

## **In-situ and position selective CVD of nanostructures with electron microscopy**

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Electron-Beam-induced deposition (EBID) has been studied extensively, since it is a promising technique to fabricate small-sized structures on a substrate. When electrically conductive substrates are used, the decomposition of metal-organic precursors produces beam-sized (nanometer-sized) objects can be formed in the position selective manner. On the other hand, dendritic or tree-like structures are successfully grown on the surface by the charge-up effects of electrons, when insulator materials are used for the substrate. In this talk, the general technique to introduce the precursor gas into the TEM and SEM columns is described and the maneuverability of the apparatus will be demonstrated. The usefulness of position selective chemical vapor deposition will be discussed in terms of the fabrication tools of nanometer-sized structures and of “in-situ” electron microscopy.