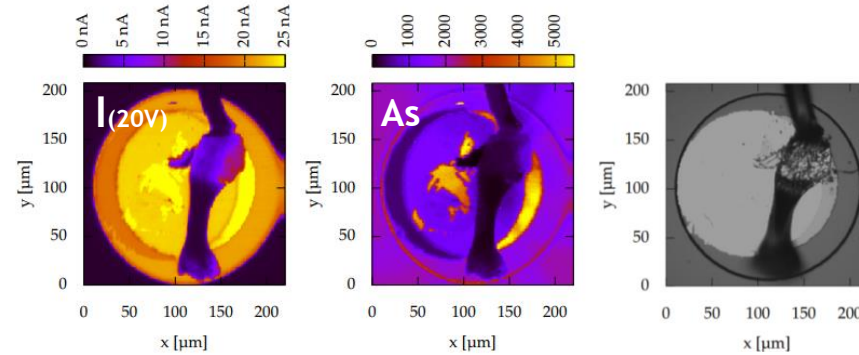
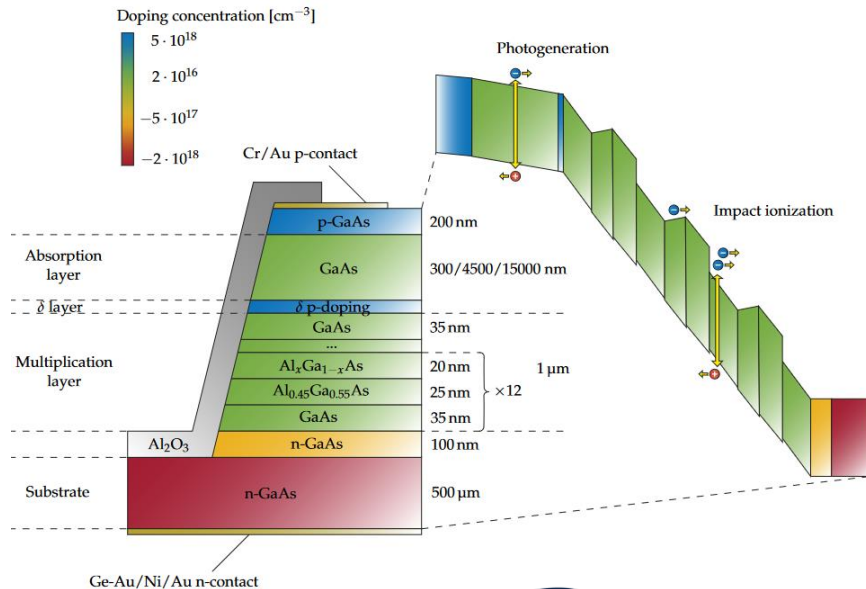


Characterization of GaAs APDs featuring separated absorption and GaAs/AlGaAs superlattices multiplication layers using soft X-rays

Colja M., Cautero M., Menk R.H., Pierpaolo Palestri P., Gianoncelli A., Antonelli m., Biasiol G., Dal Zilio S., Steinhartova T., Nichetti C., Arfelli F., De Angelis D., Driussi F., Bonanni V., Pilotto A., Gariani G., Carrato S. and Cautero G.

• GaAs SAM-APDs

- Efficient and sensitive
- Shorter absorption length for high energy X rays
- Minimization of noise using a super-lattice structure



- Fabrication and Simulation procedures
 - Different device thicknesses
- Measurements
 - Excess noise factor
 - Gain
- Synchrotron radiation Measurements
 - Absence of traps in the interfaces
 - Efficiency independence from thickness
 - High photocurrents