Cristina GHEORGHE
NATIONAL INSTITUTE FOR LASER, PLASMA AND RADIATION PHYSICS - INFLPR
LABORATORY OF SOLID-STATE QUANTUM ELECTRONICS

LIST OF PUBLICATIONS

1. PAPERS PUBLISHED IN PEER-REVIEW JOURNALS

81 S. Hau, **C. Gheorghe**✉, A. Broasca, L. Gheorghe, H. Boubekri, M. Diaf, R. Fartas, "Broadband multimodal LIR thermometry in (Er, Tm, Yb):CdF_2 crystal for dual-excitation visible-NIR sensing from cryogenic to high temperatures," J. Alloys Compd. **1079**, 189927 (2026).

80. H. Boubekri, **C. Gheorghe**✉, S. Hau, A. M. Voiculescu, O. Toma, M. Diaf, R. Fartas, "Photoluminescence investigation and Up-conversion behavior under different excitations wavelengths of (Er, Tm, Yb) doped CdF_2 single crystal," J. Lumines. **294**, 121852 (2026).

79. S. Hau, G. Stanciu, A. Broasca, E. Bancu, L. Gheorghe, N. Scarisoreanu, **C. Gheorghe**✉, "Energy transfer in the (Pr,Yb):$Ca_3(Nb,Ga)_5O_{12}$ phosphor with excellent properties for temperature sensing applications," Ceram. Int. **52**(12,. Part A), 18750-18763 (2026).

78. A. Broasca, M. Greculeasa, F. Voicu, **C. Gheorghe**, S. Hau, G. Croitoru, P. Gheorghe, A. Petris, C. Mihailescu, L. Gheorghe, "Nd-doped LYSB: A new multifunctional crystal for efficient multi-wavelength laser emission and frequency conversion," J. Alloys & Comp. **1049**, 185432 (2025).

77. A. M. Voiculescu, S. Hau, G. Stanciu, **C. Gheorghe**✉, "A dual-mode temperature sensing based on UC luminescence of a new green Er^{3+}:$SrLaGaO_4$ phosphor," J. Alloys & Compd. **1038**, 182727 (2025).

76. S. Hau, H. Boubekri, M. Diaf, R. Fartas, **C. Gheorghe**✉, "Excellent sensing capabilities of the multimodal optical temperature sensor based on Er^{3+} ion emission in the CdF_2: Er, Y crystal," J. Alloys & Compd. **1035**, 181475 (2025).

75. S. Hau, L. Gheorghe, G. Stanciu, **C. Gheorghe**✉, "Up-conversion luminescence and multimodal temperature sensing behaviors in the visible and infrared region of Er^{3+} and (Er^{3+}, Yb^{3+}) ions in $Ca_3Ta_2Ga_3O_{12}$ phosphors," Ceram. Int. **51**(12, B), 16864-16877 (2025).

74. A. Broasca, M. Greculeasa, F. Voicu, **C. Gheorghe**, S. Hau, C.A. Susala, L Gheorghe, "Bifunctional Nd-doped LGSB crystals: A roadmap for crystal growth and improved laser emission performance in the NIR and green domains," Materials **18**(5), 964 (2025).

73. M. Greculeasa, F. Voicu, S. Hau, **C. Gheorghe**, L. Gheorghe, "Growth and spectroscopic characterization of a new 6.2 at.% Yb-doped LGSB crystal," J. Optoelectron. Adv. Mater. **26**(11-12), 475-479 (2024).

72. **C. Gheorghe**, S. Hau, L. Gheorghe, A. Broasca, M. Greculeasa, F. Voicu, G. Stanciu, M. Enculescu, "Growth and spectroscopic properties of $Ca_3(Ta,Ga)_5O_{12}Pr^{3+}$ single crystal as a promising new laser material in the visible domain," Opt. Mater. **150**, 115286 (2024).

71. A. Broasca, M. Greculeasa, F. Voicu, S. Hau, **C. Gheorghe**, G. Croitoru, N. Pavel, G. Stanciu, A. Petris, P. Gheorghe, F. Albota, A. Serban, L. Gheorghe, "LGYSB:Nd - high-performance lasing in the near-infrared region," J. Am. Chem. Soc. **146**(3), 2196-2207 (2024).

70. A. M. Voiculescu, S. Hau, G. Stanciu, **C. Gheorghe**✉, "Effects of Eu^{3+} concentration on the thermoluminescence properties of narrow-band red-emitting Eu^{3+}:$SrLaGaO_4$ phosphor," J. Alloys & Compds. **958**, 170507 (2023).

69. A. D. Timoshenko, O. O. Matvienko, A. G. Doroshenko, S. V. Parkhomenko, I. O. Vorona, O. S. Kryzhanovska, N. A. Safronova, O. O. Vovk, A. V. Tolmachev, V. N. Baumer, I. Matolínova, S.

Hau, **C. Gheorghe**, R. P. Yavetskiy, "Highly-doped YAG:Sm^{3+} transparent ceramics: Effect of Sm^{3+} ions concentration," Ceram. Int. **49**(5), 7524-7533 (2023).

68. A. Broasca, M. Greculeasa, F. Voicu, **C. Gheorghe** and L Gheorghe, "Pure and Yb-Doped $La_xY_ySc_{4-x-y}(BO_3)_4$ Crystals: A Review of Recent Advances," Crystals **13**(2), 169 (2023).

67. **C. Gheorghe**, S. Hau, L. Gheorghe, F. Voicu, M. Greculeasa, A. Broasca, and G. Stanciu, "RE^{3+}-Doped $Ca_3(Nb,Ga)_5O_{12}$ and $Ca_3(Li,Nb,Ga)_5O_{12}$ Crystals (RE = Sm, Dy, and Pr): A Review of Current Achievements," Materials **16**(1), 269 (2023).

66. S. Hau, G. Stanciu, D. Avram, L. Gheorghe, **C. Gheorghe**✉, "Energy transfer and luminescent properties of Tb^{3+} and (Tb^{3+}, Yb^{3+}) doped CNGG phosphors," J. Rare Earths **40**(9), 1445-1453 (2022).

65. **C. Gheorghe**, S. Hau, G. Stanciu, D. Avram, A. Broasca, L. Gheorghe, "Novel optical temperature sensors based on the emission of the Pr^{3+} ions doped $Ca_3(M,Ga)_5O_{12}$ (M^{5+} = Nb, Ta) garnet phosphors," J. Alloys & Compds. **922**, 166178 (2022).

64. A. Broasca, M. Greculeasa, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, L. Gheorghe, "Pr:LGSB as a new nonlinear optical crystal: Czochralski growth and optical characterization," J. Alloys & Comp. **908**, 164633 (2022).

63. A. Broasca, M. Greculeasa, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, C. A. Brandus, N. Pavel, M. Enculescu, L. Gheorghe, "Growth and characterization of 3.5 at.% Nd:LGSB bifunctional crystal," Opt. Mat. **123**, 111832 (2022).

62. A. M. Voiculescu, S. Hau, G. Stanciu, D. Avram, **C. Gheorghe**✉, "Optical thermometry through infrared excited green upconversion emissions of Er^{3+} -Yb^{3+} co-doped $LaAlO_3$ phosphors," J. Lumin. **242**, 118602 (2022).

61. N. A. Safronova, R. P. Yavetskiy, O. S. Kryzhanovska, M. V. Dobrotvorska, A. E. Balabanov, I. O. Vorona, A. V. Tolmachev, V. N. Baumer, I. Matolínov, D. Yu. Kosyanov, O. O. Shichalin, E. K. Papynov, S. Hau, **C. Gheorghe**, "A novel IR-transparent Ho^{3+}:Y_2O_3-MgO nanocomposite ceramics for potential laser applications," Ceram. Int. **47**(1), 1399-1406 (2021).

60. G. Stanciu, F. Voicu, C. A. Brandus, C. E. Tihon, S. Hau, **C. Gheorghe**, G. Croitoru, L. Gheorghe, M. Dumitru, "Enhancement of the laser emission efficiency of Yb:Y_2O_3 ceramics via multi-step sintering method fabrication," Opt. Mater. **109**, 110411 (2020).

59. 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. Alloy. Compd. **844**, 156143 (2020).

58. M. Greculeasa, A. Broasca, F. Voicu, S. Hau, G. Croitoru, G. Stanciu, **C. Gheorghe**, N. Pavel, L. Gheorghe, "Bifunctional $La_xNd_yGd_zSc_{4-x-y-z}(BO_3)_4$ crystal: Czochralski growth, linear and nonlinear optical properties, and near-infrared laser emission performances," Opt. & Laser Techn. **131**, 106433 (2020).

57. 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 $La_xGd_yR_zSc_{4-x-y-z}(BO_3)_4$ (R = Yb, Nd) crystals - A review of recent developments," Opt. Mat. X **7**, 100052 (2020).

56. 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).

55. S. Hau, **C. Gheorghe**✉, L. Gheorghe, F. Voicu, M. Greculeasa, G. Stanciu, A. Broasca, M. Enculescu, "Spectroscopic investigations of Pr^{3+} ions doped CNGG and CLNGG single crystals," J. Alloy. Compd. **799**, 288-301 (2019).

54. G. Stanciu, L. Gheorghe, F. Voicu, S. Hau, **C. Gheorghe**, G. Croitoru, M. Enculescu, and R.P. Yavetskiy, "Highly transparent Yb:Y_2O_3 ceramics obtained by solid-state reaction and combined sintering procedures," Ceram. Int. **45**(3), 3217-3222 (2019).

53. L. Gheorghe, M. Greculeasa, F. Voicu, **C. Gheorghe**, S. Hau, A. M. Vlaicu, K. N. Belikov, E. Yu. Bryleva, O. V. Gaiduk, "Crystal growth and structural characterization of Sm^{3+}, Pr^{3+} and Dy^{3+}-doped CNGG and CLNGG single crystals," Opt. Mater. **84**, 335-338 (2018).

52. I. O. Vorona, R. P. Yavetskiy, M. V. Dobrotvorskaya, A. G. Doroshenko, S. V. Parkhomenko, A. V. Tolmachev, D. Yu. Kosyanov, L. Gheorghe, **C. Gheorghe**, S. Hau, M. Enculescu, "1532 nm sensitized luminescence and up-conversion in Yb,Er:YAG transparent ceramics," Opt. Mater. **77**, 221-225 (2018).

51. **C. Gheorghe**, S. Hau, L. Gheorghe, F. Voicu, M. Greculeasa, M. Enculescu, K. N. Belikov, E. Yu. Bryleva, O. V. Gaiduk, "Yellow laser potential of cubic $Ca_3(Nb,Ga)_5O_{12}:Dy^{3+}$ and $Ca_3(Li,Nb,Ga)_5O_{12}:Dy^{3+}$ single crystals," J. Alloy. Compd. **739**, 806-816 (2018).

50. I. O. Vorona, R. P. Yavetskiy, A. G. Doroshenko, S. V. Parkhomenko, A. V. Tolmachev, V. N. Baumer, D. Yu Kosyanov, V. I. Vovna, V. G. Kuryavyi, M. Greculeasa, L. Gheorghe, S. Hau, **C. Gheorghe**, G. Croitoru, "Structural-phase state and lasing of 5-15 at.% $Yb^{3+}:Y_3Al_5O_{12}$ optical ceramics," J. Eur. Cer. Soc. **37**(13), 4115-4122 (2017).

49. **C. Gheorghe**, S. Hau, L. Gheorghe, F. Voicu, M. Greculeasa, A. Achim, M. Enculescu, "Optical properties of Sm^{3+} doped $Ca_3(Nb,Ga)_5O_{12}$ and $Ca_3(Li,Nb,Ga)_5O_{12}$ single crystals," J. Lumin. **186**, 175-182 (2017).

48. V. Lupei, A. Lupei, S. Hau, **C. Gheorghe**, A. Ikesue, "Structural and electron-phonon interaction effects in optical spectra of $Pr^{3+}$and Sm^{3+} in YAG," J. Alloy. Compd.. **706**, 176-185 (2017).

47. F. Khaled, P. Loiseau, F. Voicu, A. Achim, S. Hau, **C. Gheorghe**, G. Croitoru, N. Pavel, L. Gheorghe, G. Aka, "Spectroscopic properties and laser performances of Yb:LGSB nonlinear optical crystal," J. Alloy. Compd. **688**, 510-517 (2016).

46. **C. Gheorghe**, A. Lupei, S. Hau, L. Gheorghe, A. M. Vlaicu, "Compositional dependence of optical properties of Sm^{3+}-doped $Y_3Sc_xAl_{5-x}O_{12}$ polycrystalline ceramics," J. Alloy. Compd. **683**, 547-553 (2016).

45. V. Lupei, A. Lupei, **C. Gheorghe**, and A. Ikesue, "Spectroscopic and de-excitation properties of (Cr,Nd):YAG transparent ceramics," Opt. Mat. Express **6**(2), 552-557 (2016).

44. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, "Emission sensitization processes involving Nd^{3+} in YAG," J. Lumin. **170**, 594- 601, (2016).

43. A. Lupei, V. Lupei, S. Hau, **C. Gheorghe**, F. Voicu, "Structure and temperature effects on Nd^{3+} spectra in polycrystalline mixed scandium aluminum garnets $Y_3Sc_xAl_{5-x}O_{12}$," Opt. Mater. **47**, 465-472 (2015).

42 **C. Gheorghe**, L. Gheorghe, A. Achim, S. Hau, R. D. Avram, G. Stanciu, "Optical properties of Sm^{3+} doped strontium hexa-aluminate single crystals," J. Alloy. Compd. **622,** 296-302 (2015).

41. A. Lupei, V. Lupei, **C. Gheorghe**, S. Hau, and A. Ikesue, "Multicenters in Ce^{3+} visible emission of YAG ceramics," Opt. Mater. **37**, 727-733 (2014).

40. D. Avram, **C. Gheorghe**, C. Rotaru, B. Cojocaru, M. Florea, V. Parvulescu, and C. Tiseanu "Lanthanide - lanthanide and lanthanide - defect interactions in co-doped ceria revealed by luminescence spectroscopy," J. Alloy. Compd. **616**, 535-541 (2014).

39. **C. Gheorghe**, A. Lupei, F. M. Voicu, and C. Tiseanu, "Emission properties and site occupation of Sm^{3+} ion doped Lu_2O_3 translucent ceramics," J. Alloy. Compd. **588**, 388-393 (2014).

38. A. Lupei, V. Lupei, and **C. Gheorghe**, "Electronic structure of Sm^{3+} ions in YAG and cubic sesquioxide ceramics," Opt. Mater. **36** (2), 419-424 (2013).

37. A. Lupei, V. Lupei, and **C. Gheorghe**, "Thermal shifts of Sm^{3+} lines in YAG and cubic sesquioxide ceramics," Opt. Mat. Express **3** (10), 1641-1646 (2013).

36. A. Lupei, C. Tiseanu, **C. Gheorghe**, and F. Voicu, "Optical spectroscopy of Sm^{3+} in C_2 and C_{3i} sites of Y_2O_3 ceramics," Appl. Phys. B, **108** (4), 908-918 (2012).

35. L. Gheorghe and **C. Gheorghe**, "Judd-Ofelt analysis and laser investigations of Nd^{3+}-doped $Gd_{1-x}Sc_xCa_4O(BO_3)_3$ single crystal," Optoelectronics and Advanced Materials - Rapid Communications **6** (3-4), 374-382 (2012).

34. V. Lupei, A. Lupei, A. Ikesue, **C. Gheorghe**, L. Gheorghe, A. Achim, "Crystal field disorder effects in the optical spectra of Nd^{3+} and Yb^{3+}-doped CLNGG laser crystals and ceramics", J. Appl. Phys. **112** (6), 063110, 2012.

33. **C. Gheorghe**, A. Lupei, F. Voicu, M. Enculescu, "Sm^{3+}- doped Sc_2O_3 polycrystalline ceramics: spectroscopic investigation," J. Alloy. Compd. **535**, 78-82 (2012).

32. **C. Gheorghe**, A. Lupei, V. Lupei, and L. Gheorghe, "A comparative study of Nd^{3+} and Sm^{3+} ions doped into oxide host materials; correlation between structure and spectral properties," Optoelectronics and Adv. Mat. – Rapid Commun. **6** (1-2), 44-48 (2012).

31. **C. Gheorghe**, L. Gheorghe, P. Loiseau, and G. Aka, "Spectroscopic features and laser performance at 1.06 µm of Nd^{3+} doped $Gd_{1-x}Lu_xCa_4O(BO_3)_3$ single crystal", J. Appl. Phys., **111** (1), 013102 (2012).

30. A. Lupei, V. Lupei, **C. Gheorghe**, A. Ikesue, and M. Enculescu, "Spectroscopic characteristics of Dy^{3+} doped $Y_3Al_5O_{12}$ transparent ceramics," J. Appl. Phys. **110**, 083120 (2011).

29. A. Lupei, V. Lupei, **C. Gheorghe**, and A. Ikesue, "Spectroscopic investigation of Sm^{3+} in YAG ceramic," Rom. Rep. Phys. **63** (3), 817-822 (2011).

28. **C. Gheorghe**, A. Lupei, L. Gheorghe, and A. Achim, "Growth and spectroscopic preliminary investigations of Sm^{3+} doped strontium hexa-aluminates single crystals," Optoelectronics and Adv. Mat. – Rapid Commun. **5** (2), 116-118 (2011).

27. **C. Gheorghe**, A. Lupei, V. Lupei, A. Ikesue, M. Enculescu, "Intensity parameters of Tm^{3+} doped Sc_2O_3 transparent ceramic laser material," Opt. Mater. **33** (3), 501-505 (2011).

26. V. Lupei, A. Lupei, **C. Gheorghe**, and A. Ikesue, "Sensitized Yb^{3+} emission in (Nd, Yb):YAG transparent ceramics", J. Appl. Phys., **108** (12) 123112 (2010).

25. A. Lupei, V. Lupei, A. Ikesue, **C. Gheorghe**, S. Hau, "Nd →Yb energy transfer in (Nd, Yb):Y_2O_3 transparent ceramics," Opt. Mater. **32** (10), 1333-1336 (2010).

24. A. Lupei, V. Lupei, A. Ikesue, **C. Gheorghe**, "Spectroscopic and energy transfer investigation of Nd/Yb in Y_2O_3 transparent ceramics," J. Opt. Soc. Am. B **27** (5), 1002-1010 (2010).

23. **C. Gheorghe**, A. Lupei, V. Lupei, L. Gheorghe, S. Hau, "Judd-ofelt analysis of Nd^{3+} in CLNGG single crystals," JOAM., **12** (4), 818-820 (2010).

22. V. Lupei, A. Lupei, A. Ikesue, **C. Gheorghe**, S. Hau, "Sensitization of Yb^{3+} emission in laser oxide ceramics," Rom. Rep. Phys. **62** (3), 429-443 (2010).

21. A. Lupei, A. Achim, V. Lupei, **C. Gheorghe**, L. Gheorghe, S. Hau, "RE^{3+} doped $SrWO_4$ as laser and nonlinear active crystals," Rom. J. Phys. **54** (9-10), 919-928 (2009).

20. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, E. Osiac, "Energy transfer driven infrared emission processes in rare earth doped Sc_2O_3 ceramics," J. Lumin. **129** (12), 1862-1865 (2009).

19. **C. Gheorghe**, A. Lupei, V Lupei, L. Gheorghe, A. Ikesue "Spectroscopic properties of Ho^{3+} doped Sc_2O_3 transparent ceramic for laser materials," J. Appl. Phys. **105** (12), 123110 (2009).

18. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, "Efficient sensitization of Yb^{3+} emission by Nd^{3+} in Y_2O_3 transparent ceramics and the prospect for high-energy Yb lasers," Opt. Lett. **34** (14), 2141-2143 (2009).

17. A. Lupei, V. Lupei, **C. Gheorghe**, A. Ikesue, E. Osiac, "Upconversion emission of RE^{3+} in Sc_2O_3 ceramic under 800 nm pumping," Opt. Mater. **31** (5), 744-749 (2009).

16. A. Achim, L. Gheorghe, V. Lupei, A. Lupei, **C. Gheorghe**, "Co-doping effects on $SrWO_4$: Nd^{3+} crystals for RAMAN lasers," JOAM **10** (6), 1353-1356 (2008).

15. A. Lupei, V. Lupei, **C. Gheorghe**, L. Gheorghe, A. Achim, "Multicenter structure of the optical spectra and the charge-compensation mechanisms in Nd:$SrWO_4$ laser crystals", J. Appl. Phys. **104** (8), 083102 (2008).

14. **C. Gheorghe**, S. Georgescu, V. Lupei, A. Lupei, A. Ikesue, "Absorption intensities and emission cross section of Er^{3+} in Sc_2O_3 transparent ceramics," J. Appl. Phys. **103** (7), 083116 (2008).

13. **C. Gheorghe**, S. Georgescu, V. Lupei, A. Lupei, A. Ikesue, Judd Ofelt analysis of the Er^{3+} ($4f^{11}$) absorption intensities in Er^{3+}- Sc_2O_3," JOAM, **10** (2), 359-362 (2008).

12. A. Lupei, V.Lupei, **C. Gheorghe**, A.Ikesue, "Excited state dynamics of Er^{3+} in Sc_2O_3 ceramic," J. Lumin. **128** (5-6), 918-920 (2008).

11. A. Lupei, V. Lupei, **C. Gheoghe**, L. Gheorghe, C. Aka, D. Vivien, "Cationic disorder effects in complex oxide laser materials and phosphors," Opt. Mater. **30** (11), 1677-1681 (2008).

10. V. Lupei, A.Lupei, **C. Gheorghe**, A.Ikesue, "Spectroscopic characteristics of Tm^{3+} in Tm and Tm, Nd, Yb:Sc_2O_3 ceramic," J. Lumin. **128** (5-6), 901-904 (2008).

9. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, "Comparative high resolution spectroscopy and emission dynamics of Nd-doped GSGG crystals and ceramics," J. Lumin. **128** (5-6), 885-887 (2008).

8. **C. Gheorghe**, A. Lupei, V. Lupei, L. Gheorghe, A. Achim, D. Vivien, G. Aka, "Comparative study of spectroscopic behavior of Nd^{3+} in magnetoplumbite type laser crystals", JOAM **9** (5), 1281-1285, 2007.

7. V. Lupei, A. Lupei, **C. Gheorghe**, L. Gheorghe, G. Aka, D. Vivien, "Composition dependence of Pr^{3+} spectral characteristics in strontium lanthanum aluminate crystals," Opt. Mater. **30** (1), 164-167 (2007).

6. A. Lupei, V. Lupei, **C. Gheorghe**, L. Gheorghe, D. Vivien, G. Aka and E. Antic - Fidancev, "Disorder effects in Nd^{3+} doped strontium lanthanum aluminate laser crystals," J. Phys. Cond. Matter **18** (2), 597-611 (2006).

5. A. Lupei, V. Lupei, **C. Gheorghe**, L. Gheorghe, E. Antic-Fidancev, D. Vivien, G. Aka, "Polarization effects of Nd^{3+} spectra in strontium hexa-aluminates," JOAM **8** (1), 86-90 (2006).

4. L. Gheorghe, V. Lupei, A. Lupei, **C. Gheorghe**, A. Achim, G. Aka, C. Varona, "Growth and characterization of Nd^{3+} doped strontium hexa - aluminates single crystals," JOAM **8** (1), 82-85 (2006).

3. L. Gheorghe, V. Lupei, A. Lupei, **C. Gheorghe**, C. Varona, P. Loiseau, G. Aka, D. Vivien, B. Ferrand, "Czochralski Growth and Characterization of Neodymium Doped Strontium-Lanthanum Aluminate (ASL:Nd) Single Crystals," J. Cryst. Growth **277** (1-4), 410-415 (2005).

2. A. Lupei, V. Lupei, **C. Gheorghe**, D. Vivien, G. Aka, P. Ascheoung, "Spectroscopic and structural properties of Nd^{3+}doped Strontium Lanthanum Aluminate laser crystals," J. Appl. Phys. **96** (6), 3057-3064 (2004).

1. A. Lupei, V. Lupei, T. Taira, A. Ikesue, **C. Gheorghe**, "Energy transfer processes of Nd^{3+} in Y_2O_3 ceramic," J. Lumin. **102-103**, 72-76 (2003).

2. PROCEEDINGS OF INTERNATIONAL CONFERENCES

(Presentations at International Meetings published in extended version)

8. F. Voicu, **C. Gheorghe**, C. Florica, "Preliminary Study in Preparation of Nd^{3+}:YAG and Sm^{3+}:Y_2O_3 Transparent Ceramics," Analele Universităţii de Vest din Timişoara, Seria Fizică, **56**, 76-80 (2012).

7. A. Lupei, A. Achim, V. Lupei, **C. Gheorghe**, L. Gheorghe, S. Florea, "RE^{3+} doped $SrWO_4$ as laser and nonlinear active crystals," 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, 666-669 (2009).

6. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, A. Stefan, V. Ciupina, A. Prodan, "Spectroscopic characteristics of RE^{3+}:Sc_2O_3 ceramics," 8th Conference on Optics, Sibiu, Romania, September 04-07, 2006; Proc. SPIE, Vol. **6785**, 67850C (2007).

5. V. Lupei, A. Lupei**, C. Gheorghe**, A. Ikesue, "Spectroscopic characterization of ceramic laser materials for high-performance solid-state lasers", Conference on Laser Source Technology for Defense and Security, Orissa, Florida, Apr. 09-10, 2007; Proc. SPIE, Vol. **6552**, 65521D (2007).

4. A. Lupei, V. Lupei, **C. Gheorghe**, L. Gheorghe, E. Antic-Vidancev, D. Vivien, G. Aka,

"Spectroscopic Bases for Optimisation of 900 nm Laser Emission of Nd^{3+} in Strontium Lanthanum Aluminate", International Conference on Lasers, Applications and Technologies, St Petersburg, Russia, May 11-15, 2005; Proc. SPIE, vol. **6054**, 60540F (2006).

3. A. Lupei, V. Lupei, **C. Gheorghe**, L. Gheorghe, D. Vivien, G. Aka, "Spectroscopic investigation of Nd^{3+} in ASL", Int. Conf. on Defects in Insulating Materials, Riga 11-16 lulie 2004. Phys. Status Solidi (c) - Conferences and Critical Reviews, **2** (1), 276-279 (2005).

2. D. Vivien, G. Aka, A. Lupei, V. Lupei, **C. Gheorghe**, "High resolution investigation of Nd^{3+} doped strontium lanthanum aluminate", 7th Conference on Optics (ROMOPTO 2003) Constanta, Romania, Sept. 08-11, 2003; Proc. SPIE, vol **5581**, 287-291 (2004).

1. A. Lupei, E. Antic–Fidancev, G. Aka, D. Vivien, L. Gheorghe, **C. Gheorghe,** "Spectral and structural studies of activated oxoborates RCOB crystals for self non-linear laser processes," 7th Conference on Optics (ROMOPTO 2003) Constanta, Romania, Sept. 08-11, 2003; Proc. SPIE, vol **5581**, 114-122, (2004).

3. COMMUNICATIONS AT INTERNATIONAL CONFERENCES

142. L. Gheorghe, A. Broasca, M. Greculeasa, F. Voicu, S. Hau, **C. Gheorghe**, G. Croitoru, N. Pavel, "High efficiency laser emission in the near-infrared range from a new LGYSB:Nd laser crystal," EUROPHOTON 2026, 21 - 25 Sept. 2026, Arcachon, France; poster presentation P.S.1.3.
141. A. Broasca, M. Greculeasa, F. Voicu, **C. Gheorghe**, S. Hau, G. Croitoru, L. Gheorghe, "Efficient multi-wavelength laser emission from Czochralski-grown Nd-doped LYSB crystal," EUROPHOTON 2026, 21 - 25 Sept. 2026, Arcachon, France; poster presentation P.S.1.5.
140. M. Greculeasa, A. Broasca, F. Voicu, S. Hau, **C. Gheorghe**, C. A. Susală, N. Pavel, L. Gheorghe, "Advanced bifunctional Nd-doped LGSB crystals: strategies for optimizing laser emission in the NIR and green spectral ranges," EUROPHOTON 2026, 21 - 25 Sept. 2026, Arcachon, France; poster presentation P.S.1.6.
139. L. Gheorghe, A. Broasca, M. Greculeasa, F. Voicu, S. Hau, **C. Gheorghe**, G. Croitoru, "LGYSB:Nd Crystal: Czochralski Growth, Optical Properties, and NIR Laser Emission Performances," The 15th Europhysical Conference on Defects in Insulating Materials (EuroDIM 15), July 05-10, 2026, Timisoara, Romania; invited presentation I-03.
138. M. Greculeasa, A. Broasca, F. Voicu, **C. Gheorghe**, S. Hau, C. A. Susala, N. Pavel, L. Gheorghe, "Development of Nd-doped LGSB crystals as new candidates for the next generation of bifunctional crystals," The 15th Europhysical Conference on Defects in Insulating Materials (EuroDIM 15), July 05-10 2026, Timisoara, Romania; oral presentation O-03.
137. A. Broasca, M. Greculeasa, F. Voicu, **C. Gheorghe**, S. Hau, G. Croitoru, L. Gheorghe, "High-Performance Multi-Wavelength Laser Emission from a Newly Developed Nd-Doped LYSB Crystal," The 15th Europhysical Conference on Defects in Insulating Materials (EuroDIM 15), July 05-10, 2026, Timisoara, Romania; oral presentation O-04.
136. S. Hau, L. Gheorghe, G. Stanciu, **C. Gheorghe**, "Up-conversion luminescence and multimodal temperature sensing behaviors in the visible and infrared region of Er^{3+} and (Er^{3+}, Yb^{3+}) ions in $Ca_3Ta_2Ga_3O_{12}$ phosphors," The 15th Europhysical Conference on Defects in Insulating Materials (EuroDIM 15), July 05-10 2026, Timisoara, Romania; poster presentation.
135. **C. Gheorghe**, S. Hau, G. Stanciu, A. Broasca, E. Bancu, L. Gheorghe, N. Scarisoreanu, "Energy transfer in the (Pr, Yb):$Ca^3(Nb,Ga)_5O_{12}$ phosphor with excellent properties for temperature sensing applications," The 15th Europhysical Conference on Defects in Insulating Materials (EuroDIM 15), July 05-10 2026, Timisoara, Romania; poster presentation.
134. F. Voicu, L. Gheorghe, **C. Gheorghe**, S. Hau, M. Greculeasa, A. Broasca, G. Stanciu, M. Enculescu, "Pr^{3+}-doped $Ca_3(Ta,Ga)_5O_{12}$ Single Crystal," The 15th Europhysical Conference on Defects in Insulating Materials (EuroDIM 15), July 05-10, 2026, Timisoara, Romania; poster presentation.
133. M. Greculeasa, A. Broasca, F. Voicu, **C. Gheorghe**, S. Hau, C.A. Susala, N. Pavel, L. Gheorghe, "Growth and characterization of bifunctional Nd:LGSB crystals," The 3rd International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR-

ST), 29 June - 3 July 2026, Poiana Brasov, Romania; oral presentation O-07.

132. A. Broasca, M. Greculeasa, F. Voicu, **C. Gheorghe**, S. Hau, G. Croitoru, L. Gheorghe, "Efficient diode-pumped laser operation in Nd-doped LYSB nonlinear optical crystal," The 3rd International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR-ST), 29 June - 3 July 2026, Poiana Brasov, Romania; oral presentation O-12.
131. **C. Gheorghe**, H. Boubekri, S. Hau, A. M. Voiculescu, O. Toma, M. Diaf, and R. Fartas, "Photoluminescence investigation and up-conversion behavior under different excitation wavelengths of (Er, Tm, Yb) doped CdF_2 single crystal," The 3rd International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR-ST), 29 June - 3 July 2026, Poiana Brasov, Romania; poster presentation P-29.
130. S. Hau, H. Boubekri, M. Diaf, R. Fartas, **C. Gheorghe**, "A multimodal temperature sensing based on up-conversion luminescence of (Er, Y) co-doped fluorite crystals," The 3rd International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR-ST), 29 June - 3 July 2026, Poiana Brasov, Romania; poster presentation P-30.
129. A. M. Voiculescu, S. Hau, G. Stanciu, **C. Gheorghe**, "Upconversion properties and optical temperature-sensing performance in the visible and near-infrared region based on luminescence intensity ratio in a new Er^{3+}:$SrLaGaO_4$ phosphor," The 3rd International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR-ST), 29 June - 3 July 2026, Poiana Brasov, Romania; poster presentation P-31.
128. A. Broasca, M. Greculeasa, F. Voicu, S. Hau, **C. Gheorghe**, G. Croitoru, N. Pavel, L. Gheorghe, "Nd-doped LGYSB: A New Bifunctional Crystal for Efficient Laser Emission and Frequency Conversion," Advanced Solid State Lasers Conference (ASSL), 19 - 23 October 2025, Prague, Czech Republic; oral presentation AW4A.2.
127. M. Greculeasa, A. Broasca, F. Voicu, S. Hau, **C. Gheorghe**, G. Croitoru, N. Pavel, L. Gheorghe, "Advanced Czochralski Growth Strategies for Yb-Doped LYSB Crystals Enabling High-Performance NIR Laser Emission," Advanced Solid State Lasers Conference (ASSL), 19 - 23 October 2025, Prague, Czech Republic; poster presentation JTu2A.21.
126. L. Gheorghe, M. Greculeasa, A. Broasca, F. Voicu, S. Hau, **C. Gheorghe**, C. Susala, G. Croitoru, N. Pavel, "Undoped, Yb- and Nd-Doped LGSB Czochralski-Grown Nonlinear and Laser Crystals," Advanced Solid State Lasers Conference (ASSL), 19 - 23 October 2025, Prague, Czech Republic; poster presentation JTu2A.22.
125. **C. Gheorghe**, S. Hau, A. Broasca, M. Greculeasa, F. Voicu, M. Enculescu, L. Gheorghe, "$Ca_3(Ta,Ga)_5O_{12}$:Pr^{3+} single Crystal: A Promising New Laser Material in the Visible Domain," Advanced Solid State Lasers Conference (ASSL), 19 - 23 October 2025, Prague, Czech Republic; poster presentation JTu2A.24.
124. S. Hau, H. Boubekri, M. Diaf, R. Fartas, A. Broasca, **C. Gheorghe**, "Excellent Sensing Capabilities of the Multimodal Optical Temperature Sensor Based on Er^{3+} Ion Emission in the CdF_2:Er,Y crystal," Advanced Solid State Lasers Conference (ASSL), 19 - 23 October 2025, Prague, Czech Republic; poster presentation JTu2A.26.
123. G. Salamu, M. Greculeasa, A. Broasca, F. Voicu, S. Hau, **C. Gheorghe**, N. Pavel, L. Gheorghe, "Near-Infrared Efficient Laser Emission from a Diode- Pumped 6.2-at.% Yb:LGSB Crystal Grown by the Czochralski Method," Advanced Solid State Lasers Conference (ASSL), 19 - 23 October 2025, Prague, Czech Republic; poster presentation JTu2A.40.
122. L. Gheorghe, A. Broasca, M. Greculeasa, F. Voicu, S. Hau, **C. Gheorghe**, G. Croitoru, N. Pavel, "High efficiency laser emission in the near-infrared range from a new LGYSB:Nd laser crystal," The 8th European Conference on Crystal Growth - ECCG8, 21-25 July 2024, Warsaw, Poland.
121. L. Gheorghe, A. Broasca, M. Greculeasa, F. Voicu, S. Hau, **C. Gheorghe**, G. Stanciu, G. Croitoru, and N. Pavel, "Nd:LYSB as a new laser and nonlinear optical crystal grown by the Czochralski method," The 2nd International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR-ST), 16-21 June 2024, Danube Delta, Crişan, Romania (P2-O1, poster presentation).
120. A. Broasca, M. Greculeasa, F. Voicu, S. Hau, **C. Gheorghe**, G. Croitoru, N. Pavel, and L. Gheorghe, "LGYSB:Nd - a new laser crystal with enhanced performance for high-efficiency laser applications in the near-infrared region," The 2nd International Conference on Laser,

Plasma and Radiation - Science and Technology (ICLPR-ST), 16-21 June 2024, Danube Delta, Crişan, Romania (P2-O2, poster presentation).

119. M. Greculeasa, A. Broasca, F. Voicu, **C. Gheorghe**, S. Hau, G. Stanciu, C.A. Brandus, N. Pavel, and L. Gheorghe, "Crystal growth and characterization of Nd:LGSB as bifunctional laser and nonlinear optical crystals," The 2nd International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR-ST), 16-21 June 2024, Danube Delta, Crişan, Romania (P2-O3, poster presentation).
118. F. Voicu, L. Gheorghe, **C. Gheorghe**, S. Hau, M. Greculeasa, A. Broasca, G. Stanciu, and M. Enculescu," Growth and spectroscopic properties of $Ca_3(Ta,Ga)_5O_{12}Pr^{3+}$ single crystal," The 2nd International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR-ST), 16-21 June 2024, Danube Delta, Crişan, Romania (P2-O4, poster presentation).
117. G. Stanciu, F. Voicu, C. Tihon, A.M. Voiculescu, S Hau, **C. Gheorghe**, G. Croitoru, L. Gheorghe, and N. Pavel, "Multilayered $Y_2O_3/RE^{3+}:Y_2O_3$ (RE= Nd, Yb) transparent ceramics: Fabrication process and laser performances," The 2nd International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR-ST), 16-21 June 2024, Danube Delta, Crişan, Romania (P2-O5, poster presentation).
116. **C. Gheorghe**, S. Hau, G. Stanciu, D. Avram, A. Broasca, and L. Gheorghe, "Pr^{3+} ions doped $Ca_3(M,Ga)_5O_{12}$ (M^{5+} = Nb, Ta) garnet phosphors as new optical temperature sensors," The 2nd International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR-ST), 16-21 June 2024, Danube Delta, Crişan, Romania (P5-01, poster presentation).
115. A. M. Voiculescu, S. Hau, G. Stanciu, and **C. Gheorghe**, "Novel $SrLaGaO_4:Er^{3+}$ perovskite phosphor for optical thermometry," The 2nd International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR-ST), 16-21 June 2024, Danube Delta, Crişan, Romania (P5-02, poster presentation).
114. A. M. Voiculescu, S. Hau, G. Stanciu, and **C. Gheorghe**, "Narrow-band red-emitting $Eu^{3+}:SrLaGaO_4$ phosphor as a potential temperature sensor," The 2nd International Conference on Laser, Plasma and Radiation - Science and Technology (ICLPR-ST), 16-21 June 2024, Danube Delta, Crişan, Romania (P5-03, poster presentation).
113. L. Gheorghe, A. Broasca, M. Greculeasa, F. Voicu, **C. Gheorghe**, S. Hau, G. Stanciu, C. A. Brandus, N. Pavel, "Czochralski-grown LGSB crystals as high-performance NIR laser crystals and SFD crystals in the VIS spectral range," International Conference on Crystal Growth and Epitaxy - ICCGE-20, 30 July - 04 August 2023, Naples, Italy (poster presentation PS 1 - P49).
112. G. Stanciu, F. Voicu, C. A. Brandus, C. E. Tihon, S. Hau, **C. Gheorghe**, G. Croitoru, L. Gheorghe, N. Pavel, "Rare-earths doped Y_2O_3 laser materials," International Conference on Crystal Growth and Epitaxy - ICCGE-20, 30 July - 04 August 2023, Naples, Italy; (poster presentation PS 2 - P30).
111. **C. Gheorghe**, S. Hau, A. Broasca, M. Greculeasa, F. Voicu, M. Enculescu, L. Gheorghe, "$Ca_3(Ta,Ga)_5O_{12}:Pr^{3+}$ as potential laser crystal emitting in the blue and red spectral domains," International Conference on Crystal Growth and Epitaxy - ICCGE-20, 30 July - 04 August 2023, Naples, Italy; (poster presentation PS 3 - P15).
110. A. Broasca, M. Greculeasa, F. Voicu, S. Hau, G. Stanciu, **C. Gheorghe**, G. Croitoru, N. Pavel, L. Gheorghe, "Growth and optical properties of Nd:LYSB as a new laser and nonlinear optical borate crystal," International Conference on Crystal Growth and Epitaxy - ICCGE-20, 30 July - 04 August 2023, Naples, Italy; (oral presentation Optical Crystals 4 - O3).
109. M. Greculeasa, A. Broasca, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, G. Croitoru, N. Pavel, L. Gheorghe, "Development of LYSB and Yb-doped LYSB crystals as new candidates for the next generation of nonlinear optical and/or laser crystals," International Conference on Crystal Growth and Epitaxy - ICCGE-20, 30 July - 04 August 2023, Naples, Italy; (oral presentation Optical Crystals 6 - O4).
108. A. M. Voiculescu, S. Hau, G. Stanciu, **C. Gheorghe**, "Synthesis and characterization of a new red phosphor $SrLaGaO_4$ doped with Eu^{3+}," The 21th International Balkan Workshop on Applied Physics and Materials Science, 11-14 July, 2023, Constanta, Romania; paper S1 O17 (Book of abstracts, ISSN 2501-9058, page 30; oral presentation).
107. M. Greculeasa, A. Broasca, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, G. Croitoru, N. Pavel, L. Gheorghe, "Development of LYSB and Yb-doped LYSB crystals as new candidates for the

next generation of nonlinear optical and/or laser crystals," International Conference on Crystal Growth and Epitaxy (ECCGE-20), 30 July – 4 August 2023, Napoli, Italy (oral presentation - 04).

106. A. Broasca, M. Greculeasa, F. Voicu, S. Hau, **C. Gheorghe**, C.A. Brandus, L. Gheorghe, "Growth and optical properties of Nd:LYSB as a new laser and nonlinear optical borate crystal," International Conference on Crystal Growth and Epitaxy (ECCGE-20), 30 July - 4 August 2023, Napoli, Italy (oral presentation - 03)

105. A.-M. Voiculescu, S. Hau, G. Stanciu, **C. Gheorghe**, "Synthesis and optical characterization of a new red phosphor $SrLaGaO_4$ doped with Eu^{3+}," 21st International Balkan Workshop on Applied Physics and Materials Science - IBWAP 2023, 11-14 July 2023 Constanta, Romania (oral presentation).

104. L. M. Gheorghe, A. Broasca, M. Greculeasa, F. Voicu, G. Croitoru, S. Hau, **C. Gheorghe**, N. Pavel, "Yb- and Nd-doped $La_xGd_ySc_{4-x-y}(BO_3)_4$ (LGSB) as new high performance near-infrared laser crystals," The 9th Tiny Integrated Laser and Laser Ignition Conference 2023, 19-21 April 2023, Pacifico Yokohama, Yokohama, Japan, presentation TILA-LICp-01 (poster presentation).

103. G. Stanciu, F. Voicu, C. A. Brandus, C. E. Tihon, S. Hau, **C. Gheorghe**, G. Croitoru, L. M. Gheorghe, N. Pavel, "RE^{3+}:Y_2O_3 transparent ceramic media realized via a multi-step sintering method," The 9th Tiny Integrated Laser and Laser Ignition Conference 2023, 19-21 April 2023, Pacifico Yokohama, Yokohama, Japan, presentation TILA-LICp-02 (poster presentation).

102. L. Gheorghe, A. Broasca, M. Greculeasa, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, "Czochralski growth and characterization of newly developed Pr:LGSB nonlinear optical and laser crystal," 7th European Conference on Crystal Growth - ECCG7, 25-27 July 2022, Paris, France; oral presentation.

101. S. Hau, M. Greculeasa, A. Broasca, F. Voicu, G. Stanciu, D. Avram, M. Enculescu, L. Gheorghe, **C. Gheorghe**, "Pr^{3+}-doped $Ca_3(Ta, Ga)_5O_{12}$ single crystal as potential laser material in the visible range," 7th European Conference on Crystal Growth - ECCG7, 25-27 July 2022, Paris, France; presentation P20.

100. S. Hau, **C. Gheorghe**, L. Gheorghe, F. Voicu, M. Greculeasa, A. Broasca, G. Stanciu, M. Enculescu, "Spectroscopic Characterizations of Pr^{3+} and Dy^{3+} doped Calcium Tantalum Gallium Garnet- $Ca_{2.85}Ta_{1.80}Ga_{3.10}O_{12}$ Single Crystals," 20th International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2022), July 12-15, Constanta, Romania; presentation S1-P7.

99. A. Broasca, M. Greculeasa, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, and L. Gheorghe, "Growth and optical properties of the newly developed Pr:LGSB bifunctional crystal," 10th EPS-QEOD EUROPHOTON Conference, 28 Aug. - 2 Sept. 2022, Hannover, Germany; presentation TUE-P-1.8.

98. M. Greculeasa, A. Broasca, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, C.A. Brandus, N. Pavel, and L. Gheorghe, "Development of Czochralski-grown $La_{0.733}Nd_{0.035}Gd_{0.452}Sc_{2.75}(BO_3)_4$ as a new bifunctional laser and nonlinear crystal," 10th EPS-QEOD EUROPHOTON Conference, 28 Aug. - 2 Sept. 2022, Hannover, Germany; presentation TUE-P-1.9.

97. G. Stanciu, F. Voicu, C. A. Brandus, C. E. Tihon, S. Hau, **C. Gheorghe**, G. Croitoru, L. Gheorghe, N. Pavel, "Fabrication and laser performances of Nd- and Yb-doped $Y_3Al_5O_{12}$ transparent ceramics," International Conference on Laser, Plasma and Radiation - Science and Technology, June 7-10, 2022 Bucharest, Romania; poster presentation P2-06.

96. M. Greculeasa, A. Broasca, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, C.A. Brandus, N. Pavel, M. Enculescu, L. Gheorghe, "Crystal Growth and Characterization of $La_{0.733}Nd_{0.035}Gd_{0.452}Sc_{2.78}(BO_3)_4$ as a New Bifunctional Laser and Nonlinear Optical Crystal," International Conference on Laser, Plasma and Radiation - Science and Technology, June 7-10, 2022 Bucharest, Romania; poster presentation P2-05.

95. A. Broasca, M. Greculeasa, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, L. Gheorghe, "Czochralski Growth and Characterization of new Pr:LGSB Nonlinear Optical Crystal," International Conference on Laser, Plasma and Radiation - Science and Technology, June 7-10, 2022 Bucharest, Romania; poster presentation P2-04.

94. A. M. Voiculescu, S. Hau, G. Stanciu, R. D. Avram, **C. Gheorghe**, "Luminescence properties and optical thermometry of Er^{3+}-Yb^{3+} co-doped $LaAlO_3$ phosphors," International Conference on Laser, Plasma and Radiation - Science and Technology, June 7-10, 2022 Bucharest, Romania; poster presentation P2-02.

93. S. Hau, **C. Gheorghe**, L. Gheorghe, F. Voicu, M. Greculeasa, A. Brosca, G. Stanciu, D. Avram, M. Enculescu, "Luminescence and optical thermometry of the Pr^{3+} ions doped $Ca_3(M,Ga)_5O_{12}$ (M^{5+} = Nb, Ta) garnet phosphors," International Conference on Laser, Plasma and Radiation - Science and Technology, June 7-10, 2022 Bucharest, Romania; poster presentation P2-01.

92. A. M. Voiculescu, S. Hau, G. Stanciu, **C. Gheorghe**, "Synthesis by solid state reaction and luminescence properties of $LaAlO_3$ perovskite phosphor doped with Rare Earths," TIM 20-21 International Physics Conference, 11-13 November 2021, Timișoara, Romania. poster presentation CMP 10.

91. S. Hau, **C. Gheorghe**, L. Gheorghe, G. Stanciu, "Optical properties of Pr^{3+}-doped $Ca_3(Ta,Ga)_5O_{12}$ ceramic phosphors," TIM 20-21 International Physics Conference, 11-13 November 2021, Timișoara, Romania, poster presentation CMP-P3.

90. 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, poster presentation CA-P.7.

89 G. Stanciu, F. Voicu, C.-A. Brandus, E.-C. Tihon, S. Hau**, C. Gheorghe**, G. Croitoru, L. Gheorghe, "Development of a new sintering technique for fabricating high-quality Nd^{3+}- and Yb^{3+}-doped Y_2O_3 Transparent Ceramics," 2021 Conference on Lasers and Electro-Optics/Europe - European Quantum Electronics Virtual Conferences (CLEO®/Europe-EQEC 2021), 21-25 June 2021, poster presentation CE-P.4.

88. 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.

87. G. Stanciu, F. Voicu, C.-A. Brandus, E.-C. Tihon, S. Hau, **C. Gheorghe**, G. Croitoru, L. Gheorghe, "Development of a new sintering technique for fabricating high-quality Nd3+- and Yb3+-doped Y2O3 Transparent Ceramics," 2021 Conference on Lasers and ElectroOptics/Europe - European Quantum Electronics Virtual Conferences (CLEO®/Europe-EQEC 2021), 21-25 June 2021, poster presentation CE-P.4.

86. 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 nearinfrared laser crystals," 2021 Conference on Lasers and Electro-Optics/Europe - European Quantum Electronics Virtual Conferences (CLEO®/Europe-EQEC 2021), 21-25 June 2021, poster presentation CA-P.7.

85. A. Broasca, M. Greculeasa, F. Voicu, S. Hau, G. Croitoru, **C. Gheorghe**, N. Pavel, L. Gheorghe, "New Yb:LYSB bifunctional crystal for efficient near-infrared laser emission and selffrequency doubling conversion," 9th EPS-QEOD Europhoton Virtual Conference, 30 August - 4 September 2020; poster presentation Tu-P1.12.

84. G. Stanciu, F. Voicu, C. A. Brandus, C. Tihon, S. Hau, **C. Gheorghe**, G. Croitoru, L. Gheorghe, "Enhancement of the laser emission efficiency of Yb:Y2O3 ceramics via multi-step sintering method fabrication," 9th EPS-QEOD Europhoton Virtual Conference, 30 August - 4 September 2020; poster presentation Tu-P1.13.

83. L. Gheorghe, M. Greculeasa, A. Broasca, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, C. Brandus, G. Croitoru, 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, oral presentation AM3A.2.

82. A. Broasca, L. Gheorghe, M. Greculeasa, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, G. Croitoru, N. Pavel, "Czochralski growth and characterization of pure and Yb-doped $La_xGd_ySc_{4-x-}$

$_y(BO_3)_4$ nonlinear and laser crystal," OSA Laser Congress, Advanced Solid State Lasers Conference - ASSL 2019, 29 September 2019 - 03 October 2019, Vienna, Austria, poster presentation JM5A.40.

81. L. Gheorghe, M. Greculeasa, A. Broasca, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, "Yb^{3+} - doped $La_xGd_ySc_{4-x-y}(BO_3)_4$ as bifunctional laser and nonlinear optical crystal," Excited States of Transitions Elements Conference - ESTE 2019, 08-13 September 2019, Kudowa Zdrój, Poland, oral presentation O-10.

80. S. Hau, **C. Gheorghe**, L. Gheorghe, F. Voicu, M. Greculeasa, G. Stanciu, A. Broasca, M. Enculescu, "Optical properties of Pr^{3+} ions doped garnet crystals," Excited States of Transitions Elements Conference - ESTE 2019, 08-13 September 2019, Kudowa Zdrój, Poland, poster presentation.

79. C. A. Brandus, **C. Gheorghe**, S. Hau, A. Broasca, M. Greculeasa, 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, Münich, Germany, poster presentation CA-P.44

78. L. Gheorghe, M. Greculeasa, A. Broasca, F. Voicu, G. Stanciu, S. Hau, **C. Gheorghe**, G. Croitoru, and N. Pavel, "Pure, Yb- and Nd-doped $La_xGd_ySc_{4-x-y}(BO_3)_4$ Czochralski-grown nonlinear optical and laser crystals," TIM 19 Physics Conference, 29 - 31 May 2019, Timisoara, Romania, **invited presentation** CM-I02.

77. F. M. Voicu, L. Gheorghe, M. Greculeasa, A. Broasca, **C. Gheorghe**, S. Hau, and G.Croitoru, "Nd^{3+} doped $La_xGd_ySc_{4-x-y}(BO_3)_4$ as bifunctional laser and nonlinear crystal," TIM 19 Physics Conference, 29 - 31 May 2019, Timisoara, Romania, poster presentation CM-P06.

76. S. Hau, **C. Gheorghe**, L. Gheorghe, F. Voicu, M. Greculeasa, G. Stanciu, and M. Enculescu, "Luminescence properties of Pr^{3+} doped $Ca_3(Li,Nb,Ga)_5O_{12}$ single crystal," TIM 19 Physics Conference, 29 - 31 May 2019, Timisoara, Romania, poster presentation CM-P09.

75. M. Greculeasa, 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, poster presentation CM-P11.

74. **C. Gheorghe**, S. Hau, L. Gheorghe, and G. Stanciu, "Cooperative energy transfer in $Ca_3(Nb,Ga)_5O_{12}$ ceramics doped with ytterbium and terbium," TIM 19 Physics Conference, 29 - 31 May 2019, Timisoara, Romania, poster presentation CM-P12.

73. L. Gheorghe, M. Greculeasa, F. Voicu, F. Khaled, P. Loseau, G. Aka, S. Hau, **C. Gheorghe**, G.Croitoru, N. Pavel, "Czochralski growth and optical properties of pure, Yb- and Nd-doped $La_xGd_ySc_{4-x-y}(BO_3)_4$ nonlinear optical and laser crystals,'' 8th EPS-QEOD EUROPHOTON CONFERENCE, Solid State, Fibre, and Waveguide Coherent Light Sources, 02-07 September, 2018, Barcelona, Spain; Europhysics Conference Abstracts Volume 42C, ISBN 979-10-96389-10-0; poster presentation ThP.34.

72. M. Greculeasa, L. Gheorghe, F. Voicu, **C. Gheorghe**, S. Hau, A. M. Vlaicu, " Growth and characterization of Sm- and Dy-doped CNGG and CLNGG single crystals for laser emission in the yellow - orange spectral range,'' 8th EPS-QEOD EUROPHOTON CONFERENCE, Solid State, Fibre, and Waveguide Coherent Light Sources, 02-07 September, 2018, Barcelona, Spain; Europhysics Conference Abstracts Volume 42C, ISBN 979-10-96389-10-0; poster presentation ThP.41.

71. L. Gheorghe, M. Greculeasa, F. Voicu, F. Khaled, P. Loiseau, G. Aka, S. Hau, **C. Gheorghe**, G. Croitoru, N. Pavel, "Czochralski growth, NLO properties and laser performances of pure and Nd-doped $La_xGd_ySc_{4-x-y}(BO_3)_4$- LGSB single crystals," TIM18 Physics Conference, 24-26 May 2018, Timisoara, Romania, oral presentation CM-O05.

70. S. Hau, **C. Gheorghe**, L. Gheorghe, F. Voicu, M. Greculeasa, G. Stanciu, M. Enculescu, "Optical properties of Pr^{3+} doped $Ca_3(Nb,Ga)_5O_{12}$ single crystal," TIM18 Physics Conference, 24-26 May 2018, Timisoara, Romania; CM-P11, poster presentation.

69. M. Greculeasa, L. Gheorghe, F. Voicu, **C. Gheorghe**, S. Hau, M. Enculescu, "Growth and spectroscopic properties of Dy^{3+}-doped CNGG and CLNGG crystals for lasers in the yellow

spectral region," TIM18 Physics Conference, 24-26 May 2018, Timisoara, Romania, poster presentation CM-P12.

68. L. Gheorghe, M. Greculeasa, F. Voicu, F. Khaled, P. Loiseau, G. Aka, S. Hau, **C. Gheorghe**, G.Croitoru, N. Pavel, "Pure and Nd-doped Czochralski-grown $La_xGd_ySc_{4-x-y}(BO_3)_4$ nonlinear optical single crystals," ECCG6 Sixth European Conference on Crystal Growth, Varna, Bulgaria, 16-20 September 2018; poster presentation S02-P15.

67. M. Greculeasa, L. Gheorghe, F. Voicu, **C. Gheorghe**, S. Hau, A. M. Vlaicu, "Crystal growth and structural investigation of Sm^{3+}, Dy^{3+}-doped CNGG and CLNGG crystals for lasers in the visible range," ECCG6 Sixth European Conference on Crystal Growth, Varna, Bulgaria, 16-20 September 2018; poster presentation S02-P35.

66. G. Stanciu, L. Gheorghe, F. Voicu, S. Hau, **C. Gheorghe**, T. Dascalu, M. Enculescu, "Highly transparent $Yb:Y_2O_3$ ceramics obtained by solid-state reaction and combined sintering procedures," ECCG6 Sixth European Conference on Crystal Growth, Varna, Bulgaria, 16-20 September 2018, poster presentation S09-P11.

65. I. Vorona, R. Yavetskiy, A. Tolmachev, L. Gheorghe, **C. Gheorghe**, G. Croitoru, "The effect of rareearth doping on sintering and functional response of RE:YAG (RE= Nd^{3+}, Yb^{3+}) transparent ceramics," ECCG6 Sixth European Conference on Crystal Growth, Varna, Bulgaria, 16-20 September 2018; poster presentation S04-P02.

64. S. Hau, **C. Gheorghe**, L. Gheorghe, F. Voicu, M. Greculeasa, M. Enculescu, Optical properties of Pr^{3+} doped $Ca_3(Nb,Ga)_5O_{12}$ single crystal, TIM 2018 Physics Conference, 26-28 mai 2018, Timisoara, Romania, poster presentation.

63. F. Voicu, L. Gheorghe, A. Achim, **C. Gheorghe**, S. Hau, P. Loiseau, F. Khaled, G. Aka, G. Croitoru, Optical and laser performances of Yb:LGSB nonlinear optical crystal, ROCAM 2017, 11-14 Iulie 2017, Bucresti Romania, poster presentation.

62. I.O. Vorona, R.P. Yavetskiy, M.V. Dobrotvorskaya, A.G. Doroshenko, S.V. Parkhomenko, A.V. Tolmachev, L. Gheorghe, **C. Gheorghe**, S. Hau, Solid-state sintering and luminescent properties of Yb^{3+}, Er^{3+}:YAG transparent ceramics, International Conference on Oxide Materials for Electronic Engineering - fabrication, properties and applications, OMEE-2017, May 29 - June 2, 2017, Lviv, Ukraine, poster presentation Mo-P59.

61. I.O. Vorona, R. P. Yavetskiy, A. G. Doroshenko, S. V. Parkhomenko, A. V. Tolmachev, L. Gheorghe, M. Greculeasa, **C. Gheorghe**, S. Hau, and G. Croitoru, Nd^{3+}:YAG Ceramic Materials with Efficient Laser Emission under Diode-Laser Pumping, LIC 2017, 20-23 June 2017, Bucuresti Romania, poster presentation.

60. L. Gheorghe, F. Voicu, M.Greculeasa, A. Achim, F. Khaled, P. Loiseau, G. Aka, S. Hau, **C.Gheorghe**, G Croitoru, "Pure and yb-doped $La_xGd_ySc_{4-x-y}(BO_3)_4$ incongruent borates type crystal: czochralski growth, nlo properties and laser performances", TIM 17 Physics Conference, 25 - 27 May 2017, Timisoara, Romania, invited presentation CM-I01.

59. F. Voicu, L. Gheorghe, M. Greculeasa, A. Achim, **C. Gheorghe**, S. Hau, "Growth and optical properties of Sm^{3+} doped $Ca_3(Nb,Ga)_5O_{12}$ and $Ca_3(Li,Nb,Ga)_5O_{12}$ single crystals", TIM 17 Physics Conference, 25 - 27 May 2017, Timisoara, Romania, poster presentation CM-P08.

58. S. Hau, **C. Gheorghe**, L. Gheorghe, I. Porosnicu, A. Crisan, "Luminescence properties and energy transfer of Sm^{3+} and Dy^{3+} co-doped $Ca_3(Li,Nb,Ga)_5O_{12}$: Ce^{3+} novel phosphors under UV excitation", Timisoara, Romania, 25-27 Mai 2017, poster presentation P02.

57 I. Vorona, R. Yavetskiy, A. Doroshenko, S. Parkhomenko, A. Tolmachev, S. Hau, **C. Gheorghe**, G. Croitoru, L. Gheorghe, "Yb^{3+}:YAG trasparent ceramics as active media for diode-pumped lasers", 6th International Conference on Excited States of Transitions Elements, 21 - 26 August 2016, Polanica Zdrój, Poland, poster presentation P-41.

56 V. Lupei, A. Lupei, **C. Gheorghe**, S. Hau, A. Ikesue, "Dynamics of Sensitization in (Cr,Nd,Yb):YAG Ceramics", 19th Conference of Dinamical Processes in excited states of Solids, 17-22 Iulie 2016, Paris, Franta, poster presentation.

55 A.Lupei, V. Lupei, S. Hau, **C. Gheorghe**, A. Ikesue, "Electron-phonon interaction of Pr^{3+} and Sm^{3+} in YAG, 19th Conference of Dinamical Processes in excited states of Solids, 17-22 Iulie 2016, Paris, Franta, poster presentation.

54 S. Hau, **C. Gheorghe**, L. Gheorghe, A. Achim, F. Voicu, M Greculeasa, M. Enculescu, O.Toma, Crystal growth and spectroscopic investigation of Sm^{3+} doped CNGG and CLNGG crystals, IBWAP 2016, 7-9 iulie 2016, Constanta, Romania, poster presentation.

53. **C. Gheorghe**, A. Lupei, S. Hau, F. Voicu, A. M. Vlaicu, M. Enculescu, L. Gheorghe, Compositional dependence of optical properties of Sm^{3+}-doped $Y_3Sc_xAl_{5-x}O_{12}$ polycrystalline ceramics, REMAT 2015, 26-28 Octobrie 2015, Wroclaw, Polonia, poster presentation.

52. S. Hau, **C. Gheorghe**, A. Lupei, L. Gheorghe, Optical properties of Sm^{3+}: CLNGG polycrystalline ceramics, REMAT 2015, 26-28 Octobrie 2015, Wroclaw, Polonia, poster presentation.

51. L. Gheorghe, F. Voicu, G. Salamu, F. Khaled, A. Achim, **C. Gheorghe**, P. Loiseau, N. Pavel, G. Aka, On the crystal growth of incongruent borate type crystal $La_xGd_ySc_z(BO_3)_4$ (x + y + z=4) by Czochralski method, Fifth European Conference on Crystal Growth, 9-11 September 2015, Bologna, Italy, oral presentation.

50. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, "Spectroscopic and de-excitation properties of (Cr, Nd):YAG ceramics," 9th International Conference on F-Elements, 06 - 09 September 2015, UK, Oxford; poster presentation.

49. V. Lupei, A. Lupei, S. Hau, **C. Gheorghe**, F. Voicu, "Compositional disorder effects in the spectra of Nd^{3+} in $Y_3Sc_xAl_{5-x}O_{12}$ ceramics," 9th International Conference on F-Elements, 06 - 09 September 2015, UK, Oxford; poster presentation.

48 L. Gheorghe, A. Achim, F. Voicu, G. Stanciu, **C. Gheorghe**, "Growth and characterization of Sm: ASL crystals for visible lasers", The 8th International Conference on Advanced Materials: ROCAM 2015, 7-10 July, Bucharest, Romania, oral presentation.

47. F. Voicu, **C. Gheorghe**, S. Hau, L. Esposito, J. Hostasa, Sm^{3+}:YSAG transparent ceramic, 10th Laser Ceramics Symposium (LCS), International Symposium on Transparent Ceramics for Photonic Applications, 1-5 December 2014, Wroclaw, POLONIA, poster presentation.

46. L. Gheorghe, **C. Gheorghe**, A. Achim, F. Voicu, G. Stanciu, Novel crystals for yellow-orange lasers, CM-I06, TIM 2014, 20-22 nov 2014, Timisoara, invited presentation.

45. F. Voicu, **C. Gheorghe**, S. Hau, L. Esposito, and J. Hostasa, "Preliminary results on Sm3+:YSAG transparent ceramic," 5th International Student Conference on Photonics, Orastie, Romania, 23-26 September 2014; poster presentation P.09.

44. L. Gheorghe, A. Achim, G. Stanciu, F. Voicu, and **C. Gheorghe**, "Sm^{3+}-doped $Sr_{1-x}La_xMg_xAl_{12-x}O_{19}$ (ASL) single crystals for visible yellow-orange lasers," 5th International Student Conference on Photonics, Orastie, Romania, 23-26 September 2014, invited presentation I.05.

43. A. Lupei, V. Lupei, **C. Gheorghe**, S. Hau, and A. Ikesue, "Perturbed centers in visible emission of Ce^{3+}:YAG ceramic," 17th International Conference on Luminescence and Optical Spectroscopy of Condensed Matter (ICL2014), 13-18 July, 2014, Wroclaw, Poland; poster presentation P 25.

42. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, F. Voicu, "Suppression of Nd^{3+} And Yb^{3+} ASE by Sm^{3+} absorption in ceramics", 9th Laser Ceramics Symposium (LCS), International Symposium on Transparent Ceramics for Photonic Applications,2- 6 December 2013, Daejeon, South Korea, poster presentation.

41. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, "Sensitization processes of Nd^{3+} and Yb^{3+} doped YAG ceramics for broadband pumped", 9th Laser Ceramics Symposium (LCS), International Symposium on Transparent Ceramics for Photonic Applications,2- 6 December 2013, Daejeon, South Korea, poster presentation.

40. A. Lupei, V. Lupei, **C. Gheorghe**, A. Ikesue, F. Voicu, "Thermal effects on Sm^{3+} doped ceramic laser materials for ASE suppression", ASSL 2013, Optics and photonics congresses, Advanced Solid-State Lasers, 27 Oct. - 01.Nov.2013, Paris, France, poster presentation AM4A.02.

39. **C. Gheorghe**, A. Lupei, F. Voicu, C. Tiseanu, "Sm^{3+} emission from different sites in Lu_2O_3 ceramics", 3rd International Conference on Rare Earth Materials (REMAT 2013), 26-28 April 2013, Wroclaw, POLONIA, poster presentation P17.

38. F. Voicu, A. Lupei, **C. Gheorghe,** Sm^{3+} doped YAG and sesquioxides translucent ceramics," INDLAS 2013, International Conference "Modern Laser Applications" Third Edition, 20-24 May 2013, Bran, Romania**,** oral presentation.

37. A.Lupei, C. Tiseanu, **C. Gheorghe**, "Electronic structure and energy transfer processes of Sm^{3+} in sesquioxides, 3rd International Conference on the Physics of Optical Materials and Devices(ICOM 2012), 3 – 6 sept. 2012, Serbia- Belgrad, poster presentation.

36. V. Lupei, A. Lupei, A. Ikesue, **C. Gheorghe**, L. Gheorghe, A. Achim, F. M. Voicu, "Nd^{3+} and Yb^{3+} in disordered garnet crystals and ceramics", 8th International Conference on *f*-Elements" (ICFE8), 25-31 August 2012, Udine, Italia, poster presentation.

35. A. Lupei, C. Tiseanu, **C. Gheorghe** ,F. Voicu,"Spectroscopic analysis of Sm^{3+} in C_2 and C_{3i} sites of Y_2O_3", 8th International Conference on *f*-Elements" (ICFE8), 25-31 August 2012, Udine, Italia, poster presentation.

34. F. Voicu, **C. Gheorghe**, A. Crisan, "Preparation of Nd^{3+}:YAG and Sm^{3+}:Sc_2O_3 transparent ceramics," International Student Conference on Photonics 2012, SPIE Student Chapter, 8-11 May 2012, Sinaia, Romania. Book of abstracts, ISSN 2284-9750, p. 71; poster presentation.

33. F. Voicu, **C. Gheorghe**, C. Florica, "Preliminary study in preparation of N^{3+}:YAG and Sm^{3+}:Y_2O_3 transparent ceramics," Physics Conference TIM-11, 24-27 November 2011, Timisoara, Romania, poster presentation CMP-P38.

32. **C. Gheorghe**, A. Lupei, F. Voicu, "Sm^{3+}-doped Sc_2O_3 polycrystalline ceramics: Spectroscopic investigation," Physics Conference TIM-11, 24-27 November 2011, Timisoara, Romania; poster presentation CMP-P12.

31. **C. Gheorghe**, A. Lupei, V. Lupei, A. Ikesue, "Dy^{3+} doped $Y_3Al_5O_{12}$ transparent ceramics, a system for visible emission," 12th International Balkan Workshop on Applied Physics (IBWAP), July 6-8, 2011, Constanta, Romania, poster presentation S1-P43.

30. **C. Gheorghe**, A. Lupei, L. Gheorghe, A. Achim, F. Voicu, "Preliminary spectroscopic investigations of Sm^{3+} doped ASL single crystal," 12th International Balkan Workshop on Applied Physics (IBWAP), July 6-8, 2011, Constanta, Romania, poster presentation S1-P42.

29. A. Achim, V. Lupei, A. Lupei, **C. Gheorghe**, L. Gheorghe, F. M. Voicu, "Growth and spectroscopy of Nd^{3+} and Yb^{3+} in disordered garnet crystals," 12th International Balkan Workshop on Applied Physics (IBWAP), July 6-8, 2011, Constanta, Romania, poster presentation S1-P40.

28. V. Lupei, A. Lupei, A. Ikesue, **C. Gheorghe**, "Comparative study of Nd→Yb transfer in oxide ceramics," 4th EPS-QEOD EUROPHOTON Conference, August 29 - September 3, 2010, Hamburg, Germany, poster presentation TuP6.

27. A. Lupei, V. Lupei, A. Ikesue, **C. Gheorghe**, S. Hau, "Nd→Yb energy transfer in (Nd,Yb):Y_2O_3 transparent ceramics," 5th Intern. Symposium on Laser, Scintillator and Non Linear Optical Materials (ISLNOM-2009), 3-5 September 2009, Pisa, Italy, invited presentation.

26. V. Lupei, A. Lupei, L. Gheorghe, **C. Gheorghe**, A. Achim, "Spectroscopic properties of Yb^{3+} in new disordered Ca-Li-Nb-Ga and Ca-Li-Nb-Ta-Ga-garnet crystals", 5th International Symposium on Laser, Scintillator and Non Linear Optical Materials (ISLNOM-2009), 3-5 Sept. 2009, Pisa, Italy, poster presentation PA13.

25. **C. Gheorghe**, A. Lupei, V. Lupei, L. Gheorghe, S. Hau, "Intensity of the f-f transitions of Nd^{3+} in CLNGG single crystals", 5th International Symposium on Laser, Scintillator and Non Linear Optical Materials (ISLNOM-2009), 3-5 September 2009, Pisa, Italy, poster presentation PA12.

24. A. Lupei, V. Lupei, A. Ikesue, **C. Gheorghe**, S. Hau, "Spectroscopic investigations of (Nd, Yb) in Y_2O_3 transparent ceramics," Micro- to Nano-Photonics II - ROMOPTO 2009 Conference, August 31 - Sept. 03, 2009, Sibiu, Romania, poster presentation I.P.1.

23. V. Lupei, A. Lupei, L. Gheorghe, **C. Gheorghe**, A. Achim, "Spectral characterstics of Yb^{3+} in calcium lithium niobium gallium garnets," CLEO-Europe 2009 Conference, June 14-19, 2009, Munich, Germany, poster presentation CA.P.18.

22. A. Achim, L. Gheorghe, V. Lupei, A. Lupei, **C. Gheorghe**, "Growth and characterisation of Yb^{3+} doped calcium lithium niobium gallium garnet (CLNGG) single crystals", 10th International Balkan Workshop on Applied Physics (IBWAP), July 6-8, 2009, Constanta, Romania, poster presentation S1-P62.

21. **C. Gheorghe**, A. Lupei, V. Lupei, L. Gheorghe, S. Hau, "Judd-ofelt analysis of Nd^{3+} in CLNGG single crystals", 10th International Balkan Workshop on Applied Physics (IBWAP), July 6-8, 2009, Constanta, Romania, poster presentation S1-P64.

20. V. Lupei, A. Lupei, **C. Gheorghe**, N. Pavel, A Ikesue, "New spectroscopic and laser emission properties of Nd:GSGG crystals and ceramics," 3rd EPS-QEOD EUROPHOTON Conference, August 31 - Sept. 5, 2008, Paris, France, poster presentation TUp.27.

19. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, "Spectroscopic particularities of the garnet crystals and transparent ceramics and their implication on the laser emission," 3rd EPS-QEOD EUROPHOTON Conference, August 31 - September 5, 2008, Paris, France, poster presentation WEp.26.

18. L. Gheorghe, A. Achim, V. Lupei, A. Lupei, **C. Gheorghe**, E. Cotoi, "Growth and spectroscopic characterization of Yb^{3+} doped calcium lithium niobium gallium garnet (Yb:CLNGG) crystals for diode laser pumping," The 2nd INDLAS International Conference Modern Laser Applications, May 20-23, 2008, Bran, Romania, poster presentation.

17. V. Lupei, A. Lupei, **C. Gheorghe**, N. Pavel, A. Ikesue, "New high-resolution spectroscopic and diode-pumped laser emission properties of Nd:GSGG," The 2nd INDLAS International Conference Modern Laser Applications, May 20-23, 2008, Bran, Romania, poster presentation.

16. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, E. Osiac, "Energy transfer driven infrared emission processes in rare earth doped Sc_2O_3 ceramics," Internat Conf. on Luminescence ICL'08, Lyon, France, June 2008, poster presentation TuA2-03.

15. A. Lupei, V. Lupei, **C. Gheorghe**, L. Gheorghe, A. Achim, "Nonequivalent Nd^{3+} centers in $SrWO_4$," International Conference on Luminescence ICL'08, Lyon, France, 7-11 July 2008, poster presentation WE-P-028.

14. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, "High-resolution spectroscopy of Nd-doped GSGG crystals and transparent ceramics," Photonics Europe 2008, April, 2008, Strasbourg, France, poster presentation 6998-58.

13. A. Lupei, V. Lupei, **C. Gheorghe**, A. Achim, L. Gheorghe, "High resolution spectroscopy of $SrWO_4$: Nd^{3+} laser crystals," Photonics Europe 2008, April, 2008, Strasbourg, France, poster presentation 6998-56.

12. L. Gheorghe, A. Achim, V. Lupei, A. Lupei, **C. Gheorghe**, C. Stoicescu, "Growth and spectral characterization of $SrWO_4$:Nd^{3+} nonlinear Raman active crystal", INDLAS 2007, 23-25 Mai, Bran, Romania, poster presentation.

11. V Lupei, A. Lupei, **C. Gheorghe**, G. Boulon, A. Jouini, A. Ikesue, "Single Ion and Cooperative Optical Processes in Yb-Doped Sc_2O_3 Transparent Ceramics", Frontiers in Optics-Laser Science, FiO-LS 06- Rochester- USA Oct 2006, poster presentation 1032.

10. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, "Spectroscopic and Energy Transfer Properties of Rare Earth Doped Sc_2O_3 Transparent Ceramics", Frontiers in Optics-Laser Science, FiO-LS 06-Rochester, USA, Oct 2006, poster presentation 1039.

9. A. Lupei, V.Lupei, **C. Gheorghe**, L. Gheorghe, G Aka, and D. Vivien, "Spectroscopic properties and highly efficient 900-nm laser emission of Nd^{3+} in strontium lanthanum hexa-aluminate: relation to composition and structure," Photonics Europe an SPIE Europe Event, Strasbourg France, 3 - 7 April 2006, poster presentation.

8. V. Lupei, A. Lupei, **C. Gheorghe**, L. Gheorghe, A. Achim, G. Aka, D. Vivien, “Structural disorder and energy transfer in Pr^{3+} strontium lanthanum aluminate crystals”, Int. Conf Inorg. Mat. Ljubljana, Slovenia, Sept. 2006., poster presentation.

7. V. Lupei, A. Lupei, **C. Gheorghe**, A. Ikesue, “Rare earth doped Sc_2O_3 ceramics as potential laser materials”, Int. Conf. Inorg. Materials, Ljubljana, Slovenia, Sept. 2006, poster presentation.

6. A. Lupei, V. Lupei, **C. Gheorghe**, A. Ikesue, ”RE^{3+} doped Sc_2O_3 ceramics as potential energy transfer driven laser materials”, International conference on f-elements, 6th ICFE 06-Wroclaw-Poland, Sept. 2006, poster presentation.

5. V.Lupei, A. Lupei, **C. Gheorghe**, A.Ikesue, “Energy transfer in rare earth-doped Sc_2O_3 ceramic laser materials”, ISLNOM 4, Conf. Int., 26-30 Iunie 2006, Praga, Czech Republic, poster presentation.

4. A. Lupei, V. Lupei, **C. Gheorghe**, L. Gheorghe, D. Vivien, G. Aka, “Structural models for Nd^{3+} centers in hexaaluminates”, ISLNOM 4, Conf. Int., 26-30 Iunie 2006, Praga, Czech Republic, poster presentation.

3. A. Lupei, V. Lupei, **C. Gheorghe**, L. Gheorghe, D. Vivien, and G. Aka, "Cationic Distribution and Spectral Properties of Nd^{3+} in Hexa-Aluminate Laser Crystals," in Advanced Solid-State Photonics, Technical Digest (Optical Society of America, 2005), poster presentation TuB6.

2. V. Lupei, A. Lupei, **C. Gheorghe**, L.Gheorghe, G.Aka, D.Vivien, “Structural properties of Pr activated strontium aluminate quantum cutting phosphors”, Conference on Advanced Optical Materials,Tucson-SUA (2005), poster presentation.

1. A.Lupei, E. Antic–Fidancev, L. Gheorghe, **C. Gheorghe**, “Growth and spectroscopic investigation of Eu^{3+} in YCOB”, 7th Conference on Optics (ROMOPTO 2003) Constanta, Romania, Sept. 08-11, 2003, poster presentation I.P.2.

4. PATENTS

1. L. M. Gheorghe, A. Broasca, M. Greculeasa, F. M. Voicu, **C. Gheorghe**, S. Hau, G. Croitoru, G. Stanciu, “Cristal laser de tip borat și sistem laser cu emisie eficientă în domeniul infraroșu apropiat / Borate laser crystal and laser system with efficient near-infrared emission,” Romanian patent, OSIM application number **a 2023 00743** / 27.11.2023.