

## Facile Synthesis of SnO<sub>2</sub>-Embedded Carbon Nanomaterials via Glucose-mediated Oxidation of Sn Particles

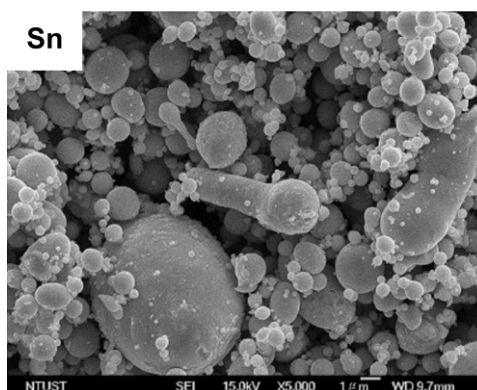
Ming-Yao Cheng,<sup>a</sup> Cheng-Liang Hwang,<sup>b</sup> Chun-Jen Pan,<sup>b</sup> Ju-Hsiang Cheng,<sup>b</sup>  
Yun-Sheng Ye,<sup>b</sup> John F. Rick,<sup>b</sup> and Bing-Joe Hwang<sup>b,c,\*</sup>

<sup>a</sup> Graduate Institute of Engineering, National Taiwan University of Science and Technology, 43, Sec. 4, Keelung Rd., Taipei 106, (Taiwan, ROC)

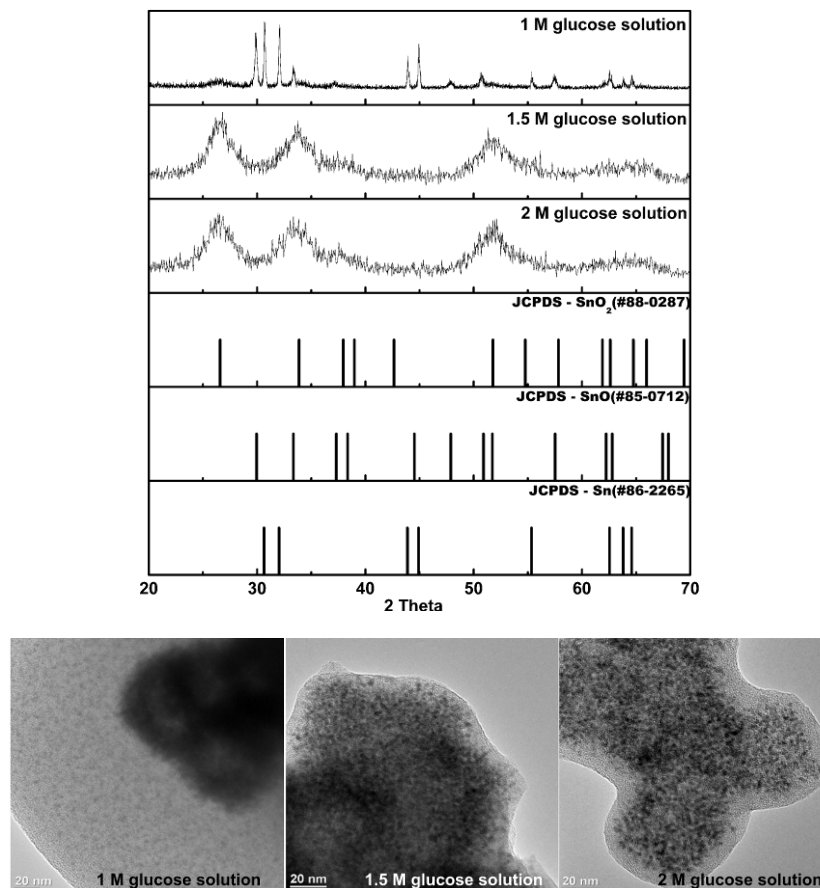
<sup>b</sup> Chemical Engineering, National Taiwan University of Science and Technology, 43, Sec. 4, Keelung Rd., Taipei 106 (Taiwan, ROC)

<sup>c</sup> National Synchrotron Radiation Research Center (NSRRC), 101 Hsin-Ann Rd., HsinChu 30076 (Taiwan, ROC)

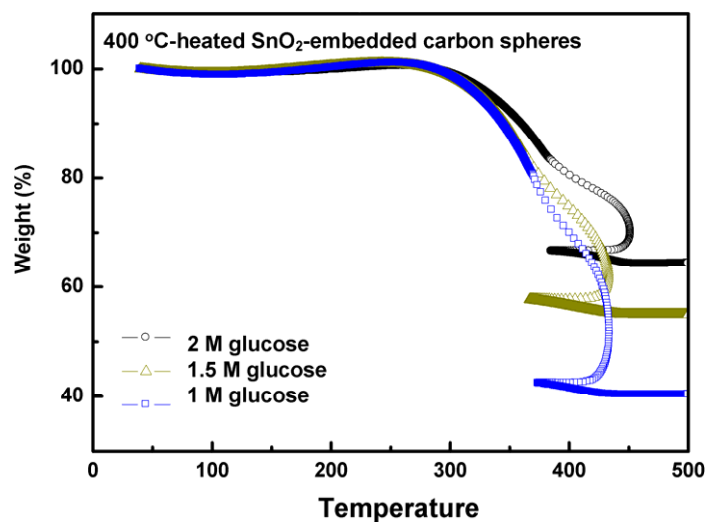
\*E-mail: [bjh@mail.ntust.edu.tw](mailto:bjh@mail.ntust.edu.tw)



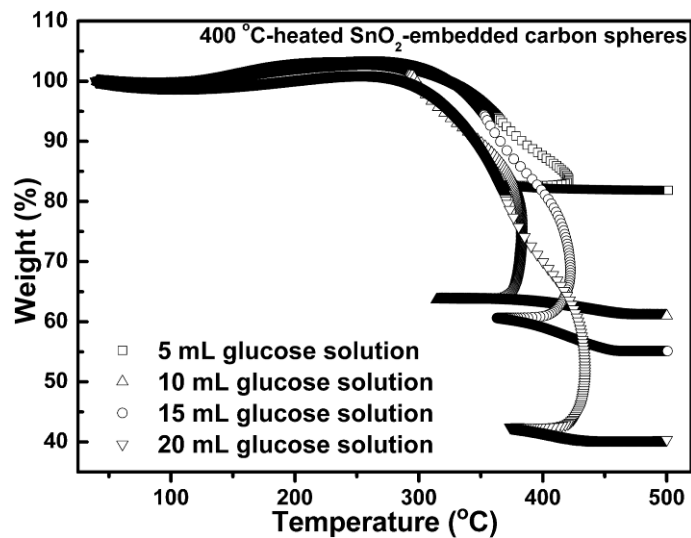
**Figure S1.** SEM image of the commercial Sn particles (scale bar: 1 μm).



**Figure S2.** XRD patterns and TEM images of 400 °C-heated SnO<sub>2</sub>-embedded carbon spheres.



**Figure S3.** TGA data for 400 °C-heated SnO<sub>2</sub>-embedded carbon spheres prepared with various glucose concentrations.



**Figure S4.** TGA data for 400 °C-heated SnO<sub>2</sub>-embedded carbon spheres prepared with various amounts of 2 M glucose solutions.

**Table 1.** Measured pH values of the residual solutions of various glucose concentrations.

Glucose conc. [M]	pH value
0.5	2.94
1	2.89
1.5	2.93
2	2.63
2 [a]	3.12

[a] residual solution with pure glucose precursor solution