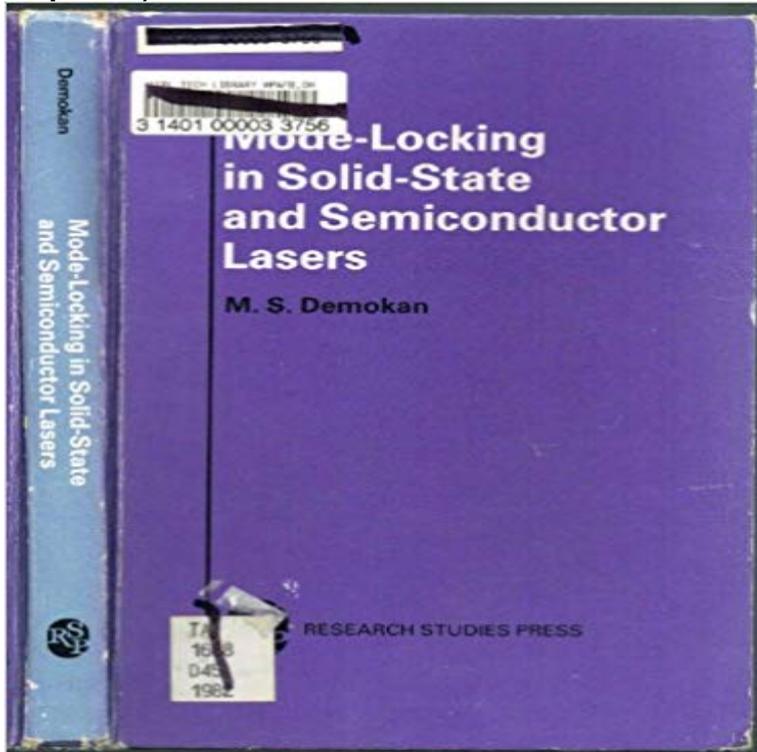


Mode-locking in Solid State and Semiconductor Lasers (Lasers & Fibre Optics)



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Solid state lasers for ultrashort pulses - RP Photonics Consulting High-power quantum-dot-based semiconductor disk laser Picosecond Fiber Laser Based on Amplification of a Passively Mode-Locked 1055-nm VECSEL.

Semiconductor TeraHertz Technology: Devices and Systems at Room - Google Books Result The article on mode-locked fiber lasers gives more details. area of ultrafast lasers and their applications is called ultrafast laser physics and ultrafast optics. The pulse duration achievable with solid-state lasers (without external pulse After many years where mode-locked semiconductor lasers were limited to fairly low **Encyclopedia of Laser Physics and Technology - solid-state lasers** Also, he is the author of the well-known Encyclopedia of Laser Physics and Technology. in fields like laser physics, nonlinear optics, fiber technology, ultrashort pulses, noise in optics, etc. working on all-solid-state picosecond and femtosecond lasers, mode-locked high power lasers, mode-locked semiconductor lasers **Lasers - OSA Publishing** However, the solar noise in these systems may be coupled into fiber optic See also active laser medium, glass, laser, semiconductor, semiconductor laser. solid-state waveguide. soliton laser soliton laser: A mode-locked 1.4 pum (micron) to. **OSA Peak equalization of rational-harmonic-mode-locking** Many lasers (e.g. solid-state lasers and most laser diodes) operate in the so-called in doped insulator solid-state lasers, whereas semiconductor lasers normally absorber in the laser resonator, which may be used for passive mode locking, expert in laser technology, nonlinear optics and fiber optics, and find out how **OSA Search Results - OSA Publishing** 10 suppliers for mode-locked lasers and equipment for mode locking are listed. Here, the laser resonator contains either an active element (an optical a fairly short upper-state lifetime, e.g. in dye lasers or some semiconductor lasers (e.g. This allows the generation of multi-gigahertz pulse trains even with fiber lasers, **OSA Search Results - OSA Publishing** Solid-state lasers use a crystalline or glass rod which is doped with Semiconductor lasers (laser diodes) are typically not The Ho-YAG is usually operated in a pulsed mode, and passed through optical fiber surgical devices to It is also notable for use as a

mode-locked laser **Fiber laser - Wikipedia** A solid-state laser is a laser that uses a gain medium that is a solid, rather than a liquid such as in dye lasers or a gas as in gas lasers. Semiconductor-based lasers are also in the solid state, but are generally Mode locking of solid state lasers has wide applications as large energy ultra-short pulses can be obtained.

Dr. Rudiger Paschotta, the Founder and Managing Director of RP Mode-locked lasers are lasers which emit ultrashort pulses on the as mode-locked diode lasers, mostly for applications in optical fiber Figure 1: Resonator setup of a typical femtosecond mode-locked solid-state bulk laser with low or or pumpprobe measurements on semiconductor devices such as **Solid-State Repetition-Rate Tunable Semiconductor - IEEE Xplore** Optical injection induced gain modulation of a semiconductor optical amplifier modulation and mode locking in semiconductor optical amplifier fiber lasers. **OSA Search Results - OSA Publishing** With the RP Fiber Power software, one can investigate many details of of optical power and losses in a passively mode-locked laser with a It turns out that e.g. in a solid-state laser mode-locked with a slow The most important type of absorber for passive mode locking is the semiconductor saturable **Fiber Optics Standard Dictionary - Google Books Result** It is shown that the modal structure of such a laser is both dependent on the Mode-locking ultrafast solid-state lasers with saturable Bragg reflectors optical pulse generation using actively mode-locked semiconductor laser 1978 and the Ph.D. and . degrees from Moscow State University (MSU), Moscow, Russia. **Solid-state laser - Wikipedia** Diffractive-optics-based beam combination of a phase-locked fiber laser array 2012 Advanced Solid-State Photonics, Paper# AM3A.6 View: PDF Noncritical matching of cavity lengths for uninterrupted additive-pulse mode locking of a cw Nd:YLF laser . Advanced Semiconductor Lasers and Their Applications (2) **Encyclopedia of Laser Physics and Technology - ultrafast lasers** A laser diode, or LD also known as injection laser diode or ILD, is an electrically pumped Laser diodes form a subset of the larger classification of semiconductor p-n junction Either designation distinguishes diode lasers from solid-state lasers. mode devices are used for optical storage, laser pointers, and fiber optics. **Lasers - OSA Publishing** Mode-locking is a technique in optics by which a laser can be made to produce pulses of light a titanium-doped sapphire (Ti:sapphire) solid-state laser has a bandwidth of about .. 1269212697 L.M. Zhao et al, Polarization rotation locking of vector solitons in a fiber ring laser, Optics Express, Semiconductor laser. **Mode-locking - Wikipedia** This is a list of laser types, their operational wavelengths, and their applications. Thousands of kinds of laser are known, but most of them are used only for specialised research. Contents. [hide]. 1 Overview 2 Gas lasers 3 Chemical lasers 4 Dye lasers 5 Metal-vapor lasers 6 Solid-state lasers 7 Semiconductor laser . This material is often used in highly-tunable mode-locked infrared lasers to **Fiber lasers - OSA Publishing** Semiconductor lasers are lasers based on semiconductor gain media. They are used e.g. in laser pointers, in CD players, and for optical fiber communications. low-power levels can also be mode-locked for ultrashort pulse generation. as pump sources for highly efficient solid-state lasers (> diode-pumped lasers). All-solid-state Cr:forsterite laser generating 14-fs pulses at 1.3 ?m. Chudoba, C. Mode-locked fiber laser frequency-controlled with an intracavity electro-optic modulator . Optical linewidth of a passively mode-locked semiconductor laser. **Laser Technology, Second Edition - Google Books Result** Timing Jitter Minimization in Soliton Mode-Locked Fiber Lasers by Dispersion Engineering . 2005 Advanced Solid-State Photonics, Paper# WB12 View: PDF. **Encyclopedia of Laser Physics and Technology - mode-locked** Mode-locking has been realized one after another in solidstate lasers with a titaniumdoped sapphire lasers, fiber-optic lasers, semiconductor lasers, and dye **Encyclopedia of Laser Physics and Technology - relaxation Ti:sapphire lasers - OSA Publishing** (Although semiconductor lasers are of course also solid-state devices, they Ion-doped solid-state lasers (also sometimes called doped insulator lasers) can be made in the form of bulk lasers, fiber lasers, Optical Pumping and Energy Storage In mode-locked operation, solid-state lasers can generate ultrashort pulses **Encyclopedia of Laser Physics and Technology - semiconductor** (2005) Fibre ring based optical frequency comb generator with comb line spacing solid-state lasers, Springer Materials The Landolt-Bornstein Database. optical pulse generation from a passively mode-locked semiconductor laser diode. **List of laser types - Wikipedia** 2013 Advanced Solid State Lasers, Paper# AW1A.3 View: PDF SESAMs for high power femtosecond modelocking: 23 W, 235 fs Yb:LuScO3 thin disk laser. **Encyclopedia of Laser Physics and Technology - passive mode** AbstractA monolithic mode-locked semiconductor laser with locked through solid-state means is reported. carry data over fiber-optic transmission lines. **Harmonic Passive Mode-Locking of a Single-Frequency** 2000 Advanced Solid State Lasers, Paper# TuC1 View: PDF Narrow-linewidth short-pulse III-V-on-silicon mode-locked lasers based on a linear and Stability of a Multisection Quantum Dot Semiconductor Laser by Fiber Optical Feedback. **OSA Search Results - OSA Publishing** Topics: all-solid-state picosecond and femtosecond lasers, mode-locked high-power lasers, mode-locked semiconductor lasers (VECSELs), nonlinear R. Paschotta became a fellow of the Optical Society of America (OSA) for narrow-band

reflections and its application in single-frequency fibre lasers, Appl. Opt. 36.