DTU Fotonik

SEMINAR

Growth of nanostructures by molecular beam epitaxy

By **Professor George Cirlin**
Otto Mønsted Visiting Professor from St. Petersburg Academic University

Time: **Friday, May 10th**, **10:00-11:00**
Place: DTU Fotonik, building **340**, room **0.15.A**

An overview of the growth activities at Academic University will be given. I will start with the facilities description which we have in the lab and show which particular materials may be grown. Mostly, we are concentrated in growing classical A-III B-V materials for optoelectronic devices, like lasers emitting at different wavelengths, from visible to THz. Another direction of our activity is the growth of nitrogen-based materials, like GaN, AlN, InGaN, etc. Main attention will be paid for the nanowire (NW) growth of different materials. We will discuss the growth mechanisms responsible for the formation of the NWs via a bottom-up approach, the growth of NWs on silicon, and, finally, the growth of heterostructured NWs. Structural and optical properties of the NWs will be presented.

Short Bio of Professor George Cirlin

Prof. George Cirlin is head of the laboratory in St. Petersburg Academic University and senior researcher in Ioffe Institute of Russian Academy of Sciences. Prof. Cirlin's research is focused on physics of semiconductor heterostructures and the application of heterostructures based devices for opto- and microelectronics. Last activities are concentrated on self-organized growth of nanostructures, including vertical nanowires fabrication technology. Prof. Cirlin has co-authored more than 300 papers and has several international patents. He has also been a Visiting Professor in the Laboratory of Photonics and Nanostructures CNRS, Marcoussis, France in 2006–2007, and Visiting Scientist / Alexander von Humboldt Fellow at Max-Planck Institute for Microstructure Physics, Halle/Saale, Germany in 2001–2004.

Host: Nika Akopian (DTU Fotonik)