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Research outputs:

Deep-UV to Mid-IR Supercontinuum Generation driven by Mid-IR Ultrashort Pulses in a Gas-filled Hollow-core Fiber
Research output: Contribution to journal › Journal article – Annual report year: 2019 › Research › peer-review

Wavelength scaling of terahertz pulse energies delivered by two-color air plasmas
Research output: Contribution to journal › Journal article – Annual report year: 2019 › Research › peer-review

Terahertz time-domain spectroscopy of zone-folded acoustic phonons in 4H and 6H silicon carbide
Research output: Contribution to journal › Journal article – Annual report year: 2019 › Research › peer-review

Resonant effects in terahertz generation with laser-induced gas plasmas
Research output: Contribution to journal › Conference article – Annual report year: 2018 › Research › peer-review

High-efficiency Sub-single-cycle THz Wave Generation by Three-color Air Plasma
Research output: Chapter in Book/Report/Conference proceeding › Book chapter – Annual report year: 2018 › Research › peer-review

Plasmonic Resonances Affecting Terahertz Generation in Laser-Induced Gas-Plasmas
Research output: Chapter in Book/Report/Conference proceeding › Book chapter – Annual report year: 2018 › Research › peer-review

Terahertz emission from laser-driven gas plasmas: A plasmonic point of view
Research output: Contribution to journal › Journal article – Annual report year: 2018 › Research › peer-review

Ultra-broadband THz spectroscopy for sensing and identification for security applications
Research output: Chapter in Book/Report/Conference proceeding › Book chapter – Annual report year: 2018 › Research › peer-review

Bridging the gap between the THz and IR frequency regime
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2017 › Research › peer-review

Influence of dispersion of nonlinearity on coherent supercontinuum generation bandwidth in photonic crystal fibers pumped at 2 μm
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2017 › Research › peer-review
Experimental observation of dispersive wave generation by self-defocusing nonlinearity in BBO crystal
Research output: Chapter in Book/Report/Conference proceeding → Conference abstract in proceedings → Annual report year: 2015 → Research → peer-review

High-energy compression of mid-IR pulses in a bulk nonlinear crystal
Research output: Chapter in Book/Report/Conference proceeding → Conference abstract in proceedings → Annual report year: 2015 → Research → peer-review

Mid-infrared supercontinuum generation spanning more than 11 μm in a chalcogenide step-index fiber
Research output: Chapter in Book/Report/Conference proceeding → Article in proceedings → Annual report year: 2015 → Research → peer-review

Mid-IR femtosecond frequency conversion by soliton-probe collision in phase-mismatched quadratic nonlinear crystals
Research output: Contribution to journal → Journal article → Annual report year: 2015 → Research → peer-review

Supercontinuum generation in quadratic nonlinear waveguides without quasi-phase matching
Research output: Contribution to journal → Journal article → Annual report year: 2015 → Research → peer-review

Tunable mid-infrared radiations in quadratic media through near-infrared soliton interactions with second-harmonic resonances
Research output: Chapter in Book/Report/Conference proceeding → Conference abstract in proceedings → Annual report year: 2015 → Research → peer-review

Efficient femtosecond mid-infrared pulse generation by dispersive wave radiation in bulk lithium niobate crystal
Research output: Chapter in Book/Report/Conference proceeding → Article in proceedings → Annual report year: 2014 → Research → peer-review

Efficient Femtosecond Mid-infrared Pulse Generation by Dispersive Wave Radiation in Bulk Lithium Niobate Crystal
Research output: Chapter in Book/Report/Conference proceeding → Article in proceedings → Annual report year: 2014 → Research → peer-review

Experiments on Cascaded Quadratic Soliton Compression in Unpoled LN Waveguide
Research output: Chapter in Book/Report/Conference proceeding → Article in proceedings → Annual report year: 2014 → Research → peer-review

Few-cycle solitons and supercontinuum generation with cascaded quadratic nonlinearities in unpoled lithium niobate ridge waveguides
Research output: Contribution to journal → Journal article → Annual report year: 2014 → Research → peer-review

Generating Efficient Femtosecond Mid-infrared Pulse by Single Near-infrared Pump Wavelength In Bulk Nonlinear Crystal Without Phase-matching
Research output: Chapter in Book/Report/Conference proceeding → Article in proceedings → Annual report year: 2014 → Research → peer-review

High-energy pulse compressor using self-defocusing spectral broadening in anomalously dispersive media
Research output: Chapter in Book/Report/Conference proceeding → Article in proceedings → Annual report year: 2014 → Research → peer-review

Highly coherent mid-IR supercontinuum by self-defocusing solitons in lithium niobate waveguides with all-normal dispersion
Research output: Contribution to journal → Journal article → Annual report year: 2014 → Research → peer-review
Low-energy Self-defocusing Soliton Compression at Optical Communication Wavelengths in Unpoled Lithium Niobate Ridge Waveguide
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2014 › Research › peer-review

Mid-infrared supercontinuum covering the 1.4–13.3 μm molecular fingerprint region using ultra-high NA chalcogenide step-index fibre
Research output: Contribution to journal › Letter – Annual report year: 2014 › Research › peer-review

Observation of an octave-spanning supercontinuum in the mid-infrared using ultrafast cascaded nonlinearities
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2014 › Research › peer-review

Octave-Spanning Mid-IR Supercontinuum Generation with Ultrafast Cascaded Nonlinearities
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2014 › Research › peer-review

Soliton-Induced nonlocal resonances observed through high-intensity tunable spectrally compressed second-harmonic peaks
Research output: Contribution to journal › Journal article – Annual report year: 2014 › Research › peer-review

Nonlinear wave equation in frequency domain: accurate modeling of ultrafast interaction in anisotropic nonlinear media
Research output: Contribution to journal › Journal article – Annual report year: 2013 › Research › peer-review

Completely background free broadband coherent anti-Stokes Raman scattering spectroscopy
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2013 › Research › peer-review

Cross-correlation frequency-resolved optical gating by molecular vibration for ultrashort pulse
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2013 › Research › peer-review

Few-cycle nonlinear mid-IR pulse generated with cascaded quadratic nonlinearities
Research output: Contribution to conference › Conference abstract for conference – Annual report year: 2013 › Research › peer-review

Generating mid-IR octave-spanning supercontinua and few-cycle pulses with solitons in phase-mismatched quadratic nonlinear crystals
Research output: Contribution to journal › Journal article – Annual report year: 2013 › Research › peer-review

Near- and Mid-IR Few-cycle Self-defocusing Soliton Compression in PPLNWaveguide
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2013 › Research › peer-review

Near- and MID-IR few-cycle self-defocusing soliton compression in PPLN Waveguide
Research output: Chapter in Book/Report/Conference proceeding › Article in proceedings – Annual report year: 2014 › Research › peer-review

Soliton Delay Driven by Cascading and Raman Responses
Research output: Chapter in Book/Report/Conference proceeding › Conference abstract in proceedings – Annual report year: 2013 › Research › peer-review
Projects:

Supercontinuum generation with rugged femtosecond fibre lasers
Project: PhD

Novel ultrafast mid-IR laser source for spectroscopy
Project: Research

Femtosecond few-cycle mid-infrared laser pulses
Project: PhD

Cascaded Quadratic Soliton Compression in Waveguide Structures
Project: PhD

Femto-midIR: Femtosecond few-cycle mid-infrared laser pulses
Project: Research

Activities:

Generating ultra-short energetic pulses with cascaded soliton compression in lithium niobate crystals
Activity: Talks and presentations › Conference presentations