



Dr. Byeong-Ok Cho

Wonik Materials, Republic of Korea

Dr. Cho received his BS, MS, and PhD(1999) in chemical engineering from Seoul National University in Korea. His PhD thesis was on dry etch processes using fluorocarbon plasmas and he expanded his research area to CVD(Chemical Vapor Deposition) and ALD(Atomic Layer Deposition) as a postdoctoral researcher in University of California at Los Angeles. After he joined Samsung Electronics, he took part in developing various memory devices including DRAM, NAND, FRAM, PCRAM and MRAM as a researcher and an engineer of mainly photolithography and dry etching processes. He also investigated potential application of various materials such as polymers, carbon nanotube and silicon nanowire to future semiconductor devices.

Currently, he is working as a chief technical officer of Wonik Materials Co. Ltd. in Korea, one of main suppliers of ESG(Electronic Specialty Gases) to semiconductor and display industries. While he has carried out many governments funded projects, he's currently leading a multi-organization consortium developing commercially viable low GWP(Global Warming Potential) gases to replace main PFC(PerFluoroCarbons) gases towards carbon neutrality.

His research interest is not limited only to those ESGs but also ranges to various materials applicable to novel processes of semiconductor and display manufacturing including CVD/ALD precursors and also to those contributing to carbon neutrality such as hydrogen out of ammonia cracking process.