

Special issue: Frequency comb generation

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The development of locked frequency combs in the early 2000s had a dramatic impact on the measurement of optical frequencies – improving both the accuracy and precision of those measurements by many orders of magnitude. The scope of potential applications is vast. They range from fundamental applications, such as the search for earth-like planets, to military, commercial, and medical applications, such as the remote sensing of trace gases. For many applications, the development of robust, compact, and inexpensive comb sources is required, and there has been a steady evolution in that direction. The first comb sources were solid-state lasers, followed later by fiber laser comb sources, and most recently by microresonator combs. In this special issue, there are articles that describe the fundamentals of comb generation, laser combs, microresonator combs, and comb applications. Bringing together these different perspectives in one place should enable the progress toward smaller, cheaper, and more robust comb sources.

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