

**[NP-14]**

## Synthesis of Carbon Nanotubes by Annealing in the H<sub>2</sub> Atmosphere

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We present the method to fabricate carbon nanotubes on the nickel and DLC coated Silicon substrates by annealing alone in the H<sub>2</sub> atmosphere without supplying additional gases. At first, the nickel whose thickness ranges from 50 to 300nm is deposited on the silicon substrate wafer. And then, the DLC(Diamond-Like-Carbon) film is fabricated by RFPECVD method upon it. The specimen is annealed in the quartz tube. For the right gas and the temperature, we observe the growth of the carbon nanotubes. The adequate annealing temperature ranges from 800°C to 1000°C. We present the surface morphology and microstructure of these films taken by the TEM (transmission electron microscopy) and the SEM(scanning electron microscopy).