

超高分解能インレンズ形 FE-SEM

SU9000

HITACHI UHR in-lens FE-SEM SU9000

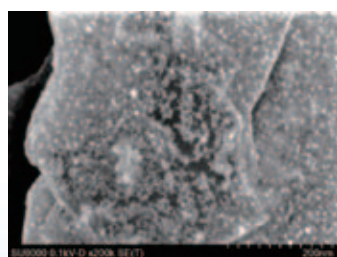
◎ 特長

- 超高分解能観察に最適な高輝度CFE電子銃とインレンズ形対物レンズを搭載。
- 迅速に試料導入および観察を開始できるサイドエントリーゴニオメータステージ(試料交換位置が高分解能観察位置)。
- ナノマテリアルにも対応した低加速STEM/EELS。

◎ Feature

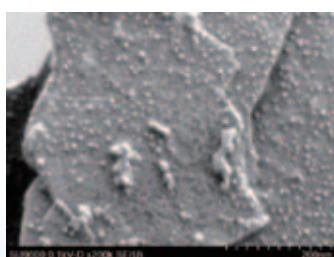
- Spectacular CFE Gun with high brightness and in-lens system optimized for ultra high resolution imaging.
- High throughput observation with the side entry goniometer stage and its quick sample exchange (The side-entry exchange positions the sample holder at the correct position for high resolution imaging)
- Low voltage STEM / EELS suitable for Nano-materials

◎ 極低照射電圧&高コントラストSEM観察 ULV & high contrast SEM imaging



SE image

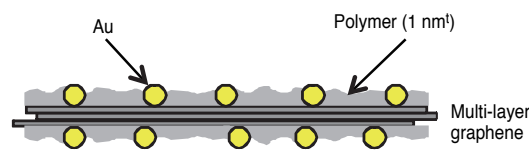
Specimen : Graphene / Polymer / Au^{*1}, Vd : 100 V



BSE image



Hitachi UHR FE-SEM SU9000

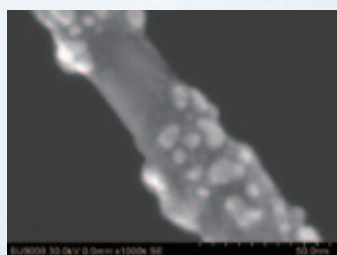


Specimen cross section schematic view

SE image : 高コントラストでポリマーのコーティング状態を可視化
High contrast observation on polymer coating condition

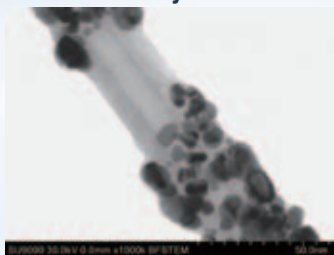
BSE image : 試料最表面の形状を可視化
Topographic condition observation on topmost surface

◎ 試料表面・内部構造の同時観察 surface & volume information simultaneously



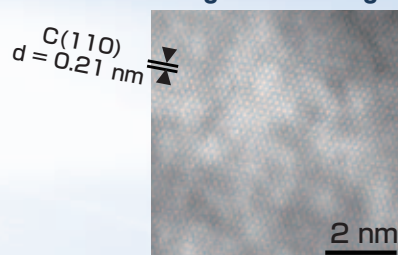
SE image

Specimen : CNT coated by Polybenzimidazole attached with Platinum Nano Particle^{*1}
HV : 30 kV



BF-STEM image

◎ 格子像観察 Low-voltage lattice imaging



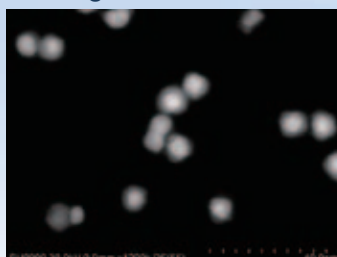
BF-STEM image

Specimen : Graphene
HV : 30 kV
Mag. : 3,000 kX



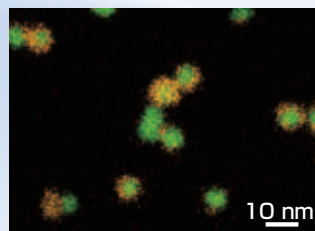
Diffraction pattern

◎ 超高分解能EDX分析 Ultra high resolution EDX



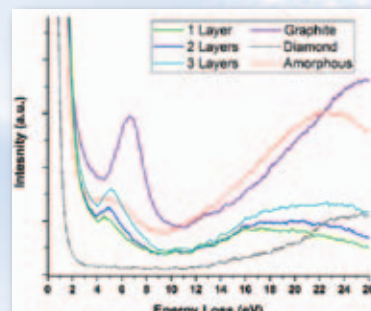
DF-STEM image

Specimen : Silver-Copper Nanoparticle^{*2}
HV : 30 kV, Mag : 1,200 kX



Ag/Cu ED Layer map
(Orange : Cu-K, Green : Ag-L)

◎ 30 kV EELS



EELSスペクトル

(グラフェン、アモルファスカーボン、グラファイト、ダイヤモンド)
EEL spectra of graphene, amorphous carbon, graphite and diamond

*1 : Specimen Courtesy of A. Prof. Tsuyohiko Fujigaya, Department of Applied Chemistry, Faculty of Engineering, Kyushu University *2 : Specimen courtesy of Dr. Dai Mochizuki, Department of Applied Chemistry, Tokyo Institute of Technology