Intracavity solar container q modulation

Are tin oxide nanocrystals saturable absorbers for Q-switched erbium-do?
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Can a spatiotemporal metasurface be integrated into a laser cavity?
The direct integrationof a spatiotemporal metasurface in a laser cavity may pave the way for the development of miniaturized laser sources with tailored spatial and temporal profiles,which can be useful for numerous applications,such as superresolution imaging,high-density optical storage,and three-dimensional laser lithography.

What is intracavity soliton control?
We introduce the intracavity soliton control via a fiber-coupled acousto-optic modulator (AOM) allowing for intensity modulations of the zero-order beam, which is fast enough to modulate down to a single pulse.

Are tin oxide nanocrystals saturable absorbers for Q-switched erbium-do?
Mater., 29, 1700754 (2017). J. Guo et al. Indium tin oxide nanocrystals as saturable absorbers for passively Q -switched erbium-doped fiber laser. Opt. Mater. Express, 7, 3494-3502 (2017).

How does a cavity model work?
The modelling uses an iterative map approachdescribing each cavity element by a suitable transfer function. For a given set of system parameters,the model seeks convergence to a particular operating state after injection of an initial seed (see 'Methods' section).

Does intracavity supercontinuum dynamics play a dominant role in broadband instability?
Perhaps most significantly,our results suggest that for this case of broadband instability in a highly nonlinear regime,we can clarify the noise-like pulse regime as one where intracavity supercontinuum dynamics play a dominant role.

Do pulse shapers and intracavity modulators control solitons?
While intracavity modulators and pulse shapers offer additional degrees of control(17,18),their slow temporal response affects entire groups of solitons simultaneously. Thus,soliton control is currently limited in efficiency,speed,and repeatability,and flexible means for soliton control are essentially absent.

Real-time characterisation reveals intracavity extreme events satisfying statistical rogue wave criteria, and both real-time and time-averaged measurements are in quantitative ...

Abstract: We characterized and analyzed the effect of intracavity spectral filtering in the Er:fiber laser mode-locked with a semiconductor saturable absorber mirror (SESAM). We studied the dispersive ...

Intracavity optical metasurfaces with compact and flexible light manipulation capabilities, effectively enrich the implementation of miniaturized ...

A compact-size fiber optic accelerometer was designed to achieve both high resolution and wide dynamic range concurrently. An optical cavity, with its length modulated by a ...

Abstract: We present a novel intracavity frequency modulation scheme in a tunable, picosecond optical parametric oscillator (OPO). The OPO signal wavelength can be modulated with a depth of more than ...

Experimental optimization and dynamics solution of active-passive Q-switched intracavity optical parametric oscillator based on EO modulator and layered-WSe2 SA

An electro-optical Q-switched intracavity frequency-doubled sub-nanosecond pulsed green laser, which is characterized by comprising: a pump source, a pump coupling element, a polarization beam ...

A pigtailed acousto-optic modulator (AOM) was further used to realize the 1064 nm Q-switched pulsed laser which intracavity pumps a 5-m silica photonic crystal fiber (PCF, NKT LMA-5) ...

An integrated optoelectronic device, comprising VCSEL and intracavity electro-absorption modulator within the same epitaxial structure, has been previously developed by several ...

Original measurement setup Detectors must be able to measure voltages over at least four orders of magnitude with an accuracy of better than 0.1% Lock-in detection with two separate lock-in amplifiers ...

Locking of longitudinal modes in laser cavities is the common path to generate ultrashort pulses. In traditional multi-wavelength mode-locked lasers, the group velocities rely on lasing wavelengths due ...

The enormous sensitivity of intracavity absorption spectroscopy (ICAS), as well as its unique ability to tolerate high broadband losses caused by, e.g., optical windows and light scattering, ...

We report intracavity second harmonic (at 532 nm) generation in a passively Q -switched mode-locked Nd:YVO 4 laser. The width of a typical Q -switched envelope of the mode ...

This method enables the continuous locking of laser frequency and optical cavity, and it achieves the intracavity intensity modulation with an adjustable modulation ...

An idler-resonant KTiOAsO4 (KTA)-based intracavity optical parametric oscillator (IOPO) pumped by a dual-loss-modulated Q-switched laser with an acousto-optic modulator (AOM) and a Cr4+:YAG ...

Mentioning: 5 - We have studied the modulation properties of VCSEL with intracavity multiple quantum well (MQW) electroabsorption modulator integrated into the top distributed Bragg reflector (DBR) [1]. ...

In this paper, the stabilization and high efficiency of an unstable Second Harmonic Generation (SHG) of a Nd : YVO4 laser with a KTP intracavity is carried out by ...

Here we report a novel, to the best of our knowledge, method of active intracavity intensity modulation for cavity-enhanced photoacoustic spectroscopy (PAS) without the need for any external optical ...

We implement comb-selective soliton control via intracavity modulations of individual pulses from two interlaced frequency combs in a single ...

In this work, we analyze the intracavity amplitude modulation at a high harmonic and phase modulation at the cavity fundamental frequency which is usually much smaller than the pulse ...

Ta2NiS5 nanosheets were fabricated and analyzed for their microstructures and nonlinear optical responses. As a saturable absorber (SA), Ta2NiS5 was integrated into an idler-resonant KTiOAsO4 ...

An idler-resonant KTiOAsO₄ (KTA)-based intracavity optical parametric oscillator (IOPO) pumped by a dual-loss-modulated Q-switched laser with an acousto-optic modulator (AOM) and a ...

In this paper we report on the development program of an original intracavity Q-switch for CO2 lasers, called Integrated Mirror Optical Switch (IMOS). The IMOS is based on the optical plasma resonance ...

Figure 4 tracavity spatiotemporal modulation. (a), (b) Transverse mode profiles of the Q -switched vortex pulses with topological charge l = 1 (a) and l = 2 (b), ...

Furthermore, a set of coupled rate equations for the dual-loss-modulated QML laser-pumped intracavity idler-resonant OPO was formulated according to the Gauss distribution of ...

While significantly enhancing the intracavity laser intensity, the optical cavity also acts as an intensity modulator. As a proof-of-principle, we demonstrated the PAS of C 2 H 2 by placing a photoacoustic ...

This paper presents an approach for real-time observing intracavity soliton evolution processes in a mode-locked fiber laser by synchronizing multi-port time-division multiplexed ...

We demonstrate a technique for suppressing the intensity noise of erbium doped fiber lasers. We show that by introducing negative feedback into ...

Here, we experimentally demonstrate the spatiotemporal light-field modulation in a fiber laser cavity using a single-layer plasmonic metasurface strongly coupled to ...

Summary form only given. Modulation of intracavity losses is a powerful tool for controlling the laser dynamics, e.g. for active mode-locking and for synchronization of different lasers. ...

We have studied the modulation properties of VCSEL with intracavity multiple quantum well (MQW) electroabsorption modulator integrated into the top distributed Bragg reflector (DBR) [1]. Small signal ...

Here, we address this question directly with a combined numerical and experimental study that reveals the physical origin of instability as nonlinear soliton dynamics and supercontinuum ...

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