

The TERACOMB project - List of publications

D. Bachmann, M. Rösch, M. J. Süess, M. Beck, K. Unterrainer, J. Darmo, J. Faist, and G. Scalari, „Short pulse generation and mode control of broadband terahertz quantum cascade lasers“, *Optica* 3, 1087-1094 (2016), DOI: [10.1364/OPTICA.3.001087](https://doi.org/10.1364/OPTICA.3.001087).

M. Rösch, G. Scalari, M. Beck, and J. Faist, „Octave-spanning semiconductor laser“, *Nature Photonics* (2014); DOI: [10.1038/nphoton.2014.279](https://doi.org/10.1038/nphoton.2014.279).

J. Faist, G. Villares, G. Scalari, M. Rösch, C. Bonzon, A. Hugi, M. Beck, „Quantum Cascade Laser Frequency Combs“, *physics.optics* (2015), [arXiv:1510.09075](https://arxiv.org/abs/1510.09075).

G. Scalari, M. Rösch, M. Beck, J. Faist, „Octave-spanning semiconductor laser for frequency comb applications“, *SPIE Newsroom* (2015), DOI: [10.1117/2.1201503.005783](https://doi.org/10.1117/2.1201503.005783).

M. Roesch, G. Scalari, M. Beck, J. Faist, „Octave-spanning THz quantum cascade laser“, *SPIE Proceedings Vol. 9370* (2015), DOI: [10.1117/12.2076923](https://doi.org/10.1117/12.2076923).

M. Vitiello, G. Scalari, B. Williams, P. De Natale, „Quantum cascade lasers: 20 years of challenges“, *Optics Express*, Vol. 23, Issue 4 (2015), DOI: [10.1364/OE.23.005167](https://doi.org/10.1364/OE.23.005167).

D. Bachmann, N. Leder, M. Rösch, G. Scalari, M. Beck, H. Arthaber, J. Faist, K. Unterrainer, and J. Darmo, „Broadband terahertz amplification in a heterogeneous quantum cascade laser“, *Opt. Express* 23, 3117 (2015); DOI: [10.1364/OE.23.003117](https://doi.org/10.1364/OE.23.003117).

H. Li, P. Laffaille, D. Gacemi, M. Apfel, C. Sirtori, G. Santarelli, M. Rosch, M. Beck, J. Faist, W. Hansel, R. Holzwarth, S. Barbieri, „Dynamics of ultra-broadband terahertz quantum cascade lasers for comb operation“, *Opt. Express*, Vol. 23, No. 26 (2015); DOI: [10.1364/OE.23.033270](https://doi.org/10.1364/OE.23.033270).

D. Bachmann, M. Rösch, C. Deutsch, M. Krall, G. Scalari, M. Beck, J. Faist, K. Unterrainer, and J. Darmo, „Spectral gain profile of a multi-stack terahertz quantum cascade laser“, *Appl. Phys. Lett.* 105, 181118 (2014); DOI: [10.1063/1.4901316](https://doi.org/10.1063/1.4901316).

H. Li, J. M. Manceau, A. Andronico, V. Jagtap, C. Sirtori, L. H. Li, E. H. Linfield, A. G. Davies, and S. Barbieri, „Coupled-cavity terahertz quantum cascade lasers for single mode operation“, *Applied Physics Letters* 104, 241102 (2014); DOI: [10.1063/1.4884056](https://doi.org/10.1063/1.4884056).

D. Dietze, A. M. Andrews, P. Klang, G. Strasser, K. Unterrainer, and J. Darmo, „Ultrastrong coupling of intersubband plasmons and terahertz metamaterials“, *Appl. Phys. Lett.* 103, 201106 (2013), DOI: [10.1063/1.4830092](https://doi.org/10.1063/1.4830092).

D. Dietze, J. Darmo, and K. Unterrainer, „Efficient population transfer in modulation doped single quantum wells by intense few-cycle terahertz pulses“, *New J. Phys.* 15, 065014 (2013), DOI: [10.1088/1367-2630/15/6/065014](https://doi.org/10.1088/1367-2630/15/6/065014).

D. Dietze, K. Unterrainer, and J. Darmo, „Role of geometry for strong coupling in active terahertz metamaterials“, *Phys. Rev. B* 87, 075324 (2013), DOI: [10.1103/PhysRevB.87.075324](https://doi.org/10.1103/PhysRevB.87.075324).



TECHNISCHE
UNIVERSITÄT
WIEN
Vienna | Austria



Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

