

Seminar: Pierre Fehlen

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Application of III-V semiconductors to biodetection and terahertz technology



The III-V semiconductor class has emerged as a novel alternative for many modern photonic applications thanks to their wide diversity, tunability, and CMOS compatibility. In this seminar, we will first discuss their application in plasmonics towards the detection of dangerous gases using Surface-Enhanced InfraRed Absorption spectroscopy. Second, we will demonstrate how this class of materials is especially suited for the design and engineering of plasmonic structures for any applications from the THz to the NIR using Epsilon-Near-Zero media. Finally, we will briefly address their use within the framework of THz technologies: modulator, doping level & carrier lifetime measurements.

Séminaire organisé dans le cadre du projet de programme interdisciplinaire MAT-PULSE



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