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[183] Shaping terahertz frequency combs at room temperature: photomixing reloaded

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A convenient light source together with a suitable detector comprise the basic setup for sensing and imaging applications.

We present a flexible terahertz (THz) frequency comb source operating at room temperature that provides great freedom in the spectral content design. A robust setup merges two mature technologies, namely optical fibre communications and opto-electronic frequency conversion (photomixing). The quality of the generated THz comb is proven by the observation of the pressure-dependent collisional broadening of an ammonia molecular absorption line. Our presented THz source is expected to enhance the sensitivity and accuracy of sensing applications in general.

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