[From tool to product](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=cNclVT4AAAAJ&citation_for_view=cNclVT4AAAAJ:hMod-77fHWUC), Quantum cascade laser:

a thirty-years adventure

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Abstract:

This talk will present the state-of-the-art InP-based quantum cascade lasers from 3 to 300 μm, its past, present. and future trends, from high power, high wall plug efficiency, large wavelength tuning, 2D beam steering, high reliability, diffraction-limited beam quality, to direct heterogeneous epitaxy of InP-based QCL on Si and GaAs substrates, and the recent development of quantum cascade THz difference-frequency generation and frequency comb. Finally, I will discuss the possible solution to bridge the spectral gap in the Reststrahlen band of III-V material systems, i.e. 24-66 μm.