

Speaker Profile



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Name Wonbong Choi

Title Associate Professor

Director, Nano Materials and Devices Lab

Education

Ph.D 1997 Department Material Science & Engineering North Carolina State University
M.S. 1988 Material Science & Engineering, Hanyang University, Seoul, Korea
B.S. 1986 Department of Metallurgical Engineering, Hanyang University, Seoul, Korea

Professional Employment:

1988 - 1993, Research Scientist, Materials Lab., Agency for Defense Development, Korea
1997 -1998, Post Doctoral Researcher, Prof. J.J. Cuomo's group, North Carolina State University
1998- 2003, Senior researcher (Project Manager) Samsung SAIT
Developed world 1st Carbon nanotube field emission display
Developed vertical CNT-FET device and CNT-based non-volatile memory device
2003 - present, Associate Professor, Florida International University

Dr. Choi is an expert of nanomaterials and device application. He has served as the Project Director (2000-2003) for "Carbon Nanotubes for Tera-level Memory Device" project with more than \$3.0 M for 3 years support from SAMSUNG and the Government of Korea. He has also been involved in the field emission display project at SAMSUNG (SAIT), leading the team investigating the cold-cathodes (1998-2000). Choi has invented the CNT Field Emission Display, reported in *Science* and covered extensively by news media around the world. His work has led to a recent demonstration by SAMSUNG, of over 30-inch field emission flat panel display. He has also served as the leader of the "Carbon Nanotubes for Microwave Generators" project from 2000-2001, supported by the Government of Korea (Ministry of Telecommunication and Information). Choi is credited to developing the vertical CNT-Field Effect Transistor and CNT based non-volatile memory devices.

Choi is an author/co-author of over 42 patents (granted or applied), 3 book chapters, over 65 journal papers and over 42 conference proceedings. He has been invited to speak at many international conferences, e.g., a keynote presentation on "Trends in Nanotechnology 2002," at the American Physical Society Meeting (2001), and a lecture on "Carbon Nanotube" at the Knowledge Foundation Conference (2001). He has served as a committee member for several international meetings such as "Nanotube 2003," "IEEE-Nano 2004" and US-Korea-Japan Molecular Electronics Conference.

Choi has received several prestigious awards for his innovative research, e.g., the *Gold Award* from SAMSUNG in 2000 (for carbon nanotube field emission display development), *Gold Technology Award* from the Agency for Defense and Development, Korea Government in 1993 (for special ceramic composites development), and Awards for *Best Paper of the Year 2001* and *Best Patent of the Year 2001* from SAMSUNG (SAIT).