

LIST OF PUBLICATIONS

1. PAPERS PUBLISHED IN PEER-REVIEW JOURNALS

7. C. A. Brandus, M. Greculeasa, A. Broasca, F. Voicu, L. Gheorghe, and N. Pavel, "Diode-pumped bifunctional Nd:LGSB laser passively Q-switched by a Cr⁴⁺:YAG saturable absorber," *Opt. Mater. Express* **11**(3), 685-694 (2021).
6. A. Broasca, M. Greculeasa, F. Voicu, S. Hau, G. Croitoru, C. Gheorghe, N. Pavel, L. Gheorghe, "Efficient near-infrared laser emission and nonlinear optical properties of a newly developed Yb:LYSB laser crystal," *J. Alloys & Comp.* **844**, 156143 (2020).
5. M. Greculeasa, A. Broasca, F. Voicu, S. Hau, G. Croitoru, G. Stanciu, C. Gheorghe, N. Pavel, L. Gheorghe, "Bifunctional La_xNd_yGd_zSc_{4-x-y-z}(BO₃)₄ crystal: Czochralski growth, linear and nonlinear optical properties, and near-infrared laser emission performances," *Opt. & Laser Techn.* **131**, 106433 (2020).
4. L. Gheorghe, A. Broasca, M. Greculeasa, F. Voicu, G. Stanciu, S. Hau, G. Croitoru, C. A. Brandus, C. Gheorghe, F. Khaled, P. Loiseau, G. Aka, "Czochralski-grown La_xGd_yR_zSc_{4-x-y-z}(BO₃)₄ (R = Yb, Nd) crystals - A review of recent developments," *Opt. Mat. X* **7**, 100052 (2020).
3. C. A. Brandus, S. Hau, A. Broasca, M. Greculeasa, F. M. Voicu, C. Gheorghe, L. Gheorghe, and T. Dascalu, "Efficient 1 μm Laser Emission of Czochralski-Grown Nd:LGSB Single Crystal," *Materials* **12**(12), 2005 (2019).
2. L. Gheorghe, M. Greculeasa, A. Broasca, F. Voicu, G. Stanciu, K. N. Belikov, E. Yu. Bryleva, and O. Gaiduk, "Incongruent Melting La_xY_ySc_{4-x-y}(BO₃)₄ - LYSB Nonlinear Optical Crystal Grown by the Czochralski Method," *ACS Appl. Mat. Interfaces*, **11**(23), 20987-20994 (2019).
1. S. Hau, C. Gheorghe, L. Gheorghe, F. Voicu, M. Greculeasa, G. Stanciu, A. Broasca, M. Enculescu, "Spectroscopic investigations of Pr³⁺ ions doped CNGG and CLNGG single crystals," *J. Alloy. Compd.* **799**, 288-301 (2019).

2. COMMUNICATIONS AT INTERNATIONAL CONFERENCES

(Technical Digests, manuscripts up to 3 pages)

18. A. Broasca, M. Greculeasa, F. Voicu, G. Stanciu, S. Hau, C. Gheorghe, G. Croitoru, N. Pavel, L. Gheorghe, "LYSB and Yb-Doped LYSB crystals: Czochralski growth, optical characterization and laser emission performances," OSA Laser Congress Virtual Event, 03 Oct. - 07 Oct. 2021; oral presentation ATh1A.6.
17. M. Greculeasa, A. Broasca, F. Voicu, S. Hau, G. Croitoru, C. Brandus, G. Stanciu, C. Gheorghe, L. Gheorghe, "RE-doped LGSB (RE = Nd, Yb) as new high performance near-infrared laser crystals," 2021 Conference on Lasers and Electro-Optics/Europe - European Quantum Electronics Virtual Conferences (CLEO@/Europe-EQEC 2021), 21-25 June 2021, presentation CA-P.7 (poster presentation).
16. C. A. Brandus, M. Greculeasa, A. Broasca, F. Voicu and L. Gheorghe, "Self-frequency-doubling Nd:LGSB laser passively Q-switched by Cr⁴⁺:YAG saturable absorber," OSA Laser Congress, 13 - 16 Oct. 2020, oral presentation AF2A.6.
15. C. A. Brandus, M. Greculeasa, A. Broasca, F. Voicu, L. Gheorghe, "Infrared and self-frequency-doubling emission characteristics of diode-pumped Nd:LGSB laser crystal," 9th EPS-QEOD Europhoton Virtual Conference, 30 August - 4 September 2020; poster presentation Tu-P1.11.

14. A. Broasca, M. Grecaleasa, F. Voicu, S. Hau, G. Croitoru, C. Gheorghe, N. Pavel, L. Gheorghe, "New Yb:LYSB bifunctional crystal for efficient near-infrared laser emission and self-frequency doubling conversion," 9th EPS-QEOD Europhoton Virtual Conference, 30 August - 4 September 2020; poster presentation Tu-P1.12.
13. L. Gheorghe, M. Grecaleasa, A. Broasca, F. Voicu, G. Stanciu, S. Hau, C. Gheorghe, C. Brandus, G. Croitoru, and N. Pavel, "Undoped, Yb- and Nd-doped LGSB Czochralski-grown nonlinear and laser crystals," Advanced Solid State Lasers Conference - ASSL 2019, 29 September 2019 - 03 October 2019, Vienna, Austria, presentation AM3A.2 (oral presentation).
12. C. A. Brandus, A. Broasca, M. Grecaleasa, L. Gheorghe, and T. Dascalu, "Ultrashort ps-order Pulse Generation from a SESAM Mode-Locked Czochralski-Grown Nd:LGSB Laser Crystal," OSA Laser Congress, Advanced Solid State Lasers Conference - ASSL 2019, 29 September 2019 - 03 October 2019, Vienna, Austria, presentation JTU3A.45 (poster presentation).
11. A. Broasca, L. Gheorghe, M. Grecaleasa, F. Voicu, G. Stanciu, S. Hau, C. Gheorghe, G. Croitoru, and N. Pavel, "Czochralski growth and characterization of pure and Yb-doped $\text{La}_x\text{Y}_y\text{Sc}_{4-x-y}(\text{BO}_3)_4$ nonlinear and laser crystal," OSA Laser Congress, Advanced Solid State Lasers Conference - ASSL 2019, 29 September 2019 - 03 October 2019, Vienna, Austria, presentation JM5A.40 (poster presentation).
10. L. Gheorghe, M. Grecaleasa, A. Broasca, F. Voicu, G. Stanciu, S. Hau, and C. Gheorghe, "Yb³⁺ - doped $\text{La}_x\text{Y}_y\text{Sc}_{4-x-y}(\text{BO}_3)_4$ as bifunctional laser and nonlinear optical crystal," Excited States of Transitions Elements Conference - ESTE 2019, 08-13 September 2019, Kudowa Zdrój, Poland, presentation O-10 (oral presentation).
9. S. Hau, C. Gheorghe, L. Gheorghe, F. Voicu, M. Grecaleasa, G. Stanciu, A. Broasca, and M. Enculescu, "Optical properties of Pr³⁺ ions doped garnet crystals," Excited States of Transitions Elements Conference - ESTE 2019, 08-13 September 2019, Kudowa Zdrój, Poland (poster presentation).
8. C. A. Brandus, C. Gheorghe, S. Hau, A. Broasca, M. Grecaleasa, F. Voicu, L. Gheorghe, and N. Pavel, "Highly efficient laser emission from a Novel Nd:LGSB crystal," CLEO Europe - EQEC 2019 Conference, 23-27 June 2019, München, Germany, presentation CA-P.44 (poster presentation).
7. M. Porębski, M. Kowalczyk, L. Gheorghe, M. Grecaleasa, A. Broasca, F. Voicu, and J. Sotor, "Passively mode-locked self-frequency doubling Yb:LGBS laser," CLEO Europe - EQEC 2019 Conference, 23-27 June 2019, München, Germany, presentation CA-P.23 (poster presentation).
6. L. Gheorghe, M. Grecaleasa, A. Broasca, F. Voicu, G. Stanciu, S. Hau, C. Gheorghe, G. Croitoru, and N. Pavel, "Pure, Yb- and Nd-doped $\text{La}_x\text{Gd}_y\text{Sc}_{4-x-y}(\text{BO}_3)_4$ Czochralski-grown nonlinear optical and laser crystals," TIM 19 Physics Conference, 29 - 31 May 2019, Timisoara, Romania, presentation CM-I02 (invited presentation).
5. A. Broasca, L. Gheorghe, M. Grecaleasa, F. Voicu, and G. Stanciu, "Czochralski growth and optical properties of nonlinear $\text{La}_x\text{Y}_y\text{Sc}_{4-x-y}(\text{BO}_3)_4$ - LYSB single crystal," TIM 19 Physics Conference, 29 - 31 May 2019, Timisoara, Romania, presentation CM-P03 (poster presentation).
4. F. M. Voicu, L. Gheorghe, M. Grecaleasa, A. Broasca, C. Gheorghe, S. Hau, and G. Croitoru, "Nd³⁺ doped $\text{La}_x\text{Gd}_y\text{Sc}_{4-x-y}(\text{BO}_3)_4$ as bifunctional laser and nonlinear crystal," TIM 19 Physics Conference, 29 - 31 May 2019, Timisoara, Romania, presentation CM-P06 (poster presentation).
3. M. Grecaleasa, L. Gheorghe, A. Broasca, F. Voicu, C. Gheorghe, S. Hau, and G. Stanciu, "Czochralski growth and characterization of Yb-doped LYSB single crystals," TIM 19 Physics Conference, 29 - 31 May 2019, Timisoara, Romania, presentation CM-P11 (poster presentation).
2. A. Broasca, B. Cojocar, C. Colbea, D. Avram, Carmen Tiseanu, "Remarkable enhancement of emission intensity of Eu-SnO₂ nanoparticles by Li addition," 18th International Balkan Workshop on Applied Physics and Materials Science – IBWAP 2018, 10-13 July 2018, Constanta, Romania, presentation S2 P9 (poster presentation).
1. C. Colbea, D. Avram, A. Broasca, M. Florea, and C. Tiseanu, "Tetragonal to monoclinic phase tuning of Er doped nano-zirconia by lithium addition and its effect on near-infrared up-conversion emission," 18th International Balkan Workshop on Applied Physics and Materials Science - IBWAP 2018, 10-13 July 2018, Constanta, Romania, presentation S2 P6 (poster presentation).

