RESEARCH CENTER FOR ADVANCED SCIENCE AND TECHNOLOGY, THE UNIVERSITY OF TOKYO
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SEMINAR ANNOUNCEMENT

Dr. Young-Il Kim

Korea Institute of Science and Technology (KIST), Korea

"Semicondcutor Functional Photonic Devices and All-optical Digital Signal Processing"

DATE: Wednesday, March 24, 2004
TIME: 5:00 pm-6:00 pm
PLACE: Seminar Room 307
3rd Floor, RCAST Building 3

Abstract

In view of optical communication technologies, the roles of the photons can be defined as the passive medium since they are only used as the information storages. Because the photons cannot actively control themselves, the advantages of the photons such as high-speed and parallel transmission of wavelength are not applicable. Therefore, new technologies enabling the photons to be the central operating units in the optical communication systems are strongly required. Optical communication technology that fits these concept is an all-optical digital signal processing system. The all-optical logic gate and their applications have been developed so that the information processing technology can avoid the cumbersome data processes of electrical-to-optical or optical-to-electrical conversions. Among the currently designed functional devices for all-optical information processing system, some device are considered impossible to manufacture with current fabrication technologies, To solve these problems, I will introduces photonic device by the ion implantation and optical isolator by spin-photonics for photonic integrated circuit(PIC).

Biography

1996. 1. - 1998. 8. Samsung SDS - Network Design
1998. 9. - 2000. 8. Pusan National University - MS
2000. 9. - 2003. 8. Pusan National University - Ph.D
2000. 7. - 2003. 8. Korea Institute of Science and Technology (KIST) - Student Research Worker
2003. 9. - 2004. 2. Korea Institute of Science and Technology (KIST) - Post-doctoral
2004. 2. - RCAST, University of Tokyo -Post-doctoral

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Refreshments will be provided.