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Jonathan A. Terry
Thomas Graf
Helena Jelínková
Editors

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Contents

ix	Conference Committee
xi	Introduction

SESSION 1 FIBRE LASERS

6998 03	8-ns Q-switched fiber laser using resonant saturable absorber mirror [6998-02] T. Hakulinen, O. G. Okhotnikov, Tampere Univ. of Technology (Finland)
6998 04	Cw-operation of an Ytterbium doped 19-core fiber laser [6998-03] A. Popp, M. Abdou Ahmed, D. Kauffmann, A. Voss, T. Graf, Univ. Stuttgart (Germany)
6998 05	Soliton crystal fiber laser [6998-04] A. Haboucha, A. Komarov, M. Salhi, H. Leblond, F. Sanchez, Lab. POMA FRE, Univ. d'Angers (France)
6998 07	High power shortwave infrared fibre lasers that use silica host material (Invited Paper) [6998-06] S. D. Jackson, Univ. of Sydney (Australia)
6998 09	Mode-locked Yb-doped large-mode-area microstructure fiber laser [6998-08] C. Lecaplain, A. Hideur, C. Chédot, G. Martel, Univ. de Rouen (France); B. Ortaç, J. Limpert, Friedrich-Schiller-Univ. Jena (Germany)
6998 0A	Improvement of Yb³⁺ doped optical fiber preforms by using MCVD method [6998-09] V. Petit, E. H. Sekiya, T. Okazaki, R. Bacus, P. Barua, Toyota Technological Institute (Japan); B. Yao, K. Ohsono, Hitachi Cable (Japan); K. Saito, Toyota Technological Institute (Japan)

SESSION 2 PULSED SSL

6998 0B	Compact and efficient mode-locked lasers based on QD-SESAMs (Invited Paper) [6998-10] E. U. Rafailov, Univ. of Dundee (United Kingdom); A. A. Lagatsky, Univ. of St. Andrews (United Kingdom); S. A. Zolotovskaya, Univ. of Dundee (United Kingdom); W. Sibbett, Univ. of St. Andrews (United Kingdom)
6998 0C	Efficient, high peak power, Q-switched, tunable, diode pumped Tm:YLF laser [6998-11] J. K. Jabczyński, L. Gorajek, W. Zendzian, J. Kwiatkowski, Military Univ. of Technology (Poland); H. Jelinkova, J. Sulc, M. Nemec, Czech Technical Univ. (Czech Republic)
6998 0D	Q-switching a fiber laser with a dual mode single crystal photo-elastic modulator [6998-12] F. Bammer, Vienna Univ. of Technology (Austria); R. Petkovsek, Univ. of Ljubljana (Slovenia); D. Schuöcker, Vienna Univ. of Technology (Austria); J. Mozina, Univ. of Ljubljana (Slovenia)

- 6998 OE **High-energy diode-pumped Yb:YAG chirped pulse amplifier** [6998-13]
M. Siebold, Max-Planck-Institute for Quantum Optics (Germany) and Friedrich-Schiller-Univ. Jena (Germany); C. Wandt, S. Klingebiel, Z. Major, S. Trushin, I. Ahmad, T.-J. Wang, Max-Planck-Institute for Quantum Optics (Germany); J. Hein, Friedrich-Schiller-Univ. Jena (Germany); F. Krausz, S. Karsch, Max-Planck-Institute for Quantum Optics (Germany)
- 6998 OF **Impact of pumping configuration on all-fibered femtosecond chirped pulse amplification** [6998-14]
J.-B. Lecourt, C. Duterte, A. Bertrand, F. Liégeois, Y. Hernandez, D. Giannone, Multitel (Belgium)
- 6998 OG **Q-switched high-power disk laser** [6998-15]
Y. Chivel, I. Niconchuk, D. Zatiagin, Stepanov Institute of Physics (Belarus)

SESSION 3 BEAM CONTROL AND TRANSMISSION

- 6998 OH **Radially polarized Yb:YAG thin-disc laser (Invited Paper)** [6998-16]
M. Abdou Ahmed, M. M. Vogel, A. Austerschulte, F. Sterns, A. Voss, T. Schoder, M. Ubl, Univ. Stuttgart (Germany); M. Pritschow, Institut für Mikroelektronik Stuttgart (Germany); T. Graf, Univ. Stuttgart (Germany)
- 6998 OI **3-dimensional simulation of solid state lasers** [6998-17]
M. Wohlmuth, C. Pflaum, Univ. of Erlangen-Nuremberg (Germany)
- 6998 OJ **Detection of mode conversion effects in passive LMA fibers by means of optical correlation analysis** [6998-22]
T. Kaiser, B. Lüdge, Univ. Jena (Germany); S. Schröter, Institut für Photonische Technologien (Germany); D. Kauffmann, Univ. Stuttgart (Germany); M. Duparré, Univ. Jena (Germany)
- 6998 OK **Full vectorial finite-element simulations of Bragg fibers for single-mode beam delivery systems** [6998-19]
M. M. Vogel, M. Abdou-Ahmed, A. Voß, D. Kauffmann, T. Graf, Univ. Stuttgart (Germany)
- 6998 OL **Efficient linear-to-radial polarization converter for high-power lasers** [6998-20]
G. Machavariani, S. Jackel, Y. Lumer, I. Moshe, A. Meir, Soreq Nuclear Research Ctr. (Israel)
- 6998 OM **Investigation of bending effects on evanescent-field coupled waveguides designed for high-power fundamental-mode delivery systems** [6998-21]
D. Kauffmann, M. Abdou Ahmed, F. Kizhakeparampil, T. Rataj, M. M. Vogel, A. Popp, A. Voß, T. Graf, Univ. Stuttgart (Germany)
- 6998 ON **Transverse mode analysis of a laser beam with a non-optical technique** [6998-18]
R. de Saint Denis, M. Fromager, F. Porée, K. Ait-Ameur, ENSICAEN-CEA-UCBN (France)
- 6998 OO **Novel coupling device of high peak power pulsed laser to multimode fiber** [6998-23]
X. Zhao, Y. Gao, W. Cheng, Y. Cheng, W. Su, China Academy of Engineering Physics (China)

SESSION 4 INFRARED LASERS

- 6998 OP **Some new approaches for development of mid-IR laser sources (Invited Paper)** [6998-24]
T. T. Basiev, M. E. Doroshenko, L. I. Ivleva, V. V. Osiko, General Physics Institute (Russia);
V. V. Badikov, D. V. Badikov, Kuban State Univ. (Russia)
- 6998 OQ **2 watt 2 μm Tm/Ho fiber laser system passively Q-switched by antimonide semiconductor saturable absorber** [6998-25]
S. Kivistö, T. Hakulinen, M. Guina, Tampere Univ. of Technology (Finland); K. Röbner,
A. Forchel, Univ. Würzburg (Germany); O. Okhotnikov, Tampere Univ. of Technology
(Finland)
- 6998 OR **Laser action in bulk Cr:ZnSe crystals** [6998-26]
P. Koranda, H. Jelínková, M. Němec, J. Šulc, Czech Technical Univ. (Czech Republic);
M. E. Doroshenko, T. T. Basiev, General Physics Institute (Russia); V. K. Komar,
A. S. Gerasimenko, V. M. Puzikov, Institute for Single Crystals (Ukraine); V. V. Badikov,
D. V. Badikov, Kuban State Univ. (Russia)
- 6998 OS **Effects of pulse timing parameters on bulk erbium laser operation in the eyesafe region**
[6998-27]
E. Georgiou, N. Lazarides, Technological Educational Institute of Crete (Greece);
O. Musset, J. P. Boquillon, Institut Carnot de l'Univ. de Bourgogne (France)
- 6998 OT **Tm-doped vanadates under pulsed pumping with variable duty-cycle: impact on lasing and fluorescence** [6998-42]
J. Šulc, P. Černý, H. Jelínková, Czech Technical Univ. (Czech Republic);
W. Ryba-Romanowski, R. Lisiecki, P. Solarz, G. Dominiak-Dzik, Institute of Low Temperature
and Structure Research (Poland); Y. Urata, Megaopto Co., Ltd. (Japan); M. Higuchi,
Hokkaido Univ. (Japan)
- 6998 OU **Record performance from a passively Q-switched Yb:Er:YVO₄ laser** [6998-29]
Y. H. Tsang, C. J. Mercer, D. J. Binks, The Univ. of Manchester (United Kingdom)

SESSION 5 1 MICRON

- 6998 OW **Dual wavelength generation of a diode pumped Nd:GdVO₄ laser at 1063 nm and 1066 nm**
[6998-32]
V. Kubeček, M. Dražák, P. Zátorský, M. Čech, P. Hříšl, Czech Technical Univ.
(Czech Republic)
- 6998 OX **Continuous-wave and mode-locked operation of diode-pumped Yb:NaY(WO₄)₂** [6998-33]
A. Schmidt, S. Rivier, V. Petrov, U. Griebner, Max-Born-Institute for Nonlinear Optics and
Ultrafast Spectroscopy (Germany); A. García-Cortés, M. Serrano, C. Cascales, C. Zaldo,
Instituto de Ciencia de Materiales de Madrid (Spain)
- 6998 OZ **Diode pumping of Yb³⁺:CaGdAlO₄** [6998-35]
P. O. Petit, P. Goldner, B. Viana, Lab. de Chimie de la Matière Condensée de Paris
(France); J. Boudeille, J. Didierjean, F. Balembois, F. Druon, P. Georges, Lab. Charles Fabry
de l'Institut d'Optique (France)

SESSION 6 NLO

- 6998 12 **High-pulse-energy 8 μm laser source based on optical parametric amplification in ZnGeP_2** [6998-37]
M. W. Haakestad, G. Arisholm, E. Lippert, S. Nicolas, G. Rustad, K. Stenersen, Norwegian Defense Research Establishment (Norway)
- 6998 14 **$\text{YAl}_3(\text{BO}_3)_4$: a novel NLO crystal for frequency conversion to UV wavelengths** [6998-38]
D. Rytz, A. Gross, S. Vernay, V. Wesemann, F.E.E. GmbH (Germany)
- 6998 15 **Laser damage investigation in nonlinear crystals: study of KTiOPO_4 (KTP) and RbTiOPO_4 (RTP) crystals** [6998-40]
A. Hildenbrand, F. R. Wagner, J.-Y. Natoli, M. Commandré, Institut Fresnel, Univ. Aix Marseille (France); H. Albrecht, F. Théodore, Cristal Laser S.A. (France)
- 6998 16 **Efficient diode-pumped intracavity frequency-doubled CW Nd: YLF laser emitting at 656nm for a silver atom optical clock** [6998-62]
J.-P. Loisel, S. Topcu, L. Chassagne, Y. Alayli, Univ. of Versailles (France); P. R. Dahoo, SA (France); T. Badr, P. Juncar, LNE-INM/CNAM (France)

POSTER SESSION

- 6998 17 **Diode pumped Er:YVO₄ microchip laser** [6998-28]
H. Jelínková, J. Šulc, Czech Technical Univ. (Czech Republic); W. Ryba-Romanowski, Institute of Low Temperature and Structure Research (Poland); T. Lukasiewicz, Institute of Electronic Materials Technology (Poland)
- 6998 18 **Gain variation of Raman amplifier in silicon micro-ring coupled-resonator optical waveguides** [6998-41]
E. Daghigh Ahmadi, Shahid Bahonar Univ. of Kerman (Iran); F. Farman, Sharif Univ. of Technology (Iran); R. Taghiabadi, Shahid Bahonar Univ. of Kerman (Iran); S. Keyvaninia, Sharif Univ. of Technology (Iran); A. Bahrapour, Sharif Univ. of Technology (Iran) and Shahid Bahonar Univ. of Kerman (Iran)
- 6998 19 **Nd:YAG laser systems with radiation delivery by thin hollow waveguides** [6998-43]
M. Němec, H. Jelínková, J. Šulc, Czech Technical Univ. (Czech Republic); M. Miyagi, K. Iwai, Sendai National College of Technology (Japan); Y.-W. Shi, Fudan Univ. (China); Y. Matsuura, Tohoku Univ. (Japan)
- 6998 1A **Optical and laser characterization of 2% Nd:YAG ceramics elements** [6998-44]
Z. Librant, H. Węglarz, A. Wajler, H. Tomaszewski, T. Łukasiewicz, Institute of Electronic Materials Technology (Poland); J. K. Jabczyński, W. Zendzian, J. Kwiatkowski, Military Univ. of Technology (Poland)
- 6998 1B **The study of spectroscopic and luminescence properties of disordered laser crystals calcium niobium gallium garnet doped with Er^{3+}** [6998-45]
P. A. Ryabochkina, Mordovian State Univ. (Russia); Y. K. Voronko, General Physics Institute (Russia); A. V. Malov, Mordovian State Univ. (Russia); M. O. Marychev, N.I. Lobachevsky State Univ. of Nizhni Novgorod (Russia); A. A. Sobol, S. N. Ushakov, General Physics Institute (Russia); E. V. Chuprunov, N.I. Lobachevsky State Univ. of Nizhni Novgorod (Russia)

- 6998 1C **Investigations on fibers for high-peak power pulsed Nd:YAG-lasers for laser detonator** [6998-46]
Y. Gao, X. Zhao, W. Su, Y. Cheng, M. Xu, W. Duan, H. Yu, China Academy of Engineering Physics (China)
- 6998 1D **Optimized single amplified ultra-short laser pulse** [6998-47]
J. Chen, K.-C. Chuang, Chung-Hua Univ. (Taiwan)
- 6998 1E **Laser induced fluorescence as a tool for the study of laser damage precursors in transparent materials** [6998-48]
A. Ciapponi, S. Palmier, F. Wagner, J.-Y. Natoli, Institut Fresnel, Univ. de Méditerranée (France); H. Piombini, D. Damiani, B. Bertussi, CEA-Le Ripault (France)
- 6998 1F **300-kW, eye-safe intracavity OPO with efficient pulse shortening** [6998-49]
W. Zendzian, J. K. Jabczynski, J. Kwiatkowski, Military Univ. of Technology (Poland)
- 6998 1H **Characterization and optimization of a miniature 2.94 μm Er:YAG laser** [6998-51]
C. Yu, R.-B. Jhang, National Central Univ. (Taiwan); E.-Y. Pan, National Defense Univ. (Taiwan); H.-F. Yau, National Central Univ. (Taiwan); Y.-P. Tong, DailyCare Biomedical, Inc. (Taiwan)
- 6998 1I **A Q-switched Nd:YCOB laser** [6998-52]
C. J. Mercer, Y. H. Tsang, D. J. Binks, The Univ. of Manchester (United Kingdom); H. Zhang, J. Wang, Shandong Univ. (China)
- 6998 1J **Fictive temperature dependences of optical properties in Yb-doped silica glass** [6998-53]
K. Saito, R. Yamamoto, N. Kamiya, E. H. Sekiya, P. Barua, Toyota Technological Institute (Japan)
- 6998 1K **Gain flattened fiber Raman amplifiers by tailoring Raman amplification bandwidth of tellurite glasses** [6998-54]
R. Jose, G. Qin, Y. Arai, T. Suzuki, Y. Ohishi, Toyota Technological Institute (Japan)
- 6998 1N **Z-scan measurements of nonlinear refractive indices of $\text{NaT}(\text{XO}_4)_2$ $\text{T} = \text{Y, La, Gd, Lu}$ and Bi , $\text{X} = \text{Mo, W}$, femtosecond laser crystals** [6998-57]
A. García-Cortés, M.-D. Serrano, C. Zaldo, C. Cascales, Instituto de Ciencia de Materiales de Madrid (Spain); G. Strömqvist, V. Pasiskevicius, KTH Royal Institute of Technology (Sweden)
- 6998 1P **A mechanically Q-switched Yb:Er:YVO₄ laser** [6998-60]
Y. H. Tsang, C. J. Mercer, D. J. Binks, The Univ. of Manchester (United Kingdom)
- 6998 1R **An inhomogeneous theoretical model for analyzing the temporal response of high concentration erbium-doped fiber lasers** [6998-63]
S. Keyvaninia, M. Karvar, Sharif Univ. of Technology (Iran) and International Ctr. of Science, High Technology and Environmental Science (Iran); A. Bahrampour, Sharif Univ. of Technology (Iran), International Ctr. of Science, High Technology and Environmental Science (Iran), and Vali-Asr Univ. of Rafsanjan (Iran)

- 6998 1S **Passively mode-locked waveguide lasers using carbon nanotube saturable absorber**
[6998-64]
H. Chen, Yangtze Univ. (China); Q. Wang, College of Optical Sciences, Univ. of Arizona (USA)
- 6998 1T **Numerical rate equation modelling of a 1.61 μm pumped $\sim 2 \mu\text{m}$ Tm^{3+} -doped tellurite fibre laser** [6998-65]
B. D. O. Richards, C. A. Evans, Z. Ikonić, P. Harrison, The Univ. of Leeds (United Kingdom); Y. H. Tsang, D. J. Binks, The Univ. of Manchester (United Kingdom); J. Lousteau, A. Jha, The Univ. of Leeds (United Kingdom)
- 6998 1U **Thermal and optical properties of new fluorotellurite glasses for photonics application**
[6998-66]
G. Liao, Q. Chen, J. Xing, D. Milanese, M. Fokine, M. Ferraris, Politecnico di Torino (Italy)

Author Index

Conference Committee

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- 1 Fibre Lasers
 Thomas Graf, Universität Stuttgart (Germany)
- 2 Pulsed SSL
 Helena Jelínková, Czech Technical University (Czech Republic)
- 3 Beam Control and Transmission
 Jonathan A. Terry, University of St. Andrews (United Kingdom)
- 4 Infrared Lasers
 Jonathan A. Terry, University of St. Andrews (United Kingdom)
- 5 1 Micron
 Efstratios Georgiou, Technological Education Institute-Crete (Greece)

- 6 NLO
Yehoshua Shimony, Soreq Nuclear Research Center (Israel)

Introduction

This was the third occurrence of the Solid State Lasers and Amplifiers conference, held as part of the Photonics Europe symposium, over the period 8-10 April 2008 in Strasbourg, France. The participation level increased compared to 2 years ago, reflected by the conference extending over 3 days, with 37 oral papers and an interactive poster session of some 22 papers.

Particular hot topics for this year were fibre lasers, with two invited papers, from Shibin Jiang of NP Photonics and Stuart Jackson of the University of Sydney, and a new session entitled Beam Control and Transmission, regarding spatial and polarisation analysis and control of beams, and beam delivery systems to actually get the generated beams to their respective applications. Pulsed solid state lasers was again a session topic, regarding both Q-switching and mode-locking, the latter being implemented with Quantum Dot structures in an invited paper from Edik Rafailov of the University of Dundee, as was Infrared Lasers, including Raman conversion in Tungstates and Dy doped in Lead Thiogallate as a direct source for $>4\text{ }\mu\text{m}$, as described in an invited paper by Maxim Doroshenko of the General Physics Institute (Moscow). Despite the long history, there is always something new concerning 1 Micron lasers, often with new host materials, but also in scaling to high powers with excellent beam quality and spectral purity, as described by Dietmar Kracht of the Laser Zentrum Hanover, where the application was gravitational wave detection. The final oral session was on Non-linear Optical sources, kicked-off by a presentation on the advantages of periodic and quasi-periodic nonlinear photonic crystals from Ady Arie of Tel-Aviv University.

A new addition this year was a keynote presentation, from John Collier of the UK Science and Technology Facilities Council, giving a flavour of what might be expected of the upcoming large-scale project HiPER, described as the European path to laser fusion and related plasma science.

This proceedings volume provides more detail on all the presented papers for which a manuscript was submitted.

Jonathan A. Terry
Thomas Graf
Helena Jelínková