

Chip-based Silicon Nanomembranes for Open Sensing platform

AFOSR MURI Research Center on Silicon Nanomembranes, UT Austin (Leading Institute)

Enabled-Products and services

Through the MURI research center slow light device on silicon nanomembranes, we built a myriad sensing devices for Lidar, early cancer detection, drug screening, heavy metal detection, air-and water-pollution sensing, 40 Gbit/sec EO modulator and RF sensors. All with sensitivity higher than existing devices and systems

Successful stories

Up to now, 10 US patents have been granted for this nanotechnology. It is an open platform as long as the signature of sensing is photon-based. We are in the process of building hand-held and desktop systems with automation functions. We have commercial contracts from Aerospace and medical industry. A new company Alfa Sensors is formed to further commercialize products. Strategic partners from private sectors are explored to further commercialize this technology

Role of the Federal Government has been led by AFOSR (Dr. Pomrenke, Contract No. FA 9550-08-0394) through a 4.75 million dollar MURI program in Silicon Nanomembranes from 2008 to 2013. The five year program provides us with the scientific and technology infrastructure through which a large number of supports from industry and federal government follows. These include Boeing, MD Anderson Cancer Research Center, Medical University of South Carolina, DOE, NIH, Army, Navy, EPA, and NSF

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