Electronic Supplementary Information for

Synthesis of Outer Tube-selectively Nitrogen-Doped Double-Walled Carbon Nanotubes by Nitrogen Plasma Treatment

Hiroyuki Muramatsu, Masahiro Takahashi, Cheon-Soo Kang, Jin Hee Kim, Yoong Ahm Kim, and Takuya Hayashi

Faculty of Engineering, Shinshu university, Wakasato, 4-17-1, Nagano, Japan, E-mail: muramatsu@endomoribu.shinshu-u.ac.jp; Fax: +81-26-269-5202; Tel: +81-26-269-5212
Faculty of Engineering, Chonnam National University, 77 Yongbong-ro, Buk-gu, Gwangju, 61186, Republic of Korea
Department of Polymer Engineering, Graduate School, Alan G. MacDiarmid Energy Research Institute & School of Polymer Science and Engineering, Chonnam National University, 77 Yongbong-ro, Buk-gu, Gwangju, 61186, Republic of Korea, E-mail: yak@chonnam.ac.kr

Figure S1. Low and high frequency regions of Raman spectra for the pristine and N doped DWCNTs (3 min) using a 785nm laser line.
Figure S2. Low and high frequency regions of Raman spectra for the pristine and N doped DWCNTs (3 min) using a 633nm laser line.

Figure S3. FT-IR spectra of DWCNTs before and after nitrogen plasma treatment. Note that plasma treatment we used is 3 min.
Figure S4. Wide-scan XPS spectra of DWCNTs before and after nitrogen plasma treatment (note that plasma treatment time is 3 min.)

Figure S5. C1s XPS spectra of DWCNTs before and after nitrogen plasma treatment (note that plasma treatment time is 3 min.).
Table S1. Elemental analysis of DWCNTs before and after nitrogen plasma treatment using XPS.

<table>
<thead>
<tr>
<th>sample</th>
<th>Carbon</th>
<th>Oxygen</th>
<th>Nitrogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWCNTs</td>
<td>98.1</td>
<td>1.80</td>
<td>0</td>
</tr>
<tr>
<td>N-DWCNTs (3min)</td>
<td>87.6</td>
<td>8.08</td>
<td>4.30</td>
</tr>
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