

Report on European Summer School & 2nd Japanese-German Student Workshop

**Dept of Electrical and Electronic Engineering, Meijio University, Japan
Hitoshi Watanabe**

The European Summer School & 2nd Japanese-German Student Workshop was held in Germany from 4th to 14th October 2008.

During the European Summer School, I attended a lecture on the basic of Plasma and Unclear Fusion. I leaned a lot from this lecture because it was very interesting. I asked many questions.

In the poster session, those students who take part in the European Summer School explained and debated their fields of study. We exchanged our opinion during lecture, poster sessions, our free time, and the lunch time. I had a chance to talk to people from each country that took part in the European Summer School. It was quite a good experience for me to take part in European Summer School.

In the 2nd Japanese-German Student Workshop, I presented my study which is Formation of carbon nanostructures employing non-equilibrium atmospheric pressure plasma CVD. The content of the announcement is

Carbon nanowall(CNW) of two-dimensions that is structure is the gathering of several of grafenshet and stands vertically for substrate. Characteristics of CNW are large surface area, and are that electro conductive is high. Application using theses characteristics is full cell electro catalyst layer, electric double layer capacitor, gas storages. Aligned carbon nanotubes (CNTs) were successfully synthesized on a Co-catalyzed Si substrate with TiN buffer layer at a relatively low temperature of 560°C using He/H₂/CH₄ atmospheric pressure PECVD. In addition, carbon nanowalls (CNWs) were successfully synthesized on a Ti-catalyzed Si substrate at temperature of 680 °C using He/H₂/CH₄ high pressure PECVD. After I presented my study, some people asked me questions about CNTs and CNWs.

During the student session, the presentation time was 15 minutes and the question and answer time was minutes. Japanese and Germany students asked each presenter a lot of question. People spoke about PECVD, Etching and the

measure of Plasma. Every thing was interesting for me and I learned a lot. My English skills also improved.

Through the European Summer School & 2nd Japanese-German Student Workshop, I learned a lot of things. It was a useful experience. I thank ITP for allowing me to take part in the European Summer School & 2nd Japanese-German Student Workshop. I hope I can have the chance to exchange opinions with international students again. If the program is run again, I would like to take part.