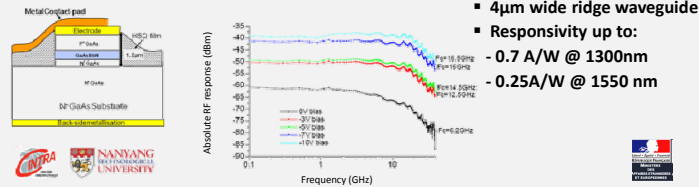


Permanent staff:

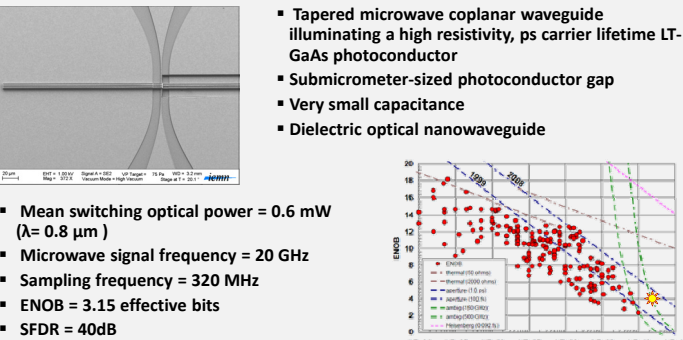
D. BERNARD, D. DECOSTER, E. DOGHECHE, S. DUPONT, J. GAZALET, M. HALBWAX, J. HARARI, J.C. KASTELIK, V. MAGNIN, S. MARICOT, M. POMMERAY, C. SION, J.P. VILCOT

Microwave-photonic components

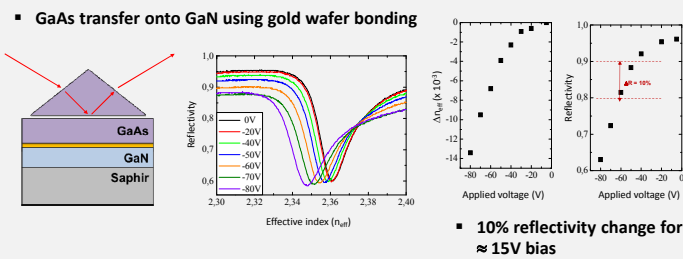
GaAsSbN 1300nm waveguide photodetectors



LT GaAs nano-photoswitch



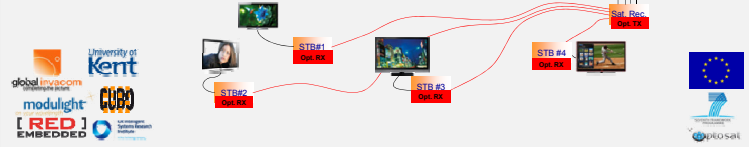
Surface plasmon resonance based optical modulator



Microwave-photonic systems

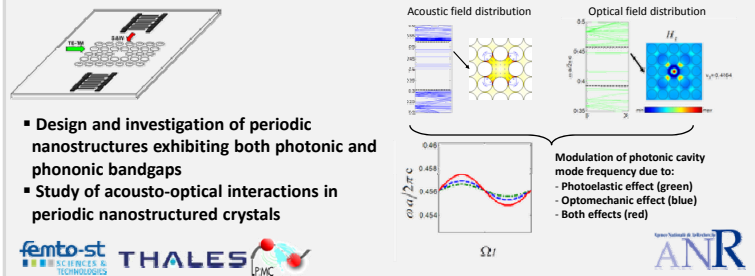
Consumer electronics demonstrator

- Ultimate demonstration of Radio over Fiber potentialities
- Optical distribution of DVB-S IF signals for home applications
- 4 DVB-S bands simultaneously distributed onto 4 receivers jointly with IP connectivity
- Use of low-cost TOSA-ROSA transceivers and MMF

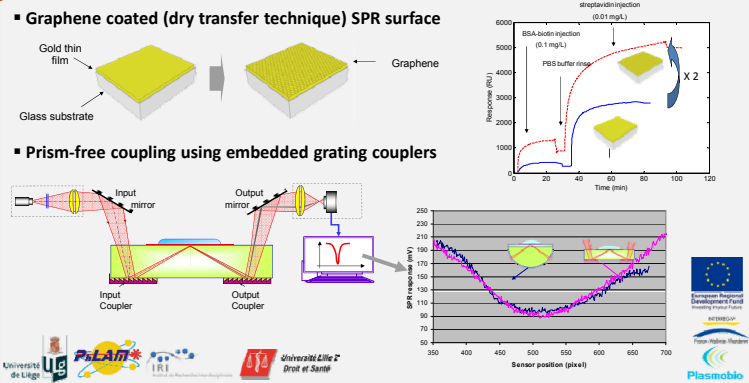


Acousto-optic components

Photonic & phononic crystal structures



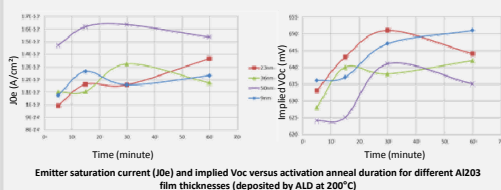
Surface Plasmon Resonance based biosensors



Photovoltaic cells

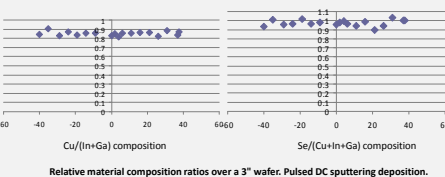
1st generation

P-type Si surface passivation by Al_2O_3 films deposited using Atomic Layer Deposition technique



2nd generation

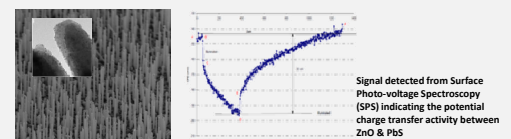
CIGS (CZTS) cells using a full sputtering deposition process



3rd generation

ZnO NW Based Quantum Dot Sensitized Solar Cell (QDSSC)

- Demonstration of n type Zinc Oxide (ZnO) NWs deposited by PLD and Attachment of p type Lead Sulfide (PbS) on ZnO NWs



- Limited incident photon to current conversion efficiency IPCE: Selection of metallic top electrode (MoO₃/ITO, graphene)