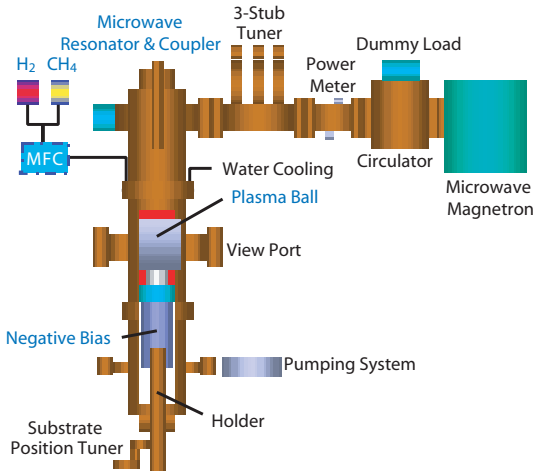
MPECVD Growth of Carbon Nanotubes & Applications
微波電漿輔助化學氣相沉積碳奈米管成長與應用

The microwave plasma enhanced chemical vapor deposition (MPECVD) method is employed for carbon nanotubes (CNT) growth at a temperature lower than those with other schemes, an important advantage for CNT applications in microelectronics. ITRI-designed MPECVD has been successfully used in the growth of aligned multi-walled carbon nanotubes at temperature as low as 550˚C.

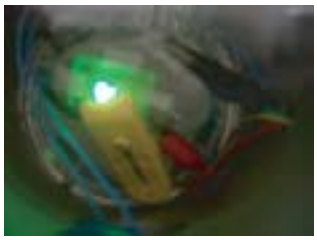
工研院開發出共振腔式微波電漿輔助化學氣相沉積設備，可在較他法為低之溫度下產出碳奈米管，利用此設備已在550˚C低溫下成功產出排列整齊之多壁碳奈米管。

MPECVD System Schematic & Equipment

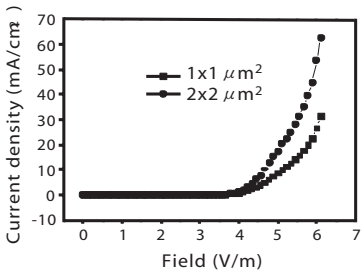
2002/04



Aligned MWNT by MPECVD
2002/11



MWNT Field Emission
2003/02



I - V Measurement
2003/02

Future R&D Scope