- 1 Electronic supporting information[†]
- 2 3
- 4 Fabrication of flexible wearable electrodes based on carbon
- 5 nanotubes/nickel/nickelous hydroxide ternary composites by
- 6 a facile single side printing technology[†]
- 7
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18 2. Experiments

19 2.1 Oxidation process of carbon nanotubes

The acidic oxidation of CNTs is a quite complex sequential process in which CNTs are gradually oxidized into many oxygen-containing intermediates ¹. These oxygen-containing groups are usually represented by carboxyl groups, carbonyl, hydroxyl, and other oxygencontaining groups. Overoxidation might cause CNT collapse and produce carbon species in 24 the form of CFs². The oxidation process could be expressed as followed reaction ³.

$$CNTs \xrightarrow{k_1} CNTs - COOH + CNTs = O +$$

$$CNTs - OH \dots \xrightarrow{k_2} CFs - COOH + CFs = O +$$

$$CFs - OH \dots \xrightarrow{k_3} CO_2^{\uparrow}$$

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26 3. Results and discussions



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28 Fig. S1 Raman spectra of CNNOH

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