

## Sub-nanosecond 1-kHz low-threshold non-critical OPO based on periodically poled KTP crystal pumped at 1064 nm

Paper 8240-12

Time: **2:10 PM - 2:30 PM**

Author(s): Georgi Marchev, Valentin Petrov, Aleksey Tyazhev, Max-Born-Institut für Nichtlineare Optik und Kurzzeitspektroskopie (Germany); Valdas Pasiskevicius, Nicky Thilmann, Fredrik Laurell, Royal Institute of Technology (Sweden); Ivan Buchvarov, Sofia Univ. St. Kliment Ohridski (Bulgaria)

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We employed a 9-mm long periodically-poled KTiOPO<sub>4</sub> (PPKTP) with a domain inversion period of 37.8 micron to generate sub-nanosecond pulses around 2.8 micron. With a 1-cm long OPO cavity in a singly resonant configuration with double pass pumping the OPO threshold was 110 microJ at 1064 nm (1-ns pump pulses at 1064 nm). The maximum idler output energy reached 110 microJ (quantum conversion efficiency of 32.5%). The signal pulse duration (FWHM) was 0.72 ns and the estimated idler pulse duration was 0.76 ns. At room temperature the signal and idler wavelengths were at 1717 and 2799 nm.