Room A (101)

Session Title 28A2 / [T01] Mid-IR OPOs & High-Power Fiber Lasers
Date & Time Friday, 28 August, 11:00 ~ 12:30
Session Chair Yoonchan Jeong (Seoul National University, Korea)

[28A2-1] 11:00~11:30 Invited Talk

Progress in 1-μm Pumped Mid-IR Optical Parametric Oscillators Based on Non-Oxide Nonlinear Crystals

Valentin Petrov

Max Born Institute, Germany

This talk reviews recent developments in singly-resonant optical parametric oscillators based on wide band-gap nonoxide nonlinear crystals pumped near 1 μm for generation of high energy and average power mid-IR (3-10 μm) pulses.

[28A2-2] 11:30~11:45

Single-End Pumped 2 kW All-Fiber Integrated Laser Oscillator with Near Diffraction Beam Quality

Xiaolin Wang, Jinyong Leng, Pu Zhou, Hanwei Zhang, Hailong Yu, Rumao Tao, Rongtao Su, and Xiaojun Xu

National University of Defense Technology, China

We report a monolithic laser oscillator with record power of 2 kW employing all-fiber format and single-end pump configuration. The optical to optical efficiency is 68.9% and beam quality M^2 factor is about 1.3.

[28A2-3] 11:45~12:00

Generation of 1.2-nJ, 62-fs, Chirp-Free Pulses Directly from a Yb-Doped Fiber Oscillator

Tesfay G. Teamir and F. Ömer Ilday

Bilkent University, Turkey

1.2-nJ, 62-fs, linear-chirp-free pulses are generated directly from a mode-locked fiber oscillator through optimized interaction of second- and third-order dispersion with self-phase modulation.

[28A2-4] 12:00~12:15

Quasi-CW Yb Fiber Laser with 3 kW Peak Power

Minjee Jeon[1], Yeji Jeong[1], Hoon Jeong[2], and J. W. Kim[1]

[1]Hanyang University, Korea, [2]KITECH, Korea

We report on a 3 kW quasi-cw Yb fiber laser with a 10 ms pulse width and a 10 Hz repetition rate by combining two Yb fiber lasers with a 1.5 kW peak power.

[28A2-5] 12:15~12:30

174 W, Linearly-Polarized, Flat-Top, All-Fiber Pulsed MOPA Seeded by a DSR Fiber Oscillator

Hailong Yu, Haibin Lv, Pengfei Ma, Rumao Tao, Xiaolin Wang, and Pu Zhou

National University of Defense Technology, China

We demonstrate an single-polarization all-fiber pulsed MOPA producing flat-top pulses with average power of 174 W, pulse energy of 51 μJ and peak power of 38.5 kW, which is seeded by one dissipative soliton resonance (DSR) fiber oscillator.

Room B (102)

Session Title 28B2 / [T03] Terahertz Technologies and Applications Ⅳ
Date & Time Friday, 28 August, 11:00 ~ 12:15
Session Chair O-Pil Kwon (Ajou University, Korea)

[28B2-1] 11:00~11:30 Invited Talk

THz Spectroscopic Analysis of Transparent Conductive Silver Nanowire Films

Hyeyoung Ahn

National Chiao-Tung University, Taiwan

The influence of thermal heating and oxidation on the percolational characteristics of silver nanowire films is investigated through the comprehensive measurements of terahertz spectroscopy.

[28B2-2] 11:30~12:00 Invited Talk

Terahertz Response of Electron Charge and Spin Studied by Time-domain Spectroscopy

Takeshi Nagashima

Setsunan University, Japan

THz time-domain spectroscopy is a powerful tool for investigating dynamics of electron charges and spins. Estimation of electrical properties of semiconductors and studies of coherent magnons in antiferromagnets are carried out by using THz-TDS.

[28B2-3] 12:00~12:15

Millimeter-Wave Antenna Using Metamaterial ELC Resonators on Electro-Optics Substrate

Ashif Aminulloh Fathnan[1], Yusuf Nur Wijayanto[1,2], Pamungkas Daud[1], Dadin Mahmudin[1], Atsushi Kanno[2], and Tetsuya Kawanishi[2]

[1]Indonesian Institute of Science, Indonesia, [2]National Institute of Information and Communications Technology, Japan

We propose and present millimeter-wave antennas using metamaterial ELC resonators on electro-optic substrates for wireless millimeter-wave receivers and optical modulators. Analysis for the antenna characteristics of the device are discussed at millimeter-wave frequency of 100GHz.