**SnO2 nano-mulberries anchored onto RGO nanosheets for Lithium ion batteries**

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**1. The assembly of cells and measurements of electrochemical properties**

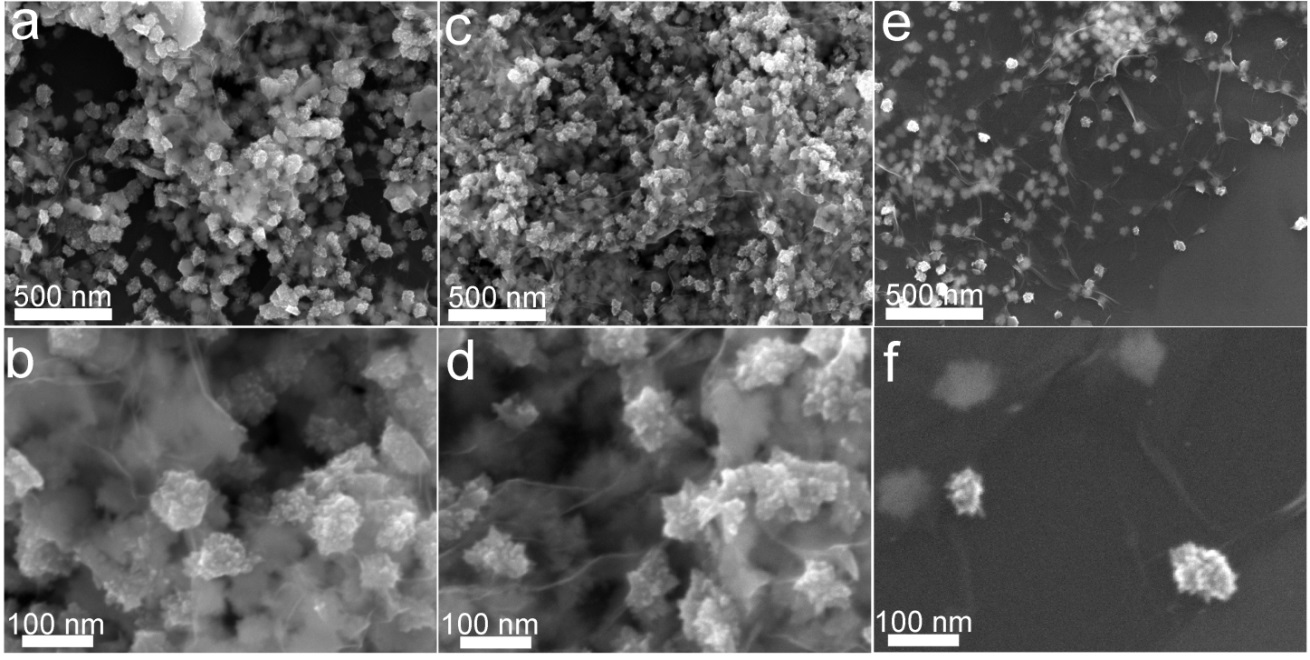
As-prepared materials were mixed with acetylene black and poly-(vinyl difluoride) dissolved in N-methyl-pyrrolidone at a weight ratio of 8:1:1 to form a slurry. The slurry was pasted onto a copper foil, dried at 80 ºC for 12 h, and cut into circle slices with a diameter of 12 mm and the active materials of ~2.5 mg cm-2 to make working electrodes. Lithium metal foils work as both reference electrode and counter. The electrolyte was LiPF6 (1 M) in ethylene carbonate/dimethyl carbonate/diethyl carbonate (1:1:1in vol). Nickel plates were used as shims to help current collectors contact with cathode and anode. The cells were assembled in an argon-filled glove box. The cyclic voltammogram (CV) was carried out on a CHI660D electrochemical workstation at a scan rate of 0.1 mV s-1 within the potential range of 0.01 - 3.0 V vs Li+/Li. The discharge and charge measurements of the batteries were performed on a NEWARE CT3008 electrochemical workstation between 0.01 and 3 V at room temperature. Electrochemical impedance spectroscopy (EIS) measurements were recorded on a CHI660D electrochemical workstation in the frequency range of 100 kHz to 10 mHz.

**2. Physisorption isotherms and pore-size distributions**

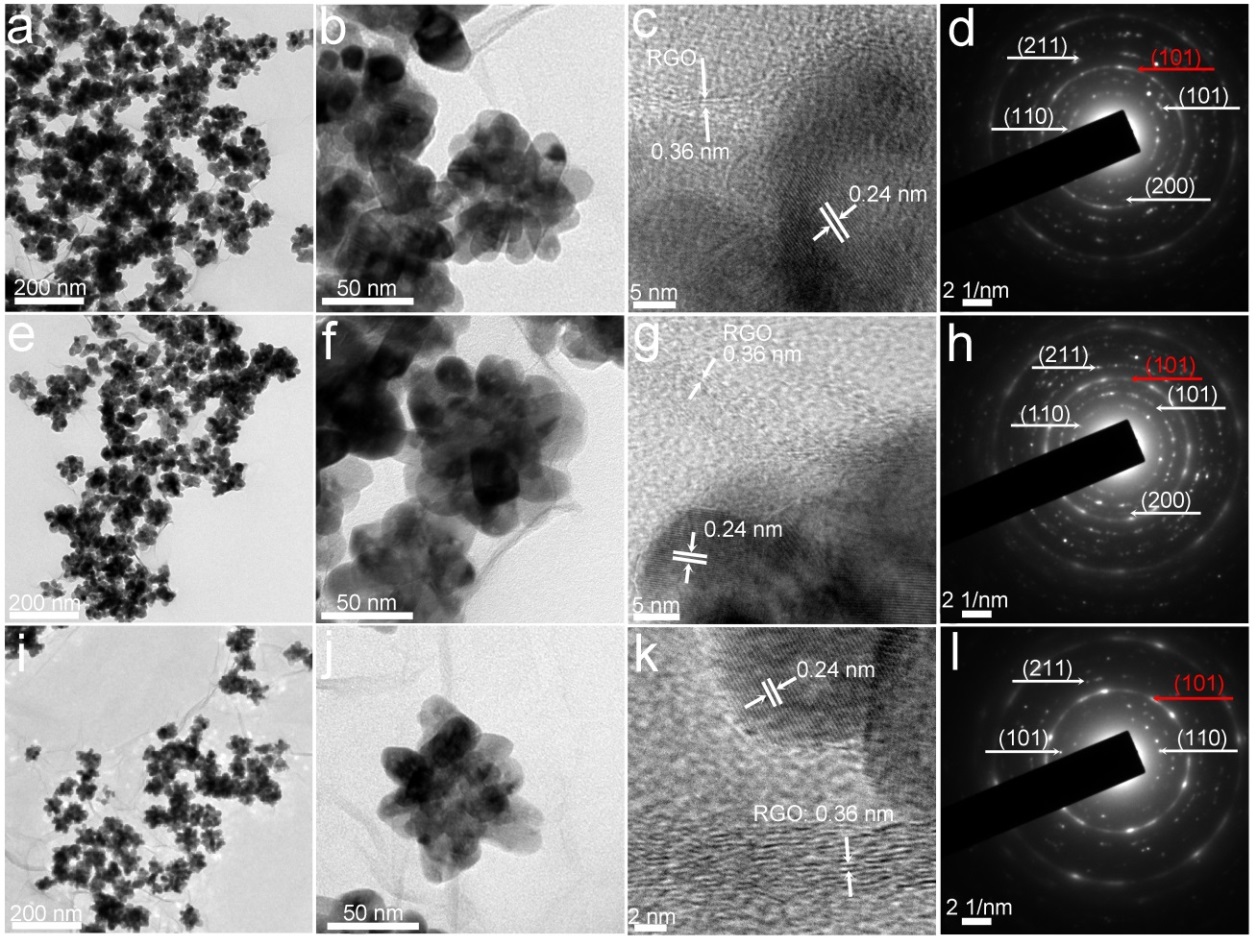
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**Figure S1**. The physisorption isotherms and pore-size distributions of GT-1, GS-2 and GT-4.

**3. FESEM and TEM images**

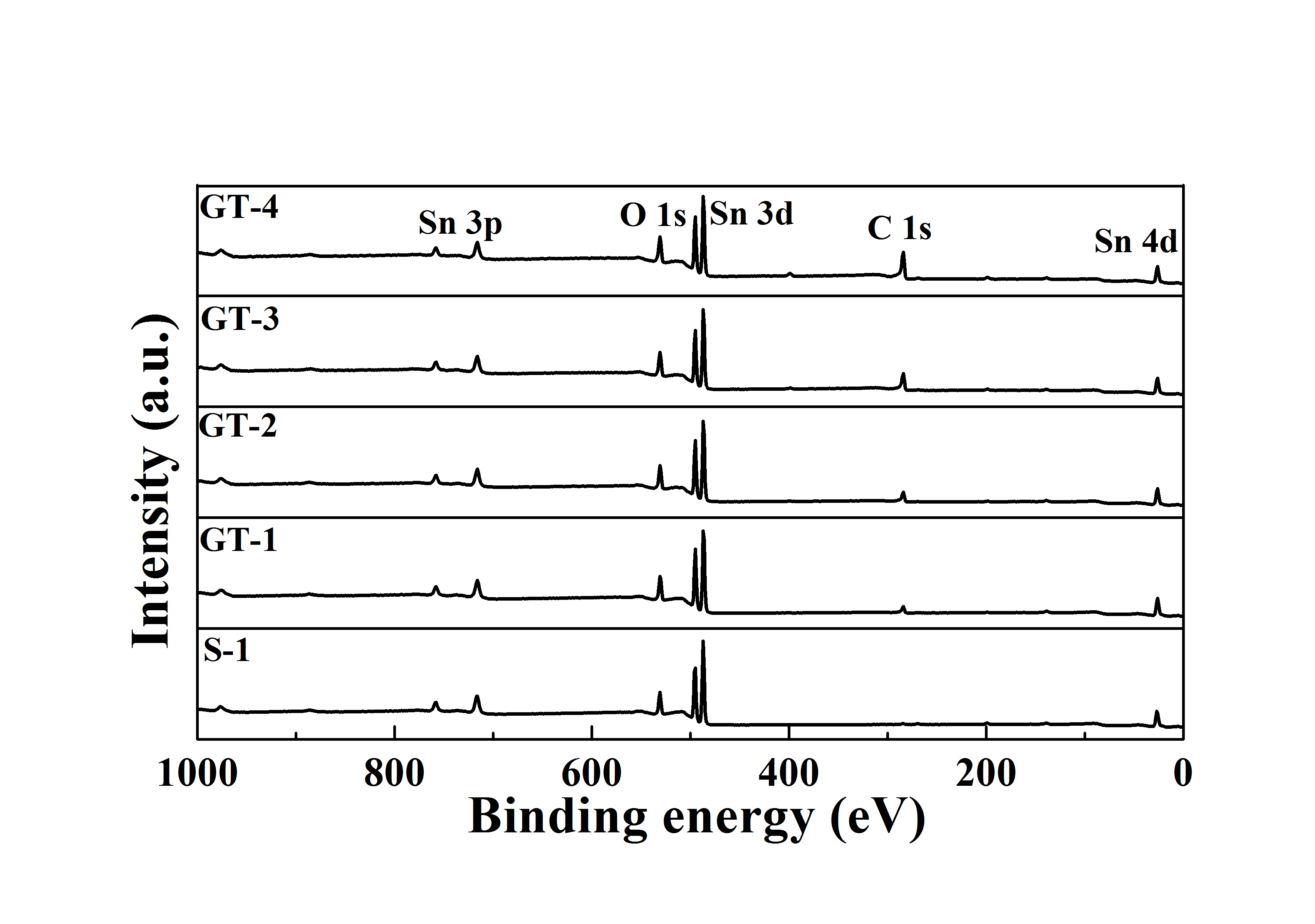


**Figure S2.** FESEM images of (a-b) GT-1, (c-d) GT-2 and (e-f) GT-4.

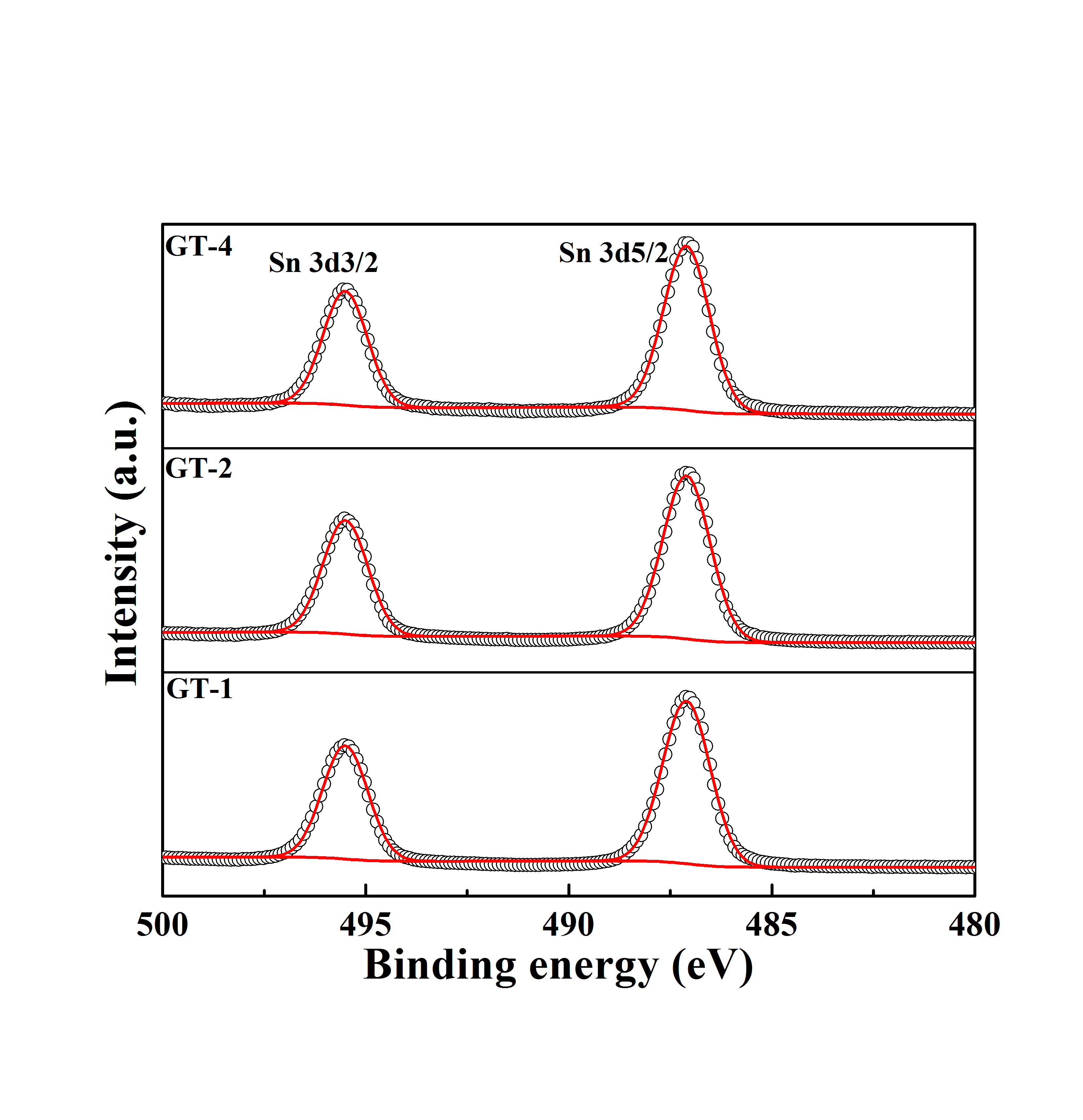


**Figure S3.** TEM, HRTEM and SAED images of GT-1, GT-2 and GT-4.

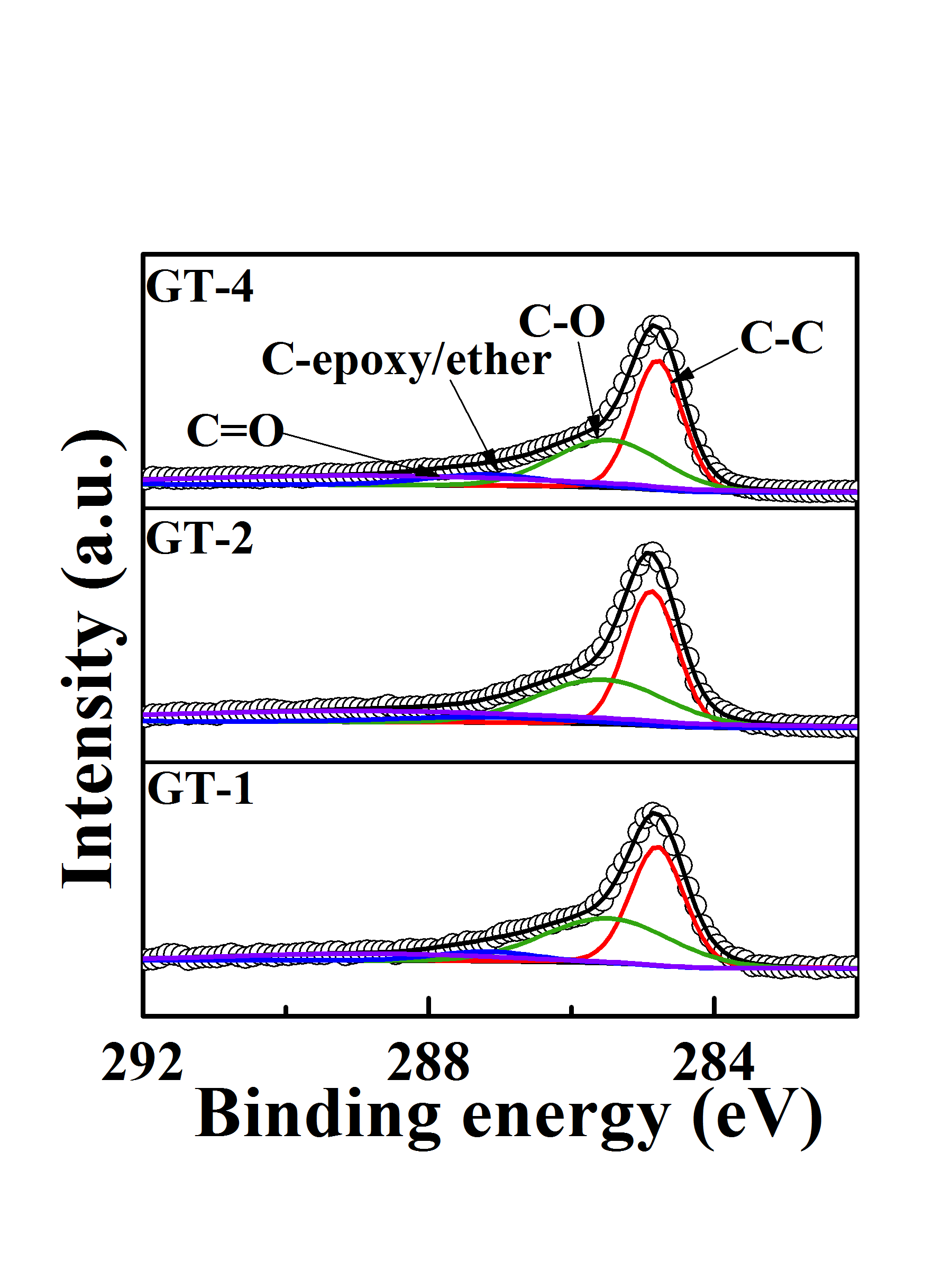
**4. XPS spectra**



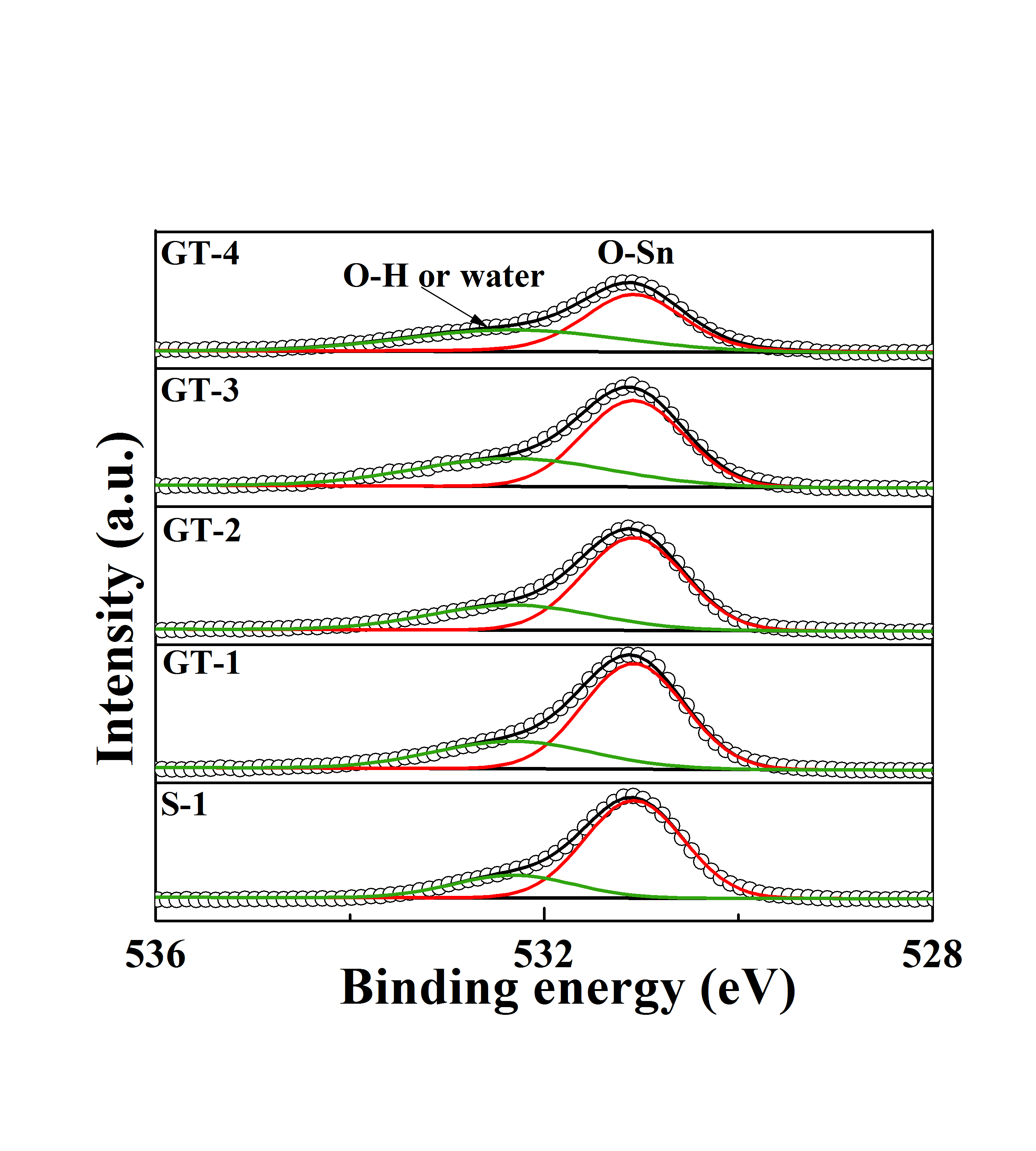
**Figure S4.** The survey XPS spectra of S-1 GT-1, GT-2, GT-3 and GT-4.

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**Figure S5.** The high-resolution XPS spectra of Sn 3d in GT-1, GT-2 and GT-4.

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**Figure S6.** The high-resolution XPS spectra of C 1s in GT-1, GT-2 and GT-4.

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**Figure S7.** The high-resolution XPS spectra of O 1s in S-1, GT-1, GT-2, GT-3 and GT-4.

**5. CV curves of SnO2@RGO materials**

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**Figure S8.** CV curves (a) at a scan rate of 0.1 mV s-1 of GT-1.

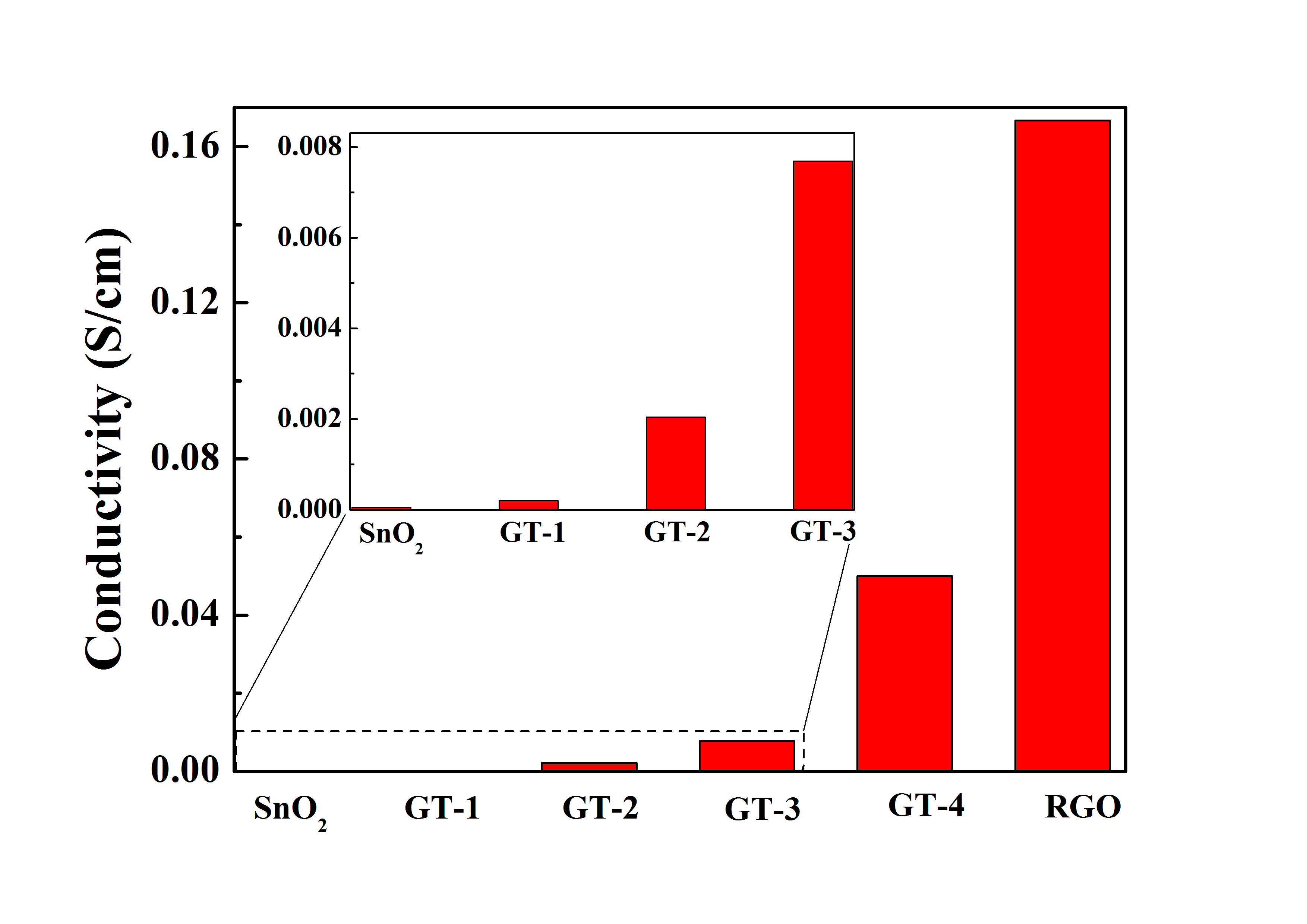
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**Figure S9.** CV curves (a) at a scan rate of 0.1 mV s-1 of GT-2.

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**Figure S10.** CV curves (a) at a scan rate of 0.1 mV s-1 of GT-4.

**6. The conductivities of SnO2, SnO2@RGO composites, and RGO materials**

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**Figure S11.** The conductivities of SnO2, SnO2@RGO composites, and RGO.