



第144回公開セミナー/第53回実践リーダーレクチャー

## Controlled Preparation and Property Manipulation of Single-Walled Carbon Nanotubes

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日時: 2014年2月28日(金) 14:00-15:30  
会場: 東京大学工学部2号館3階31A会議室

### 要旨

Single-walled carbon nanotubes (SWNTs) can be either metallic or semiconducting depending on their structures. The selective preparation and modification of SWNTs have long been a big challenge in the area. Based on the design of catalysts for chemical vapor deposition (CVD) of SWNTs, we developed strategies to directly grow semiconducting SWNTs and even chirality specified SWNTs. We have also studied the structure-dependent modification of SWNTs and found that some anionic surfactants can selectively modify metallic in ionic liquids.

