



CENTER FOR NANOHYBRID FUNCTIONAL MATERIALS



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Silicon Ring Modulators

Realization of photonic devices based on Si processing technology, or Si Photonics, is attracting a great amount of attention. With Si Photonics, highly integrated photonic devices that can provide many more functions compared to conventional photonics devices can be realized in a cost-effective manner with very mature and powerful Si technology. Furthermore, Si Photonics allows much easier integration of photonic devices with electronic circuits, and can provide solutions for the interface bottleneck problem from which many present-day high-performance electronic systems suffer. In this talk, I will introduce Si Photonics research efforts at Yonsei University, especially the high-speed Si ring modulators, which are one of the key building blocks for high-speed Si photonic optical interconnect systems.

Prof. Woo-Young Choi received his B.S/M.S., and Ph.D. degrees in electrical engineering and computer science from the Massachusetts Institute of Technology (MIT), Cambridge, in 1987, and 1994, respectively. His doctoral dissertation concerned the investigation of molecular-beam epitaxy (MBE)-grown InGaAlAs laser diodes for fiber-optic applications. From 1994 to 1995, he was a Post-Doctoral Research Fellow with NTT Opto-Electronics Laboratories, Japan, where he worked on femtosecond all-optical switching devices based on low-temperature grown InGaAlAs quantum wells. In 1995, he joined the Department of Electrical and Electronic Engineering, Yonsei University, Seoul, Korea, where he is currently a professor. His research interest is in the area of high-speed circuits and systems that include Si Photonics, high-speed optoelectronics, and high-speed electronic circuits.

Seminar hosted by Dr. Ming Han, UNL Department of Electrical and Computer Engineering



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