



**- PROCEEDINGS / OTHER PUBLICATIONS -**

**- 2019 -**

1. A. Birtas, N. Boicea, G. Croitoru, M. Dinca, N. Pavel, F. Draghici, R. Chiriac "On the possibility to improve petrol engine operation by laser ignition," Energy Procedia **157**, 1022-1028 (2019); Proceeding paper, Technologies and Materials for Renewable Energy, Environment and Sustainability (TMREES), TMREES18, 19-21 Sept. 2018, Athens, Greece. <https://doi.org/10.1016/j.egypro.2018.11.269>

**- 2017 -**

1. A. Birtas, N. Boicea, F. Draghici, R. Chiriac, G. Croitoru, M. Dinca, T. Dascalu and N. Pavel, "On the assessment of performance and emissions characteristics of a SI engine provided with a laser ignition system," IOP Conf. Ser.: Mater. Sci. Eng. **252**, art. 012071 (2017); doi:10.1088/1757-899X/252/1/012071

**- 2016 -**

1. C.-A. Stanciu, T. Dascalu, G. Stanciu, N. Pavel, "Transparent Nd doped YAG ceramics," Journal of Physics: Conference Series **741**(1), art. 012074 (2016); 3rd International School and Conference on Optoelectronics, Photonics, Engineering and Nanostructures (Saint Petersburg OPEN 2016), 28–30 March 2016, St Petersburg, Russia; doi:10.1088/1742-6596/741/1/012074

**- 2014 -**

1. G. Salamu, F. Voicu, F. Jipa, M. Zamfirescu, T. Dascalu, and N. Pavel, "Laser emission from diode-pumped Nd:YAG cladding waveguides obtained by direct writing with a femtosecond-laser beam," Proc. SPIE **9135**, Laser Sources and Applications II, 91351F (May 1, 2014); doi:10.1117/12.2052250; <http://dx.doi.org/10.1117/12.2052250>

**- 2013 -**

5. L. Sirbu, L. Ghimpu, M. Danila, R. Muller, A. Matei, F. Comanescu, A. Ionescu, O. Grigore, T. Dascalu, and A. Sarua, "Porous and RF sputtering InP for portable THz-TDS in pharmaceutical and medical applications," IEEE Proceeding of Semiconductor Conference (CAS), 2013 International, 14-16 Oct. 2013, Sinaia, Romania; vol. **1**, pp. 69-72 (2013). DOI: 10.1109/SMICND.2013.6688092
4. C. A. Brandus, L. Gheorghe, and T. Dascalu, "Infrared laser emission in a compact CW and quasi-CW diode pumped Nd<sup>3+</sup>:GdLuCOB laser," Conference Proc. IEEE, Advanced Optoelectronics and Lasers (CAOL), 2013 International Conference on, 9 - 13 Sept. 2013, Sudak, Ukraine; pages 102-103, ISSN: 2160-1518, ISBN: 978-1-4799-0016-9, doi: 10.1109/CAOL.2013.6657543.
3. S. Georgescu, A. M. Voiculescu, C. Matei, A. G. Stefan, and O. Toma, "Upconversion luminescence in La<sub>3</sub>Ga<sub>5.5</sub>Ta<sub>0.5</sub>O<sub>14</sub> codoped with Er<sup>3+</sup> and Yb<sup>3+</sup>," Proc. SPIE **8882**, ROMOPTO 2012: Tenth Conference on Optics: Micro- to Nanophotonics III, 888204 (June 10, 2013); doi: 10.1117/12.2032265; <http://dx.doi.org/10.1117/12.2032265>.
2. G. Salamu, A. Ionescu, C. Brandus, O. Grigore, N. Pavel and T. Dascalu, "Generation of high-peak power 532-nm green pulses from composite, all-ceramics, passively Q-switched Nd:YAG/Cr<sup>4+</sup>:YAG laser," Proc. SPIE **8882**, ROMOPTO 2012: Tenth Conference on Optics: Micro- to Nanophotonics III, 888206 (June 10, 2013); doi:10.1117/12.2032267; <http://dx.doi.org/10.1117/12.2032267>.



1. M. Tsunekane, N. Pavel, and T. Taira, "Simultaneously 3-Point Ignitable, Nd:YAG/Cr:YAG Ceramic Micro-Lasers," *The Review of Laser Engineering* **41** (2), 117-122 (2013) (in Japanese).

**- 2012 -**

1. J. Rafael Molina Contreras, **A. Ionescu**, and T. Dascalu, "THz-Time Domain Spectroscopy of (001) ZnSe," *Proceedings of the Physics Conference TIM-11*, 24-27 November 2011, Timisoara, Romania, AIP Conf. Proc. **1472**, 114-120 (2012).
2. O. Toma, L. Gheorghe, and R. Birjega, "Solubility limits of Erbium in partially disordered crystals langanite and langatate," *Romanian Journal of Physics* **57** (9-10), xxx-xxxx (2012). Proceeding of the 12th International Balkan Workshop on Applied Physics (IBWAP), July 6-8, 2011, Constanta, Romania.
3. L. Gheorghe, A. Achim, and F. Voicu, "A new nonlinear optical (NLO) crystal for visible and ultraviolet (UV) regions," *Proceedings of the Physics Conference TIM-11*, 24-27 November 2011, Timisoara, Romania, AIP Conf. Proc., vol. **1472** (1), 141-147 (2012).
4. A. Ionescu, M. Mernea, I. Vasile, C. A. Brandus, M. E. Barbanta-Patrascu, L. Tugulea, D. Mihailescu, and T. Dascalu, "Study of supported phospholipid bilayers by THz-TDS," *Proc. SPIE* **8496**, Terahertz Emitters, Receivers, and Applications III, 849614 (2012); doi:10.1117/12.981603.

**- 2011 -**

1. M. Mernea, O. Calborean, D. Zatreanu, O. Sandu, T. Dascalu, and D. Mihailescu, "Macromolecular crowding effects studied by THz spectroscopy and molecular modeling," 8th EBSA European Biophysics Congress, 23-27 August 2011, Budapest, Hungary. *European Biophysics Journal with Biophysics Letters*, **40** (Supplement: 1), 112-113 (August 2011).
2. M. Mernea, O. Calborean, L. Petrescu, D. Zatreanu, O. Sandu, T. Dascalu, and D. Mihailescu, "THz spectroscopy and molecular modeling of bovine serum albumin under various hydration conditions," *Proceedings of SPIE* **8306**, "Photonics, Devices and Systems V", 24 - 26 August 2011, Praga, Czech Republic, paper 83060N (2011).
3. O. Toma and S. Georgescu, "Modeling of two wavelengths emission in erbium upconversion laser," *AIP Conference Proceedings* **1400**, 385-390 (2011).
4. Nicolaie Pavel, Masaki Tsunekane and Takunori Taira (2011). *All-Poly-Crystalline Ceramics Nd:YAG/Cr<sup>4+</sup>:YAG Monolithic Micro-Lasers with Multiple-Beam Output, Laser Systems for Applications*, Dr Krzysztof Jakubczak (Ed.), ISBN: 978-953-307-429-0, InTech, DOI: 10.5772/24071. Available from: <http://www.intechopen.com/books/laser-systems-for-applications/all-poly-crystalline-ceramics-nd-yag-cr4-yag-monolithic-micro-lasers-with-multiple-beam-output>

**- 2010 -**

1. N. Pavel, M. Tsunekane, and T. Taira, "High Peak-Power Passively Q-switched All-Ceramics Nd:YAG/Cr<sup>4+</sup>:YAG Lasers," *Proceedings SPIE* **7469**, Micro- to Nano-Photonics II - ROMOPTO 2009 Conference, August 31 - Sept. 03, 2009, Sibiu, Romania; paper 746903 (2010).
2. L. Gheorghe, A. Achim, P. Loiseau, and G. Aka, "New nonlinear Gd<sub>1-x</sub>R<sub>x</sub>Ca<sub>4</sub>O(BO<sub>3</sub>)<sub>3</sub> (R = Lu, Sc) crystals for 400-nm blue-violet light generation by type-I noncritical phase-matching frequency doubling processes," *Proceedings SPIE* **7469**, Micro- to Nano-Photonics II - ROMOPTO 2009 Conference, August 31 - Sept. 03, 2009, Sibiu, Romania; paper 746904 (2010).
3. S. Georgescu, A. M. Voiculescu, E. Cotoi, O. Toma, L. Gheorghe, A. Achim, C. Matei, I. Enculescu, E. Matei, and M. Osiac, "Optical and morphologic properties of YVO<sub>4</sub>:Eu phosphor," *Proceedings SPIE* **7469**, Micro- to Nano-Photonics II - ROMOPTO 2009 Conference, August 31 - Sept. 03, 2009, Sibiu, Romania; paper 74690C (2010).



4. M. Mernea, O. Calborean, L. Petrescu, M. P. Dinca, A. Leca, D. Apostol, T. Dascalu, and D. Mihailescu, "The flexibility of hydrated bovine serum albumin investigated by THz spectroscopy and molecular modeling," Proceedings SPIE **7469**, Micro- to Nano-Photonics II - ROMOPTO 2009 Conference, August 31 - Sept. 03, 2009, Sibiu, Romania; paper 74690N (2010).

- 2009 -

1. V. Lupei, "New directions for performance enhancement and power scaling of the Nd lasers," Proceedings of International Conference "MODERN LASER APPLICATIONS", INDLAS, Second Edition 2008, May 20-23, 2008, Bran, Romania; J. of Optoelectron. & Adv. Mat. (JOAM) - Symposia, Vol. **1**, No. 4, 621-629 (2009).
2. T. Dascalu, O. Sandu, N. Vasile, A. Leca, N. Pavel, and T. Taira, "End-Pumped Yb:KGW Laser Mode-Locked by Saturable Absorber Mirror," Proceedings of International Conference "MODERN LASER APPLICATIONS", INDLAS, Second Edition 2008, May 20-23, 2008, Bran, Romania; J. of Optoelectron. & Adv. Mat. (JOAM) - Symposia, Vol. **1**, No. 4, 658-661 (2009).
3. A. M. Voiculescu, E. Cotoi, O. Toma, S. Georgescu, S. Constantinescu, I. Bibicu, "Optical and Mössbauer spectroscopy studies on YVO<sub>4</sub>:Eu nanophosphor," Proceedings of International Conference "MODERN LASER APPLICATIONS", INDLAS, Second Edition 2008, May 20-23, 2008, Bran, Romania; J. of Optoelectron. & Adv. Mat. (JOAM) - Symposia, Vol. **1**, No. 4, 670-672 (2009).
4. N. Pavel, N. Vasile, A. Leca, and T. Dascalu, "Diode-Pumped Nd-based Lasers for Generation of Visible Radiations," Proceedings of International Conference "MODERN LASER APPLICATIONS", INDLAS, Second Edition 2008, May 20-23, 2008, Bran, Romania; J. of Optoelectron. & Adv. Mat. (JOAM) - Symposia, Vol. **1**, No. 4, 673-676 (2009).
5. N. Vasile, A. Leca, N. Pavel, and T. Dascalu, "A Diode-Pumped Acoustooptic Q-switched Nd:YAG Laser for Marking Applications," Proceedings of International Conference "MODERN LASER APPLICATIONS", INDLAS, Second Edition 2008, May 20-23, 2008, Bran, Romania; J. of Optoelectron. & Adv. Mat. (JOAM) - Symposia, Vol. **1**, No. 4, 677-680 (2009).
6. O. Toma, S. Georgescu, A. M. Voiculescu, E. Cotoi, "Dynamics of the upconversion laser emission at 850 nm in Er:YLiF<sub>4</sub>," Proceedings of International Conference "MODERN LASER APPLICATIONS", INDLAS, Second Edition 2008, May 20-23, 2008, Bran, Romania; J. of Optoelectron. & Adv. Mat. (JOAM) - Symposia, Vol. **1**, No. 4, 681-684 (2009).
7. E. Cotoi, A. M. Voiculescu, S. Georgescu, O. Toma, T. Rosu, L. Bran, E. Borca, S. Hodorocea, "Synthesis and spectroscopic characterization of upconversion nanophosphor NaYF<sub>4</sub> doped with erbium and codoped with ytterbium," Proceedings of International Conference "MODERN LASER APPLICATIONS", INDLAS, Second Edition 2008, May 20-23, 2008, Bran, Romania; J. of Optoelectron. & Adv. Mat. (JOAM) - Symposia, Vol. **1**, No. 4, 689-692 (2009).

- 2008 -

1. S. Georgescu and O. Toma, "Infrared and visible laser transitions in erbium-doped crystals," Proc. SPIE, vol. **7007**, art. no. 700709 (2008), The First International Conference on Industrial Applications of Lasers, INDLAS 2007, May 23-25, 2007, Bran, Romania.
2. N. Pavel and V. Lupei, "High-power continuous wave Nd lasers under diode pumping directly in the <sup>4</sup>F<sub>3/2</sub> emitting level," Proc. SPIE, vol. **7007**, art. no. 700705 (2008), The First International Conference on Industrial Applications of Lasers, INDLAS 2007, May 23-25, 2007, Bran, Romania.
3. C. Petre, N. Vasile, N. Pavel, and T. Dascalu, "Continuous-wave diode end-pumped Nd:YAG and Nd:GdVO<sub>4</sub> lasers passively Q-switched by Cr<sup>4+</sup>:YAG. Comparative study for industrial applications," Proc. SPIE, vol. **7007**, art. no. 70070P (2008), The First International Conference on Industrial Applications of Lasers, INDLAS 2007, May 23-25, Bran, Romania.



**- 2007 -**

1. V. Lupei, A. Lupei, A. Ikesue, "High resolution properties and emission decay of rare-earth doped transparent laser ceramics," Proc. of The 10th Europhysics Conference on Defects in Insulating Materials (EURODIM 2006), Milano, Italy, 10-14 July 2006; Phys. Stat. Sol. (c), **4** (3), 1376-1379 (2007).
2. S. Georgescu, A.M. Chinie, A. Stefan, O. Toma, "Spectroscopy of Eu:YAG nanopowders," Proc. of The 10th Europhysics Conference on Defects in Insulating materials (EURODIM 2006), Milano, Italy, 10-14 July 2006; Phys. Stat. Sol. (c), **4** (3), 946-949 (2007).
3. S Georgescu, O. Toma, A. Achim, A. M. Chinie, L. Gheorghe, A. Stefan, "Optical studies of the partially disordered crystals langasite ( $\text{La}_3\text{Ga}_5\text{SiO}_{14}$ ) and langatate ( $\text{La}_3\text{Ga}_{5.5}\text{Ta}_{0.5}\text{O}_{14}$ ) doped with  $\text{Eu}^{3+}$ ," ROMOPTO '06: Eight Conference on Optics, 28-31 August, Sibiu, Romania; SPIE vol. **6875**, Art. no. 678509 (2007).
4. S. Georgescu, S. Constantinescu, A. M. Chinie, A. S. Stefan, O. Toma, I. Bibicu, "Optical and Mössbauer studies on YAG:Eu nanocrystals synthesized by a sol-gel method," ROMOPTO '06: Eight Conference on Optics, 28-31 August, Sibiu, Romania; SPIE vol. **6875**, Art. no. 67850A (2007).
5. V. Lupei, A. Lupei, C. Gheorghe, A. Ikesue, A. Stefan, V. Ciupina, A. Prodan, "Spectroscopic characteristics of  $\text{RE}^{3+}:\text{Sc}_2\text{O}_3$  ceramics," ROMOPTO '06: Eight Conference on Optics, 28-31 August, Sibiu, Romania; SPIE vol. **6875**, Art. no. 67850C (2007).
6. T. Dascalu, T. Taira, "Non linear mirror mode locking operation of edge pumped Yb:YAG/YAG laser," ROMOPTO '06: Eight Conference on Optics, 28-31 August, Sibiu, Romania; SPIE vol. **6875**, Art. no. 678506 (2007).
7. T. Dascalu, C. Dascalu, "High-power lens-shape diode edge-pumped composite laser," ROMOPTO '06: Eight Conference on Optics, 28-31 August, Sibiu, Romania; SPIE vol. **6875**, Art. no. 67850B (2007).
8. N. Pavel, K. Lünstedt, K. Petermann, G. Huber, "Diode pumped Neodymium-based thin disk lasers," ROMOPTO '06: Eight Conference on Optics, 28-31 August, Sibiu, Romania; Proc. SPIE vol. **6785**, Art. no. 678504 (2007).
9. C. Petre, T. Dascalu, "Passively Q-switched diode pumped CW Nd:GdVO<sub>4</sub>-Cr<sup>4+</sup>:YAG and Nd:YAG-Cr<sup>4+</sup>:YAG laser," 14th International Conference on Advanced Laser Technologies, Brasov, Romania, Sept. 08-12, 2006; SPIE vol. **6606**, Art. no. 66060A (2007).
10. T. Dascalu, T. Taira, "Mode locking operation of Yb : YAG/YAG laser: non linear mirror technique," 14th International Conference on Advanced Laser Technologies, Brasov, Romania, Sept. 08-12, 2006; SPIE vol. **6606**, Art. no. 660605 (2007).

**- 2006 -**

1. V. Lupei, A. Lupei, A. Ikesue, "Efficient sensitisation of Yb<sup>3+</sup> emission by Nd<sup>3+</sup> in Sc<sub>2</sub>O<sub>3</sub> transparent ceramics," International Conference on Lasers, Applications and Technologies, St. Petersburg, Russia, May 11-15, 2005; Proc. SPIE vol. **6054**, Art. no. 6054OE (2006).
2. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, G. Aka, D. Vivien, "Spectroscopic bases for optimization of 900 nm Laser Emission of Nd<sup>3+</sup> in Strontium Lanthanum Aluminate," International Conference on Lasers, Applications and Technologies, St. Petersburg, Russia, May 11-15, 2005; Proc. SPIE vol. **6054**, Art. no. 6054OF (2006).
3. V. Lupei, N. Pavel, "Highly efficient one-micron laser emission under 885 nm diode laser pumping in Nd:YAG crystals with an extended range of concentrations," 2nd Conference on Solid State Lasers and Amplifier, Strasbourg, France, Apr. 05-06, 2006; Proc. SPIE vol. **6190**, Art. no. 619002 (2006).



4. C. Varona, P. Loiseau, G. Aka, V. Lupei, "CW blue laser emission by second harmonic generation of 900 nm oscillation of Nd-doped strontium and lanthanum aluminate," 2nd Conference on Solid State Lasers and Amplifier, Strasbourg, France, Apr. 05-06, 2006; Proc. SPIE vol. **6190**, Art. no. 61900D (2006).
5. L. Gheorghe, P. Loiseau, G. Aka, T. Taira, V. Lupei, "Growth and non-critical phase matching second harmonic generation of  $Gd_{1-x}R_xCa_4O(BO_3)_3$  ( $R=Sc$  or  $Lu$ ) nonlinear crystals," 2nd Conference on Solid State Lasers and Amplifier, Strasbourg, France, Apr. 05-06, 2006; Proc. SPIE vol. **6190**, Art. no. 61900Z (2006).

- 2005 -

1. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, D. Vivien, G. Aka, "Spectroscopic investigation of Nd in ASL," Proc. of The 15th International Conference on Defects in Insulating Materials (ICDIM-2004), Riga, Latvia, 11-16 July 2004; Phys. St. Sol. (c) **1**, 276-279 (2005).
2. S. Georgescu and O. Toma, "Energy transfer processes in Er-doped crystals," Proc. of 15th International Conference on Defects in Insulating Materials (ICDIM-2004), Riga, Latvia, 11-16 July 2004; Phys. Stat. Sol. (c) **2** (1), 280-283 (2005).
3. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, D. Vivien, G. Aka, "Cationic Distribution and Spectral Properties of  $Nd^{3+}$  in Hexaaluminate Laser Crystals," Advanced Solid-State Photonics Conference, Vienna, Austria, February 2005; Trends in Optics and Photonics Series, Eds. I. Sorokina and C. Denman, (OSA, Washington DC), vol. **98**, 52-57 (2005).
4. V. Lupei, A. Lupei, A. Ikesue, "Spectroscopic Properties of  $Nd^{3+}$  and Highly Efficient  $Nd^{3+}$  to  $Yb^{3+}$  Energy Transfer in Transparent  $Sc_2O_3$  Ceramics," Advanced Solid-State Photonics Conference, Vienna, Austria, February 2005; Trends in Optics and Photonics vol. **98**, 41-46 (2005).
5. V. Lupei, G. Aka, D. Vivien, "Highly Efficient 900 nm Laser Emission of  $Nd^{3+}$  in Strontium Lanthanum Aluminate," Advanced Solid-State Photonics Conference, Vienna, Austria, February 2005; Trends in Optics and Photonics vol. **98**, 177-182 (2005).
6. V. Lupei, G. Aka, "Enhanced Efficiency of Second Harmonic Generation in GdCOB of the Nd:YVO<sub>4</sub> Laser under Direct  $^4F_{3/2}$  Pumping," Advanced Solid-State Photonics Conference, Vienna, Austria, February 2005; Trends in Optics and Photonics vol. **98**, 478-482 (2005).
7. C. Varona, P. Loiseau, G. Aka, V. Lupei, B. Ferrand, "900 nm Infrared Laser Emission and Second Harmonic Generation of Nd Doped ASL," Advanced Solid-State Photonics Conference, Vienna, Austria, February 2005; Trends in Optics and Photonics vol. **98**, 240 (2005).
8. N. Pavel, Y. Sato, T. Taira, Y. Tamaoki, and H. Kan, "Generation of 5 W continuous-wave green power at 531 nm based on a frequency-doubled Nd:GdVO<sub>4</sub> laser pumped into the emitting level at 879 nm," Advanced Solid-State Photonics Conference, Vienna, Austria, February 2005; Trends in Optics and Photonics vol. **98**, 478-482 (2005).
9. M. Tsunekane, T. Taira, and T. Dascalu, "High-power operation of diode edge-pumped, microchip Yb:YAG laser composed with YAG ceramic pump waveguide," Advanced Solid-State Photonics Conference, Vienna, Austria, February 2005; Trends in Optics and Photonics Series, Eds. I. Sorokina and C. Denman, (OSA, Washington DC), vol. **98**, 603-607 (2005).
10. N. Pavel, T. Taira, K. Mizuuchi, A. Morikawa, T. Sugita, and K. Yamamoto, "Continuous-wave 456-nm blue light generation in a bulk periodically poled MgO:LiNbO<sub>3</sub> crystal," Advanced Solid-State Photonics Conference, Vienna, Austria, February 2005; Trends in Optics and Photonics Series, Eds. I. Sorokina and C. Denman, (OSA, Washington DC), vol. **98**, 468-472 (2005).
11. N. Pavel, Y. Sato, T. Taira, Y. Tamaoki, and H. Kan, "Generation of 5 W continuous-wave green power at 531 nm based on a frequency-doubled Nd:GdVO<sub>4</sub> micro-laser pumped into the emitting level at 879 nm," Advanced Solid-State Photonics Conference, Vienna, Austria, February 2005; Trends in Optics and Photonics Series, Eds. I. Sorokina and C. Denman, (OSA, Washington DC), vol. **98**, 462-467 (2005).





- 2004 -

1. T. Dascalu, N. Pavel, M. Tsunekane, T. Taira, "Continuous-wave 90-W output power diode edge-pumped microchip composite Yb:YAG laser," Advanced Solid-State Photonics Conference, (February 2004, Santa Fe, New Mexico, USA); Trends in Optics and Photonics Series, Ed. G.J. Quarles, (OSA, Washington DC), vol. **94**, 245-250 (2004).
2. N. Pavel, I. Shoji, T. Taira, K. Mizuuchi, A. Morikawa, T. Sugita, K. Yamamoto, "High-power green generation at room temperature in a periodically poled MgO:LiNbO<sub>3</sub> by frequency doubling of a diode end-pumped Nd:GdVO<sub>4</sub> laser," Advanced Solid-State Photonics Conference, (February 2004, Santa Fe, New Mexico, USA); Trends in Optics and Photonics Series, Ed. G.J. Quarles, (OSA, Washington DC), vol. **94**, 196-202 (2004).
3. Y. Sato, N. Pavel, T. Taira, "Near quantum limit laser oscillation and spectroscopic properties of Nd:GdVO<sub>4</sub> single crystal," Advanced Solid-State Photonics Conference, (February 2004, Santa Fe, New Mexico, USA); Trends in Optics and Photonics Series, Ed. Gregory J. Quarles, (OSA, Washington DC), vol. **94**, 405-409 (2004).
4. V. Lupei, N. Pavel, T. Taira, "Direct-pumping effects on the global efficiency of frequency-doubling devices for cw Nd lasers," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 232-237 (2004).
5. T. Dascalu, N. Pavel, T. Taira, "Diode Radial Pumped Composite Microchip Yb:YAG Laser: Output Performances and Thermal Effects," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 128-134 (2004).
6. V. Lupei, A. Lupei, N. Pavel, T. Taira, Y. Sato, A. Ikesue, "Comparison of Nd:YAG single crystals and transparent ceramics as laser materials," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 212-219 (2004).
7. V. Lupei, N. Pavel, T. Taira, "Efficient quasi-three-level laser emission of Nd:YAG," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 195-200 (2004).
8. N. Pavel, J. Saikawa, I. Shoji, T. Dascalu, V. Lupei, T. Taira, "All-solid-state diode end-pumped Nd:YAG laser passively Q-switched by Cr<sup>4+</sup>:YAG saturable absorber," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, Sept. 2003; Proc. SPIE vol. **5581**, 170-179 (2004).
9. N. Pavel, Y. Sato, V. Lupei, T. Taira, "Highly efficient laser operation of Nd-vanadates under 880-nm direct pumping into the emitting level," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 135-142 (2004).
10. N. Pavel, I. Shoji, T. Taira, "Continuous-wave intracavity frequency-doubled Nd:YAG-KNbO<sub>3</sub> blue laser at 473 nm," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 123-127 (2004).
11. V. Lupei, A. Lupei, "Concentration-dependence of Nd emission quantum efficiency," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 220-227 (2004).
12. D. Vivien, G. Aka, A. Lupei, V. Lupei, C. Gheorghe, "High resolution investigation of Nd<sup>3+</sup> doped strontium lanthanum aluminate," Proc. SPIE vol. **5581**, 287-291 (2004).
13. V. Lupei, A. Lupei, "Energy transfer effects in the VUV-to-VIS quantum cutting in Praseodymium-activated phosphors," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 238-244 (2004).



14. A. Lupei, E. Antic-Fidancev, G. Aka, D. Vivien L. Gheorghe, C. Gheorghe, "Spectral and structural studies of GdCOB and YCOB crystals," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 114-122 (2004).
15. V. Lupei, G. Aka, D. Vivien, "Enhanced performance of Nd-activated self-nonlinear devices," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 201-211 (2004).
16. V. Lupei, "Heat generation in pumped Nd laser materials," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 188-194 (2004).
17. V. Lupei, "New directions for efficiency enhancement and power scaling of Nd lasers," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 65-79 (2004).
18. S. Georgescu, O. Toma, H. Totia, "Intrinsic limits of the efficiency of 3- $\mu\text{m}$  Er:YAG lasers," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 98-113 (2004).
19. S. Georgescu, O. Toma, "Modeling of a green upconversion pumped Er:YAG laser," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 245-252 (2004).
20. A. Lupei, E. Antic-Fidancev, G. Aka, D. Vivien, "Electronic and vibronic structure of Yb<sup>3+</sup> in GdCOB," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 164-169 (2004).
21. E. Antic-Fidancev, A. Lupei, G. Aka, "Optical analysis of the local perturbation in RCOB host lattice doped with europium ion," ROMOPTO 2003: Seventh Conference on Optics, Ed. V.I. Vlad, Constanta, Romania, September 2003; Proc. SPIE vol. **5581**, 157-163 (2004).
22. O. Toma, S. Georgescu, "Dynamics of a green upconversion-pumped Er:YAG laser exhibiting reabsorption losses," Eighth International Conference on Laser and Laser Information Technologies, Smolyan, Bulgaria, 27 September-1 October 2003; Proc. SPIE vol. **5449**, 155-163 (2004).

**- 2003 -**

1. T. Dascalu, N. Pavel, T. Taira, "Diode radial pumped microchip Yb:YAG laser: High power operation," 2003 OSA Topical Meeting on Advanced Solid-State Photonics (San Antonio, CA, USA, 2-5 February 2003); Trends in Optics and Photonics Series, Ed. J.J. Zayhowski, (OSA, Washington DC), vol. **83**, 231-234 (2003).
2. N. Pavel, I. Shoji, T. Taira, M. Iwai, T. Yoshino, M. Imaeda, "High-power blue generation in a periodically poled MgO:LiNbO<sub>3</sub> ridge-type waveguide by frequency doubling of a diode end-pumped Nd:YAG laser," 2003 OSA Topical Meeting on Advanced Solid-State Photonics (San Antonio, CA, USA, 2-5 February 2003); Trends in Optics and Photonics Series, Ed. J.J. Zayhowski (OSA, Washington DC), vol. **83**, 388-392 (2003).
3. Y. Sato, N. Pavel, T. Taira, V. Lupei, "Near quantum-defect slope efficiency laser operation in Nd:YVO<sub>4</sub> under direct pumping into the emitting level," 2003 OSA Topical Meeting on Advanced Solid-State Photonics (San Antonio, CA, USA, 2-5 February 2003); Trends in Optics and Photonics Series, Ed. J.J. Zayhowski, (OSA, Washington DC), vol. **83**, 46-50 (2003).

**- 2002 -**

1. V. Lupei, G. Aka, D. Vivien, "Enhanced self-doubling efficiency in directly pumped Nd-activated nonlinear crystals: case of GdCOB", Topical Meeting on Advanced Solid-State Lasers (Feb 03-06, 2002 Quebec, Canada); Trends in Optics and Photonics **68**, 44-50 (2002).



2. V. Lupei, G. Aka, D. Vivien, "Quasi-three-level Laser Emission at 946-nm in Nd:YAG under Direct Pump in the Emitting Level", Topical Meeting on Advanced Solid-State Lasers (Feb 03-06, 2002 Quebec City, Canada); Trends in Optics and Photonics **68**, 434-440 (2002).
3. T. Dascalu, N. Pavel, T. Taira, "Quasi-CW Diode Radial Pumped Composite Yb:YAG Microchip Laser," Proceedings of LASERS 2001 Conference, Tucson, Arizona, USA, December 2000, 49-55 (2002).

**- 2001 -**

1. N. Pavel, J. Saikawa, T. Taira, "Intra-cavity frequency doubling of a diode-pumped Nd:YAG laser passively Q-switched by Cr<sup>4+</sup>:YAG saturable absorber," Topical Meeting on Advanced Solid-State Lasers (Jan 28-31, 2001, Seattle, USA); Trends in Optics and Photonics Series, Ed. C. Marshall, (OSA, Washington DC), vol. **50**, 246-252 (2001).
2. A. Lupei, V. Lupei, E. Osiac, L. Rogobete, L. Gheorghe, A. Petraru, "Spectroscopy and energy transfer characteristics of Nd<sup>3+</sup> in CNGG," ROMOPTO 2000: Sixth Conf. on Optics, Ed. V.I. Vlad, Bucharest, Romania, September 2000, Proc. SPIE, vol. **4430**, 62 (2001).
3. V. Lupei, B. Diaconescu, A. Lupei, "The effects of upconversion on the decay of the <sup>4</sup>F<sub>3/2</sub> level of Nd<sup>3+</sup> in YAG at high pump intensities," ROMOPTO 2000: Sixth Conference on Optics, Ed. V.I. Vlad, Bucharest, Romania, September 2000, Proc. SPIE, vol. **4430**, 88 (2001).
4. L. Rogobete, A. Lupei, V. Lupei, A. Petraru, B. Diaconescu, "On the inhomogeneous broadening by point defects on RE<sup>3+</sup> optical lines in YAG," ROMOPTO 2000: Sixth Conference on Optics, Ed. V.I. Vlad, Bucharest, Romania, September 2000, Proc. SPIE, vol. **4430**, 97 (2001).
5. N. Pavel, J. Saikawa, S. Kurimura, and T. Taira, "Diode Side-Pumped Microchip Composite Yb:YAG Laser: Design and Power Scaling," ROMOPTO 2000: Sixth Conference on Optics, Ed. V.I. Vlad, Bucharest, Romania, September 2000, Proc. SPIE **4430**, 27-34 (2001).
6. T. Dascalu, C. Dascalu, N. Pavel, "Nd:YAG laser continuous wave pumped, Q-switched by hybrid 'passive-active' methods," ROMOPTO 2000: Sixth Conference on Optics, Ed. V.I. Vlad, Bucharest, Romania, September 2000, Proc. SPIE **4430**, 52-61 (2001).
7. T. Dascalu, G. Cruz de Leon, M.C. Martinez Saldana, C.J. Ventura Juarez, "A new method to measure the contraction speed of corneal collagen under laser irradiation," ROMOPTO 2000: Sixth Conference on Optics, Ed. V.I. Vlad, Bucharest, Romania, September 2000, Proc. SPIE **4430**, 654-650 (2001).
8. N. Pavel, J. Saikawa, S. Kurimura, T. Taira, "CW Edge-Diode-Pumped Composite Yb:YAG Laser," Proc. of LASERS 2000 Conference, Albuquerque, New Mexico, USA, December 2000, 790-795 (2001).
9. T. Dascalu, N. Pavel, T. Taira, "Passively Q-switched frequency doubled Nd:YAG laser, with Cr<sup>4+</sup>:YAG saturable absorber," Proc. of LASERS 2000 Conf., Albuquerque, New Mexico, USA, December 2000, 46-52 (2001).