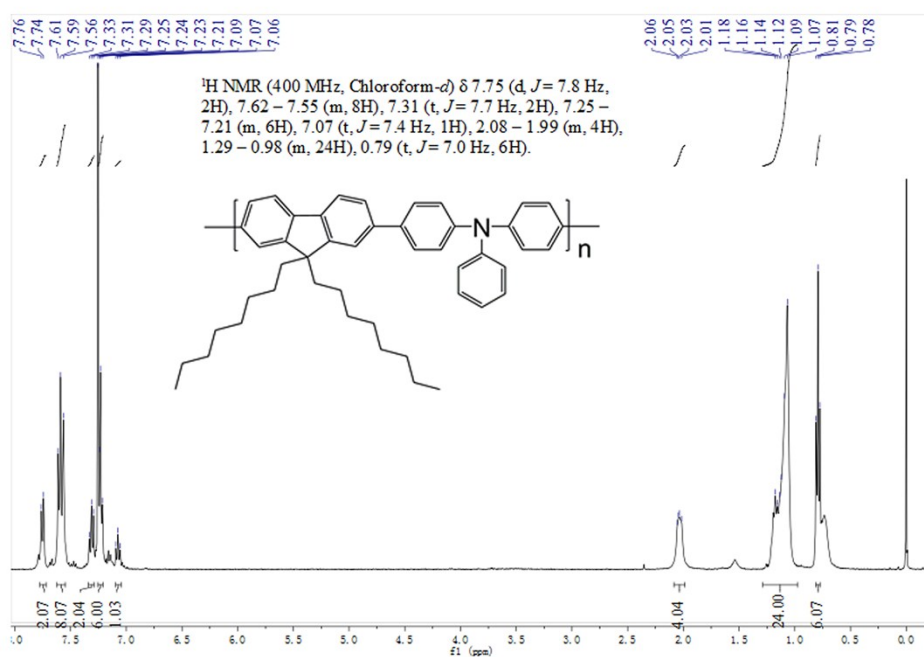


Figure S3 <sup>1</sup>H spectra of PF-TPA in CDCl<sub>3</sub>.

### 1.2.3 $^{13}\text{C}$ -NMR spectra of PF-TPA

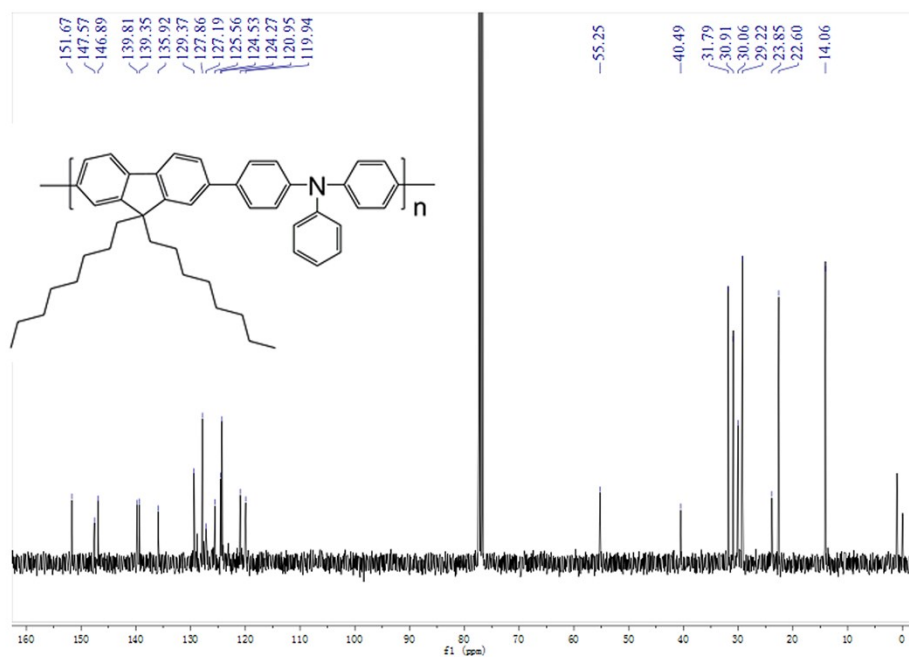


Figure S4  $^{13}\text{C}$  NMR spectra of PF-TPA in  $\text{CDCl}_3$ .