

Functional Nanostructures: Processing, Characterization, and Applications; 9780387354637; 2007; Springer Science & Business Media, 2007; Sudipta Seal; 592 pages

Advances in Semiconductor Nanostructures: Growth, Characterization, Properties and Applications focuses on the physical aspects of semiconductor nanostructures, including growth and processing of semiconductor nanostructures by molecular-beam epitaxy, ion-beam implantation/synthesis, pulsed laser action on all types of III-V, IV, and II-VI semiconductors, nanofabrication by bottom-up and top-down approaches, real-time observations using in situ UHV-REM and high-resolution TEM of atomic structure of quantum well, nanowires, quantum dots, and heterostructures and their electrical, optical, magn

Functional Nanostructures: Processing, Characterization, and Applications Edited by Sudipta Seal Nanotechnology in Catalysis, Volume 3 Edited by Bing Zhou, Scott Han, Robert Raja, and Gabor A. Somorjai Controlled Synthesis of Nanoparticles in Microheterogeneous Systems Vincenzo Turco Liveri Nanoscale Assembly Techniques Edited by Wilhelm T.S. Huck Ordered Porous Nanostructures and Applications Edited by Ralf B. Wehrspohn Surface Effects in Magnetic Nanoparticles Dino Fiorani Alternative. This book describes some of the aspects of functional nanostructures, from fabrication, characterization to novel applications for the 21st century nanotechnology boom. REVIEW. One-Dimensional Nanostructures: Synthesis, Characterization, and Applications. By Younan Xia,* Peidong Yang,* Yugang Sun, Yiyang Wu, Brian Mayers, Byron Gates, Yadong Yin, Franklin Kim, and Haoquan Yan. We also briefly discuss a number of methods potentially useful for assembling 1D nanostructures into functional devices based on crossbar junctions, and complex architectures such as 2D and 3D periodic lattices. We conclude this review with personal perspectives on the directions towards which future research on this new class of nanostructured materials might be directed.