

Tutorials

Here we describe several example input files.

THz QCLs

GaAs/AlGaAs

- [THz QCL - Fatholouloumi \(2012\)](#)
Terahertz quantum cascade lasers operating up to ~ 200 K with optimized oscillator strength and improved injection tunneling
S. Fatholouloumi, E. Dupont, C.W.I. Chan, Z.R. Wasilewski, S.R. Laframboise, D. Ban, A. Mátyás, C. Jirauschek, Q. Hu, H. C. Liu
Optics Express 20, 3866 (2012)
- GaAs/Al_{0.15}Ga_{0.85}As terahertz quantum cascade lasers with double-phonon resonant depopulation operating up to 172 K
R. W. Adams, K. Vijayraghavan, Q. J. Wang, J. Fan, F. Capasso, S. P. Khanna, A. G. Davies, E. H. Linfield, M. A. Belkin
Applied Physics Letters 97, 13111 (2010)
- Influence of doping on the performance of terahertz quantum-cascade lasers
A. Benz, G. Fasching, A. M. Andrews, M. Martl, K. Unterrainer, T. Roch, W. Schrenk, S. Golka, G. Strasser
Applied Physics Letters 90, 101107 (2007)
- 1.9 THz quantum-cascade lasers with one-well injector
S. Kumar, B. S. Williams, Q. Hu
Applied Physics Letters 88, 121123 (2006)
- Far-infrared ($\lambda \sim 87 \mu\text{m}$) bound-to-continuum quantum-cascade lasers operating up to 90 K
G. Scalari, L. Ajili, J. Faist, H. Beere, E. Linfield, D. Ritchie, G. Davies
Applied Physics Letters 82, 3165 (2003)
- Broadband THz lasing from a photon-phonon quantum cascade structure
G. Scalari, M. I. Amanti, C. Walther, R. Terazzi, M. Beck, J. Faist
Optics Express 18, 8043 (2010)

InGaAs/AlGaSb

- High performance InGaAs/GaAsSb terahertz quantum cascade lasers operating up to 142 K
C. Deutsch, M. Krall, M. Brandstetter, H. Detz, A. M. Andrews, P. Klang, W. Schrenk, G. Strasser, K. Unterrainer
Applied Physics Letters 101, 211117 (2012)

Mid-IR QCLs

InGaAs/AlInAs

- [Mid-IR QCL - Yu Slivken Razeghi](#)

Injector doping level-dependent continuous-wave operation of InP-based QCLs at $\lambda = 7.3 \sim 7.5 \mu\text{m}$ above room temperature

J. S. Yu, S. Slivken, M. Razeghi

Semiconductor Science and Technology 25, 125015 (2010)

GaAs/AlGaAs

- 300 K operation of a GaAs-based quantum-cascade laser at $\lambda \sim 9 \sim 10 \mu\text{m}$
H. Page, C. Becker, A. Robertson, G. Glastre, V. Ortiz, C. Sirtori
Applied Physics Letters 78, 3529 (2001)

Resonant-tunneling diodes

Intraband RTDs

- [AlGaAs/GaAs RTD](#) (our new manual)

Interband RTDs

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