

MAR07-2006-020131

Abstract for an Invited Paper
for the MAR07 Meeting of
the American Physical Society

HRTEM studies of various carbon nanotubes¹

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Among various synthesis methods of carbon nanotubes (CNT), catalytic CVD method has gained its majority. There are several reasons for the popularity of CCVD method, which is the simplicity of the instrumental setup, ease of varying the CNT growth condition, and relatively simple control over the number of layers. We have been working with the CCVD method for producing high quality nanotubes, and by finding the right synthesis condition, succeeded in obtaining highly homogeneous double-wall carbon nanotubes (DWCNT). In the heat-treated DWCNT sample, we were able to find various coalesced tubes with interesting morphologies. In the present talk, the process of producing high quality DWCNT and its morphological changes by various treatments will be shown. In collaboration with Hiroyuki Muramatsu, Yoong Ahm Kim, and Morinobu Endo, Shinshu University and the Endo Lab Team.

¹CLUSTER Project, JSPS Research grant