

Development of Nano Assembling System Development of Mass Production Method of SWNTs

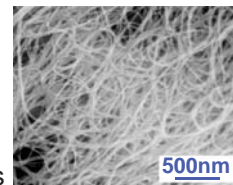
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※SWNTs = single-walled carbon nanotubes

Objective

Mass production of SWNTs by arc discharge method.

➔ Application of SWNTs based on their characteristics.



Purified SWNTs

Results

Development of mass production method of SWNTs by arc discharge.

- Macroscopic net of SWNTs longer than 30cm could be produced by arc evaporation of Fe-included carbon rod in H₂-Ar mixture gas.
[Production rate is 3g/day]
- SWNTs were easily purified by heat and HCl treatments.

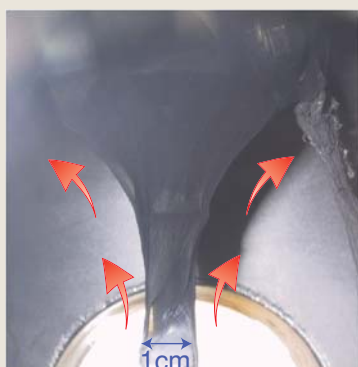
Patent
submitting

Feature

Production of high crystallinity SWNTs.

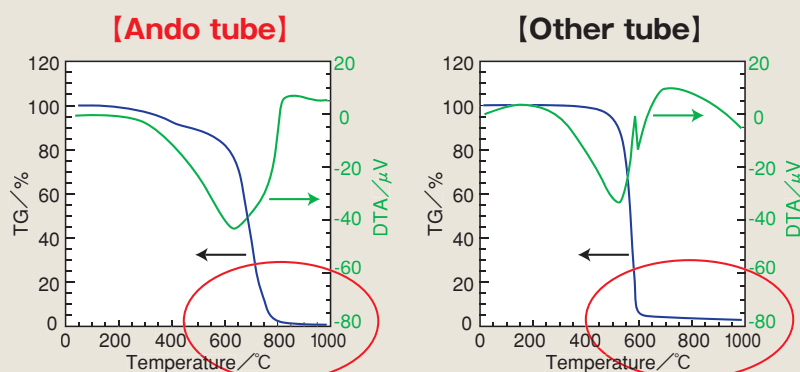
➔ high-strength, high-conductivity, absorber of EM wave

Macroscopic net



Net-like SWNTs are produced as a cotton candy.

Thermostable



Ando tube is stable until 800°C and no residue.

Industrial applications

Composite materials applying high crystallinity is expected.