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TUTORIAL TOPIC:

How to fabricate Photonic Integrated Circuits?

TUTORIAL:

Over the past decade, tremendous progress has been made in the area of photonic integrated circuit (PIC). PIC is analogous to electronic IC, where properties of photons/light is manipulated to achieve desired optical process. Though the concept of manipulating light on a chip was conceived in early eighties the year of revelation only happened at the turn of this century. In this tutorial, we will discuss PIC basics and find out why it is tipped as a disruptive technology for the future followed by state-of-the-art technology, challenges and applications. Furthermore, we will discuss how such a circuit can be made using technology available at National Nano Fabrication Centre (NNfC) located in National Centre for Nano Science and Engineering, IISc.

PROFILE:

EDUCATION:

- Ph.D. Photonics Engineering, 2011, Ghent University-imec, Ghent, Belgium
- M.S. Electrical Engineering, Microsystems and Microelectronics, 2005, University of Twente, Enschede, The Netherlands
- M. Engg. Optical Communication, 2004, College of Engineering, Anna University, Chennai, India
- B. Engg. Electronics and Communication Engineering, 2002, Bharathiar University, India

EXPERIENCE:

- Asst. Professor, IISc, Bangalore, March 2014 – Present
- Process Integration engineer-Silicon Photonics, IMEC, Belgium April 2013 – Feb 2014
- Post-doctoral Researcher, IMEC, Belgium April 2011 – April 2013