Chemical Engineering

Jih-Jen Wu (吳季珍 副教授)

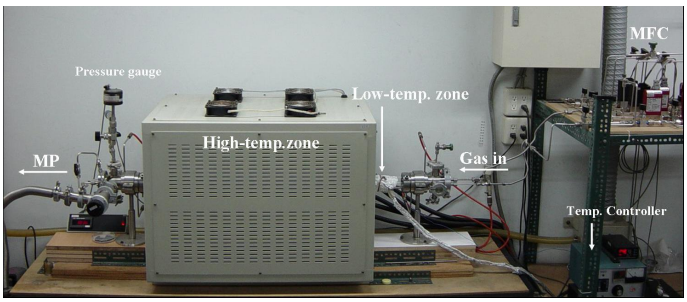
Associate Professor

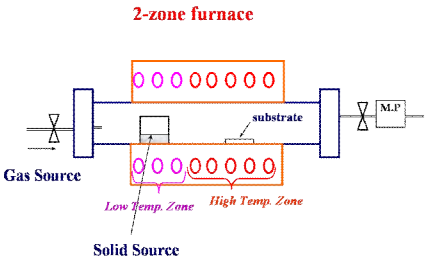
B.S.	Chemical Engineering, National Cheng Kung University, Taiwan	1991
Ph.D.	Chemical Engineering, National Cheng Kung University, Taiwan	1997

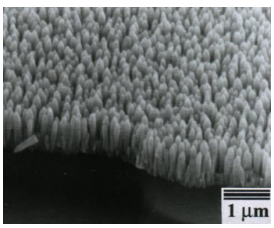
Phone	886-6-2757575-62694
Email	wujj@mail.ncku.edu.tw
Office	Room 93A08, Chemical Engineering Building

Research Interests:

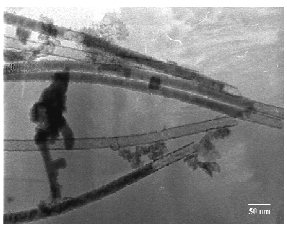
One-Dimensional Semiconductor Nanostructures



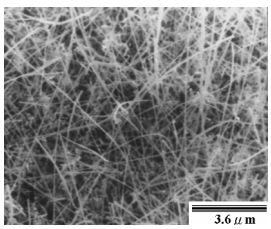




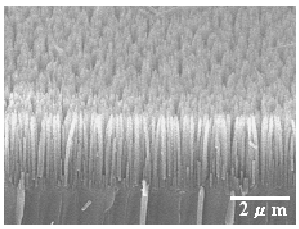
ZnO Nanorods
(Adv. Mater. & JPCB, 2002)



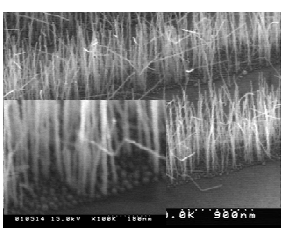
ZnO Nanotubes
(APL, 2002)



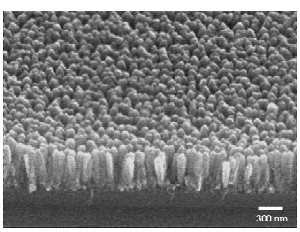
GaN Nanowires (VLS)
(JPCB, 2002)



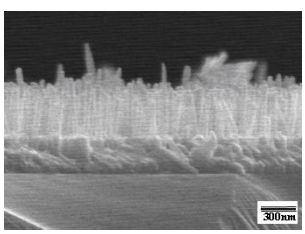
nc-Si/SiO_x Composite Nanorods
(Adv. Mater., 2002)



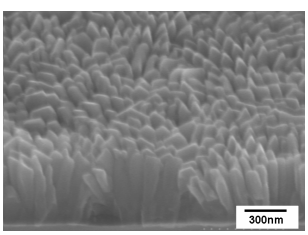
Ga_2O_3 Nanowires (VLS)
(Adv. Mater., 2004)



TiO_2 Nanorods
(JPCB, 2004)

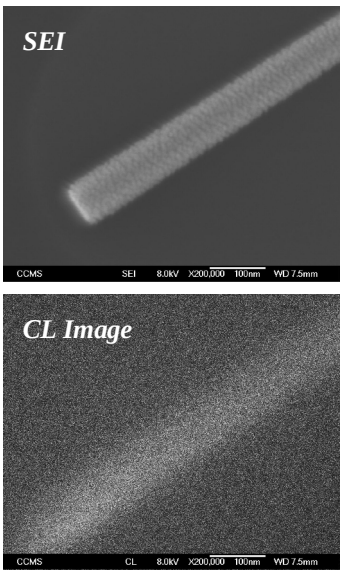


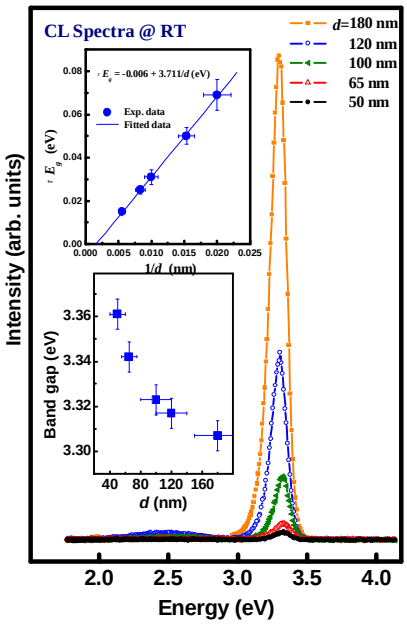
ZnO nanorods/ZnO film
(Adv. Funct. Mater., 2004)



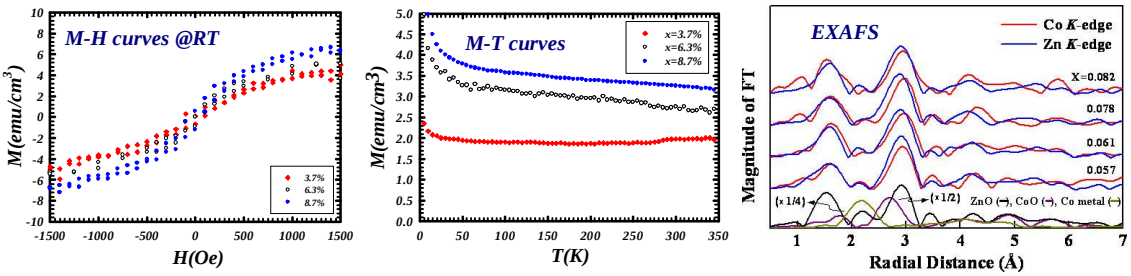
Fe_2O_3 Nanorods

Anomalous Energy Shift of ZnO Nanorod Emission Spectra with Sizes beyond Quantum Confinement Regime

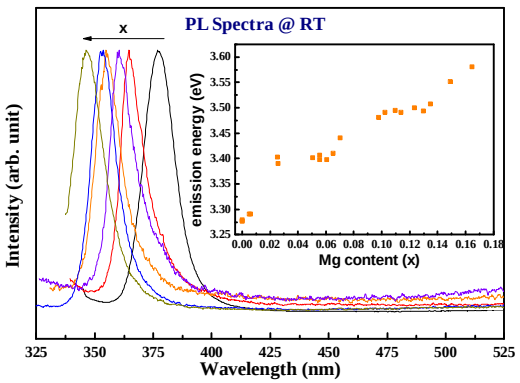




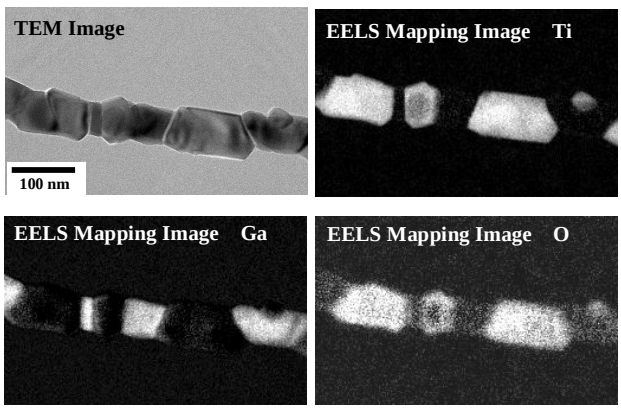
Room-temperature Ferromagnetism in Well-Aligned $Zn_{1-x}Co_xO$ Nanorods (APL, 2004)



Band Gap Engineering of Well-Aligned $Zn_{1-x}Mg_xO$ Nanorods (CPL, 2005)

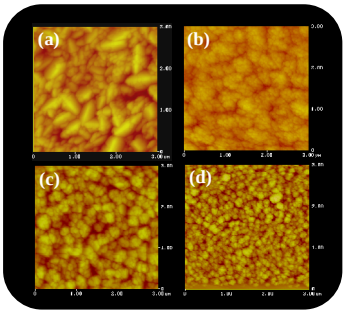


Ga_2O_3-TiO_2 Nano-Barcodes (Adv. Mater. 2005)



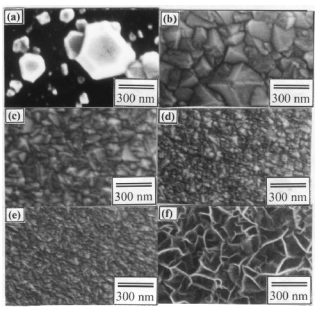
CVD Thin Films

Low-Temperature Polysilicon



AFM images of the 2.6-μm-thick films at a substrate temperature of 270^{0}C from $SiCl_4$ concentration of (a) 17% and (b) 26%. 460 nm-thick films at a substrate temperature of 270^{0}C from $SiCl_4$ concentration of (c) 17% and (d) 26%.

Nanodiamond Films (Carbon, 2004)



SEM images of films deposited at 610 ^{o}C from various concentrations of CCl_4. (a) 0.5%, (b) 1.0%, (c) 1.5%, (d) 2.0%, (e) 2.5% and (f) 3.0%.