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Nano scale characterizations of semiconductor materials and devices with SPM

Sang-il Park
PSIA, Seocho-dong 1600-3, Seoul, Korea

Abstract:

Scanning Probe Microscopy (SPM) is a powerful surface chracterization technology, which can measure not only surface topography but also various properties of the sample with unprecedented sensitivity and spatial resolution. Recent development of electrostatic force microscope (EFM) and scanning capacitance microscope (SCM) allows us to measure surface potential distribution and capacitance variation on semiconductor devices. The capacitance image provide us valuable information on carrier density and doping profile.

Biography:

Dr. Sang-il Park is the Chairman and CEO of PSIA, a manufacturer of industrial Scanning Probe Microscope (SPM) in Korea. Earlier, Dr. Park founded Park Scientific Instruments, where he served as the Chairman and CEO for 9 years. Prior to founding PSI, he worked with Prof. Quate at Stanford University, authored and co-authored numerous research papers, a text book on SPM, and nine U.S. patents. He received his Ph.D. in applied physics from Stanford University and his B.S. in physics from Seoul National University. Dr. Park is a member of Korean Physical Society, American Physical Society, American Vacuum Society, IEEE, and Materials Research Society.