Purification of SWNTs Synthesized by an ACCVD Method

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A catalytic CVD method from alcohol (ACCVD) has been reported to produce high quality single-walled carbon nanotubes (SWNTs) on zeolite[1,2)]. Here we discribe a purification procedure of the SWNTs synthesized by this method.

SWNTs were synthesized with Fe-Co zeolite (5 wt%) at 800℃ at 0.67 kPa (5 Torr) for 15 min in Ar atomoshere. Obtained raw SWNTs were grinded and exposed in 20 % Ar/O_2 at 240℃ for 18 h. Thus obtained nanotubes were shaked in 1 % HF aqueous solution at for 30 min and then anealed at 350℃ for 1 h in air to obtain purified SWNTs (p-SWNTs).

As shown Figure1, the Raman spectra of the p-SWNTs and the raw SWNTs were essentially the same (Figure 1), indicating that the chemical damage of the SWNTs in this purification procedure is almost none. Datails will be reported in the meeting.

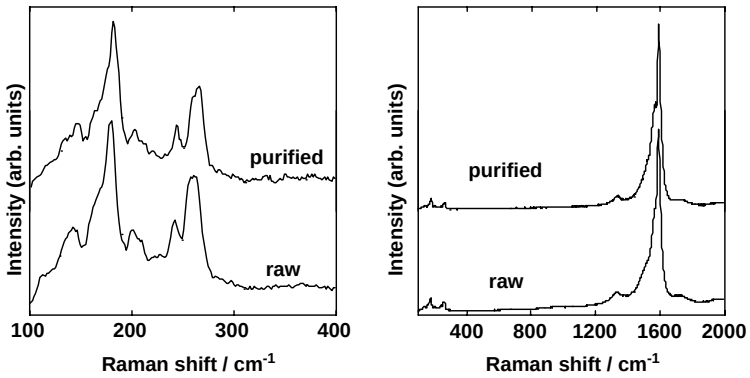

Figure 1 Raman spectra of the raw SWNTs and p-SWNTs.

(1) S. Maruyama, et al, *Chem. Phys. Lett.* **360** (2002) 229-234.

(2) Y. Murakami, et al, *Chem. Phys. Lett.* **374** (2003) 53-58.

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