

CS I, dr. GHEORGHE Lucian Marian

Domeniul de abilitare: Fizică

I. Activitatea didactica si profesionala

Nr. Crt.	Tipul activitatilor	Indicatori
1	Carti in edituri internationale recunoscute de Web of Science in calitate de autor	$A_1 = \sum_i 4 / n_i^{ef}$
	$A_1 =$	0
2	Capitole de carti in edituri internationale recunoscute de Web of Science in calitate de autor / Review-uri in reviste cotate ISI	$A_2 = \sum_i 1 / n_i^{ef}$
	$A_2 =$	0
3	Carti in edituri internationale recunoscute de Web of Science in calitate de editor	$A_3 = \sum_i 0.5 / n_i^{ef}$
	$A_3 =$	0
4	Carti, manuale, indrumare de laborator in edituri nationale sau alte edituri internationale ca autor, note interne, prezentari sustinute pentru aprobarea analizelor de date in cadrul colaborarilor mari	$A_4 = \sum_i 0.5 / n_i^{ef}$
	$A_4 =$	0
5	Capitole de carti in edituri nationale sau alte edituri internationale ca autor	$A_5 = \sum_i 0.2 / n_i^{ef}$
	$A_5 =$	0
6	Lucrari in Extenso (cel putin 3 pagini) publicate in Proceedings-uri indexate ISI	$A_6 = \sum_i 0.2 / n_i^{ef}$
	17. I. O. Vorona, R. P. Yavetskiy, A. G. Doroshenko, S. V. Parkhomenko, A. V. Tolmachev, L. Gheorghe , M. Greculeasa, C. Gheorghe, S. Hau, C. Brandus, and G. Croitoru, "Nd3+:YAG Ceramic Materials with Efficient Laser Emission under Diode-Laser Pumping," in Laser Ignition Conference 2017, OSA Technical Digest (online) (Optical Society of America, 2017), paper LWA5.4 (https://doi.org/10.1364/LIC.2017.LWA5.4).	0.025
	16. L. Gheorghe , A. Achim, F. Voicu, and G. Stanciu, "Advanced NLO Crystals for Efficient Blue Laser Sources Based on SHG Processes," in Advanced Solid State Lasers, OSA Technical Digest (online) (Optical Society of America, 2015), paper ATu2A.3, doi: 10.1364/ASSL.2015.ATu2A.3.	0.05
	15. 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 YVO4:Eu phosphor," ROMOPTO 2009: Ninth Conference on Optics: Micro- to Nanophotonics II, Sibiu, Romania, August 31 - Sept. 03, 2009, Proc. SPIE, vol. 7469, 74690C (2010). (6 pagini)	0.026
	14. L. Gheorghe , A. Achim, P. Loiseau, and G. Aka, "New nonlinear Gd _{1-x} R _x Ca ₄ O(BO ₃) ₃ (R = Lu, Sc) crystals for 400-nm blue-violet light generation by type-I noncritical phase-matching frequency doubling processes," ROMOPTO 2009: Ninth Conference on Optics: Micro- to Nanophotonics II, Sibiu, Romania, August 31 - Sept. 03, 2009, Proc. SPIE, vol. 7469, 746904 (2010). (6 pagini)	0.05
	13. 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). (4 pagini)	0.036
	12. K. Xu, L. Gheorghe , P. Loiseau, G. Aka, J. Lejay, D. Rytz, P. Villeval, A. Maillard, P. Georges, L. Mc Donagh, F. Salin, "Development of new non-linear crystals for the conception of solid laser devices emitting ultraviolet rays, UVX 2008: 9th Conference Of Coherent And Incoherent Sources Uv, Vuv And X; Applications And Recent Developments, Oct. 07-10, 2008 Dourdan, FRANCE, Pages: 93-99, (2008). (7 pagini)	0.025
	11. S. Georgescu, O. Toma, A. Achim, A. M. Chinie, L. Gheorghe , and A. Stefan, "Optical studies of the partially disordered crystals langasite (La ₃ Ga ₅ SiO ₁₄) and langatate (La ₃ Ga _{5.5} Ta _{0.5} O ₁₄) doped with Eu ³⁺ ," ROMOPTO 2006: Eighth Conference on Optics (V. I. Vlad Editor), Sibiu, Romania, 28-31 August 2006, Proc. SPIE, vol. 6785, 678509 (2007). (6 pagini)	0.036

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	10. L. Gheorghe, P. Loiseau, G. Aka, T. Taira, and V. Lupei, "Growth and noncritical 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, 61900Z (2006). (9 pagini)	0.04
	9. 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). (8 pagini)	0.033
	8. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, D. Vivien, and G. Aka, "Cationic Distribution and Spectral Properties of Nd ³⁺ in Hexa-aluminate LaserCrystals," in Advanced Solid-State Photonics (TOPS), C. Denman and I. Sorokina, eds., Vol. 98 of OSA Trends in Optics and Photonics (Optical Society of America, 2005), 52-57, (2005). (6 pagini)	0.036
	7. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, D. Vivien, and G. Aka, "Spectroscopic investigation of Nd ³⁺ in ASL", Int. Conf. on Defects in Insulating Materials, Riga 11-16 Iulie 2004. Phys. Status Solidi (c) - Conferences and Critical Reviews, 2 (1), 276-279 (2005). (4 pagini)	0.036
	6. S. Constantinescu, L. Gheorghe, C. Stoicescu, S. Georgescu, O. Toma, and I. Bibicu, "Growth and optical and Mössbauer investigations of eu-doped trigonal la-gallosilicate crystals", Rom. Rep. Phys. 57 (2), 249-260 (2005). (12 pagini)	0.036
	5. A. Lupei, E. Antic-Fidancev, G. Aka, D. Vivien, L. Gheorghe, C. Gheorghe, "Spectral and structural studies of GdCOB and YCOB crystals," 7th Conference on Optics (ROMOPTO 2003) Constanta, Romania, Sept. 08-11, 2003; Proc. SPIE, vol 5581, 114-122, (2004). (9 pagini)	0.036
	4. L. Gheorghe, S. Georgescu, S. Constantinescu, I. Mateescu, L. Diamandescu, and E. Borca, "Synthesis, growth and characterisation of langasite crystals," 2002 IEEE International Ultrasonics Symposium, October 8-11, Munich, Germany; 2002 IEEE Ultrasonics Symposium Proceedings, Vol. 1 & 2, Book Series: Ultrasonics Symposium, 965-968 (2002) (4 pagini)	0.036
	3. L. Gheorghe, S. Georgescu, I. Mateescu, L. Dumitrache, E. Borca, C. Ranea, "Synthesis growth and X-ray diffraction studies of Langastie crystals," IEEE International Frequency Control Symposium and PDA Exhibition, May 29-31, 2002, Proceedings of the 2002 IEEE International Frequency Control Symposium & Pda Exhibition, Book Series: IEEE International Frequency Control Symposium, 320-323 (2002). (4 pagini)	0.036
	2. A. Lupei, V. Lupei, E. Osiac, L. Rogobete, L. Gheorghe, and A. Petraru, "Spectroscopy and energy transfer characteristics of Nd ³⁺ in CNGG," ROMOPTO 2000: Sixth Conference on Optics, Bucharest, Romania, 4-7 September 2000, Proc. SPIE vol. 4430, 62-70. (2001). (9 pagini)	0.036
	1. A. Lupei, V. Lupei, E. Osiac, L. Gheorghe, M. Petrache, C. Stoicescu, and A. Petraru, "Growth and spectral characteristics of Nd ³⁺ in calcium lithium niobium gallium garnet (CLNGG) crystals," 6th Symposium on Optoelectronics (SIOEL'99), Bucharest, Romania, Sept. 22-24, 1999, Proc. SPIE, Vol. 4068, 423-428 (2000). (6 pagini).	0.033
	A₆ =	0.606
7	Brevete de inventie internationale acordate	$A_7 = \sum_i 3 / n_i^{ef}$
	A₇ =	0
8	Brevete de inventie nationale acordate	$A_8 = \sum_i 0.5 / n_i^{ef}$
	A₈ =	0
9	Director/ Responsabil/coordonator pentru programe de studii, programe de formare continua, proiecte internationale si proiecte de infrastructura (proiectele de cercetare se exclud)	$A_9 = \sum_i 0.5$
	A₉ =	0
10	Director/ Responsabil de proiecte	$A_{10} = \sum_i V_i / 100000$
	1. Director proiect PN II – PARTENERIATE, Centrul National de Management Programe Nr. Contract 12105/01.10.2008, 2008-2011 / "Noi materiale nelineare laser pentru generarea eficienta de emisie fotonica coerenta in domeniul albastru - ultraviolet apropiat" (NCBUV) Total proiect : 759976.13 lei / 203485 euro, 1 Euro=3.7348 lei (01.10.2008)	2.0348
	2. Director proiect PN II-IDEI, CNCIS Nr. Contract 491/2009, 2009-2011 / "Cercetari de noi materiale si procese nelineare pentru generarea eficienta de radiatie laser in domeniul spectral albastru – violet" Total proiect: 433658.98 lei / 106497.78 euro / 1 Euro=4.072 lei (07.01.2009)	1.0649

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	3. Director proiect Proiect Bilateral ROMANIA - FRANTA 2009-2010, PN II, Programul CAPACITATI-Modul III (Le Programme "Hubert Curien (PHC)-BRANCUSI") Nr. Contract 214-1, 2009-2010 / "Noi materiale nelinere laser pentru generarea eficienta de emisie fotonica coerenta in domeniul albastru - ultraviolet apropiat" (NCBUV) Total Proiect: 16067 lei / 3882.88 euro / 1 Euro=4.1379 lei (14.04.2009)	0.0388
	4. Director proiect International Cooperation, Joint Research Project Romania - France/ CNCS-UEFISCDI Nr. Contract 3 RO-FR/ 03.01.2012, 2012-2015/ "Cercetarea si dezvoltarea de cristale optic nelinere de tip borat pure si activate cu ioni Yb³⁺ pentru realizarea de noi surse laser de mare putere cu emisie in vizibil, compacte si acordabile, bazate pe procese de conversie de frecventa" (BORATESYB) Total proiect: 1087500 lei / 251625.44 euro / 1 Euro=4.32 lei (04.01.2012).	2.5162
	5. Director proiect PROGRAMUL "PARTENERIATE" PN-II-PT-PCCA-2013-4-1488, UEFISCDI Nr. Contract 10/2014, 2014-2016/ "Noi cristale de inalta performanta pentru dezvoltarea de surse laser de mare putere acordabile in domeniul vizibil bazate pe procese optice neliniare" (NOVILAS) Total proiect: 1437500 lei / 325764.2 euro / 1 Euro=4.4127 lei (01.10.2014)	3.2576
	6. Director proiect Proiect Bilateral ROMANIA - UCRAINA, PN II, Programul CAPACITATI, Modul III PROJECT NUMBER:2/BM/15.06.2016, 2016-2017/ "Dezvoltarea ceramicilor laser policristaline Y₂O₃:Yb³⁺ pentru constructia de laseri microcip" Total proiect: 26962.44 lei / 5.948.6 euro / 1 Euro=4.5325 lei (15.06.2016)	0.0594
	7. Director proiect PNCDI III - Programul 4 - Cercetare Fundamentala Si De Frontiera PN-III-P4-ID-PCE Nr. Contract 119/12.07.2017, 2017-2019/ "Dezvoltarea de cristale laser si optic neliniare eficiente de borati de tip huntit pentru surse laser in infrarosu apropiat si vizibil" (NLOBIFUN) Total proiect: 850000 lei / 185922.39 euro / 1 Euro=4.5718 lei (12.07.2017)	1.8592
	8. Director proiect PNCDI III - Programul 4 - Cercetare Fundamentala Si De Frontiera PN-III-P4-ID-PCE Nr. Contract 49/2021/ "Advanced bifunctional Nd:LYSB crystal for new and efficient laser sources in the near-infrared and visible spectral ranges", (BILAS) Total proiect: 1198032 lei / 242,148.96 euro / 1 Euro=4.9475 lei (06.09.2021)	2.1214
	A₁₀ =	12.9523
	Total A = $\sum_i A_i$	13.5583

II. Activitatea de cercetare

Nr. Crt.	Tipul activitatilor	Indicatori	
1	Articole stiintifice originale in extenso ca autor.	AIS	$I = \sum_i AIS_i / n_i^{ef}$
	1. L. Gheorghe , M. Petrache, V. Lupei, "Preparation, growth, and characterisation of Nd ³⁺ - doped calcium lithium niobium gallium garnet (Nd ³⁺ : CLNGG) single crystals," <i>J. Crystal Growth</i> 220 (1-2), 121-125 (2000).	0.582	0.1940
	2. A. Lupei, V. Lupei, L. Gheorghe , L. Rogobete, E. Osiac, A. Petraru, "The nature of nonequivalent Nd ³⁺ centers in CNGG and CLNGG," <i>Opt. Mater.</i> 16 (3), 403-411 (2001).	0.575	0.10454
	3. A. Lupei, E. Antic-Fidancev, G. Aka, D. Vivien, P. Aschehoug, Ph. Goldner, F. Pelle, L. Gheorghe , "Spectroscopic and Crystal Field Studies of Nd ³⁺ in GdCOB and YCOB," <i>Phys. Rev. B</i> 65 (22), 224518 (2002).	1.251	0.19246
	4. M. Popescu, F. Sava, S. Georgescu, L. Gheorghe , I. N. Mihailescu, M. Cristescu, G. Socol, H. Bradaczek, "Thin films of langasite (La ₃ Ga ₅ SiO ₁₄) prepared by pulsed laser deposition," <i>JOAM</i> 4 (3), 813-818 (2002).	0.161	0.02476
	5. L. E. Dinca, L. Gheorghe , A. Lupei, D. Pantelica, N. Scintee, "Growth, RBS-ERDA characterisations and modelling in Nd ³⁺ -doped calcium-lithium-niobium-gallium garnet (CLNGG:Nd) crystal," <i>Nucl. Instr. & Met. Phys. A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> 486 (1-2), 93-97 (2002).	0.401	0.0802
	6. L. Gheorghe , V. Lupei, A. Lupei, C. Gheorghe, C. Varona, P. Loiseau, G. Aka, D. Vivien, B.	0.582	0.08314

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	Ferrand "Czocharlski Growth and Characterization of Neodymium Doped Strontium-Lanthanum Aluminate (ASL:Nd) Single Crystals," <i>J. Crystal Growth</i> 277 (1-4), 410-415 (2005).		
7.	A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe , D. Vivien, G. Aka, E. Antic-Fidancev, "Disorder effects in Nd ³⁺ doped strontium lanthanum aluminate laser crystals," <i>J. Phys: Cond. Mater.</i> 18 (2), 97-611 (2006).	1.024	0.17066
8.	L. Gheorghe , V. Lupei, A. Achim, G. Aka, C. Varona, "Growth and optical properties of GdCa ₄ O(BO ₃) ₃ :RE crystals (RE=Sc ³⁺ or Lu ³⁺) as new nonlinear materials," <i>JOAM</i> 8 (1) 91-94 (2006).	0.161	0.0322
9.	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," <i>JOAM</i> 8 (1), 86-90 (2006).	0.161	0.02683
10.	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," <i>JOAM</i> 8 (1), 82-85 (2006).	0.161	0.02683
11.	L. Gheorghe , P. Loiseau, G. Aka, V. Lupei, "Growth and type-I noncritical phase-matching second-harmonic-generation of Gd _{1-x} R _x Ca ₄ O(BO ₃) ₃ (R ³⁺ = Sc ³⁺ or Lu ³⁺) crystals," <i>J. Crystal Growth</i> 294 (2), 442-446 (2006).	0.582	0.14550
12.	L. Gheorghe , P. Loiseau, G. Aka, V. Lupei, T. Taira, "Second harmonic generations of blue light in nonlinear optical crystals of Gd _{1-x} Lu _x Ca ₄ O(BO ₃) ₃ and Gd _{1-x} Sc _x Ca ₄ O(BO ₃) ₃ through non-critical phase matching," <i>JOSA B</i> 23 (8), 1630-1634 (2006).	0.972	0.19440
13.	M.T. Andersen, J.L. Mortensen, S. Germershausen, P. Tidemand-Lichtenberg, P. Buchhave, L. Gheorghe , V. Lupei, P. Loiseau, G. Aka, "First measurement of the nonlinear coefficient for Gd _{1-x} Lu _x Ca ₄ O(BO ₃) ₃ and Gd _{1-x} Sc _x Ca ₄ O(BO ₃) ₃ crystals," <i>Opt. Express</i> 15 (8), 4893-4901 (2007).	1.412	0.20171
14.	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 crystal," <i>JOAM</i> 9 (5), 1281-1285 (2007).	0.161	0.03220
15.	V. Lupei, A. Lupei, C. Gheorghe, L. Gheorghe , G. Aka, D. Vivien, "Composition dependence of Pr ³⁺ spectral characteristics in strontium lanthanum aluminate crystals," <i>Opt. Mater.</i> 30 (1), 164-167 (2007).	0.575	0.10454
16.	L. Gheorghe , P. Loiseau, G. Aka, V. Lupei, "Investigations of NCPM second harmonic generation and self frequency doubling in Gd _{1-x-y} R _x Nd _y Ca ₄ O(BO ₃) ₃ (R= Sc or Lu) crystals," <i>Opt. Mater.</i> 30 (1), 44-46 (2007).	0.575	0.14375
17.	S. Georgescu, O. Toma, L. Gheorghe , A. Achim, A.M. Chinie, A. Stefan, "Disorder effects in the fluorescence spectra of Eu ³⁺ in langatate (La ₃ Ga _{5.5} Ta _{0.5} O ₁₄) crystals," <i>Opt. Mater.</i> 30 (2), 212-215 (2007).	0.575	0.10454
18.	S. Georgescu, O. Toma, A.M. Chinie, L. Gheorghe , A. Achim, A. Stefan, "Spectroscopic characteristics of langasite (La ₃ Ga ₅ SiO ₁₄) and langatate (La ₃ Ga _{5.5} Ta _{0.5} O ₁₄) crystals doped with Eu ³⁺ ," <i>Opt. Mater.</i> 30 (6), 1007-1012 (2008).	0.590	0.10727
19.	S. Georgescu, O. Toma, A.M. Chinie, L. Gheorghe , A. Achim, A.S. Stefan, "Excited state dynamics of Eu ³⁺ in the partially disordered crystals La ₃ Ga ₅ SiO ₁₄ and La ₃ Ga _{5.5} Ta _{0.5} O ₁₄ ," <i>J. Lumin.</i> 128 (5-6), 741-743 (2008).	0.551	0.10018
20.	A. Achim, L. Gheorghe, V. Lupei, A. Lupei, C. Gheorghe , C. Stoicescu, "Co-doping effects on SrWO ₄ :Nd ³⁺ crystals for Raman lasers," <i>JOAM</i> 10 (6), 1353-1356 (2008).	0.113	0.02054
21.	A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe , G. Aka, D. Vivien, "Cationic disorder effects in complex oxide laser materials and phosphors," <i>Opt. Mater.</i> 30 (11), 1677-1681 (2008).	0.590	0.10727
22.	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," <i>J. Appl. Phys.</i> 104 (8), 083102 (2008).	0.945	0.17181
23.	A. Lupei, A. Achim, V. Lupei, C. Gheorghe, L. Gheorghe , S. Hau, "RE ³⁺ doped SrWO ₄ as laser and nonlinear active crystals," <i>Rom. J. Phys.</i> 54 (9-10), 919-928 (2009).	0.095	0.01727
24.	C. Gheorghe, A. Lupei, V. Lupei, L. Gheorghe , A. Ikesue, "Spectroscopic properties of Ho ³⁺ doped Sc ₂ O ₃ transparent ceramic for laser materials," <i>J. Appl. Phys.</i> 105 (12), 123110 (2009).	0.877	0.17540
25.	S. Georgescu, A.M. Voiculescu, O. Toma, C. Tiseanu, L. Gheorghe , A. Achim, C. Matei, "Eu-doped langasite, langatate and langanite - possible new red phosphors," <i>OAM-RC</i> 3 (12), 1379-1382 (2009).	0.107	0.01783
26.	S. Georgescu, A. M. Voiculescu, C. Matei, O. Toma, L. Gheorghe , A. Achim, "Reflectance measurements on europium-doped langasite, langanite and langatate powders," <i>Rom. Rep. Phys.</i> 62 (1), 128-133 (2010).	0.125	0.02272

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27.	L. Gheorghe , A. Achim, B. Sbarcea, S. Mitrea, "Synthesis and X-ray investigations of new $Y_{1-x}R_xCa_4O(BO_3)_3$ (R = Sc, Lu) nonlinear materials," <i>OAM-RC 4</i> (3), 318-321 (2010).	0.078	0.01950
28.	L. Gheorghe , P. Loiseau, G. Aka, "Second-harmonic generation of 400 nm blue-violet light in $Gd_{1-x}R_xCa_4O(BO_3)_3$ (R = Lu, Sc) crystals through noncritical phase-matching," <i>JOAM 12</i> (4), 821-823 (2010).	0.113	0.03766
29.	C. Gheorghe, A. Lupei, V. Lupei, L. Gheorghe , S. Hau, "Judd-ofelt analysis of Nd^{3+} in CLNGG single crystals," <i>JOAM 12</i> (4), 818-820 (2010).	0.113	0.02260
30.	L. Gheorghe , P. Loiseau, G. Aka, "Four hundred nanometer blue-violet light production by type-I noncritical phase-matching second-harmonic generation in $Gd_{1-x}R_xCa_4O(BO_3)_3$ (R = Lu, Sc): Crystal growth and nonlinear characterization," <i>Opt. Mater.</i> 32 (10), 1283-1285 (2010).	0.567	0.18900
31.	L. Gheorghe , A. Achim, F. Voicu, C. Ghica, "Growth and structural characterization of $Y_{0.6}Lu_{0.4}Ca_4O(BO_3)_3$ new nonlinear crystal," <i>JOAM 12</i> (8), 1680-1683 (2010).	0.113	0.02825
32.	A. Achim, L. Gheorghe , S. Georgescu, and F. Voicu, "Growth and characterization of $Y_{0.7}Sc_{0.3}Ca_4O(BO_3)_3$ single crystal for nonlinear optical applications," <i>OAM-RC 4</i> (12), 1977-1980 (2010).	0.078	0.01950
33.	L. Gheorghe , G. Aka, "Crystal growth, NCPM second harmonic generation, and infrared laser performance for SFD in $Gd_{1-x}R_xNd_yCa_4O(BO_3)_3$ (R = Sc or Lu) crystals," <i>OAM-RC 4</i> (12), 1973-1976 (2010).	0.078	0.03900
34.	S. Georgescu, A. M. Voiculescu, O. Toma, L. Gheorghe , A. Achim, C. Matei, S. Hau "Luminescence efficiency of europium-doped LGS, LGT and LGN crystals", <i>OAM-RC 4</i> (12), 1937-1941 (2010).	0.078	0.01300
35.	O. Toma, L. Gheorghe , A. M. Vlaicu, "Synthesis and preliminary characterization of Erbium Lithium Niobium Gallium Garnet", <i>Rom. J. Phys.</i> 56 (7-8) 928 (2011).	0.095	0.03166
36.	C. Gheorghe, A. Lupei, L. Gheorghe , and A. Achim, "Growth and spectroscopic preliminary investigations of Sm^{3+} doped strontium hexa-aluminates single crystals," <i>OAM-RC 5</i> (2), 116-118 (2011).	0.053	0.01325
37.	L. Gheorghe , A. Achim, F. Voicu, and G. Aka, "Growth and type-I non critical phase matching second harmonic generation of $Y_{1-x}R_xCa_4O(BO_3)_3$ (R= Sc or Lu) crystals," <i>OAM-RC 5</i> (2), 103-105 (2011).	0.053	0.01325
38.	S. Georgescu, A. M. Voiculescu, O. Toma, L. Gheorghe , A. Achim, "D-5(0) luminescence in europium-doped langanite," <i>OAM-RC 5</i> (11), 1139-1141 (2011).	0.053	0.01060
39.	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", <i>J. Appl. Phys.</i> 111 (1), 013102 (2012).	0.796	0.19900
40.	O. Tom0.01725a, L. Gheorghe , and A. M. Vlaicu, "Synthesis and Characterization of Erbium Lithium0.0138 Niobium Gallium Garnet", <i>Acta Physica Polonica A</i> 121 (1), 193-195 (2012).	0.131	0.04366
41.	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," <i>OAM-RC 6</i> (1-2), 44-48 (2012).	0.069	0.01725
42.	S. Georgescu, O. Toma, A. M. Voiculescu, L. Gheorghe , and A. Achim, "Energy level scheme of Eu^{3+} : $La_3Ga_5SiO_{14}$ (langasite)," <i>OAM-RC 6</i> (1-2), 22-24 (2012).	0.069	0.0138
43.	O. Toma, S. Georgescu, L. Gheorghe , "Energy levels of Er^{3+} in calcium lithium niobium gallium garnet", <i>Rom. Rep. Phys.</i> 64 S, 1381-1390 (2012).	0.125	0.04166
44.	O. Toma, L. Gheorghe , R. Birjega, "Solubility limits of erbium in partially disordered crystals langanite and langatate," <i>Rom. J. Phys.</i> 57 (9-10), 1375-1381 (2012).	0.095	0.03166
45.	L. Gheorghe , C. Gheorghe, "Judd-Ofelt analysis and laser investigations of Nd^{3+} -doped $Gd_{1-x}Sc_xCa_4O(BO_3)_3$ single crystal," <i>OAM-RC 6</i> (3-4), 374-382 (2012).	0.069	0.0345
46.	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", <i>J. Appl. Phys.</i> 112 (6), 063110 (2012).	0.7960	0.14473
47.	A. M. Voiculescu, S. Georgescu, C. Matei, A. G. Stefan, L. Gheorghe , A. Achim, F. Voicu, "Infrared-excited red, green, violet and UV luminescence from langasite crystal doped with erbium and ytterbium," <i>Rom. J. Phys.</i> 58 (1-2), 136-142 (2013).	0.125	0.02083
48.	C. Gheorghe, L. Gheorghe , A. Achim, S. Hau, R. D. Avram, G. Stanciu, "Optical properties of Sm^{3+} doped strontium hexa-aluminate single crystals", <i>J. Alloys Compd.</i> 622 , 296-302 (2015).	0.558	0.10145
49.	C. A. Brandus, L. Gheorghe , T. Dascalu, "Efficient laser operation at 1.06 μm in co-doped Lu^{3+} , Nd^{3+} : $GdCa_4O(BO_3)_3$ single crystal", <i>Opt. Mater.</i> 42 , 376-380 (2015).	0.461	0.15367

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

50.	A. Achim, L. Gheorghe , F. M. Voicu, G. Stanciu, "Blue light production by type-I non-critical phase matching second-harmonic generation in $\text{La}(\text{Ca}_{1-x}\text{Sr}_x)_4\text{O}(\text{BO}_3)_3$ single crystals", <i>CrystEngComm</i> , 17 , 4098-4101 (2015).	0.670	0.1675
51.	C. Gheorghe, A. Lupei, S. Hau, L. Gheorghe , A. M. Vlaicu, "Compositional dependence of optical properties of Sm^{3+} -doped $\text{Y}_3\text{Sc}_x\text{Al}_{5-x}\text{O}_{12}$ polycrystalline ceramics," <i>J. Alloys Compd.</i> 683 , 547-553 (2016).	0.552	0.11040
52.	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 $\text{Yb}:\text{LGSB}$ nonlinear optical crystal, <i>J. Alloys Compd.</i> 688 , 510-517 (2016).	0.552	0.07360
53.	L. Gheorghe , F. Khaled, A. Achim, F. Voicu, P. Loiseau, G. Aka, "Czochralski Growth and Characterization of Incongruent Melting $\text{La}_x\text{Gd}_y\text{Sc}_z(\text{BO}_3)_4$ ($x+y+z=4$) Nonlinear Optical Crystal", <i>Cryst. Growth Design</i> 16 , 3473-3479 (2016).	0.836	0.15200
54.	F. Khaled, P. Loiseau, G. Aka, L. Gheorghe , Rise in power of $\text{Yb}:\text{YCOB}$ for green light generation by self-frequency doubling, <i>Opt. Lett.</i> 41 (2016) 3607-3610.	0.882	0.22050
55.	C. Gheorghe, S. Hau, L. Gheorghe , F. Voicu, M. Greculeasa, A. Achim, M. Enculescu, "Optical properties of Sm^{3+} doped $\text{Ca}_3(\text{Nb,Ga})_5\text{O}_{12}$ and $\text{Ca}_3(\text{Li,Nb,Ga})_5\text{O}_{12}$ single crystals", <i>J. Lumin.</i> 186 , 175-182 (2017).	0.423	0.07050
56.	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. Kuryavii, M. Greculeasa, L. Gheorghe , S. Hau, C. Gheorghe, G. Croitoru, "Structural-phase state and lasing of 5-15 at% $\text{Yb}^{3+}:\text{Y}_3\text{Al}_5\text{O}_{12}$ optical ceramics", <i>J. Eur. Ceram. Soc.</i> 37 (13), 4115-4122 (2017).	0.679	0.07147
57.	R. P. Yavetskiy, S. V. Parkhomenko, I. O. Vorona, A. V. Tolmachev, D. Yu. Kosyanov, V. G. Kuryavii, V. Yu. Mayorov, L. Gheorghe , G. Croitoru, M. Enculescu, Effect of green body annealing on laser performance of $\text{YAG}:\text{Nd}^{3+}$ ceramics, <i>Ceram. Int.</i> 44 (4), 4487-4490 (2018).	0.454	0.06053
58.	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 $\text{Ca}_3(\text{Nb,Ga})_5\text{O}_{12}:\text{Dy}^{3+}$ and $\text{Ca}_3(\text{Li,Nb,Ga})_5\text{O}_{12}:\text{Dy}^{3+}$ single crystals, <i>J. Alloys Compd.</i> 739 , 806-816 (2018).	0.601	0.08585
59.	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 $\text{Yb,Er}:\text{YAG}$ transparent ceramics", <i>Opt. Mater.</i> 77 , 221-225 (2018).	0.409	0.05112
60.	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," <i>Opt. Mater.</i> 84 , 335-338 (2018).	0.409	0.05842
61.	G. Stanciu, L. Gheorghe , F. Voicu, S. Hau, C. Gheorghe, G. Croitoru, M. Enculescu, and R.P. Yavetskiy, "Highly transparent $\text{Yb}:\text{Y}_2\text{O}_3$ ceramics obtained by solid-state reaction and combined sintering procedures," <i>Ceram. Int.</i> 45 (3), 3217-3222 (2019).	0.478	0.073538
62.	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," <i>J. Alloys Compd.</i> 799 , 288-301 (2019).	0.629	0.09676
63.	R. P. Yavetskiya, A. G. Doroshenko, S. V. Parkhomenko, I. O. Vorona, A. V. Tolmachev, D. Yu. Kosyanov, A. A. Vornovskikh, A. M. Zakharenko, V. Yu. Mayoroc, L. Gheorghe , G. Croitoru, N. Pavel, V. V. Multian, and V. Ya. Gayvoronsky, "Microstructure evolution during reactive sintering of $\text{Y}_3\text{Al}_5\text{O}_{12}:\text{Nd}^{3+}$ transparent ceramics: Influence of green body annealing," <i>J. Eur. Ceram. Soc.</i> 39 (13), 3867-3875 (2019).	0.709	0.07463
64.	L. Gheorghe , M. Greculeasa, A. Broasca, F. Voicu, G. Stanciu, K. N. Belikov, E. Yu. Bryleva, and O. Gaiduk, "Incongruent Melting $\text{La}_x\text{Y}_y\text{Sc}_{4-x-y}(\text{BO}_3)_4$: LYSB Nonlinear Optical Crystal Grown by the Czochralski Method," <i>ACS Appl. Mat. Interfaces</i> , 11 (23), 20987-20994 (2019).	1.685	0.25923
65.	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 $\text{Nd}:\text{LGSB}$ Single Crystal," <i>Materials</i> 12 (12), 2005 (2019).	0.543	0.08353
66.	A. G. Doroshenko, R. P. Yavetskiy, S. V. Parkhomenko, I. O. Vorona, O. S. Kryzhanovska, P. V. Mateychenko, A. V. Tolmachev, E. A. Vovk, V. A. Bovda, G. Croitoru, L. Gheorghe , "Effect of the sintering temperature on the microstructure and optical properties of $\text{YAG}:\text{Cr,Mg}$ ceramics," <i>Opt. Mater.</i> 98 , 109505 (2019).	0.384	0.048
67.	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 $\text{La}_x\text{Gd}_y\text{R}_z\text{Sc}_{4-x-y}$ "	0	0

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	$z(\text{BO}_3)_4$ (R = Yb, Nd) crystals - A review of recent developments," <i>Opt. Mater. X</i> 7 , 100052 (2020).		
68.	M. Greculeasa, A. Broasca, F. Voicu, S. Hau, G. Croitoru, G. Stanciu, C. Gheorghe, N. Pavel, L. Gheorghe , "Bifunctional $\text{La}_x\text{Nd}_y\text{Gd}_z\text{Sc}_{4-x-y-z}(\text{BO}_3)_4$ crystal: Czochralski growth, linear and nonlinear optical properties, and near-infrared laser emission performances," <i>Opt. & Laser Techn.</i> 131 , 106433 (2020).	0.589	0.08414
69.	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," <i>J. Alloys Compd.</i> 844 , 156143 (2020).	0.716	0.110153
70.	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 ₂ O ₃ ceramics via multi-step sintering method fabrication," <i>Opt. Mater.</i> 109 , 110411 (2020).	0.424	0.06057
71.	R. P. Yavetskiy, A. E. Balabanov, S. V. Parkhomenko, O. S. Kryzhanovska, A. G. Doroshenko, P. V. Mateychenko, A. V. Tolmachev, Jiang Li, Nan Jiang, L. Gheorghe , M. Enculescu, "Effect of starting materials and sintering temperature on microstructure and optical properties of Y ₂ O ₃ :Yb ³⁺ 5 at% transparent ceramics," <i>J. Adv. Ceram.</i> 10 (1), 49-61 (2021).	1.058	0.13225
72.	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 Cr ⁴⁺ :YAG saturable absorber," <i>Opt. Mater. Express</i> 11 (3), 685-694 (2021).0.0	0.563	0.10236
73.	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," <i>Opt. Mater.</i> 123 , 111832 (2022).	0.443	0.059
74.	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," <i>J. Alloys Compd.</i> 908 , 164633 (2022).	0.738	0.123
75.	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) ₅ O ₁₂ (M ⁵⁺ = Nb, Ta) garnet phosphors," <i>J. Alloys Compd.</i> 922 , 166178 (2022).	0.738	0.13418
76.	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," <i>J. Rare Earths</i> 40 (9), 1445-1453 (2022).	0.539	0.1078
77.	C. Gheorghe, S. Hau, L. Gheorghe , F. Voicu, M. Greculeasa, A. Broasca, and G. Stanciu, "RE ³⁺ -Doped Ca ₃ (Nb,Ga) ₅ O ₁₂ and Ca ₃ (Li,Nb,Ga) ₅ O ₁₂ Crystals (RE = Sm, Dy, and Pr): A Review of Current Achievements," <i>Materials</i> 16 (1), 269 (2023).	0.508	0.08466
78.	A. Broasca, M. Greculeasa, F. Voicu, C. Gheorghe, and L. Gheorghe , "Pure and Yb-Doped La _x Y _y Sc _{4-x-y} (BO ₃) ₄ Crystals: A Review of Recent Advances," <i>Crystals</i> 13 (2), 169 (2023).	0.394	0.0788
79.	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," <i>J. Am. Chem. Soc.</i> 146 (3), 2196-2207 (2024).	3.859	0.42877
80.	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) ₅ O ₁₂ : Pr ³⁺ single crystal as a promising new laser material in the visible domain," <i>Opt. Mater.</i> 150 , 115286 (2024).	0.478	0.07353
81.	G. Croitoru, F. Jipa, M. Greculeasa, A. Broasca, F. Voicu, L. Gheorghe , and N. Pavel, "Buried depressed-cladding waveguides inscribed in Nd ³⁺ and Yb ³⁺ doped CLNGG laser crystals by picosecond-laser beam writing," <i>Materials</i> 17 (8), 1758 (2024).	0.508	0.084666
82.	M. Greculeasa, F. Voicu, S. Hau, C. Gheorghe, L. Gheorghe , "Growth and spectroscopic characterization of a new 6.2 at.% Yb-doped LGsB crystal," <i>J. Optoelectron. Adv. Mater.</i> 26 (11-12), 475-479 (2024).	0.057	0.0114
83.	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 ", <i>Materials</i> 18 (5), 964 (2025).	0.508	0.084666
84.	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 ₃ Ta ₂ Ga ₃ O ₁₂ phosphors," <i>Ceram. Int.</i> 51 (12, B), 16864-16877 (2025).	0.639	0.15975
		I =	7.5193

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2	Articole stiintifice originale in extenso ca prim autor sau autor corespondent, conform mentiunilor de pe articol.	AIS	$P = \sum_i AIS$
1.	L. Gheorghe , M. Petrache, V. Lupei, "Preparation, growth, and characterisation of Nd ³⁺ -doped calcium lithium niobium gallium garnet (Nd ³⁺ : CLNGG) single crystals," <i>J. Crystal Growth</i> 220 (1-2), 121-125 (2000).	0.582	0.582
2.	L. Gheorghe , G. Aka, A. Lupei, C. Gheorghe, D. Vivien, "Czochralski Growth and Characterization of Neodymium Doped Strontium-Lanthanum Aluminate (ASL:Nd) Single Crystals," <i>J. Crystal Growth</i> 277 (1-4), 410-415 (2005).	0.582	0.582
3.	L. Gheorghe , V. Lupei, A. Achim, G. Aka, C. Varona, "Growth and optical properties of GdCa ₄ O(BO ₃) ₃ :RE crystals (RE=Sc ³⁺ or Lu ³⁺) as new nonlinear materials," <i>JOAM</i> 8 (1), 91-94 (2006).	0.161	0.161
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," <i>JOAM</i> 8 (1), 82-85 (2006).	0.161	0.161
5.	L. Gheorghe , P. Loiseau, G. Aka, V. Lupei, T. Taira, "Second harmonic generations of blue light in nonlinear optical crystals of Gd _{1-x} Lu _x Ca ₄ O(BO ₃) ₃ and Gd _{1-x} Sc _x Ca ₄ O(BO ₃) ₃ through non-critical phase matching," <i>JOSA B</i> 23 (8), 1630-1634 (2006).	0.972	0.972
6.	L. Gheorghe , P. Loiseau, G. Aka, V. Lupei, "Growth and type-I noncritical phase-matching second-harmonic-generation of Gd _{1-x} R _x Ca ₄ O(BO ₃) ₃ (R ³⁺ = Sc ³⁺ or Lu ³⁺) crystals," <i>J. Crystal Growth</i> 294 (2), 442-446 (2006).	0.582	0.582
7.	L. Gheorghe , P. Loiseau, G. Aka, V. Lupei, "Investigations of NCPM second harmonic generation and self frequency doubling in Gd _{1-x-y} R _x Nd _y Ca ₄ O(BO ₃) ₃ (R= Sc or Lu) crystals," <i>Opt. Mater.</i> 30 (1), 44-46 (2007).	0.575	0.575
8.	L. Gheorghe , A. Achim, B. Sbarcea, S. Mitrea, "Synthesis and X-ray investigations of new Y _{1-x} R _x Ca ₄ O(BO ₃) ₃ (R = Sc, Lu) nonlinear materials," <i>OAM-RC</i> 4 (3), 318-321 (2010).	0.078	0.078
9.	L. Gheorghe , P. Loiseau, G. Aka, "Second-harmonic generation of 400 nm blue-violet light in Gd _{1-x} R _x Ca ₄ O(BO ₃) ₃ (R = Lu, Sc) crystals through noncritical phase-matching," <i>JOAM</i> 12 (4), 821-823 (2010).	0.113	0.113
10.	L. Gheorghe , P. Loiseau, G. Aka, "Four hundred nanometer blue-violet light production by type-I noncritical phase-matching second-harmonic generation in Gd _{1-x} R _x Ca ₄ O(BO ₃) ₃ (R = Lu, Sc): Crystal growth and nonlinear characterization," <i>Opt. Mater.</i> 32 (10), 1283-1285 (2010).	0.567	0.567
11.	L. Gheorghe , A. Achim, F. Voicu, C. Ghica, "Growth and structural characterization of Y _{0.6} Lu _{0.4} Ca ₄ O(BO ₃) ₃ new nonlinear crystal," <i>JOAM</i> 12 (8), 1680-1683 (2010).	0.113	0.113
12.	L. Gheorghe , G. Aka, "Crystal growth, NCPM second harmonic generation, and infrared laser performance for SFD in Gd _{1-x-y} R _x Nd _y Ca ₄ O(BO ₃) ₃ (R = Sc or Lu) crystals," <i>OAM-RC</i> 4 (12), 1973-1976 (2010).	0.078	0.078
13.	L. Gheorghe , A. Achim, F. Voicu, and G. Aka, "Growth and type-I non critical phase matching second harmonic generation of Y _{1-x} R _x Ca ₄ O(BO ₃) ₃ (R= Sc or Lu) crystals," <i>OAM-RC</i> 5 (2), 103-105 (2011).	0.053	0.053
14.	L. Gheorghe , C. Gheorghe, "Judd-Ofelt analysis and laser investigations of Nd ³⁺ -doped Gd _{1-x} Sc _x Ca ₄ O(BO ₃) ₃ single crystal," <i>OAM-RC</i> 6 (3-4), 374-382 (2012).	0.069	0.069
15.	A. Achim, L. Gheorghe , F. M. Voicu, G. Stanciu, "Blue light production by type-I non-critical phase matching second-harmonic generation in La(Ca _{1-x} Sr _x) ₄ O(BO ₃) ₃ single crystals", <i>CrystEngComm.</i> 17 , 4098-4101 (2015). Acesti autori au contribuit in mod egal la realizarea articolului.	0.67	0.67
16.	L. Gheorghe , F. Khaled, A. Achim, F. Voicu, P. Loiseau, G. Aka, "Czochralski Growth and Characterization of Incongruent Melting La _x Gd _y Sc _z (BO ₃) ₄ (x+y+z= 4) Nonlinear Optical Crystal", <i>Cryst. Growth Design</i> 16 , 3473-3479 (2016).	0.836	0.836
17.	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," <i>Opt. Mater.</i> 84 , 335-338 (2018).	0.409	0.409
18.	L. Gheorghe , M. Greculeasa, A. Broasca, F. Voicu, G. Stanciu, K. N. Belikov, E. Yu. Bryleva, and O. Gaiduk, "Incongruent Melting La _x Y _y Sc _{4-x-y} (BO ₃) ₄ : LYSB Nonlinear Optical Crystal Grown by the Czochralski Method," <i>ACS Appl. Mat. Interfaces</i> , 11 (23), 20987-20994 (2019).	1.685	1.685
19.	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," <i>Materials</i> 12 (12), 2005 (2019). *Corresponding author	0.543	0.543
20.	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 _x Gd _y R _z Sc _{4-x-y-z} (BO ₃) ₄ (R = Yb, Nd) crystals - A review of recent developments," <i>Opt. Mat. X</i> 7 , 100052 (2020).	0	0

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

21.	M. Greculeasa, A. Broasca, F. Voicu, S. Hau, G. Croitoru, G. Stanciu, C. Gheorghe, N. Pavel, L. Gheorghe* , "Bifunctional $\text{La}_x\text{Nd}_y\text{Gd}_z\text{Sc}_{4-x-y-z}(\text{BO}_3)_4$ crystal: Czochralski growth, linear and nonlinear optical properties, and near-infrared laser emission performances," <i>Opt. & Laser Techn.</i> 131 , 106433 (2020). *Corresponding author	0.589	0.589
22.	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," <i>J. Alloys Compd.</i> 844 , 156143 (2020). *Corresponding author	0.716	0.716
23.	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," <i>Opt. Mat.</i> 123 , 111832 (2022). *Corresponding author	0.443	0.443
24.	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," <i>J. Alloys Compd.</i> 908 , 164633 (2022). *Corresponding author	0.738	0.738
25.	A. Broasca, M. Greculeasa, F. Voicu, C. Gheorghe, and L. Gheorghe* , "Pure and Yb-Doped $\text{La}_x\text{Y}_y\text{Sc}_{4-x-y}(\text{BO}_3)_4$ Crystals: A Review of Recent Advances," <i>Crystals</i> 13 (2), 169 (2023). *Corresponding author	0.394	0.394
26.	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," <i>J. Am. Chem. Soc.</i> 146 (3), 2196-2207 (2024). *Corresponding author	3.859	3.859
27.	M. Greculeasa, F. Voicu, S. Hau, C. Gheorghe, L. Gheorghe* , "Growth and spectroscopic characterization of a new 6.2 at.% Yb-doped LGSB crystal," <i>J. Optoelectron. Adv. Mater.</i> 26 (11-12), 475-479 (2024). *Corresponding author	0.057	0.057
28.	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 ", <i>Materials</i> 18 (5), 964 (2025). *Corresponding author	0.508	0.508
P =			16.133

III. Recunoasterea impactului activitatii

Nr. Crt.	Tipul activitatilor		Indicatori
1	Citari in reviste stiintifice cu factor de impact care se regasesc in InCites Journal Citation Reports sau in carti in edituri recunoscute Web of Science		$C=\sum_i c_i / n_i^{ef}$
	Articol citat	Articole care citeaza (*) /autori, titlu, revista, an,	
	Articol 1. L. Gheorghe, M. Petrache, V. Lupei, "Preparation, growth, and characterisation of Nd ³⁺ - doped calcium lithium niobium gallium garnet (Nd ³⁺ : CLNGG) single crystals" J. Crystal Growth 220 (1-2), 121-125 (2000).	Citare 15. Zhou, Y; Wang, ZP; Chen, FF; Liu, YQ; Xu, XG; " Continuous-wave and passively Q-switched c-cut Nd:CTGS laser", SPIE 11068, Art. Nr: 110681N (2019). Citare 14. Ma, C.; Wang, Y.; Cheng, X.; Xue, M.; Zuo, C.; Gao, C.; Guo, S.; He, J.; "Spectroscopic, thermal, and laser properties of disordered garnet Nd:CLTGG crystal," J Cryst. Growth 504 , 44-50 (2018). Citare 13. Wang BL; Tian L; Yu HH; Zhang HJ; Wang JY, "Energy enhancement of mixed Nd:LuYSGG crystal in passively Q-switched lasers", <i>Opt. Letter</i> 40 (13), 3213-3216 (2015). Citare 12. Tan Y; Chen F; de Aldana JRV; Yu HH; Zhang HJ; "QUASI-Three-Level Laser Emissions of Neodymium-Doped Disordered Crystal Waveguides", <i>IEEE J. Selected Topics In Quantum Electronics</i> , 21 , 601905, (2015). Citare 11. Toma O; Georgescu S, "Judd-Ofelt analysis of Er ³⁺ ions in calcium lithium niobium gallium garnet", <i>J. Lumin.</i> 147 , 259-264 (2014). Citare 10. Zhang BY; Xu JL; Wang GJ; He JL; Wang WJ; Zhang QL; Sun DL; Luo JQ; Yin ST, "Diode-pumped passively mode-locked Nd:GYSGG laser", <i>Laser Phys. Letter</i> 8 (11), 787-790 (2011).	5

	Citare 9. Di JQ; Xu XD; Li DZ; Zhou DH; Wu F; Zhao ZW; Xu J; Tang DY; "CW laser properties of Nd:GdYAG, Nd:LuYAG, and Nd:GdLuAG mixed crystals", <i>Laser Phys.</i> 21 (10), 1742-1744 (2011). Citare 8. He Kunna; Wei Zhiyi; Li Dehua; Zhang Zhiguo; Zhan, Huaijin; Wang Jiyang; Gao Chunqing; "Diode-pumped quasi-three-level CW Nd:CLNGG and Nd:CNGG lasers", <i>Opt. Expres</i> 17 (21), 19292-19297 (2009). Citare 7. Shi ZB; Zhang HJ; Wang JY; Yu YG; Wang ZP; Yu HH; Sun SQ; Xia HR; Jiang MH, "Growth and characterization of Nd:CLNGG crystal", <i>J. Cryst. Growth</i> 311 (14), 3792-3796 (2009). Citare 6. Xie GQ; Tang DY; Tan WD; Luo H; Guo SY; Yu HH; Zhang HJ; Diode-pumped passively mode-locked Nd:CTGG disordered crystal laser, <i>Appl. Phys. B-Laser and Optics</i> 95 (4), 691-695 (2009). Citare 5. Luo H; Tang DY; Xie GQ; Tan WD; Zhang HJ; Yu HH; "Diode-pumped passively mode-locked Nd:CLNGG laser", <i>Opt. Commun.</i> 282 (2), 291-293 (2009). Citare 4. Xie GQ; Tang DY; Tan WD; Luo H; Zhang HJ; Wang JY, "Subpicosecond pulse generation from a Nd:CLNGG disordered crystal laser", <i>Opt. Letter.</i> 34 (1), 103-105 (2009). Citare 3. Shi ZB; Fang X.; Zhang HJ; Wang ZP; Wang JY; Yu HH; Yu YG; Tao XT; Jiang MH; "Continuous-wave laser operation at 1.33 μm of Nd : CNGG and Nd:CLNGG crystals", <i>Laser Phys. Letter</i> 5 (3), 177-180 (2008). Citare 2. Andrade LHC; Ardila DR; Andreetta JP; Li MS; "Optical properties of Nd³⁺-doped Ca₃(VO₄)₂ single crystal fiber", <i>Opt. Mater.</i> 22 (4), 369-375 (2003). Citare 1. Xu XW; Chong TC; Zhang GY; Li MH; Soo LH; Xu W; Freeman B; "Vertical Bridgman growth of calcium lithium niobium gallium garnet crystals", <i>J. Cryst. Growth</i> 250 (1-2), 62-66 (2003).	
Articol 2. A. Lupei, V. Lupei, L. Gheorghe, L. Rogobete, E. Osiac, A. Petraru, "The nature of nonequivalent Nd³⁺ centers in CNGG and CLNGG", <i>Opt. Mater.</i> 16 (3), 403-411 (2001).	Citare 38. Guoliang Deng, Wenfang Lin, Conghui Huang, Min Xu, Qiannan Fang, Li Shi, Xinkun Liu, Chengchun Zhao, Yin Hang, Novel disordered Nd³⁺:Ca(Gd_{0.5}Y_{0.5})Al₃O₇ melilite crystal: growth, spectroscopic properties, continuous wave and tunable laser performance, <i>Opt. & Laser Tech.</i> 186, 112674 (2025). Citare 37. Okazaki, K.; Nakauchi, D.; Kato, T.; Kawaguchi, N.; Yanagida, T.; "X-ray-induced scintillation properties of Nd-doped calcium niobium gallium garnet single crystals"; <i>Nucl. Instrum. Methods Phys. Res., Sect. B</i> 547, 165197 (2024). Citare 36. Xu Li, Kirill Ereemeev, Pavel Loiko, Youshi Zhou, Yuxia Zhang, Junhai Liu, Zhongben Pan, Alain Braud, Jean-Louis Doualan, Sami Slimi, Rosa Maria Solé, Xavier Mateos, Patrice Camy, Honghao Xu, Spectroscopy of Yb³⁺, Ho³⁺, Eu³⁺-codoped calcium niobium gallium garnet (CNGG) crystal, <i>Opt. Mater.</i> 144, 114360 (2023). Citare 35. Yuhang Zhang, Shulong Zhang, Qiaorui Gong, Qiannan Fang, Mingzhu He, Conghui Huang, Shanming Li, Xufeng Zhang, Changtai Xia, Chengchun Zhao, Min Xu, Yin Hang, Structure and spectroscopic properties of a disordered Nd:CaGdAl₃O₇ crystal, <i>Infrared Physics & Technology</i> 131, 104639 (2023). Citare 34. Alles, A; Pan, ZB; Loiko, P; Serres, JM; Slimi, S; Yingming, S; Tang, KY; Wang, YC; Zhao, YG; Dunina, E; Kornienko, A; Camy, P; Chen, WD; Wang, L; Griebner, U; Petrov, V; Sole, RM; Aguilo, M; Diaz, F; Mateos, X; Tm³⁺-doped calcium lithium tantalum gallium garnet (Tm:CLTGG): novel laser crystal, <i>Opt. Mater. Express</i> 11 (9) (2021) 2938. Citare 33. Pan, ZB; Loiko, P; Wang, YC; Zhao, YG; Yuan, HL; Tang, KY; Dai, XJ; Cai, HQ; Serres, JM; Slimi, S; Ben Salem, E; Dunina, E; Kornienko, A; Fomicheva, L; Doualan, JL; Camy, P; Chen, WD; Griebner, U; Petrov, V; Aguilo, M; Diaz, F; Sole, RM; Mateos, X;	6.909

Disordered Tm^{3+} , Ho^{3+} -codoped CNGG garnet crystal: Towards efficient laser materials for ultrashort pulse generation at $\sim 2 \mu\text{m}$," *J. Alloys Compd.* **853**, 157100 (2021).

Citare 32. Ma, C.; Wang, Y.; Cheng, X.; Xue, M.; Zuo, C.; Gao, C.; Guo, S.; He, J.; "Spectroscopic, thermal, and laser properties of disordered garnet Nd:CLTGG crystal," *J Cryst. Growth* **504**, 44-50 (2018).

Citare 31. Maria Serres J; Jambunathan V; Loiko P; Mateos X; Yu H; Zhang H; Liu J; Lucianetti A; Mocek T; Yumashev K; Griebner U; Petrov V; Aguiló M; Díaz F; "Microchip laser operation of Yb-doped gallium garnets", *Opt. Mater. Expres* **6** (1), 46 -57 (2016).

Citare 30. Toma O; Georgescu S; "Excited-state absorption in erbium-doped calcium lithium niobium gallium garnet", *J. Lumin.* **147**, 259-264 (2014).

Citare 29. Zhang Yuangeng; Petrov V; Griebner U; Zhang Xingyu; Choi Sun Young; Gwak Ji Yoon; Rotermund F; Mateos Xavier; Yu Haohai; Zhang Huaijin; Liu Junhai; "90-fs diode-pumped Yb:CLNGG laser mode-locked using single-walled carbon nanotube saturable absorber", *Opt. Expres* **22** (5), 5635-5640 (2014).

Citare 28. Toma O; Georgescu S; "Judd-Ofelt analysis of Er^{3+} ions in calcium lithium niobium gallium garnet", *J. Lumin.* **154**, 553-558 (2014).

Citare 27. Toma O; Georgescu S; "Selectively excited Er^{3+} luminescence in calcium lithium niobium gallium garnet", *Rom. J. Phys.* **58** (3-4), 365-372 (2013).

Citare 26. Wang QG; Su LB; Zheng LH; Li HJ; Tang HL; Guo X; Jiang DP; Xu J; "Growth and Spectroscopic Characteristics of Er-Doped CeF_3 - CaF_2 Disordered Crystals", *J. Am.Ceram. Soc.* **95** (3), 972-976 (2012).

Citare 25. Ryabochkina PA; Antoshkina SA; Bolshakova EV; Ivanov MA; Kochurihin VV; Malov AV; Ushakov SN; Shchuchkina NV; Nishchev KN; "Hypersensitive transitions of Tm^{3+} , Ho^{3+} and Dy^{3+} rare-earth ions in garnet crystals", *J. Lumin.* **132** (8), 1900-1905 (2012).

Citare 24. Liu JH; Wan Y; Zhou ZC; Tian XP; Han WJ; Zhang HJ; "Comparative study on the laser performance of two Yb-doped disordered garnet crystals: Yb:CNGG and Yb:CLNGG", *Appl. Phys. B-Laser and Optics* **109** (2), 183-188 (2012).

Citare 23. Kumar KU; Vijaya N; Oliva J; Jacinto C; de La Rosa E; Jayasankar CK; "Multicolor Upconversion Emission and Color Tunability in $\text{Tm}^{3+}/\text{Er}^{3+}/\text{Yb}^{3+}$ Tr-Doped NaNbO_3 Nanocrystals", *Mater. Express* **2** (4), 294-302 (2012).

Citare 22. Zhang B; Guo S; He J; Liu S; Yang J; Xu J; Huang H; "Tri-wavelength laser with Nd:CLTGG crystal", *Appl. Phys. B-Laser and Optics* **105**(4), 807-811 (2011).

Citare 21. Xie GQ, Qian LJ, Yuan P, Tang DY, Tan WD, Yu HH, Zhang HJ, Wang JY, "Generation of 534 fs pulses from a passively mode-locked Nd:CLNGG-CNGG disordered crystal hybrid laser", *Laser Phys. Letter* **7** (7), 483-486 (2010).

Citare 20. Xie GQ; Qian LJ; Xu XD; Cheng Y; Zhao ZW; Tang DY; Zhang J; Tan WD; Xu J; "Diode-Pumped Passively Mode-Locked Nd:CaNb₂O₆ Laser", *Laser Phys.* **20** (6), 1331-1334 (2010).

Citare 19. Lupei V; Lupei A; Ikesue A; "Multicenter Structure and Dynamical Processes in the Rare Earth Doped Garnet and Sesquioxide Laser Crystals and Ceramics", *Spectr. Letter* **43** (5), 357-372 (2010).

Citare 18. Lupei V; "Laser processes and active materials for sustainable energy production", *Rom. Rep. Phys* **62** (3), 481-499 (2010).

Citare 17. Taku Saiki, Masahiro Nakatsuka, Kazuo Imasaki, "Highly Efficient Lasing Action of Nd^{3+} - and Cr^{3+} - Doped Yttrium

	Aluminum Garnet Ceramics Based on Phonon-Assisted Cross-Relaxation Using Solar Light Source”, <i>Jpn. J. Appl. Phys.</i> 49, 082702 (2010). Citare 16. Kaminska A; Brik MG; Boulon G; Karbowiak M; Suchocki A; “Spectroscopy of gadolinium gallium garnet crystals doped with Yb³⁺ revisited”, <i>J. Phys.: Cond. Matter.</i> 22, 255501 (2010). Citare 15. He KN; Wei ZY; Li DH; Zhang ZG; Zhang HJ; Wang JY; Gao CQ; “Diode-pumped quasi-three-level CW Nd:CLNGG and Nd:CNGG lasers”, <i>Opt. Express</i> 17 (21), 19292-19297 (2009). Citare 14. Shi ZB; Zhang HJ; Wang JY; Yu YG; Wang ZP; Yu HH; Sun SQ; Xia HR; Jiang MH; “Growth and characterization of Nd:CLNGG crystal”, <i>J. Cryst. Growth</i> 311 (14), 3792-3796 (2009). Citare 13. Guo SY; Yu HH; Yu FP; Yu FP; Cheng XF; Yuan DR; Zhang HJ; Tao XT; “Growth and characterization of calcium lithium tantalum gallium garnet single crystal”, <i>J. Cryst. Growth</i>, 311 (14) 3797-3800 (2009). Citare 12. Yu YG; Wang JY; Zhang HJ; Wang ZP; Yu HH; Sun SQ; Xia HR; Jiang MH; “Thermal characterization of lowly Nd³⁺ doped disordered Nd:CNGG crystal”, <i>Opt. Express</i> 17 (11), 9270-9275 (2009). Citare 11. Xie GQ; Tang DY; Tan WD; Luo H; Guo SY; Yu HH; Zhang HJ; “Diode-pumped passively mode-locked Nd:CTGG disordered crystal laser”, <i>Appl. Phys. B-Lasers and Optics</i> 95 (4), 691-695(2009). Citare 10. Xie GQ; Tang DY; Tan WD; Luo H; Zhang HJ; Yu HH; Wang JY; “Subpicosecond pulse generation from a Nd:CLNGG disordered crystal laser”, <i>Opt. Letter</i> 34 (1), 103-105 (2009). Citare 9. Luo H; Tang DY; Xie GQ; Tan WD; Zhang HJ; Yu HH; “Diode-pumped passively mode-locked Nd:CLNGG laser”, <i>Opt. Commun.</i> 282 (2), 291-293 (2009). Citare 8. Guo SY; Yuan DR; Cheng XF; Yu HH; Sun SQ; Yu FP; Zhang HJ; Xia HR; Tao XT; “Growth of a new laser crystal Nd³⁺ doped calcium tantalum gallium garnet by the Czochralski method”, <i>J. Cryst. Growth</i> 310 (22), 4685-4688 (2008). Citare 7. Kim ES; Jang KH; Shi L; Seo HJ; “Spectroscopic properties of Er³⁺ ions doped in a Ca₃(Nb_{2-x-z}Ga_z)Ga₃O₁₂ disordered crystal”, <i>J. Kor. Phys. Soc.</i> 52 (2), 455-461 (2008). Citare 6. Shi ZB; Fang X; Zhang HJ; Wang ZP; Wang YJ; Yu HH; Yu YG; Tao XT; Jiang MH; “Continuous-wave laser operation at 1.33 μm of Nd:CNGG and Nd:CLNGG crystals”, <i>Laser Phys. Letter</i> 5 (3), 177-180 (2008). Citare 5. Kim ES; Jang KH; Shi L; Seo HJ; “Time-resolved luminescence spectroscopy of Er³⁺ ions doped in a calcium niobium gallium garnet crystal”, <i>J. Kor. Phys. Soc.</i> 53 (2), 782-785 (2008). Citare 4. Voronko YuK; Popov AV; Sobol AA; Ushakov SN; “Yb³⁺ ion in calcium niobium gallium garnet crystals: Nearest neighbor environment and optical spectra”, <i>Inorg. Mater.</i> 42 (10), 1133-1137 (2006). Citare 3. Lupei V; Lupei A; “Concentration-dependence of Nd emission quantum efficiency”, <i>Proc SPIE</i> 5581, 220-227 (2004). Citare 2. Romero JJ; Jaque D; Bausa LE; Cavalli E; “Site-selective study of Nd³⁺ optical centers in Ca₃Sc₂Ge₃O₁₂ laser garnet crystals”, <i>J. Appl. Phys.</i> 95 (4), 1774-1779 (2004). Citare 1. Xu XW; Chong TC; Zhang GY; Li MH; Soo LH; Xu W; Freeman B; “Vertical Bridgman growth of calcium lithium niobium gallium garnet crystals”, <i>J. Cryst. Growth</i> 250 (1-2), 62-66 (2003).	
Articol 3. A. Lupei, E. Antic-Fidancev, G. Aka, D. Vivien, P. Aschehoug, Ph. Goldner, F. Pelle, L. Gheorghe,	Citare 21. Li, YJ; Song, YJ; Shen, Y; Zong, N; Peng, QJ; Yu, HH; Zhang, HJ; Wang, JY; Cui, DF; Xu, ZY; “Three-wavelength green	3.2307

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

"Spectroscopic and Crystal Field Studies of Nd³⁺ in GdCOB and YCOB", Phys. Rev. B 65 (22), 224518 (2002).	generation in Nd:GdCOB slab crystal based on self-frequency conversion", Laser Phys. Lett. 16 (5) Art. Nr: 055001 (2019). Citare 20. Fang QN; Yu HH; Zhang HJ; Zhang GC; Wang JY; Wu YC; "Output power enhancement of a self-frequency-doubled laser by selective excitation of inequivalent active centers in La₂CaB₁₀O₁₉ (Nd:LCB) crystal", Opt. Letter 42 (23), 4861-4864 (2017). Citare 19. Xu B, Camy P, Doualan JL; Cai ZP; Moncorge R; "Visible laser operation of Pr³⁺-doped fluoride crystals pumped by a 469 nm blue laser", Opt. Express, 19 (2), 1191-1197 (2011). Citare 18. Santos DRS; Santos CN; Camargo ASS; Silva WF; Santos WQ; Vermelho MVD; Astrath NGC; Malacarne LC; Li MS; Hernandez AC; Ibanez A; Jacinto C; "Thermo-optical characteristics and concentration quenching effects in Nd³⁺ doped yttrium calcium borate glasses", J Chem. Phys, 134 (12), 124503 (2011). Citare 17. Luppi E; Huebener H; Veniard V; "Ab initio second-order nonlinear optics in solids: Second-harmonic generation spectroscopy from time-dependent density-functional theory", Phys. Rev. B 82 (23), 235201 (2010). Citare 16. Molina P; Loro H; Alvarez-Garcia S; Bausa LE; Rodriguez EM; Guillot-Noel O; Goldner P; Bettinelle M; Ghigna P; Sole JG; "Site location and crystal field of Nd³⁺ ions in congruent strontium barium niobate", Phys. Rev. B 80 (5), 054111 (2009). Citare 15. Wei B; Lin ZB; Zhang LZ; Wang GF; "Growth, thermal and polarized spectral properties of Nd³⁺-doped Gd_{1-x}La_xCa₄O(BO₃)₃ (x = 0.16 and 0.33) crystals", Cryst. Growth Design 8 (1), 186-191 (2008). Citare 14. Brik MG; Majchrowski A; Kityk IV; Lukasiewicz T; Piasecki M; "Spectroscopy of Ca₄GdO(BO₃)₃ (GdCOB): Pr³⁺ single crystals", J. Alloys Compd. 465 (1-2), 24-34 (2008). Citare 13. Wei B; Zhang LZ; Lin ZB; Wang GF; "Growth and spectroscopic properties of Yb³⁺: Y_{0.8}La_{0.2}Ca₄O(BO₃)₃ crystal", Mater. Res. Innov. 11 (3), 144-147 (2007). Citare 12. Brenier A; Wu YC; Fu PZ; Guo R; Jing FL; "Evidence of self-frequency doubling from two inequivalent Nd³⁺ centers in the La₂CaB₁₀O₁₉: Nd³⁺ bifunctional crystal", J. Appl. Phys. 98 (12), 123528 (2005). Citare 11. Antić-Fidančev E, "Evidence of Dopant-Matrix Interaction in Optical Spectra of Rare Earth Ions", Mater. Sci. Forum. 494, 253-258 (2005). Citare 10. Campos S; Denoyer A; Jandl S; Viana B; Vivien D; Loiseau P; Ferrand B; "Spectroscopic studies of Yb³⁺-doped rare earth orthosilicate crystals", J. Phys.-Cond. Mater, 16 (25), 4579-4590, Article Number: PII S0953-8984(04)76330-4, (2004). Citare 9. Antic-Fidancev E; Lupei A; Caramanian A; Aka G; "Spectroscopic study of europium doped RCOB host lattices: evidence of local perturbations", J. Alloys Compd. 380 (1-2), 141-145 (2004). Citare 8. Lupei A; Antic-Fidancev E; Aka G; Vivien D, "Spectral and structural studies of GdCOB and YCOB crystals", J. Alloys Compd. 380 (1-2), 235-240 (2004). Citare 7. Lupei V; Aka G; Petit J; Vivien D; "Spectroscopic bases for efficiency enhancement and power scaling of self-frequency multiplication and self-sum-frequency mixing emission in Nd-doped nonlinear crystals", JOSA B 21 (9), 1620-1629 (2004). Citare 6. Antic-Fidancev E; Lupei A; Caramanian A; Aka G; "Optical analysis of the local perturbation in RCOB host lattice doped with europium ion", Proc. SPIE 5581, 157-163 (2004). Citare 5. Lupei A; Antic-Fidancev E; Aka G; Vivien D; "Spectral and structural studies of GdCOB and YCOB crystals", Proc. SPIE 5581, 114-122 (2004).	
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FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	Citare 4. Lupei A; Antic-Fidancev E; Aka G; Vivien D; "Electronic and vibronic structure of Yb³⁺ in GdCOB", Proc. SPIE 5581, 164-169 (2004). Citare 3. Lupei A; Aka G; Vivien D; "Enhanced performances of Nd-activated self-nonlinear devices", Proc. SPIE 5581, 1201-211 (2004). Citare 2. Campos S; Petit J; Viana B; Jandl S; Vivien D; Ferrand B., "Spectroscopic investigation of the laser materials Yb³⁺: RE₂SiO₅, RE=Y, Sc, Lu", Proc. SPIE 5460, 335-343 (2004). Citare 1. Aka G; Brenier A, "Self-frequency conversion in nonlinear laser crystals", Opt. Mater. 22 (2), 89-94 (2003).	
Articol 4. L. E. Dinca, L. Gheorghe, A. Lupei, D. Pantelica, N. Scintee, "Growth, RBS-ERDA characterisations and modelling in Nd³⁺-doped calcium-lithium-niobium-gallium garnet (CLNGG:Nd) crystal", Nucl. Instr. & Met. Phys. A: Accelerators, Spectrometers, Detectors and Associated Equipment 486 (1-2), 93-97 (2002)	Citare 3. Rawat STyagi; MohitNetrakanti P; KKashyap VKS; Mitra A; Singh AK; Desai DG; Kumar G; AnilGadkari SC; "Pulse shape discrimination properties of Gd₃Ga₃Al₂O₁₂:Ce,B single crystal in comparison with CsI:TI", Nucl. Instr. Meth. Phys. Res. A- Accelerators Spectrometers Detectors and Associated Equipment 840, 186-191 (2016). Citare 2. Shi ZB; Zhang HJ; Wang JY; Yu YG; Wang ZP; Yu HH; Sun SQ; Xia HR; Jiang MH; "Growth and characterization of Nd:CLNGG crystal", J. Cryst. Growth 311 (14), 3792-3796 (2009). Citare 1. Guo SY; Yu HH; Yu FP; Yu FP; Cheng XF; Yuan DR; Zhang HJ; Tao XT; "Growth and characterization of calcium lithium tantalum gallium garnet single crystal", J. Cryst. Growth 311 (14), 3797-3800 (2009).	0.6
Articol 5. M. Popescu, F. Sava, S. Georgescu, L. Gheorghe, I. N. Mihailescu, M. Cristescu, G. Socol, H. Bradacsek, "Thin films of langasite (La₃Ga₅SiO₁₄) prepared by pulsed laser deposition", JOAM 4 (3), 813-818 (2002).	Citare 2. Stancu V; Sava F; Lisca M; Pintilie L; Popescu M; "Comparison between PZT thin films deposited on stainless steel and on platinum/silicon substrate", Interfacial Nanostructures In Ceramics: A Multiscale Approach, Book Series: Journal of Physics Conference Series 94, 012012 (2008) Citare 1. Sava F; Cristescu R; Socol G; Radvan R; Savastu R; Savastu D; "Structure of bulk and thin films of poly-methyl-methacrylate (PMMA) polymer prepared by pulsed laser deposition", JOAM 4 (4), 965-970 (2002).	0.30769
Articol 6. L. Gheorghe, P. Loiseau, G. Aka, T. Taira, V. Lupei, "Growth and noncritical phase matching second harmonic generation of Gd_{1-x}R_xCa₄O(BO₃)₃ (R = Sc or Lu) nonlinear crystals", Proc. SPIE 6190, 61900Z (2006).	Citare 1. Wei Bo; Lin Zhoubin; Zhang Lizhen; Wang Guofu; "Growth, thermal and polarized spectral properties of Nd³⁺-doped Gd_{1-x}La_xCa₄O(BO₃)₃ (x=0.16 and 0.33) crystals", Cryst. Growth Design 8 (1), 186-191 (2008).	0.2
Articol 7. L. Gheorghe, V. Lupei, A. Achim, G. Aka, C. Varona, "Growth and optical properties of GdCa₄O(BO₃)₃:RE crystals (RE=Sc³⁺ or Lu³⁺) as new nonlinear materials", JOAM 8 (1), 91-94 (2006).	Citare 3. Altowyan, A. S.; Kaynar, U. H.; Hakami, J.; Coban, M. B.; Ayvacikli, M.; Aydin, H.; Canimoglu, A.; Can, N.; "Integrating K⁺ into Eu and Tb doped GdCa₄O(BO₃)₃: A dual study on photoluminescence and structure"; Sensors Actuators A: Phys. 373, 115453 (2024). Citare 2. Moeckel R; Reuther C; Goetze J; "REECOB: 20 years of rare earth element calcium oxoborates crystal growth research", J. Cryst. Growth 371, 70-76 (2013). Citare 1. Culea E; Flora M, "EPR and magnetic behaviour of some borate glasses containing Dy₂O₃", JOAM 10 (9), 2413-2415 (2008).	0.6
Articol 8. L. Gheorghe, P. Loiseau, G. Aka, V. Lupei, T. Taira, "Second harmonic generations of blue light in nonlinear optical crystals of Gd_{1-x}Lu_xCa₄O(BO₃)₃ and Gd_{1-x}Sc_xCa₄O(BO₃)₃ through non-critical phase matching", JOSA B 23 (8), 1630-1634 (2006)	Citare 16. Y. Gagou, H. Logbo, A.F. Kraidy, M.-A. Frémy, N. Aliouane, Y. González-Abreu, A. Peláiz-Barranco, P. Saint-Gregoire, Kinetic effects inducing metastable intermediate phase in PbK₂LiNb₅O₁₅ single crystal, Physica B: Cond. Matter 670, 415370 (2023). Citare 15. Yu, PZ; Pan, XB; Wu, GD; Liu, YQ; Yu, FP; Wang, ZP; Xu, XG; Crystal growth, optical, thermal and piezoelectric properties of HoCa₄O(BO₃)₃ crystal, CrystEngComm. Early Access (2021). Citare 14. Ranran Li, Hongwei Qi, Yanqing Liu, Fapeng Yu, Pingzhang Yu, Zhengping Wang, Xinguang Xu, Xian Zhao, Widely	3.2

Tunable Angular Non-Critical Phase-Matching Wavelengths from 0.72 to 1.42 μm Based on $\text{RE}_{1-x}\text{RE}_{21-x}\text{COB}$ Mixed Crystals, Crystals 10(9), 744 (2020).

Citare 13. Fenfen Liu, Liang Dong, Junxian Chen, Shuxuan Cao, Honghao Xu, Junhai Liu, Growth, spectroscopic properties and efficient laser action of an $\text{Yb}_{0.09}\text{Lu}_{0.13}\text{Gd}_{0.78}\text{Ca}_4\text{O}(\text{BO}_3)_3$ crystal, CrystEngComm. 22, 6026-6033 (2020).

Citare 12. S. Solgi, M. J. Tafreshi & M. S. Ghamsari, Nonlinear Optical Crystals for Second Harmonic Generation, Crystallogr. Rep. 64, 1138–1149 (2019).

Citare 11. Liu YQ; Yu FP; Wang ZP; Yang XQ; Han S; Xu XG; Zhao X; "Anisotropy of nonlinear optical properties in monoclinic $\text{Sm}_x\text{Y}_{1-x}\text{Ca}_4\text{O}(\text{BO}_3)_3$ crystals", J. Alloys Compd. **762** 431-437 (2018).

Citare 10. Liu Yanqing; Wang Zhengping; Yu Fapeng; Qi Hongwei; Yang Xiuqin; Yu Xiaoqiang; Zhao Xian; Xu Xinguang; "Angular non-critical phase-matching second-harmonic-generation characteristics of RECOB (RE = Tm, Y, Gd, Sm, Nd and La) crystals", Opt. Express **25** (10) 11867-11893 (2017).

Citare 9. Qi HW; Wang F; Chai XX; Wang ZP; Yu FP; Liu YQ; Zhao X; Xu XG; "Growth and non-critical phase-matching frequency conversion properties of $\text{La}_x\text{Y}_{1-x}\text{COB}$ crystals", CrystEngComm **18** (33), 6205-6212 (2016).

Citare 8. Hongwei Qi; Zhengping Wang; Fang Wang; Xiangxu Chai; Fapeng Yu; Yanqing Liu; Xun Sun; Xinguang Xu; Xian Zhao; "Non-critical phase-matched second-harmonic-generation and third-harmonic-generation of 1053 nm lasers in $\text{Gd}_x\text{Y}_{1-x}\text{COB}$ crystal", Opt. Mater. Express **6** (5), 1576-1586 (2016).

Citare 7. Liu YQ; Yu FP; Wang ZP; Xu XG; Zhao X; "Growth, nonlinear optical and self-frequency-doubled properties of LaGdCOB and Nd:LaGdCOB single crystals", J. Alloys Compd. **646**, 183-188 (2015).

Citare 6. Liu YQ; Yu FP; Yu XQ; Wang ZP; Zhao X; Xu XG; "Nonlinear optical characterizations of monoclinic $\text{La}_x\text{Gd}_{1-x}\text{Ca}_4\text{O}(\text{BO}_3)_3$ ($x=1, 0.09, 0.13$) single crystals", Laser Phys. **25**, 015804 (2015).

Citare 5. Liu Yanqing; Yu Fapeng; Wang Zhengping; Hou Shuai; Yang Lei; Xu Xinguang; Zhao Xian, "Bulk growth and nonlinear optical properties of thulium calcium oxyborate single crystals", CrystEngComm. **16** (30), 7141-7148 (2014).

Citare 4. Liu YQ; Yu FP; Qi HW; Han S; Zhang F; Wang ZP; Yu XQ; Zhao X; Xu XG, "High efficiency angular non-critical phase matching for Ti:sapphire laser realized on $\text{LaCa}_4\text{O}(\text{BO}_3)_3$ single crystals", Laser Phys. Lett. **11** (9), 095403(2014).

Citare 3. Liu Yanqing; Yu Fapeng; Wang Zhengping; Xu Xinguang; Zhao Xian; "Anisotropy of nonlinear optical properties in monoclinic crystal $\text{TmCa}_4\text{O}(\text{BO}_3)_3$ ", Opt. Mater. Express **4** (9), 1787-1793 (2014).

Citare 2. Zheng QH; Zhou WW; Wei B; Liu HY; Tong Y; Lin ZB; Wang GF; Zhao W; "Effect of La^{3+} incorporation on the spectroscopic properties of Yb^{3+} -doped $\text{Y}_{1-x}\text{La}_x\text{Ca}_4\text{O}(\text{BO}_3)_3$ ($x=0.09$ and 0.25) crystals", Phys. Status Solidi A-Appl. Mater. Sci. **210** (9), 1778-1784 (2013).

Citare 1. Majchrowski A; Klosowicz S; Weglowski R; Cieslik I; Piasecki M; Kityk IV; Reshak AH; "Electro-optical properties of $\text{Bi}_x\text{La}_y\text{Sc}_z(\text{BO}_3)_4$ ($x+y+z=4$) nanocrystallites having huntite structure incorporated into polymer matrices", J. Alloys Compd. **488** (1), 291-293 (2009).

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

Articol 9. L. Gheorghe, P. Loiseau, G. Aka, V. Lupei, "Growth and type-I noncritical phase-matching second-harmonic-generation of $Gd_{1-x}R_xCa_4O(BO_3)_3$ ($R^{3+}=Sc^{3+}$ or Lu^{3+}) crystals", J. Cryst. Growth 294 (2), 442-446 (2006).	Citare 7. Liu, FF; Dong, L; Cao, SX; Chen, JX; Xu, HH; Han, WJ; Liu, JH; Crystal growth, structural characterization and laser operation of an $Yb_{0.19}Y_{0.34}Lu_{0.12}Gd_{0.35}Ca_4O(BO_3)_3$ mixed crystal, J. Cryst. Growth 558, 126023 (2021). Citare 6. Fenfen Liu, Liang Dong, Junxian Chen, Shuxuan Cao, Honghao Xu, Junhai Liu, Growth, spectroscopic properties and efficient laser action of an $Yb_{0.09}Lu_{0.13}Gd_{0.78}Ca_4O(BO_3)_3$ crystal, CrystEngComm. 22, 6026-6033 (2020). Citare 5. Qi HW; Wang F; Chai XX; Wang ZP; Yu FP; Liu YQ; Zhao X; Xu XG; "Growth and non-critical phase-matching frequency conversion properties of $La_xY_{1-x}COB$ crystals", CrystEngComm 18 (33), 6205-6212 (2016). Citare 4. Hongwei Qi; Zhengping Wang; Fang Wang; Xiangxu Chai; Fapeng Yu; Yanqing Liu; Xun Sun; Xinguang Xu; Xian Zhao; "Non-critical phase-matched second-harmonic-generation and third-harmonic-generation of 1053 nm lasers in $Gd_xY_{1-x}COB$ crystal", Opt. Mater. Express 6 (5), 1576-1586 (2016). Citare 3. Liu YQ; Yu FP; Yu XQ; Wang ZP; Zhao X; Xu XG; "Nonlinear optical characterizations of monoclinic $La_xGd_{1-x}Ca_4O(BO_3)_3$ ($x=1, 0.09, 0.13$) single crystals", Laser Phys. 25, 015804 (2015). Citare 2. Cheng WD; Lin CS; Zhang WL; Zhang H; "Structural Designs and Property Characterizations for Second-Harmonic Generation Materials", Structure and Bonding 144, 1-41 (2012). Citare 1. Zhang WL; Cheng WD; Zhang H; Geng L; Lin CS; He ZZ; "A Strong Second-Harmonic Generation Material $Cd_4BiO(BO_3)_3$ Originating from 3-Chromophore Asymmetric Structures", J. Am. Chem. Soc. 132 (5), 1508-1509 (2010).	1.75
Articol 10. S. Georgescu, O. Toma, A. Achim, A. M. Chinie, L. Gheorghe, A. Stefan, "Optical studies of the partially disordered crystals langasite ($La_3Ga_5SiO_{14}$) and langatate ($La_3Ga_{5.5}Ta_{0.5}O_{14}$) doped with Eu^{3+}", Proc. SPIE 6785, 678509 (2007).	Citare 2. Reinhardt A; Zych A; Kohler I; Albert B; "Disordered langasites $La_3Ga_5MO_{14}:Eu^{3+}$ ($M = Si, Ge, Ti$) as red-emitting LED phosphors", Dalton Trans. 47 (16) 5703-5713 (2018). Citare 1. Georgescu S; Voiculescu AM; Nastase S; Zafir A; Matei C; Berger D; Matei C; Stefan A; Toma O; "Luminescence of Eu-doped langasite nanopowders synthesized by a modified Pechini route", J. Lumin. 145, 690-696 (2014).	0.3636
Articol 11. L. Gheorghe, P. Loiseau, G. Aka, V. Lupei, "Investigations of NCPM second harmonic generation and self frequency doubling in $Gd_{1-x-y}R_xNd_yCa_4O(BO_3)_3$ ($R = Sc$ or Lu) crystals", Opt. Mater. 30 (1), 44-46 (2007).	Citare 4. Ma, Q; Tong, TH; Su, Z; Synthesis, crystal structure and theoretical calculations of two rare-earth borates with DUV cut-off edges, New J. Chem. 45 (10) 4823-4827 (2021). Citare 3. Yan D; Hu CL; Mao JG; "$A_2SbB_3O_8$ ($A = Na, K, Rb$) and β-$RbSbB_2O_6$: Two types of alkali boroantimonates with 3D anionic architectures composed of SbO_6 octahedra and borate groups", CrystEngComm. 18 (9), 1655-1664 (2016). Citare 2. Petit Y; Joly S; Segonds P; Boulanger B; "Recent advances in monoclinic crystal optics", Laser Photonics Rev. 7 (6), 920-937 (2013). Citare 1. Dong LY; Pan SL; Yang ZH; Zhao WW; Dong XY; Wang Y; Huang YE; "Synthesis, Crystal Structure, and Properties of a New Lead Aluminum Fluoride Borate, $Pb_6AlB_2O_7F_7$", Z. Anorg. Allg. Chem. 638 (14), 2280-2285 (2012).	1
Articol 12. S. Georgescu, O. Toma, L. Gheorghe, A. Achim, A.M. Chinie, A. Stefan, "Disorder effects in the fluorescence spectra of Eu^{3+} in langatate ($La_3Ga_{5.5}Ta_{0.5}O_{14}$) crystals", Opt. Mater. 30 (2), 212-215 (2007).	Citare 3. Spassky DA; Kozlova NS ; Kozlova AP; Zabelina EV; Buzanov OA; Buryi M; Laguta V; Lebbou K; Nehari A; Cabane H; Dumortier M; Nagirnyi V; "Study of the defects in $La_3Ga_{5.5}Ta_{0.5}O_{14}$ single crystals", J Lumin. 180, 95-102 (2016). Citare 2. Georgescu S; Voiculescu AM; Nastase S; Zafir A; Matei C; Berger D; Matei C; Stefan A; Toma O; "Luminescence of Eu-doped langasite nanopowders synthesized by a modified Pechini route", J. Lumin. 145, 690-696 (2014). Citare 1. Georgescu S; Voiculescu AM; Matei C; Stefan A; Toma O; "Upconversion luminescence in $La_3Ga_{5.5}Ta_{0.5}O_{14}$ codoped with Er^{3+} and Yb^{3+}", Proc. SPIE 8882, 888204 (2013).	0.5454

Articol 13. S. Georgescu, O. Toma, A.M. Chinie, L. Gheorghe, A. Achim, A. Stefan, "Spectroscopic characteristics of langasite ($\text{La}_3\text{Ga}_5\text{SiO}_{14}$) and langatate ($\text{La}_3\text{Ga}_{5.5}\text{Ta}_{0.5}\text{O}_{14}$) crystals doped with Eu^{3+} ", Opt. Mater. **30** (6), 1007-1012 (2008)

Citare 21. Na-Na Zhang, Hong-Yu Wang, Xue-Yuan Yan, Xu-Ping Wang, Bing Liu, Yuan-Yuan Zhang, Yu-Guo Yang, Deep-red emitting $\text{La}_3\text{Ga}_5\text{SiO}_{14}:\text{Mn}^{4+}$ phosphors with outstanding thermal stability, J. Mol. Struct. **1325**, 141066 (2025).

Citare 20. S. M. Posokhova, V. A. Morozov, E. M. Zonov, D. V. Deyneko, D. A. Spassky, F. D. Fedyunin, A. A. Belik, E. T. Pavlova, A. A. Vasin, B. I. Lazoryak, $\text{K}_5\text{Yb}_{1-x}\text{Eu}_x(\text{MoO}_4)_4$ phosphors: aperiodic structures and luminescence properties, CrystEngComm **25**, 4822-4833 (2023).

Citare 19. Na-Na Zhang, Yu-Guo Yang, Xue-Yuan Yan, Meng-Qi Wang, Yuan-Yuan Zhang, Hua-Di Zhang, Rui Zhang, Cheng-Cheng Qiu, Fu-Di Chen, Ji-Yang Wang, Preparation and photoluminescence properties of novel orange-red $\text{La}_3\text{Ga}_5\text{SiO}_{14}:\text{Sm}^{3+}$ phosphors, Ceram. Int. **49** (10) 16080-16088 (2023).

Citare 18. Na-Na Zhang, Xiu-Xi Jiang, Ya-Ni Wang, Xiao-Ru Pan, Yuan-Yuan Zhang, Bing Liu, Yu-Guo Yang, Xu-Ping Wang, Synthesis, structure and luminescence characteristics of $\text{La}_3\text{Ga}_5\text{SiO}_{14}:\text{Pr}^{3+}$ phosphors, J. Alloy. Compds. **932**, 167626 (2022).

Citare 17. Zuo, XG; Wang, Y; Wei, L; Lv, XS; Fu, YB; Li, J; Zhang, YY; Wang, XP; Liu, B; Yang, YG; Luminescence properties and energy transfer of $\text{La}_3\text{Ga}_5\text{SiO}_{14}:\text{Eu}^{3+}, \text{Tb}^{3+}$ phosphors, CrystEngComm, **23** (23) 4194-4204 (2021)

Citare 16. Annemarie Reinhardt, Aleksander Zych, Ingo Köhler, Barbara Albert, Ordered langasites $\text{La}_3\text{Ga}_5\text{MO}_{14}:\text{Eu}^{3+}$ (M = Zr, Hf, Sn) as red-emitting LED phosphors, J. Lumin **218**, 116833 (2020).

Citare 15. A. P. Kozlova, O. A. Buzanov, V. Pankratova, V. Pankratov, Low-temperature luminescence of catangasite single crystals under excitation by vacuum ultraviolet synchrotron radiation, Low Temp. Phys. **46**, 1178 (2020).

Citare 14. Nina Kozlova, Oleg Buzanov, Evgeniia Zabelina, Anna Kozlova, Marina Voronova, Kirill Shcherbachev, Elena Skryleva, Study of the origin of the defects in $\text{La}_3\text{Ga}_{5.5}\text{Ta}_{0.5}\text{O}_{14}$ single crystals, Opt. Mater. **91**, 482-487 (2019)

Citare 13. Spasskii, DA; Kozlova, NS; Kozlova, AP; Zabelina, EV; Buzanov, OA; "Luminescence Properties of Undoped Langasite Crystals", Phys. Solid State **61** (3) 307-314 (2019).

Citare 12. You WW; Tu DT; Zheng W; Huang P; Chen XY; "Lanthanide-doped disordered crystals: Site symmetry and optical properties", J. Lumin. **201**, 255-264 (2018).

Citare 11. Reinhardt A; Zych A; Kohler I; Albert B; "Disordered langasites $\text{La}_3\text{Ga}_5\text{MO}_{14}:\text{Eu}^{3+}$ (M = Si, Ge, Ti) as red-emitting LED phosphors", Dalton Trans. **47** (16) 5703-5713 (2018).

Citare 10. Zhang X; Loiko P; Mateos X; Maria Serres J; Ren J; Guo J; Cheng R; Gao C; Dong Q; Jambunathan V; Lucianetti A; Mocek T; Vilejshikova E; Griebner U; Petrov V; Wang Z; Guo S; Xu X; Aguilo M; Diaz F; "Crystal growth, low-temperature spectroscopy and multi-watt laser operation of $\text{Yb}:\text{Ca}_3\text{NbGa}_3\text{Si}_2\text{O}_{14}$ ", J. Lumin. **197**, 90-97(2018).

Citare 9. Spassky DA; Brik MG; Kozlova NS; Kozlova AP; Zabelina EV; Buzanov OA; Belsky A; "Luminescent, optical and electronic properties of $\text{La}_3\text{Ta}_{0.5}\text{Ga}_{5.5}\text{O}_{14}$ single crystals grown in different atmospheres", J. Lumin. **177**, 152-159 (2016).

Citare 8. Kozlova NS; Busanov OA; Zabelina EV; Kozlova AP; Bykova MB; "Point defects and dichroism in langasite and langatate crystals", Crystallogr. Rep. **61** (2) 275-284 (2016).

Citare 7. Voiculescu AM; Georgescu S; Matei C; Stefan A; Toma O; "Synthesis and characterization of $\text{La}_3\text{Ga}_{5.5}\text{Ta}_{0.5}\text{O}_{14}$ doped with holmium and ytterbium", Rom. J. Phys. **60**, 495-501 (2015).

Citare 6. Georgescu S; Voiculescu AM; Nastase S; Zafir A; Matei C; Berger D; Matei C; Stefan A; Toma O; "Luminescence of Eu-

3.8181

	doped langasite nanopowders synthesized by a modified Pechini route", J. Lumin. 145, 690-696 (2014). Citare 5. Kozlova NS; Buzanov OA; Zabelina EV; Bykova MB; Kozlova AP; Siminel NA; "Optical properties of lanthanum-gallium tantalate associated with the conditions of preparation and post-growth processing", Bull. Russ. Acad. Sci.: Phys. 78 (11), 1227-1231 (2014). Citare 4. Futami Yoshisuke; Yanagida Takayuki; Fujimoto Yutaka; Jary Vitezslav; Pejchal Jan; Yokota Yuui; Kikuchi Masae; Nikl Martin; Yoshikawa Akira; "Photoluminescence and scintillation of LGS ($\text{La}_3\text{Ga}_5\text{SiO}_{14}$), LNGA ($\text{La}_3\text{Nb}_{0.5}\text{Ga}_{5.3}\text{Al}_{0.2}\text{O}_{14}$) and LTGA ($\text{La}_3\text{Ta}_{0.5}\text{Ga}_{5.3}\text{Al}_{0.2}\text{O}_{14}$) single crystals", Opt. Mater. 34 (9), 1513-1516 (2012). Citare 3. Wang Qing-Guo; Su Liang-Bi; Li Hong-Jun; Zheng Li-He; Xu Xiao-Dong; Tang Hui-Li; Jiang Da-Peng; Wu Feng; Xu Jun; "Spectroscopic properties of Er/Ce-codoped $\text{La}_3\text{Ga}_5\text{SiO}_{14}$", Chin. Phys. B 21 (2), 026101 (2012). Citare 2. Ni Haiyong; Liang Hongbin; Liu Chunmeng; Su Qiang; Sun Shuaishuai; Tao Ye; "Luminescence of Eu^{3+} in Two Different Sites of $\text{Na}_3\text{GdSi}_2\text{O}_7$ and Gd^{3+}-Eu^{3+} Energy Transfer", ECS J Solid State Sc 1 (1), R27-R31 (2012). Citare 1. Georgescu S; Voiculescu AM; Toma O; Nastase S; Matei C; Osiac M; "Luminescence of Eu-doped langanite nanopowders synthesized by citrate sol-gel method", J. Alloys Compd. 507 (2), 470-474 (2010).	
Articol 14. S. Georgescu, O. Toma, A.M. Chinie, L. Gheorghe, A. Achim, A.S. Stefan, "Excited state dynamics of Eu^{3+} in the partially disordered crystals $\text{La}_3\text{Ga}_5\text{SiO}_{14}$ and $\text{La}_3\text{Ga}_{5.5}\text{Ta}_{0.5}\text{O}_{14}$", J. Lumin. 128 (5-6), 741-743 (2008).	Citare 11. P. Thulimilli, Effect of Calcination Temperature on Photoluminescence Intensity of Sol-Gel Prepared $\text{Sr}_2\text{CeO}_4:\text{Eu}^{3+}$ Nano Phosphor, ES Mater. Manuf. 14, 73-78 (2021). Citare 10. Annemarie Reinhardt, Aleksander Zych, Ingo Köhler, Barbara Albert, Ordered langasites $\text{La}_3\text{Ga}_5\text{MO}_{14}:\text{Eu}^{3+}$ (M = Zr, Hf, Sn) as red-emitting LED phosphors, J. Lumin 218, 116833 (2020). Citare 9. Spassky DA; Kozlova NS; Kozlova AP; Zabelina EV; Buzanov OA; Buryi M; Laguta V; Lebbou K; Nehari A; Cabane H; Dumortier M; Nagirnyi V; "Study of the defects in $\text{La}_3\text{Ta}_{0.5}\text{Ga}_{5.5}\text{O}_{14}$ single crystals", J Lumin. 180, 95-102 (2016). Citare 8. Shvetsov AE; Koryttseva AK; "Quantum-chemical prediction of the luminescent properties of $\text{Eu}_{0.33}\text{Zr}_2(\text{PO}_4)_3$", Russ. J. Gen. Chem. 85, 527-532 (2015). Citare 7. Georgescu S; Voiculescu AM; Nastase S; Zafir A; Matei C; Berger D; Matei C; Stefan A; Toma O; "Luminescence of Eu-doped langasite nanopowders synthesized by a modified Pechini route", J. Lumin. 145, 690-696 (2014). Citare 6. Voiculescu AM; Georgescu S; Nastase S; Matei C; Berger D; Matei C; Stefan A; Toma O; "Upconversion luminescence of $\text{Er}^{3+}/\text{Yb}^{3+}$ co-doped nanolangasite synthesized by a modified Pechini route," J. Sol-Gel Sci. Technol. 64 (3), 667-672 (2012). Citare 5. Futami Yoshisuke; Yanagida Takayuki; Fujimoto Yutaka; Jary Vitezslav; Pejchal Jan; Yokota Yuui; Kikuchi Masae; Nikl Martin; Yoshikawa Akira; "Photoluminescence and scintillation of LGS ($\text{La}_3\text{Ga}_5\text{SiO}_{14}$), LNGA ($\text{La}_3\text{Nb}_{0.5}\text{Ga}_{5.3}\text{Al}_{0.2}\text{O}_{14}$) and LTGA ($\text{La}_3\text{Ta}_{0.5}\text{Ga}_{5.3}\text{Al}_{0.2}\text{O}_{14}$) single crystals", Opt. Mater. 34 (9), 1513-1516 (2012). Citare 4. Georgescu S; Toma O; Voiculescu AM; Matei C; Birjega R; "Infrared-excited bright green and red luminescence in $\text{La}_3\text{Ga}_{5.5}\text{Ta}_{0.5}\text{O}_{14}$ doped with erbium and ytterbium," Phys. B-Cond. Mater. 407 (7), 1124-1127 (2012). Citare 3. Wang Qing-Guo; Su Liang-Bi; Li Hong-Jun; Zheng Li-He; Xu Xiao-Dong; Tang Hui-Li; Jiang Da-Peng; Wu Feng; Xu Jun; "Spectroscopic properties of Er/Ce-codoped $\text{La}_3\text{Ga}_5\text{SiO}_{14}$", Chin. Phys. B 21 (2), 026101 (2012) Citare 2. Cui Min; Zheng Hairong; Tian Yu; He Enjie; Gao Dangli; Li Jiao; Yu Huiji; "The Influence of Synthesizing Processes on the	2

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	Spectroscopic Property of Tetragonal LaOF:Eu³⁺ Nanoparticles”, J. Nanosci. Nanotech. 11 (11), 9621-9625 (2011). Citare 1. Georgescu S; Voiculescu AM; Toma O; Nastase S; Matei C; Osiac M; “Luminescence of Eu-doped langanite nanopowders synthesized by citrate sol-gel method”, J. Alloys Compd. 507 (2), 470-474 (2010).	
Articol 15. A. Achim, L. Gheorghe, V. Lupei, A. Lupei, C. Gheorghe, C. Stoicescu, “Co-doping effects on SrWO₄:Nd³⁺ crystals for Raman lasers,” JOAM 10 (6), 1353-1356 (2008).	Citare 1. Vidya S; Solomon S; Thomas JK; “Nanocrystalline scheelite SrWO₄: a low temperature co-fired ceramic optical material-synthesis and properties”, J. Mater. Sci.-Mater. Electr. 25 (2) 693-701 (2014).	0.1818
Articol 16. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, G. Aka, D. Vivien, “Cationic disorder effects in complex oxide laser materials and phosphors”, Opt. Mater. 30 (11), 1677-1681 (2008).	Citare 1. Atuchin VV; Grivel JC; Zhang ZM; “Core level photoemission spectroscopy and chemical bonding in Sr₂Ta₂O₇”, Chem. Phys. 360 (1-3), 74-78 (2009).	0.1818
Articol 17. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, A. Achim, “Multicenter structure of the optical spectra and the charge-compensation mechanisms in Nd:SrWO₄ laser crystals”, J. Appl. Phys 104 (8), 083102 (2008).	Citare 20. G. Z. Elabedine, R. M. Solé, S. Slimi, M. Aguiló, F. Díaz, W. Chen, V. Petrov, X. Mateos, Growth, anisotropy, and spectroscopy of Tm³⁺ and Yb³⁺ doped MgWO₄ crystals, CrystEngComm 27, 1619-1631 (2025). Citare 19. Xuezhou Yu, Changbao Huang, Youbao Ni, Zhenyou Wang, Haixin Wu, Qianqian Hu, Guojin Liu, Qiang Zhou, Lingli Wei, Optical property and Judd-Ofelt analysis of Dy³⁺, Na⁺:PbGa₂S₄ crystal grown by Bridgman method, J. Lumin. 262, 119951 (2023). Citare 18. Kadam, AR; Kohale, RL; Mishra, GC; Dhoble, SJ; Eu(iii)-Doped tri-calcium Ca₃(1-X-Z)MZ(PO₄)(2)A(X):X host array: optical investigations of down-conversion red phosphor for boosting display intensity and high color purity, New Journal of Chemistry, 45 (16), 7285-7307 (2021). Citare 17. V.B. Dudnikova, E.V. Zharikov, N.N. Eremin, Local structure of molybdates solid solutions containing europium by results of atomistic simulation, Mater. Today Commun. 23, 101180 (2020). Citare 16. Jun Shu, Zhitai Jia, Eugenio Damiano, Haoyuan Wang, Yanru Yin, Na Lin, Xian Zhao, Xinguang Xu, Mauro Tonelli, Xutang Tao; "Charge compensations of Eu²⁺ and O_i²⁻ co-exist in Eu³⁺:CaMoO₄ single-crystal fibers grown by the micro-pulling-down method," CrystEngComm 20 (2018) 6741-6751 Citare 15. Loiko P; Wang Y; Serres J; Mateos X; Aguiló M; Díaz F; Zhang L; Lin Z; Lin H; Zhang G; Vilejshikova E; Dunina E; Kornienko A; Fomicheva L; Petrov V; Griebner U; Chen W; Monoclinic Tm:MgWO₄ crystal: Crystal-field analysis, tunable and vibronic laser demonstration, J Alloys Compd. 763 581-591 (2018). Citare 14. Georgescu S; Stefan A; Toma O; “Judd-Ofelt analysis of Er-doped CaSc₂O₄ revisited, J. Lumin. 199, 488-491 (2018). Citare 13. Aghamalyan NR; Kostanyan RB; Hovsepyan RK; “Luminescent Properties of Nd³⁺ Ions in Pb(MoO₄)_x(WO₄)_{1-x} Crystals”, J Contemp. Phys-Arme+. 53 (1), 41-47 (2018). Citare 12. Gueffaf H; Lagoun B; Guibadj A; Maabed S; Gueddouh A; “DFT Investigation of Structural, Electronic, Elastic and Optical Properties of SrMO₄ (M=Mo and W)”, Commun. Theor. Phys. 68 (4) 536-544 (2017). Citare 11. Loiko P; Serres JM; Mateos X; Aguiló M; Diaz F; Zhang LZ; Lin ZB; Lin HF; Zhang G; Yumashev K; Petrov V; Griebner U; Wang YC; Choi SY; Rotermund F; Chen WD; “Monoclinic Tm³⁺:MgWO₄: a promising crystal for continuous-wave and passively Q-switched lasers at similar to 2μm”, Opt. Lett. 42, 1177-1180 (2017).	4

	Citare 10. Zhang L; Lin H; Zhang Ge; Mateos X; Maria Serres J; Aguiló M; Díaz F; Griebner U; Petrov V; Wang Y; Loiko P; Vilejshnikova E; Yumashev K; Lin Z; Chen W; "Crystal growth, optical spectroscopy and laser action of Tm³⁺-doped monoclinic magnesium tungstate", Opt. Express 25 (4), 3682-3693 (2017). Citare 9. Lizhen Zhang; Weidong Chen; Jieling Lu; Haifeng Lin; Lingyun Li; Guofu Wang; Ge Zhang; Zhoubin Lin; "Characterization of growth, optical properties, and laser performance of monoclinic Yb:MgWO₄ crystal", Opt. Mater. Express 6, 1627-1634 (2016). Citare 8. Muralidharan M; Anbarasu V; Perumal AE; Sivakumar K; "Band gap tailoring and enhanced ferromagnetism in Yb doped SrWO₄ scheelite structured system", J. Mater. Sci.-Mater. Electr. 26 (9), 6875-6886 (2015). Citare 7. Pereira PFS; Nogueira IC; Longo E; Nassar EJ; Rosa ILV; Cavalcante LS; "Rietveld refinement and optical properties of SrWO₄:Eu³⁺ powders prepared by the non-hydrolytic sol-gel method", J Rare Earths 33, 113-128 (2015) Citare 6. Muralidharan M; Anbarasu V; Elaya Perumal A; Sivakumar K; "Studies on multifunctional behaviour of Cr doped SrWO₄ Compounds", J. Mater. Sci. 26, 6926 (2015). Citare 5. Hui Li; Xiao-Yu Kuang; Ai-Jie Mao; Zhen-Hua Wang; "Investigations of defect structure and EPR parameters for tetragonal Nd³⁺ centers in AWO₄ (A=Ca, Sr, Pb) crystals by superposition model analysis", Solid State Commun. 189, 47–51 (2014). Citare 4. Zheng YH; Lin JT; Wang QM; "Emissions and photocatalytic selectivity of SrWO₄:Ln³⁺ (Eu³⁺, Tb³⁺, Sm³⁺ and Dy³⁺) prepared by a supersonic microwave co-assistance method", Photochem. Photobiol. Sci. 11 (10), 1567-1574 (2012). Citare 3. Guohua Jia; Cuifang Wang; Shiqing Xu; "Local Site Symmetry Determination of Scheelite-Type Structures by Eu³⁺ Spectroscopy", J. Phys. Chem. C 114, 17905 (2010). Citare 2. Aixiang Wang; Cuifang Wang; Guohua Jia, "Recent advances in strontium tungstate scheelite material", Front. Chem. China 5, 61 (2010). Citare 1. Lupei V; Lupei A; Ikesue A; "Multicenter Structure and Dynamical Processes in the Rare Earth Doped Garnet and Sesquioxide Laser Crystals and Ceramics", Spectr. Lett. 43 (5), 357-372 (2010).	
Articol 18. C. Gheorghe, A. Lupei, V. Lupei, L. Gheorghe, A. Ikesue, "Spectroscopic properties of Ho³⁺ doped Sc₂O₃ transparent ceramic for laser materials," J. Appl. Phys. 105 (12), 123110 (2009).	Citare 26. Liu, Y.; Qin, X.; Gan, L.; Zhou, G.; Hu, S.; Wang, Z.; Jiang, J.; Zhang, T.; Chen, H.; "Fabrication and Luminescence Properties of Highly Transparent Green-Emitting Ho:Y₂O₃ Ceramics for Laser Diode Lighting," Materials, 17(2), 402 (2024). Citare 25. Liu, Y.; Qin, X.; Gan, L.; Zhou, G.; Hu, S.; Wang, Z.; Jiang, J.; Zhang, T.; Chen, H.; "Fabrication and Luminescence Properties of Highly Transparent Green-Emitting Ho:Y₂O₃ Ceramics for Laser Diode Lighting"; Materials 17(2), 402 (2024). Citare 24. Liu, Ziyu; Ikesue, Akio; Li, Jiang, Research progress and prospects of rare-earth doped sesquioxide laser ceramics, JECS 41(7), 3895-3910 (2021). Citare 23. Pan, YX; Lin, H; Liu, J; Xu, XD; Hong, RJ; Tao, CX; Han, ZX; Zhang, DW; Fabrication and spectral properties of Yb,Ho:Y₂O₃ transparent ceramics, Opt. Mater. 112, (2021) Citare 22. Zhuohao Xiao, Shijin Yu, Yueming Li, Shuangchen Ruan, Ling Bing Kong, Qing Huang, Zhengren Huang, Kun Zhou, Haibin Su, Zhengjun Yao, Wenxiu Que, Yin Liu, Tianshu Zhang, Jun Wang, Peng Liu, Deyuan Shen, Mathieu Allix, Jian Zhang, Dingyuan Tang, Materials development and potential applications of transparent ceramics: A review, Mater Sci. Eng. R. 139, 100518 (2020). Citare 21. Jing, W; Loiko, P; Serres, JM; Wang, YC; Kifle, E; Vilejshnikova, E; Aguiló, M; Díaz, F; Griebner, U; Huang, H; Petrov,	5.2

V; Mateos, X; "Synthesis, spectroscopic characterization and laser operation of Ho^{3+} in "mixed" $(\text{Lu},\text{Sc})_2\text{O}_3$ ceramics," J. Lumin. **203**, 145-151 (2018)

Citare 20. Dilawar Sharma N; Singh J; Vijay A; Samanta K; Dogra S; Bandyopadhyay AK; "Pressure-Induced Structural Transition Trends in Nanocrystalline Rare-Earth Sesquioxides: A Raman Investigation", J. Phys. Chem. C **120** (21), 11679–11689 (2016).

Citare 19. Zhao B; Xie X; Xu S; Pan Y; Yang B; Guo S; Wei T; Su H; Wang H; Chen X; Dravid VP; Huang L; Huang W; "From ScOOH to Sc_2O_3 : Phase Control, Luminescent Properties, and Applications", Adv. Mater. **28** (31), 6665–6671 (2016).

Citare 18. En-Cai Ji; Qiang Liu; Ming-Ming Nie; Hui Luo; Yu-Xi Hu; Zhou-Guo Guan; Ma-Li Gong; "Spectroscopic properties of heavily Ho^{3+} -doped barium yttrium fluoride crystals", Chin. Phys. B **24** (9), 094216 (2015).

Citare 17. Poirot N; Bregiroux D; Boy P; Autret-Lambert C; Belleville P; Bianchi L; "Sintering of nanostructured Sc_2O_3 ceramics from sol-gel-derived nanoparticles", Cer. Inter. **41**, 3879-3887 (2015).

Citare 16. Rajeswara Rao D; Sahaya Baskaran G; Ramesh Babu P; Gandhi Y; Veeraiah N; "Studies on optimizing sesquioxide contents to enhance luminescence efficiency of Pr^{3+} ions in $\text{PbO-PbF}_2\text{-B}_2\text{O}_3$ glass system", J. Mol. Struct. **1073**, 164 (2014).

Citare 15. Pandey Sugandha Dogra; Samanta K; Singh Jasveer; Sharma Nita Dilawar; Bandyopadhyay AK; "Raman scattering of rare earth sesquioxide Ho_2O_3 : A pressure and temperature dependent study", J. Appl. Phys **116** (13), 33504 (2014).

Citare 14. Georgescu S; Stefan A; Voiculescu AM; Toma O; Matei C; Birjega R; "Peculiarities of $\text{Ho}^{3+}\text{-Yb}^{3+}$ energy transfer in $\text{CaSc}_2\text{O}_4\text{:Ho:Yb}$ ", J. Lumin. **154**, 142-147 (2014).

Citare 13. Rao DR; Baskaran G; Kumar VR; Veeraiah N; "Influence of sesquioxides on fluorescence emission of Yb^{3+} ions in $\text{PbO-PbF}_2\text{-B}_2\text{O}_3$ glass system", J. Non-Cryst. Solids **378**, 265-272 (2013).

Citare 12. Futami Y; Yanagida, T; Fujimoto Y; Pejchal J; Sugiyama M; Kurosawa S; Yokota Y; Ito A; Yoshikawa A; Goto T; "Optical and scintillation properties of Sc_2O_3 , Y_2O_3 and Lu_2O_3 transparent ceramics synthesized by SPS method", Rad. Meas. **55**, 136-140 (2013).

Citare 11. Wang SF; Zhang J; Luo DW; Gu F; Tang DY; Dong ZL; Tan GEB; Que WX; Zhang TS; Li S; Kong LB; "Transparent ceramics: Processing, materials and applications", Prog. Solid State Chem. **41** (1) 20-54 (2013).

Citare 10. Gheorghe C; Lupei A; Voicu F; Enculescu M; " Sm^{3+} -doped Sc_2O_3 polycrystalline ceramics: spectroscopic investigation," J. Alloys Compd. **535**, 78-82 (2012).

Citare 9. Ryabochkina PA; Bolshakova EV; Ushakov SN; Malov AV; Nishchev KN; "Spectroscopic characteristics of the Nd^{3+} ions in garnet crystals", J. Lumin **132** (6) 1618-1618 (2012).

Citare 8. Xu RR; Tian Y; Hu LL; Zhang JJ; "Origin of $2.7\ \mu\text{m}$ luminescence and energy transfer process of Er^{3+} : $^4\text{I}_{11/2} \rightarrow ^4\text{I}_{13/2}$ transition in $\text{Er}^{3+}/\text{Yb}^{3+}$ doped germanate glasses", J. Appl. Phys **111** (3), 33524 (2012).

Citare 7. Rao CS; Kityk IV; Srikumar T; Raju GN; Kumar VR; Gandhi Y; Veeraiah N; "Spectroscopy features of Pr^{3+} and Er^{3+} ions in $\text{Li}_2\text{O-ZrO}_2\text{-SiO}_2$ glass matrices mixed with some sesquioxides", J. Alloys Compd. **509**, 9230 (2011).

Citare 6. Serivalsatit K; Ballato J; "Submicrometer Grain-Sized Transparent Erbium-Doped Scandia Ceramics", J. Am. Cer. Soc. **93**, 3657 (2010).

Citare 5. Galceran M; Cinta Pujol M; Gluchowski P; Stręk W; Carvajal JJ; et al.,

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	Galceran M; Cinta Pujol M; Gluchowski P; Stręk W; Carvajal JJ; Mateos X; Aguiló M; Díaz F; "A Promising $\text{Lu}_{2-x}\text{Ho}_x\text{O}_3$ Laser Nanoceramic: Synthesis and Characterization", J. Am. Cer. Soc. 93, 3764 (2010). Citare 4. Zhang J; Yang DL; Pun EYB; Gong H; Lin H; "Optical evaluation of multichannel radiative transitions originating from $^4\text{G}_{5/2}$ level of Sm^{3+} in heavy-metal-gallate glasses", J. Appl. Phys 107 (12) 123111 (2010). Citare 3. Zhang Q; Ding J; Shen YL; Zhang G; Lin G; Qiu J; Chen DP; "Infrared emission properties and energy transfer between Tm^{3+} and Ho^{3+} in lanthanum aluminum germanate glasses", JOSA B 27, 975-980 (2010). Citare 2. Zhang Q; Chen GR, Zhang G; Qiu JR; Chen DP; "Infrared luminescence of $\text{Tm}^{3+}/\text{Yb}^{3+}$ codoped lanthanum aluminum germanate glasses", J. Appl. Phys 107, 023102 (2010). Citare 1. Zhang Q; Chen GR, Zhang G; Qiu JR; Chen DP; "Spectroscopic properties of $\text{Ho}^{3+}/\text{Yb}^{3+}$ codoped lanthanum aluminum germanate glasses with efficient energy transfer", J. Appl. Phys 106 (11), 113102, (2009).	
Articol 19. S. Georgescu, A.M. Voiculescu, O. Toma, C. Tiseanu, L. Gheorghe, A. Achim, C. Matei, "Eu-doped langasite, langatate and langanite - possible new red phosphors", OAM-RC 3 (12), 1379-1382 (2009).	Citare 7. Marimuthu, N; Rathnakumari, M; Kumar, PS; Upadhyay, RB; "Dual photoluminescence emission of Er^{3+}, Yb^{3+} and $\text{Er}^{3+}/\text{Yb}^{3+}$ doped $\text{La}_3\text{Ga}_{5.5}\text{Nb}_{0.5}\text{O}_{14}$ ceramics under UV and IR excitation", J. Mater Sci. Mater Electr. 30 (18) 17424-17431 (2019). Citare 6. Reinhardt A; Zych A; Kohler I; Albert B; "Disordered langasites $\text{La}_3\text{Ga}_5\text{MO}_{14}:\text{Eu}^{3+}$ (M = Si, Ge, Ti) as red-emitting LED phosphors", Dalton Trans. 47 (16) 5703-5713 (2018). Citare 5. Georgescu S; Voiculescu AM; Nastase S; Zafir A; Matei C; Berger D; Matei C; Stefan A; Toma O; "Luminescence of Eu-doped langasite nanopowders synthesized by a modified Pechini route", J. Lumin. 145, 690-696 (2014). Citare 4. Georgescu S; Voiculescu AM; Nastase S; Toma O; Matei C; Birjega R; "Infrared-excited red, green, violet and UV luminescence from langasite crystal doped with erbium and ytterbium", Rom. Rep. Phys. 64 (3), 737-742 (2012). Citare 3. Petrescu L; Cinteza O; Voiculescu AM; Rosu T; Enculescu I; Matei E; Georgescu S; Birjega R; Avram S; Mihailescu D; "Interaction of $\text{NaYT}_4:\text{Er}:\text{Yb}$ with phospholipid monolayers as models of biological membranes", Revista de Chimie 63 (9), 956-961 (2012). Citare 2. Voiculescu AM; Georgescu S; Toma O; Nastase S; Birjega R; Petrescu L; Enculescu I; Matei E; "Upconversion luminescence of Er, Yb – doped nanolanganite powders synthesized by a citrate sol-gel method", OAM-RC 5 (11), 1170-1173 (2011). Citare 1. Georgescu S; Voiculescu AM; Toma O; Nastase S; Matei C; Osiac M; "Luminescence of Eu-doped langanite nanopowders synthesized by citrate sol-gel method," J. Alloys Compd. 507 (2), 470-474 (2010).	1.1666
Articol 20. S. Georgescu, A. M. Voiculescu, C. Matei, O. Toma, L. Gheorghe, A. Achim, "Reflectance measurements on europium-doped langasite, langanite and langatate powders", Rom. Rep. Phys. 62(1), 128-133 (2010).	Citare 9. Xiang-Gang Zuo, Yi Wang, Lei Wei, Xian-Shun L, Yang-Bin Fu, Jing Li, Yuan-Yuan Zhang, Xu-Ping Wang, Bing Liu, Yu-Guo Yang, Luminescence properties and energy transfer of $\text{La}_3\text{Ga}_5\text{SiO}_{14}:\text{Eu}^{3+}$, Tb^{3+} phosphors, CrystEngComm. 23, 4194-4204 (2021). Citare 8. Reinhardt A; Zych A; Kohler I; Albert B; "Disordered langasites $\text{La}_3\text{Ga}_5\text{MO}_{14}:\text{Eu}^{3+}$ (M = Si, Ge, Ti) as red-emitting LED phosphors", Dalton Trans. 47 (16) 5703-5713 (2018). Citare 7. Zu HF; Wu HY; Wang QM; "High-Temperature Piezoelectric Crystals for Acoustic Wave Sensor Applications", IEEE Trans Ultrason Ferroelectr Freq Control 63 (3), 486-505 (2016). Citare 6. Georgescu S; Voiculescu AM; Matei C; Secu CE; Negrea RF; Secu M; "Ultraviolet and visible up-conversion luminescence	1.6363

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	of Er³⁺/Yb³⁺ co-doped CaF₂ nanocrystals in sol-gel derived glass-ceramics, J. Lumin. 143, 150-156 (2013). Citare 5. Georgescu S; Voiculescu AM; Matei C; Stefan AG; Toma O; "Violet and near-ultraviolet upconversion luminescence in La₃Ga_{5.5}Ta_{0.5}O₁₄ codoped with Er³⁺ and Yb³⁺", Physica B 413, 55-58 (2013). Citare 4. Georgescu S; Voiculescu AM; Matei C; Stefan A. G; Toma O; "Upconversion luminescence in La₃Ga_{5.5}Ta_{0.5}O₁₄ codoped with Er³⁺ and Yb³⁺", Proc. SPIE 8882, 888204 (2013). Citare 3. Wang Qing-Guo; Su Liang-Bi; Li Hong-Jun; Zheng Li-He; Xu Xiao-Dong; Tang Hui-Li; Jiang Da-Peng; Wu Feng; Xu Jun; "Spectroscopic properties of Er/Ce-codoped La₃Ga₅SiO₁₄", Chin. Phys. B 21 (2), 026101 (2012). Citare 2. Georgescu S; Voiculescu AM; Nastase S; Toma O; Matei C; Birjega R; "Infrared-excited red, green, violet and UV luminescence from langasite crystal doped with erbium and ytterbium", Rom. Rep. Phys. 64 (3), 737-742 (2012) Citare 1. Georgescu S., Voiculescu AM; Toma O; Nastase S; Matei C; Osiac M; "Luminescence of Eu-doped langanite nanopowders synthesized by citrate sol-gel method", J. Alloys Compd. 507 (2), 470-474 (2010).	
Articol 21. 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).	Citare 3. Bharadwaj, M.; Gaur, A.; "Cooperative Sensitization Upconversion of Ex-Situ Sol-Gel Synthesized ZnO-SiO₂: Nd³⁺/Yb³⁺ Dense Glass Ceramic Material under 980nm Laser Pumping," Journal of Non-Crystalline Solids, 631, 122897 (2024). Citare 2. Guo HX; Zhang MF; Han JC; Nie Y; "Crystal growth, Judd-Ofelt analysis and radiative properties of Nd:YAG single crystal grown by HDS", J Lumin. 140, 135-137 (2013). Citare 1. Zhao W; Zhou WW; Song MJ; Wang GF; Du JM; Yu HJ; Chen JX; "Crystal growth and Judd-Ofelt analysis of novel Tm³⁺-doped BaCaBO₃F crystal", OAM-RC 5(2), 49-53 (2011).	0.6
Articol 22. L. Gheorghe, A. Achim, F. Voicu, C. Ghica, "Growth and structural characterization of Y _{0.6} Lu _{0.4} Ca ₄ O(BO ₃) ₃ new nonlinear crystal", JOAM 12 (8), 1680-1683 (2010).	Citare 1. Zheng QH; Zhou WW; Wei B; Liu HY; Tong Y; Lin ZB; Wang GF; Zhao W; "Effect of La³⁺ incorporation on the spectroscopic properties of Yb³⁺-doped Y_{1-x}La_xCa₄O(BO₃)₃ (x=0.09 and 0.25) crystals", Phys. Status Solidi A-Appl. Mater. Sci. 210 (9), 1778-1784 (2013).	0.25
Articol 23. S. Georgescu, A. M. Voiculescu, O. Toma, L. Gheorghe, A. Achim, C. Matei, S. Hau, "Luminescence efficiency of europium-doped LGS, LGT and LGN crystals", OAM-RC 4 (12), 1937-1941 (2010).	Citare 5. Reinhardt A; Zych A; Kohler I; Albert B; "Disordered langasites La₃Ga₅MO₁₄:Eu³⁺ (M = Si, Ge, Ti) as red-emitting LED phosphors", Dalton Trans. 47 (16) 5703-5713 (2018). Citare 4 Thakur S; Gathania AK, "Synthesis and Characterization of YVO₄-Based Phosphor Doped with Eu³⁺ Ions for Display Devices", J. Electr. Mater. 44 (10), 3444-3449, (2015). Citare 3. Komar J; Lisiecki R; Ryba-Romanowski W; Berkowski M; "Spectroscopic characterization of Sm³⁺ in La₃Ga_{5.5}Ta_{0.5}O₁₄ single crystals", J. Alloys Compd. 610, 50-54 (2014). Citare 2. Lisiecki R; Ryba-Romanowski W; Komar J; Berkowski M; "Effect of temperature on excited state relaxation dynamics and up-conversion phenomena in La₃Ga_{5.5}Ta_{0.5}O₁₄:Er³⁺ single crystals", J. Alloys Compd. 610, 451-455(2014). Citare 1. Lisiecki R; Ryba-Romanowski W; Macalik L; Komar J; Berkowski M; "Optical study of La₃Ga_{5.5}Ta_{0.5}O₁₄ single crystal co-doped with Ho³⁺ and Yb³⁺, Appl. Phys. B 116 (1), 183-194 (2014).	0.83333
Articol 24. O. Toma, L. Gheorghe, A. M. Vlaicu, "Synthesis and preliminary characterization of Erbium Lithium Niobium Gallium Garnet", Rom. J. Phys., 56 (7-8), 928 (2011).	Citare 1. Toma O; Georgescu S; "Judd-Ofelt analysis of Er³⁺ ions in calcium lithium niobium gallium garnet," J. Lumin. 147, 259-264 (2014).	0.3333
Articol 25. C. Gheorghe, L. Gheorghe, P. Loiseau, and G. Aka, "Spectroscopic features and laser performance at 1.06	Citare 7. Renpeng Yan; Chuang Zhao; Xudong Li; Xin Yu; Zhixiang Liu; Xiaolin Wen; Wenming Yao; Jing Gao; Fang Peng; Qingli Zhang; Renqin Dou; Zhongxiang Zhou; "LD pumped 1347 nm	1.75

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

μm of Nd^{3+} doped $\text{Gd}_{1-x}\text{Lu}_x\text{Ca}_4\text{O}(\text{BO}_3)_3$ single crystal", J. Appl. Phys. 111 (1), 013102 (2012).	laser with a novel $\text{Nd}:\text{GdNbO}_4$ crystal", Infrared Phys Technol. 94, 32-37 (2018). Citare 6. Ding SJ; Zhang QL; Sun DL; Peng F; Liu WP; Luo JQ; Sun GH; "Spectroscopic properties of $\text{Nd}:\text{Gd}_{0.89}\text{La}_{0.1}\text{NbO}_4$ mixed laser crystal", J. Lumin. 201, 65-69 (2018). Citare 5. Rempeng Yan; Chuang Zhao; Xudong Li; Kang Li; Xin Yu; Wenming Yao; Fang Peng; Qingli Zhang; Renqin Dou; Jing Gao; Nigel Copner; "Investigation on 1.3 μm laser performance with $\text{Nd}:\text{Gd}_{0.69}\text{Y}_{0.3}\text{TaO}_4$ and $\text{Nd}:\text{Gd}_{0.68}\text{Y}_{0.3}\text{NbO}_4$ mixed crystals", Opt. Express 26 (12), 15785-15792 (2018). Citare 4. Rempeng Yan; Xudong Li; Wenming Yao; Yingjie Shen; Zhongxiang Zhou; Fang Peng; Qingli Zhang; Renqing Dou; Jing Gao; "926 nm laser operation in $\text{Nd}:\text{GdNbO}_4$ crystal based on $4F_{3/2} \rightarrow 4I_{9/2}$ transition", Opt. Laser Tech. 101, 515-519 (2018). Citare 3. Chen Y; Peng F; Zhang Q; Liu W; Dou R; Ding S; Luo J; Sun D; Sun G; Wang X; "Growth, structure and spectroscopic properties of 1at.% $\text{Er}^{3+}:\text{GdTao}_4$ laser crystal", J. Lumin. 192, 555-561 (2017). Citare 2. Peng F; Yang HJ; Zhang QL; Luo JQ; Liu WP; Sun DL; Dou RQ; Sun GH; "Spectroscopic properties and laser performance at 1066 nm of a new laser crystal $\text{Nd}:\text{GdTao}_4$", Appl. Phys. B-Lasers and Opt. 118, 549-554 (2015). Citare 1. Zheng QH; Zhou WW; Wei B; Liu HY; Tong Y; Lin ZB; Wang GF; Zhao W; "Effect of La^{3+} incorporation on the spectroscopic properties of Yb^{3+}-doped $\text{Y}_{1-x}\text{La}_x\text{Ca}_4\text{O}(\text{BO}_3)_3$ ($x=0.09$ and 0.25) crystals", Phys. Status Solidi A-Appl. Mater. Sci. 210 (9), 1778-1784 (2013).	
Articol 26. O. Toma, S. Georgescu, L. Gheorghe, "Energy levels of Er^{3+} in calcium lithium niobium gallium garnet", Rom. Rep. Phys. 64 S, 1381-1390 (2012).	Citare 3. Toma O; Georgescu S; "Excited-state absorption in erbium-doped calcium lithium niobium gallium garnet", J. Lumin 154, 553-558 (2014). Citare 2. Toma O; Georgescu S; "Judd-Ofelt analysis of Er^{3+} ions in calcium lithium niobium gallium garnet", J. Lumin. 147, 259-264 (2014). Citare 1. Toma O; Georgescu S; "Selectively excited Er^{3+} luminescence in calcium lithium niobium gallium garnet", Rom. J. Phys. 58 (3-4), 365-372 (2013).	1
Articol 27. L. Gheorghe, C. Gheorghe, "Judd-Ofelt analysis and laser investigations of Nd^{3+}-doped $\text{Gd}_{1-x}\text{Sc}_x\text{Ca}_4\text{O}(\text{BO}_3)_3$ single crystal," OAM-RC 6 (3-4), 374-382 (2012).	Citare 1. Zheng QH; Zhou WW; Wei B; Liu HY; Tong Y; Lin ZB; Wang GF; Zhao W; "Effect of La^{3+} incorporation on the spectroscopic properties of Yb^{3+}-doped $\text{Y}_{1-x}\text{La}_x\text{Ca}_4\text{O}(\text{BO}_3)_3$ ($x=0.09$ and 0.25) crystals", Phys. Status Solidi A-Appl. Mater. Sci. 210 (9), 1778-1784 (2013).	0.5
Articol 28. 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).	Citare 20. Lin Li, Peixiong Zhang, Zhen Li, Zhenqiang Chen, First-principle calculations, crystal growth, and broadband near-infrared luminescence of $\text{Nd}:\text{Y}_2\text{Mg}_3(\text{SiO}_4)_3$ single crystal, J. Am. Chem. Soc. 108 (2), e20177 (2025). Citare 19. Xuhong Li, Zhaojie Zhu, Jianfu Li, Chaoyang Tu, Yan Wang, Growth and spectroscopic properties of Yb and Nd ions doped $\text{Ca}_3\text{Li}_{0.275}\text{Nb}_{1.775}\text{Ga}_{2.95}\text{O}_{12}$ (CLNGG) laser crystals, J. Cryst. Growth, 652, 128029 (2025). Citare 18. Croitoru, G.; Jipa, F.; Greculeasa, M.; Broasca, A.; Voicu, F.; Gheorghe, L.; Pavel, N. "Buried Depressed-Cladding Waveguides Inscribed in Nd^{3+} and Yb^{3+} Doped CLNGG Laser Crystals by Picosecond-Laser Beam Writing," Materials, 17, 1758 (2024). Citare 17. Li, X.; Lu, D.; Wang, S.; Wu, K.; Yu, H.; Li, J.; Zhang, H. "Growth of 60 mm-Diameter $\text{Yb}:\text{CNGG}$ Single Crystals with Disordered Coordination Structure for High-Energy Laser Systems," CrystEngComm, 26, 697-703 (2024). Citare 16. Zhanglang Lin, Pavel Loiko, Huang-Jun Zeng, Wen-Ze Xue, Ge Zhang, Simone Normani, Patrice Camy, Valentin Petrov, Xavier Mateos, Haifeng Lin, Haohai Yu, Huaijin Zhang, Junhai Liu,	3.6363

Li Wang, and Weidong Chen, Kerr-lens mode-locking of an Yb:CLNGG laser, Opt. Express 31, 8575-8585 (2023).

Citare 15. Yajing Zhao, Guowu Tang, Puxian Xiong, Qianyi Chen, Yongsheng Sun, Zhiduo Wang, Dongdan Chen, Zhongmin Yang, Enhanced broadband NIR emission in glass–ceramic fibers containing Nd³⁺/Yb³⁺ co-doped YCa₄O(BO₃)₃ disordered nanocrystal, J. Am. Ceram. Soc. 106 (8), 4634-4642 (2023).

Citare 14. Xiaochen Niu, Hongling Chen, Peixiong Zhang, Hao Yin, Yin Hang, Zhen Li, Wenxiong Lin, Zhenqiang Chen, Novel laser crystal Nd³⁺:Ca(Y, Gd)AlO₄: A promising candidate for laser operation beyond 1.37 μm, J. Alloy. Compd. 938, 168613 (2023).

Citare 13. Hu, H., Jiang, Q., Li, Y. et al., Effect of homogeneous coating on K⁺-doped NaGdF₄:Er³⁺,Yb³⁺ upconversion materials. J Mater Sci: Mater. Electron. 33, 596–606 (2022).

Citare 12. Wang, L; Chen, WD; Zhao, Y; Loiko, P; Mateos, X; Guina, M; Pan, ZB; Mero, M; Griebner, U; Petrov, V; Sub-50 fs pulse generation from a SESAM mode-locked Tm,Ho-codoped calcium aluminate laser, Opt. Lett. 46 (11), 2642-2645 (2021).

Citare 11. Alvarez-Perez, JO; Cano-Torres, JM; Ruiz, A; Serrano, MD; Cascales, C; Zaldo, C; A roadmap for laser optimization of Yb:Ca₃(NbGa)₅O₁₂-CNGG-type single crystal garnets dagger, J. Mater. Chem. C 9 (13), 4628-4642 (2021).

Citare 10. Jorge Omar Alvarez-Perez, Jose’ Maria Cano-Torres, Maria Dolores Serrano, Concepcion Cascales and Carlos Zaldo, A probe of the radiation field magnetic component based on octahedral Yb³⁺ in the CaNbGa garnet – CNGG – single crystal, J. Mater. Chem. C. 8 (23), 7882-7889 (2020).

Citare 9. Ana-Maria Voiculescu, Cristina-Elena Tihon, Stefania Hau, George Stanciu, Octavian Toma, Optical study of SrLaGa₃O₇ ceramic samples doped with Er³⁺ and Yb³⁺, Opt. Mter. 100, 109613 (2020).

Citare 8. Zhongben Pan, Pavel Loiko, Josep Maria Serres, Hualei Yuan, Xiaojun Dai, Huaqiang Cai, Magdalena Aguiló, Francesc Díaz, Patrice Camy, Yicheng Wang, Uwe Griebner, Valentin Petrov, Xavier Mateos, Growth, spectroscopy and laser operation of Yb³⁺,Na⁺ /Li⁺ -codoped CNGG-type garnets promising for ultrafast lasers, Proc. SPIE 11259, Solid State Lasers XXIX: Technology and Devices, 1125911 (2020).

Citare 7. Yi G; Li W; Mei B; Zhou Z; Song J; Su L; Preparation and characterizations of Pr³⁺:CaF₂ transparent ceramics with different doping concentrations, Ceram. Int. 45 (3) , 3541-3546 (2019).

Citare 6. David SP; Jambunathan V; Yue F; Navratil P; Mika M; Lucianetti A; Mocek T; “Effect of Gd³⁺/Ga³⁺ on Yb³⁺ emission in mixed YAG at cryogenic temperature”, Ceram. Int. 45 (7), 9418-9422 Part: B (2019).

Citare 5. Haiyong Zhu; Yongchang Zhang; Yanmin Duan; Ye Yu; Changwen Xu; Xiaodong Xu; Dongzhen Li; Jian Zhang; Jun Xu; “Disordered Nd:CaYAlO₄ crystal lasing at 1069, 1080 and 1363 nm”, J. Lumin. **195**, 225-227 (2018).

Citare 4. Serrano MD; Álvarez-Pérez JO; Zaldo C; Sanz J; Sobrados I; Alonso JA; Cascales C; Fernández-Díaz MT; Jezowski A; “Design of Yb³⁺ optical bandwidths by crystallographic modification of disordered calcium niobium gallium laser garnets”, J. Mater. Chem. C **5**, 11481-11495 (2017).

Citare 3. Maria Serres J; Jambunathan V; Loiko P; Mateos X; Yu H; Zhang H; Liu J; Lucianetti A; Mocek T; Yumashev K; Griebner U; Petrov V; Aguiló M; Díaz F; “Microchip laser operation of Yb-doped gallium garnets”, Opt. Mater. Express **6**(1), 46 -57 (2016).

Citare 2. Zhang YG; Petrov V; Griebner U; Zhang XY; Yu HH; Zhang HJ; Liu JH; “Diode-pumped SESAM mode-locked Yb:CLNGG laser”, Opt. Laser Techn. **69**, 144-147 (2015).

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	Citare 1. Zhang Yuangeng; Petrov Valentin; Griebner Uwe; Zhang Xingyu; Choi Sun Young; Gwak Ji Yoon; Rotermund Fabian; Mateos Xavier; Yu Haohai; Zhang Huaijin; Liu Junhai; “90-fs diode-pumped Yb:CLNGG laser mode-locked using single-walled carbon nanotube saturable absorber”, Opt. Express 22 (5), 5635-5640 (2014).	
Articol 29. M.T. Andersen, J.L. Mortensen, S. Gernershausen, P. Tidemand-Lichtenberg, P. Buchhave, L. Gheorghe, V. Lupei, P. Loiseau, G. Aka, “First measurement of the nonlinear coefficient for $Gd_{1-x}Lu_xCa_4O(BO_3)_3$ and $Gd_{1-x}Sc_xCa_4O(BO_3)_3$ crystals”, Opt. Express 15 (8), 4893-4901 (2007).	Citare 10. Ranran Li, Hongwei Qi, Yanqing Liu, Fapeng Yu, Pingzhang Yu, Zhengping Wang, Xinguang Xu, Xian Zhao, Widely Tunable Angular Non-Critical Phase-Matching Wavelengths from 0.72 to 1.42 μm Based on $RE_{1-x}RE_{2-x}COB$ Mixed Crystals, Crystals 10(9), 744 (2020). Citare 9. Liu YQ; Yu FP; Wang ZP; Yang XQ; Han S; Xu XG; Zhao X; “Anisotropy of nonlinear optical properties in monoclinic $Sm_xY_{1-x}Ca_4O(BO_3)_3$ crystals”, J. Alloys Compd. 762, 431-437 (2018). Citare 8. Liu Yanqing; Wang Zhengping; Yu Fapeng; Qi Hongwei; Yang Xiuqin; Yu Xiaoqiang; Zhao Xian; Xu Xinguang; “Angular non-critical phase-matching second-harmonic-generation characteristics of RECOB (RE = Tm, Y, Gd, Sm, Nd and La) crystals”, Opt. Express 25 (10), 11867-11893 (2017). Citare 7. Qi HW; Wang F; Chai XX; Wang ZP; Yu FP; Liu YQ; Zhao X; Xu XG; “Growth and non-critical phase-matching frequency conversion properties of $La_xY_{1-x}COB$ crystals”, CrystEngComm 18 (33), 6205-6212 (2016). Citare 6. Hongwei Qi; Zhengping Wang; Fang Wang; Xiangxu Chai; Fapeng Yu; Yanqing Liu; Xun Sun; Xinguang Xu; Xian Zhao; “Non-critical phase-matched second-harmonic-generation and third-harmonic-generation of 1053 nm lasers in $Gd_xY_{1-x}COB$ crystal”, Opt. Mater. Express 6 (5), 1576-1586 (2016). Citare 5. Liu YQ; Yu FP; Wang ZP; Xu XG; Zhao X; “Growth, nonlinear optical and self-frequency-doubled properties of $LaGdCOB$ and $Nd:LaGdCOB$ single crystals”, J. Alloys Compd 646, 183-188 (2015). Citare 4. Liu YQ; Yu FP; Lu QM; Yu XQ; Wang ZP; Zhao X; Xu XG; “Nonlinear optical characterizations of monoclinic $La_xGd_{1-x}Ca_4O(BO_3)_3$ ($x=1, 0.09, 0.13$) single crystals”, Laser Phys. 25 (1), 015804 (2015). Citare 3. Liu YQ; Qi HW; Lu QM; Yu FP; Wang ZP; Xu XG; Zhao X; “Type-II second-harmonic-generation properties of YCOB and GdCOB single crystals”, Opt. Express 23, 2163-2173 (2015). Citare 2. Liu YQ; Yu FP; Wang ZP; Xu XG; Zhao X; “Anisotropy of nonlinear optical properties in monoclinic crystal $TmCa_4O(BO_3)_3$”, Opt. Mater. Express 4, 1787-1793 (2014). Citare 1. Liu; Yu FP; Qi HW; Han S; Zhang F; Wang ZP; Yu YQ; Zhao X; Xu XG; “High efficiency angular non-critical phase matching for Ti:sapphire laser realized on $LaCa_4O(BO_3)_3$ single crystals”, Laser Phys. Lett. 11, 095403 (5pp) (2014).	1.4285
Articol 30. C. Gheorghe, A. Lupei, L. Gheorghe, A. Achim, “Growth and spectroscopic preliminary investigations of Sm^{3+} doped strontium hexa-aluminates single crystals”, OAM-RC 5 (2), 116-118 (2011)	Citare 2. Mohammed Al-B FA; Lakshminarayana G; Baki SO, Halimah MK; Kityk IV; Mahdi MA; “Structural, thermal, optical and dielectric studies of $Dy^{3+}: B_2O_3-ZnOPbO-Na_2O-CaO$ glasses for white LEDs application”, Opt. Mater. 73, 686-694 (2017). Citare 1. Marzahl DT; Metz PW; Krankel C; Huber G; “Spectroscopy and laser operation of Sm^{3+}-doped lithium lutetium tetrafluoride ($LiLuF_4$) and strontium hexaaluminate ($SrAl_{12}O_{19}$)”, Opt. Express 23 (16), 21118-21127 (2015).	0.5
Articol 31. O. Toma, L. Gheorghe, R. Birjega, “Solubility limits of erbium in partially disordered crystals langanite and langatate”, Rom. J. Phys. 57 (9-10) 1375-1381 (2012).	Citare 4. Marimuthu, N; Rathnakumari, M; Kumar, PS; Upadhyay, RB; “Dual photoluminescence emission of Er^{3+}, Yb^{3+} and Er^{3+}/Yb^{3+} doped $La_3Ga_{5.5}Nb_{0.5}O_{14}$ ceramics under UV and IR excitation”, J. Mater Sci. Mater Electr. 30 (18) 17424-17431 (2019). Citare 3. Ajimsha, RS; Das, AK; Sahu, VK; Misra, P; “Disorder Driven Weak Localization and Phase Coherent Electron Transport in Ga Doped (Zn:V)O Thin Films”, ECS J. Solid State Sci. Tech. 8 (3) Q61-Q65 (2019).	1.33333

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	Citare 2. Ajimsha RS; Das AK; Misra P; Singh B; "Observation of weak localization and phase coherent electron transport in sparsely doped (Zn:Ga)O thin films", J. Alloys Compd 708, 73-78 (2017). Citare 1. Ajimsha RS; Das AK; Joshi MP; Kukreja LM; "Quantum corrections to low temperature electrical conductivity in Dy doped ZnO thin films", Thin Solid Films 589, 521-525 (2015).	
Articol 32. C. Gheorghe, L. Gheorghe, A. Achim, S. Hau, R. D. Avram, G. Stanciu, "Optical properties of Sm³⁺ doped strontium hexa-aluminate single crystals", J. Alloys Compd. 622, 296–302 (2015).	Citare 17. Abouhaswa, A. S.; Abomostafa, H. M.; Nasr, M. H.; Rabiea, E. A. "Elucidating the Impact of Dy₂O₃ Substitution on Structure, Optical, Photoluminescence and Mechanical Properties of Borosilicate Glass," Phys. Scr., 99, 035950 (2024). Citare 16. Hu, Z., Liu, P., Wang, X., Wang, J., Liu, J., Zhang, J., Xu, X., Spectroscopic investigations and Judd-Ofelt analysis of Sm³⁺ doped Y₂O₃ transparent ceramics. Physica B: Cond. Matter, 669, 415283 (2023). Citare 15. Pingzhang Yu, Zhengping Wang, Xiaobo Panm, Yanqing Liu, Fapeng Yu, Xinguang Xu, Growth, thermal, and polarized spectral properties of the Sm:GdCa₄O(BO₃)₃ crystal for a reddish-orange laser, CrystEngComm 24, 7454-7464 (2022). Citare 14. Singh, S; Gupta, I; Singh, D; Sm³⁺-activated YAG nanocrystals: Synthesis, structural and spectroscopic analysis for orange-red emitting LEDs, Optik 238, Article Number: 166482 (2021). Citare 13. Marwa M. Abdelhameed, Yasser A. Attia, Meram S. Abdelrahman, Tawfik A. Khattab. Photochromic and fluorescent ink using photoluminescent strontium aluminate pigment and screen printing towards anticounterfeiting documents, Luminescence, 36 (4), 865-874 (2021) Wiley Online Library. Citare 12. Jian Liu, Qingsong Song, Dongzhen Li, Xiaodong Xu, Jun Xu, Growth and red-orange emission of Sm³⁺ doped SrAl₁₂O₁₉ single crystals, Opt. Mater. 101 109754 (2020). Citare 11. Jinkai Li, Bin Liu, Qi Chen, Yizhong Lu, Zongming Liu, Synthesis of M_{1-3x}Al₂O₄:Eu²⁺ x/Dy³⁺ 2x(M²⁺= Sr²⁺, Ca²⁺ and Ba²⁺) phosphors with long-lasting phosphorescence properties via co-precipitation method, Chem. Rep. 1(2), 112-117 (2019). Citare 10. Fu, ZX; Liu, B;" Hydrothermal synthesis, energy transfer and luminescence enhancement of rhombohedral LaOF: Sm³⁺-Eu³⁺ nanoparticles, Phys B-Cond. Mater. 574, Article Number: UNSP 311653 (2019). Citare 9. Liu, J; Song, QS; Li, DZ; Xu, XD; Xu, J; Crystal growth and spectroscopic characterization of Sm:LaMgAl₁₁O₁₉ crystal, J. Lumin. 215; Article Number: 116701 (2019). Citare 8. Zhou SD; Pan, YX; Liu, J; Song, QS; Xu, J; Li, DZ; Liu, P; Xu, XD; Xu, B; Xu, J; Buchvarov, I; Lebbou, K.; Diode-pumped continuous-wave a- and c-cut Pr:Sr_{0.5}La_{0.5}Mg_{0.5}O_{11.5}O₁₉ (Pr:ASL) visible lasers at 645 and 726 nm, J. Alloys Compd. 792, 1200-1205 (2019). Citare 7. Zhou S; Pan Y; Liu J; Song Q; Xu J; Li D; Liu P; Xu X; Li N; Xu B; Xu J; Spectroscopy and diode-pumped laser operation of Pr:LaMgAl₁₁O₁₉ crystal, Opt. Mater. 89, 14-17 (2019). Citare 6. Singh V; Sivaramaiah G; Singh N; Rao JL; Pramod K. Singh; Pathak MS; Hakeem DA; "EPR and PL studies on UVB-emitting gadolinium-doped SrAl₁₂O₁₉ phosphors", Optik-Inter. J. Light Electr. Opt. crystal 158, 1227-1233 (2018). Citare 5. Demesh MP; Dernovich OP; Gusakova NV; Yasukevich AS; Kornienko AA; Dunina EB; Fomicheva LA; Pavlyuk AA; Kuleshov NV; "Growth and spectroscopic properties of Sm³⁺: KY(WO₄)₂ crystal", Opt. Mater. 75, 821-826 (2018). Citare 4. Mohammed Al-B FA; Lakshminarayana G; Baki SO, Halimah MK; Kityk IV; Mahdi MA; "Structural, thermal, optical and dielectric studies of Dy³⁺: B₂O₃-ZnOPbO-Na₂O-CaO glasses for white LEDs application", Opt. Mater. 73, 686-694 (2017)	3.0909

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	Citare 3. Suthanthirakumar P; Marimuthu K; "Investigations on spectroscopic properties of Dy³⁺ doped zinc telluro-fluoroborate glasses for laser and white LED applications", J. Molec. Struct. 1125, 443-452 (2016). Citare 2. Herrera A; Buchner S; Camerini RV; Jacinto C; Balzaretti NM; "Spectroscopic properties of B₂O₃-PbO-Bi₂O₃-GeO₂ glass doped with Sm³⁺ and gold nanoparticles", Opt Mater. 52, 230-236 (2016). Citare 1. Marzahl DT; Metz PW; Krankel C; Huber G, "Spectroscopy and laser operation of Sm³⁺-doped lithium lutetium tetrafluoride (LiLuF₄) and strontium hexaaluminate (SrAl₁₂O₁₉)", Opt. Express 23 (16), 21118-21127 (2015).	
Articol 33. L. Gheorghe, S. Georgescu, S. Constantinescu, I. Mateescu, L. Diamandescu, L. Dumitrache, E. Borca, "Synthesis, growth and characterisation of langasite crystals", Proceedings of the IEEE Ultrasonics Symposium 1, 965-968 (2002).	Citare 3. Voiculescu AM; Georgescu S; Nastase S; Matei C; Berger D; Matei C; StefanA; Toma O; "Upconversion luminescence of Er³⁺/Yb³⁺ co-doped nanolangasite synthesized by a modified Pechini route", J. Sol-Gel Sci. Tech. 64 (3), 667-672, (2012). Citare 2. Mateescu I; Dumitrache L; Bran C; Capelle B; Detaint J; Johnson G, "Vibration modes analysis by X-ray topography in quartz and langasite resonators", Proceedings of the IEEE International Frequency Control Symposium, Article number P2FC-B-1, 579-584 (2005) Citare 1. Ji X; Han T; Shi W; Zhang G, "Theoretical studies on the SAW properties of LGS at high-temperature in optimal cuts", J. Mater. Sci. Tech. 20 (5), 512-516 (2004).	0.5
Articol 34. L. Gheorghe, P. Loiseau, G. Aka, "Four hundred nanometer blue-violet light production by type-I noncritical phase-matching second-harmonic generation in Gd_{1-x}R_xCa₄O(BO₃)₃ (R = Lu, Sc): Crystal growth and nonlinear characterization", Opt. Mater 32 (10), 1283-1285 (2010).	Citare 2. Qi HW; Wang F; Chai XX; Wang ZP; Yu FP; Liu YQ; Zhao X; Xu XG, "Growth and non-critical phase-matching frequency conversion properties of La_xY_{1-x}COB crystals", CrystEngComm 18 (33), 6205-6212 (2016). Citare 1. Hongwei Qi; Zhengping Wang; Fang Wang; Xiangxu Chai; Fapeng Yu; Yanqing Liu; Xun Sun; Xinguang Xu; Xian Zhao; "Non-critical phase-matched second-harmonic-generation and third-harmonic-generation of 1053 nm lasers in Gd_xY_{1-x}COB crystal", Opt. Mater. Express 6 (5), 1576-1586 (2016).	0.6666
Articol 35. A. Lupei, V. Lupei, E. Osiaic, L. Rogobete, L. Gheorghe, A. Petraru, "Spectroscopy and energy transfer characteristics of Nd³⁺ in CNGG", Proc. SPIE, 4430, 62-70 (2001).	Citare 1. Kuretake S; Tanaka N; Kintaka Y; Kageyama K; Nakao H; Shirakawa A; Ueda K; Kaminskii AA; "Nd-doped Ba(Zr,Mg,Ta)O₃ ceramics as laser materials", Opt. Mater. 36 (3) 645-649 (2014).	0.18182
Articol 36. A. Achim, L. Gheorghe, F. M. Voicu, G. Stanciu, "Blue light production by type-I non-critical phase matching second-harmonic generation in La(Ca_{1-x}Sr_x)₄O(BO₃)₃ single crystals", CrysEngComm 17, 4098-4101 (2015).	Citare 5. Weigel, T., Mehner, E., Stöcker, H., Meyer, D. C., Götze, J., Hanzig, J., Crystal Structure of Gd(Ca_{3.319}Sr_{0.681})O[BO₃]₃ and Gd(Ca_{2.592}Sr_{1.408})O[BO₃]₃. Cryst. Res. Technol. 58, 2200255 (2023). Citare 4. Bubnova, R.; Yukhno, V.; Yurev, A.; Povolotskiy, A.; Krzhizhanovskaya, M.; Volkov, S.; Ugolkov, V.; Filatov, S., Novel Non-Centrosymmetric NdSr₄O(BO₃)₃ Borate and Nd(Ca_{1-x}Sr_x)₄O(BO₃)₃ Solid Solutions: Preparation, Crystal Structures, Thermal Expansion and Optical Properties, Crystals 13, 1395 (2023). Citare 3. Pingzhang Yu, Ranran Li, Yanqing Liu, Fapeng Yu, Hongwei Qi, Lijuan Liu, Zhengping Wang, Xian Zhao, Xinguang Xu, Bulk growth and polarized spectral characters of Nd:LaCa₄O(BO₃)₃ crystals, Optik, 260, 169097, (2022). Citare 2. Liu Yanqing; Wang Zhengping; Yu Fapeng; Qi Hongwei; Yang Xiuqin; Yu Xiaoqiang; Zhao Xian; Xu Xinguang; "Angular non-critical phase-matching second-harmonic-generation characteristics of RECOB (RE = Tm, Y, Gd, Sm, Nd and La) crystals", Opt. Express 25 (10) 11867-11893 (2017). Citare 1. Qi HW; Wang F; Chai XX; Wang ZP; Yu FP; Liu YQ; Zhao X; Xu XG; "Growth and non-critical phase-matching frequency conversion properties of La_xY_{1-x}COB crystals", CrystEngComm 18 (33), 6205-6212 (2016).	1.25

Articol 37. C. Gheorghe, A. Lupei, S. Hau, L. Gheorghe, A. M. Vlaicu, "Compositional dependence of optical properties of Sm^{3+}-doped $\text{Y}_3\text{Sc}_x\text{Al}_{5-x}\text{O}_{12}$ polycrystalline ceramics," J. Alloys Compd. 683, 547-553 (2016).	Citare 13. Hu, Z., Liu, P., Wang, X., Wang, J., Liu, J., Zhang, J., Xu, X, Spectroscopic investigations and Judd-Ofelt analysis of Sm^{3+} doped Y_2O_3 transparent ceramics. Physica B: Cond. Matter, 669, 415283 (2023). Citare 12. Chonge Ta, Hongli Wen, Zhurong Mo, Yanping Huo, Zhongfei Mu, E.A. Dawi, Li Luo, Deshmukh Abdul Hakeem, Preparation and luminescence investigations of garnet-based $\text{Y}_2\text{Ca}_2\text{Ga}_3\text{VO}_{12}:\text{RE}$ (RE = Eu^{3+}, Sm^{3+}, and Dy^{3+}) phosphors, Mater. Res. Bull. 164, 112254 (2023). Citare 11. V.A. Tarala, M.S. Nikova, S.V. Kuznetsov, I.S. Chikulina, A.A. Kravtsov, D.S. Vakalov, S.O. Krandievsky, F.F. Malyavin, M.G. Ambartsumov, L.V. Kozhitov, L.M. Mitrofanenko, Synthesis of $\text{YSAG}:\text{Er}$ ceramics and the study of the scandium impact in the dodecahedral and octahedral garnet sites on the Er^{3+} energy structure, J. Lumin. 241, 118539 (2022). Citare 10. Shengyang Qin, Dandan Huang, Yao Wang, Phase equilibria in the $\text{La}_2\text{O}_3\text{-Sm}_2\text{O}_3\text{-ZrO}_2$ system: Experimental studies and thermodynamic modeling, J. the Eur. Ceram. Soc. 42 (13), 6085-6096 (2022). Citare 9. A. Bindhu, J. I. Naseemabeevi, S. Ganesanpotti, Vibrationally Induced Photophysical Response of $\text{Sr}_2\text{NaMg}_2\text{V}_3\text{O}_{12}:\text{Eu}^{3+}$ for Dual-Mode Temperature Sensing and Safety Signs, Critical Rev. Solid State & Mater. Sci. 47 (5) 621-664 (2022). Citare 8. Bindhu, Amrithakrishnan; Naseemabeevi, Jawahar I.; Ganesanpotti, Subodh; Distortion and energy transfer assisted tunability in garnet phosphors, Critical Rev. Solid State Mater. Sci., Early Access: MAY (2021). Citare 7. Yagang Feng, Guido Toci, Barbara Patrizi, Angela Pirri, Zewang Hu, Xiaopu Chen, Jiabei Wei, Hongming Pan, Xiaoying Li, Xing Zhang, Sha Su, Matteo Vannini, Jiang Li, Fabrication, microstructure, and optical properties of $\text{Tm}:\text{Y}_3\text{ScAl}_4\text{O}_{12}$ laser ceramics, J Am Ceram Soc. 103, 1819–1830 (2020). Citare 6. Skaudzius R; Sakirzanovas S; Kareiva A; "On the Samarium Substitution Effects in $\text{Y}_{3-x}\text{Sm}_x\text{Al}_5\text{O}_{12}$ ($x = 0.1\text{-}3.0$)", J. Electr. Mater. 47 (7), 3951-3956 (2018). Citare 5. Puchalska M; Zych E; "The effect of charge compensation through alkali metal co-doping on the luminescence behaviour of $\text{SrAl}_4\text{O}_7:\text{Sm}^{3+}$ phosphor", J. Lumin. 197, 211- 218 (2018). Citare 4. Pavasaryte; LKatelnikovas A; Klimavicius V; Balevicius V; Momot A; Van Bael M; Hardy A; Kareiva A; "Eu³⁺-Doped $\text{Y}_{3-x}\text{Sm}_x\text{Al}_5\text{O}_{12}$ garnet: synthesis and structural investigation", New J. Chem. 42, 2278-2287 (2018). Citare 3. Lu WC; Zhang QL; Luo JQ; Ding SJ; Dou RQ; Peng F; Zhang HL; Wang XF; Sun GH; Sun DL; "Spectral and laser properties of Nd:YSAG single crystal", Acta Phys Sinica 66 (15), 154204 (2017). Citare 2. Zongwen Hu; Xiaodong Xu; Jun Wang; Peng Liu; Dongzhen Li; Xiaodan Wang; Liqiong An; Jian Zhang; Jun Xu; Dingyuan Tang; "Spark plasma sintering of Sm^{3+} doped Y_2O_3 transparent ceramics for visible light lasers", Cer. Inter. 43, 12057-12060 (2017). Citare 1. Lupei V; Lupei, A; Hau S; Gheorghe C; Ikesue A; "Structural and electron-phonon interaction effects in optical spectra of Pr^{3+} and Sm^{3+} in YAG", J. Alloys Compd. 706, 176-185 (2017).	2.6
Articol 38. A. Lupei, A. Achim, V. Lupei, C. Gheorghe, L. Gheorghe, S. Hau, "RE³⁺ doped SrWO_4 as laser and nonlinear active crystals," Rom. J. Phys. 54 (9-10), 919-928 (2009).	Citare 4. Debarati Das, Santosh K. Gupta, C. S. Datrik, P. Nandic and K. Sudarshan, Role of alkali charge compensation in the luminescence of $\text{CaWO}_4:\text{Nd}^{3+}$ and $\text{SrWO}_4:\text{Nd}^{3+}$ Scheelites, New J. Chem. 44(18), 7300-7309 (2020). Citare 3. Frank, M; Smetanin, SN; Jelinek, M; Vyhliadal, D; Shukshin, VE; Ivleva, LI; Zverev, PG; Kubecek, V; "Efficient	0.7272

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	synchronously-pumped all-solid-state Raman laser at 1178 and 1227 nm on stretching and bending anionic group vibrations in a SrWO_4 crystal with pulse shortening down to 1.4 ps", Opt. Laser Tech. 119, Art. Nr.: 105660 (2019). Citare 2. Frank, M; Smetanin, SN; Jelinek, M; Vyhlidal, D; Shukshin, VE; Ivleva, LI; Dunaeva, EE; Voronina, IS; Zverev, PG; Kubacek, V; Stimulated Raman Scattering in Alkali-Earth Tungstate and Molybdate Crystals at Both Stretching and Bending Raman Modes under Synchronous Picosecond Pumping with Multiple Pulse Shortening Down to 1 ps, CRYSTALS 9 (3) Art. Nr. 167 (2019). Citare 1. Doroshenko ME; Papashvili AG; Dunaeva E; Ivleva LI; Osiko VV; "Thulium optical centers in Tm,Nb: SrMoO_4 crystal", J. Lumin. 184, 44-47 (2017).	
Articol 39. 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. Alloys Compd. 688, 510-517 (2016)	Citare 2. A.Y. Jamous, V.A. Svetlichnyi, A.B. Kuznetsov, K.A. Kokh, N.G. Kononova, I.N. Lapin, A. Bolatov, Y.A. Zholdas, A.E. Kokh, Linear and nonlinear optical properties of trigonal borate crystals $\text{K}_7\text{MIn}_{2-x}\text{Yb}_x(\text{B}_5\text{O}_{10})_3$ (M = Ca, Sr, Ba; x = 0...2) with isolated B_5O_{10} units, J. Alloy. Compd. 935, Part 1, 167912 (2023). Citare 1. Chuanying Shen; Duanliang Wang; Honghao Xu; Zhongben Pan; Huaijin Zhang; Jiyang Wang; Robert I. Boughton; "Bulk crystal growth and thermal, spectroscopic and laser properties of disordered Melilite $\text{Nd}:\text{Ca}_2\text{Ga}_2\text{SiO}_7$ single crystal", J. Alloys Compd. 727, 8-13 (2017).	0.26666
Articol 40. L. Gheorghe, F. Khaled, A. Achim, F. Voicu, P. Loiseau, G. Aka, "Czochralski Growth and Characterization of Incongruent Melting $\text{La}_x\text{Gd}_y\text{Sc}_z(\text{BO}_3)_4$ (x+y+z=4) Nonlinear Optical Crystal", Cryst. Growth Design 16, 3473-3479 (2016).	Citare 17. Song, J.; Kong, X.; Li, C.; Jiao, J.; She, Y.; Ye, N.; Hu, Z.; Wu, Y. "A Rare-Earth-Based Borate Optical Crystal with Enlarged Dihedral Angles of Distinct $[\text{BO}_3]$ Groups Exhibiting a Wide UV Transparent Range," Inorg. Chem., 63 (31), 14786–14793 (2024). Citare 16. Kong, X.; Jiao, J.; She, Y.; Ye, N.; Hu, Z.; Wu, Y.; Li, C. "$\text{KNa}_2\text{Lu}(\text{BO}_3)_2$: A Rare-Earth Borate Crystal Characterized by an Enhanced Birefringence and Wide Ultraviolet Transparency Range," Inorg. Chem., 63 (5), 2844–2850 (2024). Citare 15. Kokh, A.; Kuznetsov, A.; Khan, E.; Simonova, E.; Ryadun, A.; Lapin, I.; Svetlichnyi, V.; Kokh, K. "Solid Solutions in $\text{EuSc}_3(\text{BO}_3)_4$-$\text{GdSc}_3(\text{BO}_3)_4$ System: Phase Diagram, Synthesis, Crystal Growth, Structure and Luminescence," J. Crystal Growth, 645, 127842 (2024). Citare 14. Li, J.; Zhao, H.; Zhang, X.; Gong, P.; Lin, Z.; Wu, Y. "$\text{RE}(\text{HSeO}_3)(\text{SeO}_3)(\text{H}_2\text{O}) \cdot (\text{H}_2\text{O})$ (RE = Y, Gd): Two Rare-Earth Selenite Nonlinear Optical Crystals with Wide Band Gaps," Inorg. Chem., 63 (42), 19916–19923 (2024). Citare 13. Yanfei Zou, Chen Hu, Shoukun Lv, Yimeng Shao, Bing Teng, Fei You, Hui Xu, Degao Zhong, Realization of Broadband Near-Infrared Emission with High Thermal Stability in $\text{YGa}_3(\text{BO}_3)_4$: Cr^{3+} Borate Phosphor, Inorg. Chem. 62 (48), 19507-19515 (2023). Citare 12. Xuping Shi, Abudukadi Tudi, Meng Cheng, Fangfang Zhang, Zhihua Yang, Shujuan Han, and Shilie Pan, Noncentrosymmetric Rare-Earth Borate Fluoride $\text{La}_2\text{B}_5\text{O}_9\text{F}_3$: A New Ultraviolet Nonlinear Optical Crystal with Enhanced Linear and Nonlinear Performance, ACS Appl. Mater. & Interf. 14 (16), 18704-18712 (2022). Citare 11. Zhi, W., Chen, X., Wang, F. et al. Phase Relations in the $\text{CaO-B}_2\text{O}_3\text{-Sc}_2\text{O}_3$ Ternary System, J. Phase Equilib. Diffus. 43, 98–108 (2022) Citare 10. Kuznetsov, AB; Kokh, KA; Kaneva, EV; Svetlichnyi, VA; Kononova, NG; Shevchenko, VS; Rashchenko, SV; Kokh, AE; Study of an $\text{EuBO}_3\text{-ScBO}_3$ system and $\text{EuSc}_3(\text{BO}_3)_4$, $\text{EuSc}(\text{BO}_3)_2$ orthoborates, Dalton Trans., Early Access: SEP 2021. Citare 9. Pianassola, M; Stand, L; Loveday, M; Chakoumakos, BC; Koschan, M; Melcher, CL; Zhuravleva, M; Czochralski growth and characterization of the multicomponent garnet	3.0909

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	(Lu1/4Yb1/4Y1/4Gd1/4)(3)Al5O12, Phys. Rev. Mater. 5 (8) Article Number: 083401 (2021). Citare 8. Shi, XP; Zhang, WB; Cai, WB; Han, SJ; Yang, ZH; Pan, SL; Li3La2(BO3)3 and Li1.75Na1.25La2(BO3)3: A Great Enhancement in Birefringence Induced by Optimal Arrangement of pi-Conjugated [BO3] Units, Inorg. Chem. 60 (16), 12565-12572 (2021). Citare 7. Ma, Q; Tong, TH; Su, Z; Synthesis, crystal structure and theoretical calculations of two rare-earth borates with DUV cut-off edges, New J. Chem. 45 (10) 4823-4827 (2021). Citare 6. Kuznetsov, AB; Kokh, KA; Kononova, NG; Shevchenko, VS; Rashchenko, SV; Lapin, IN; Svetlichnyi, VA; Uralbekov, B; Bolatov, A; Simonova, EA; Kokh, AE; Study of an SmBO3-ScBO3 system and new SmSc(BO3)2 orthoborate, CrystEngComm. 23 (6), 1482-1488 (2021). Citare 5. A. Kuznetsova, A. Kokha, N. Kononova, V. Shevchenko, B. Uralbekov, D. Ezhovd, V. Svetlichnyi, A. Goreiavcheva, K. Kokh, New scandium borates R_xLa_ySc_z(BO3)₄ (x+y+z=4, R=Sm, Tb): Synthesis, growth, structure and optical properties, Mater Res. Bull. 126, 110850 (2020). Citare 4. Cao, LL; Song, YX; Peng, G; Luo, M; Yang, Y; Lin, CS; Zhao, D; Xu, F; Lin, ZS; Ye, N; "Refractive Index Modulates Second-Harmonic Responses in RE8O(CO3)(3)(OH)(15)X (RE = Y, Lu; X = Cl, Br): Rare-Earth Halide Carbonates as Ultraviolet Nonlinear Optical Materials", Chem. Mater. 31 (6) 2130-2137 (2019). Citare 3. Kuz'micheva, GM; Kaurova, IA; Rybakov, VB; Podbel'skiy, VV; "Crystallochemical Design of Huntite-Family Compounds", Crystals 9 (2) Art. Nr: 100 (2019). Citare 2. Miriding Mutailipu; Zhiqing Xie; Xin Su; Min Zhang; Ying Wang; Zhihua Yang; Muhammad Ramzan Saeed Ashraf Janjua; Shilie Pan, "Chemical co-substitution-oriented design of rare-earth borates as potential ultraviolet nonlinear optical materials", JACS 139 (50), 18397–18405 (2017). Citare 1. Kokh AE; Kuznetsov AB; Pestryakov, EV; Maillard A; Maillard R; Jobard C; Kononova NG; Shevchenko VS; Kragzhda AA; Uralbekov B; Kokh KA; "Growth of the complex borates Y_xR_ySc_{2+z}(BO3)₄ (R = Nd, Pr, x + y + z=2) with huntite structure", Cryst. Res. Tech. 52 (8), 1600371 (2017).	
Articol 41. F. Khaled, P. Loiseau, G. Aka, L. Gheorghe, "Rise in power of Yb:YCOB for green light generation by self-frequency doubling", Opt. Letter 41, 3607-3610 (2016).	Citare 22. Liang, T.; Jiang, L.; Sun, Z.; Yang, C.; Qian, H.; Zhao, T.; Ai, L.; Zheng, Y. "Growth, Optical and Thermal Properties of Yb_xHo_{1-x}Ca₄O(BO3)₃ Crystals," J. Crystal Growth 634, 127686 (2024). Citare 21. Guo, F.; Chen, L.; Liu, F.; Cao, T.; Sun, Y.; Gao, Z.; Tao, X. "1178 nm Self-Q-Switched Raman Laser Generation Enabled by BaTeW₂O₉ Crystal," Optics & Laser Technology 169, 110182 (2024). Citare 20. Yuxia Zhang, Liang Dong, Wenjuan Han, Honghao Xu, Junhai Liu, Spectroscopic properties and microchip laser performance of Yb:LaCa₄O(BO3)₃ crystal, Infrared Physics & Technology, 129, 104566 (2023). Citare 19. Huichen Si, Fei Liang, Ya Zhou, Dazhi Lu, Haohai Yu, Huaijin Zhang, and Yicheng Wu, "Monolithic 591-nm laser with cooperative multiphonon-coupling and nonlinear frequency-doubling," Opt. Lett. 48, 4913-4916 (2023) Citare 18. Pingzhang Yu, Ranran Li, Yanqing Liu, Fapeng Yu, Hongwei Qi, Lijuan Liu, Zhengping Wang, Xian Zhao, Xinguang Xu, Bulk growth and polarized spectral characters of Nd:LaCa₄O(BO3)₃ crystals, Optik, 260, 169097, (2022). Citare 17. Lizhen Zhang, Ru-Xue Bai, Haifeng Lin, Pavel Loiko, Xavier Mateos, Zhang-Lang Lin, Zhoubin Lin, Ge Zhang, Valentin Petrov, Li Wang, and Weidong Chen "Disordered Yb:GdYCOB crystal: polarized spectroscopy, thermal lensing and diode-	5.5

pumped lasers", Proc. SPIE 11980, Solid State Lasers XXXI: Technology and Devices, 119800L (2022).

Citare 16. Zeng, HJ; Lin, HF; Lin, ZL; Zhang, LZ; Lin, ZB; Zhang, G; Petrov, VT; Loiko, P; Mateos, X; Wang, L; Chen, WD; Diode-pumped sub-50-fs Kerr-lens mode-locked Yb:GdYCOB laser, Opt. Express 29 (9), 13496-13503 (2021).

Citare 15. Liu, FF; Dong, L; Chen, JX; Liu, JH; Spectroscopic and lasing properties of a mixed (Yb, Y, Lu, Gd) calcium oxyborate crystal: $\text{Yb}_{0.19}\text{Y}_{0.34}\text{Lu}_{0.12}\text{Gd}_{0.35}\text{Ca}_4\text{O}(\text{BO}_3)_3$, J. Lumin. 232, Article Number: 117789 (2021).

Citare 14. Liu, FF; Dong, L; Cao, SX; Chen, JX; Xu, HH; Han, WJ; Liu, JH; Crystal growth, structural characterization and laser operation of an $\text{Yb}_{0.19}\text{Y}_{0.34}\text{Lu}_{0.12}\text{Gd}_{0.35}\text{Ca}_4\text{O}(\text{BO}_3)_3$ mixed crystal, J. Cryst. Growth 558, Article Number: 126023 (2021).

Citare 13. Dong, L; Liu, FF; Chen, JX; Liu, JH; Highly efficient continuous-wave and passively Q-switched Yb:YLuGdCOB compact lasers, Opt. Express 29 (2), 1838-1850 (2021).

Citare 12. Guang Peng, Yang, Tao Yan, Dan Zhao, Bingxuan Li, Ge Zhang, Zheshuai Linc, Ning Ye, Helix-constructed Polar Rare-earth Iodate Fluoride as Laser Nonlinear Optical Multifunctional Materials, Chem. Sci. 11 (28), 7396-7400 (2020).

Citare 11. Liu Fenfen, Cao Shuxuan, Liu Junhai, Research of Yb-Doped Rare-Earth Calcium Oxyborate Crystal Lasers, Laser Optoelectr. PROG. 57 (7), 070001 (2020).

Citare 10. Hengjun Chen, Pascal Loiseau, Gerard Aka, Benoît Baptiste, and Philippe Veber, Crystal Growth and Characterization of Terbium-Based Borate Crystals of $\text{Sr}_3\text{Tb}(\text{BO}_3)_3$, $\text{Li}_6\text{Tb}(\text{BO}_3)_3$, and $\text{TbCa}_4\text{O}(\text{BO}_3)_3$: Color Centers, Spectroscopic Properties, and Optical Gain, Cryst. Growth Des. 20(3), 1905-1919 (2020).

Citare 9. Jinheng Du, Jiyang Wang, Haohai Yu, Huaijin Zhang, 17.9 W continuous-wave self-frequency-doubled Nd:GdCOB laser, Opt. Lett. 45 (2), 327-330 (2020).

Citare 8. E.A.Vovk, E.F.Dolzhenkova, V.N.Baumer, A.N.Shekhovtsov, S.V.Nizhankovsky, S.I.Kryvonohov, A.A.Kozlovskyi, V.V.Baranov, I.M.Pritula, $\text{Ca}_4\text{YO}(\text{BO}_3)_3\text{:Er,Yb}$ single crystals: structure peculiarities and anisotropy of physical and mechanical properties, Funct. Mater. 27 (2), 238-244 (2020).

Citare 7. Fenfen Liu, Liang Dong, Junxian Chen, Shuxuan Cao, Honghao Xu, Junhai Liu, Growth, spectroscopic properties and efficient laser action of an $\text{Yb}_{0.09}\text{Lu}_{0.13}\text{Gd}_{0.78}\text{Ca}_4\text{O}(\text{BO}_3)_3$ crystal, Cryst. Growth Des. 22, 6026-6033 (2020).

Citare 6. S.V. Nizhankovsky, S.I. Kryvonogov, V.N. Baumer, E.A. Vovk, N.O. Kovalenko, A. G. Dorochenko, A.N. Shekhovtsov, A.A. Kozlovskyi, I.M. Pritula, Czochralski growth and characterization of $\text{Er}^{3+}, \text{Yb}^{3+}:\text{YCa}_4\text{O}(\text{BO}_3)_3$ single crystals, 2019 IEEE 8th International Conference on Advanced Optoelectronics and Lasers (CAOL), pp. 465-468 (2019).

Citare 5. Lu, DZ; Fang, QN; Yu, XS; Han, XK; Wang, JY; Yu, HH; Zhang, HJ; "Power scaling of the self-frequency-doubled quasi-two-level Yb:YCOB laser with a 30% slope efficiency", Opt. Lett. 44 (21) 5157-5160 (2019).

Citare 4. Fang, QN; Lu, DZ; Yu, HH; Zhang, HJ; Wang, JY; "Anisotropic thermal properties of Yb:YCOB crystal influenced by doping concentrations", Opt. Mater. Express 9 (3) 1501-1512 (2019).

Citare 3. Ma Y; Li Y; Tian K; Yang J; Dou X; Xu H; Han W; Liu J, "Temperature effects on laser action of $\text{Yb}^{3+}:\text{YCa}_4\text{O}(\text{BO}_3)_3$ crystal", Opt. Laser Tech. 108, 360-363 (2018)

Citare 2. Chen H; Loiseau P; Aka G; Kränkel C; "Optical spectroscopic investigation of $\text{Ba}_3\text{Tb}(\text{PO}_4)_3$ single crystals for

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	visible laser applications”, J. Alloys Compd. 740, 1133-1139 (2018). Citare 1. Lan Jinglong; Huang Xiaoxu; Guan Xiaofeng; Xu Bin Xu Huiying; Cai Zhiping; Xu Xiaodong; Li Dongzhen; Xu, Jun; “Laser characteristics of Nd³⁺-doped calcium barium niobate ferroelectric crystal at 1.06 and 1.34 μm”, Appl. Opt. 56 (14), 4191-4196 (2017).	
Articol 42. C. Gheorghe, S. Hau, L. Gheorghe, F. Voicu, M. Greculeasa, A. Achim, M. Enculescu, “Optical properties of Sm³⁺ doped Ca₃(Nb,Ga)₅O₁₂ and Ca₃(Li,Nb,Ga)₅O₁₂ single crystals”, J. Lumin. 186, 175–182 (2017).	Citare 13. Dandan Li, Xiaoxu Zhang, Yihan Cheng, Rong Wang, Shuting Zhao, Zhiqian Lv, Qianwen Wang, Yuxin Zhang, Yuchun Wan, Xiangyu Zou, Hongbo Zhang, Luminescence properties and Judd-Ofelt theory analysis of Tb³⁺-Sm³⁺ co-doped glass ceramics containing Sr₅F(PO₄)₃, J. Non-Crystal. Solids, 647, 123280 (2025). Citare 12. Li, Y.; Ma, Y. H.; Mao, A.; Qi, X. "Photoluminescence of Sm³⁺ and Eu³⁺ Co-doped La₂O₃–Ga₂O₃ Glasses Fabricated by an Aerodynamic Levitation Furnace," Ceram. Int. 50(20), 38784-38791 (2024). Citare 11. Hu, Z., Liu, P., Wang, X., Wang, J., Liu, J., Zhang, J., ... & Xu, X., Spectroscopic investigations and Judd-Ofelt analysis of Sm³⁺ doped Y₂O₃ transparent ceramics, Physica B: Cond. Matter 669, 415283 (2023). Citare 10. Li, Y., Liu, J., Qi, X., Mao, A., & Ma, Y. Photoluminescence and transmittance of Sm³⁺-doped Sr₃Al₂O₆ glasses synthesized by an aerodynamic levitation furnace, Ceram. Int. 49(4), 7080-7084 (2023). Citare 9. Yong Yang, Heng Pan, Li Guan, Dawei Wang, Jinxin Zhao, Jingfa Yang, Zhiping Yang, Xu Li, Electronic structure and luminescent properties of Sr₃Al₂O₆:Sm³⁺ orange phosphor prepared by hydrothermal method, J. Mater. Res Tehnol. 9 (3), 3847-3855 (2020). Citare 8. Xin Li, Zhen Sun, Mochen Jia, Guofeng Liu, Zuoling Fu, Yanling Wei, Tianqi Sheng, Panpan Li, Investigation of the luminescent mechanism in Eu³⁺-doped Ln₂MoO₆ (Ln³⁺= La³⁺, Gd³⁺, Y³⁺) phosphors for warm WLED, Mater. Res. Bull. 124, 110767 (2020). Citare 7. Jian Liu, Qingsong Song, Dongzhen Li, Xiaodong Xu, Jun Xu, Growth and red-orange emission of Sm³⁺ doped SrAl₁₂O₁₉ single crystals, Opt. Mater. 101 109754 (2020). Citare 6. Vijay Singh, G. Lakshminarayana, Akshatha Wagh, Sol-gel synthesis and fluorescence features of SrAl₄O₇:Sm³⁺ phosphors, Optik 204, 163908 (2020). Citare 5. Liu, J; Song, QS; Li, DZ; Xu, XD; Xu, J; Crystal growth and spectroscopic characterization of Sm:LaMgAl₁₁O₁₉ crystal, J. Lumin. 215; Article Number: 116701 (2019). Citare 4. Xiaojun Tan, Shoulei Xu, Xiangyu Wang, Fenhong Liu, Bernard A. Goodman, Dingkan Xiong, Wen Deng, Preparation and optical properties of samaria-doped yttria-stabilized zirconia single crystals, J. Am. Cer. Soc. 102 (11), 6863-6871 (2019). Citare 3. Cao R; Quan G; Shi Z; Chen T; Luo Z; Zheng G; Hu Z; “Synthesis and luminescence properties of La₂Zr₂O₇: R (R = Sm³⁺, Bi³⁺, Sm³⁺/Bi³⁺) phosphor”, J. Phys. Chem. Solids 118, 109-113 (2018). Citare 2. Puchalska M; Zych E; “The effect of charge compensation through alkali metal co-doping on the luminescence behaviour of SrAl₄O₇:Sm³⁺ phosphor”, J. Lumin. 197, 211-218 (2018). Citare 1. Yongsheng Shi; Jingjun Shi, Chen Dong; “Luminescence characteristics and J-O analysis of BaWO₄: 3%Sm³⁺ crystal for yellow phosphors”, Ceram. Int. 43, 16356-16451 (2017).	2.1666
Articol 43. A. Achim, L. Gheorghe, S. Georgescu, F. Voicu, "Growth and characterization of Y_{0.7}Sc_{0.3}Ca₄O(BO₃)₃ single crystal for, nonlinear optical	Citare 2. M.I. Baig, Mohd Anis, M.D. Shirsat, S.S. Hussaini, H. Algarni, Comparative analysis of pristine and Cd²⁺ influenced potassium hydrogen phthalate single crystal for photonic device applications, Optik 203, 163903 (2020).	0.5

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

applications", OAM-RC 4 , 1977-1980 (2010)	Citare 1. Shaikh RN; Mohd Anis; Shirsat MD; Hussaini SS; "Emphasized analysis on linear and laser induced nonlinear optical traits of citrulline doped $\text{NH}_4\text{H}_2\text{PO}_4$ (ADP) crystal", Optik 154 , 435–440 (2018).	
Articol 44. V. Lupei, A. Lupei, L. Gheorghe, C. Gheorghe, A. Achim, "Spectral characteristics of Yb^{3+} in calcium lithium niobium gallium garnets", Lasers and Electro-Optics 2009 and the European Quantum Electronics Conference. CLEO Europe-EQEC 2009 (Munich, Germany, 14 June 2009), paper CA_P18.	Citare 1. Junhai Liu; Yong Wanl Zhichao Zhou Xueping Tian, Wenjuan Hanl Huaijin Zhangl "Comparative study on the laser performance of two Yb-doped disordered garnet crystals: Yb:CNGG and Yb:CLNGG", Appl. Phys. B 109 (2), 183-188 (2012).	0.2
Articol 45. 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. Kuryavvi, M. Greculeasa, L. Gheorghe, S. Hau, C. Gheorghe, G. Croitoru, "Structural-phase state and lasing of 5-15 at% $\text{Yb}^{3+}:\text{Y}_3\text{Al}_5\text{O}_{12}$ optical ceramics", JECS 37 (13) 4115-4122 (2017).	Citare 18. Parkhomenko, S. V.; Matvienko, O. O.; Vorona, I. O.; Doroshenko, A. G.; Kryzhanovska, O. S.; Safronova, N. A.; Mateychenko, P. V.; Tolmachev, A. V.; Kuncser, A.; Croitoru, G.; Yavetskiy, R. P. "Reactive Sintering of Coaxial $\text{Yb}^{3+}:\text{YAG}/\text{YAG}$ Transparent Ceramics," Opt. Mater. 156, 115970 (2024). Citare 17. Tarala, V. A.; Chapura, O. M.; Malyavin, F. F.; Brazhko, E. A.; Kravtsov, A. A.; Kuznetsov, S. V. "Comparison of the Thermophysical and Optical Properties of Ceramics Based on $\text{YSAG}:\text{Yb},\text{Er}$ Solid Solutions with Different Forms of Crystal Lattice Disorder," Ceram. Int. 50(19), 34859-34869 (2024). Citare 16. Chaika, Mykhailo "Advancements and Challenges in Sintering of $\text{Cr}^{4+}:\text{YAG}$: A Review," JECS 44 (13), 7432-7450 (2024). Citare 15. Otake, Shota; Sakaguchi, Hirotaka; Yoshikawa, Yuta; Kato, Takumi; Nakauchi, Daisuke; Kawaguchi, Noriaki; Yanagida, Takayuki "Concentration Dependence on Scintillation Properties of $\text{BaCl}_2:\text{Yb}$ Transparent Ceramics Prepared by SPS Method," Opt. Mater. 154, 115747 (2024). Citare 14. D.V. Bulyga, S.K. Evstropiev, R.V. Sadovnichii, M.A. Khodasevich, Influence of isomorphic substitution of Y^{3+} ions by Gd^{3+} ions on structural and luminescent properties of $\text{Yb}:\text{YAG}$ nanopowders, Mater. Sci.& Eng.B 285, 115980 (2022). Citare 13. Bulyga, D. V.; Evstropiev, S. K.; Intermediate products of $\text{Yb}:\text{YAG}$ laser ceramics fabrication: structural features, morphology, and luminescent properties, Res. Chem. Inter. 47 (8), 3501-3514 (2021). Citare 12. Perisa, J; Ristic, Z; Piotrowski, W; Antic, Z; Marciniak, L; Dramicanin, MD; All near-infrared multiparametric luminescence thermometry using Er^{3+}, Yb^{3+}-doped YAG nanoparticles, RSC Adv. 11 (26), 15933-15942 (2021). Citare 11. Kosyanov, DY; Liu, X; Vornovskikh, AA; Kosianova, AA; Zakharenko, AM; Zavjalov, AP; Shichalin, OO; Mayorov, VY; Kuryavvi, VG; Qian, XL; Zou, J; Li, J; $\text{Al}_2\text{O}_3\text{-Ce}:\text{YAG}$ and $\text{Al}_2\text{O}_3\text{-Ce}:(\text{Y},\text{Gd})\text{AG}$ composite ceramics for high brightness lighting: Effect of microstructure, Mater. Charact. 172, Article Number: 110883 (2021). Citare 10. Jovana Perisa, Zoran Ristic, Wojciech Piotrowski, Zeljka Antic, Lukasz Marciniak and Miroslav D. Dramicanin, All near-infrared multiparametric luminescence thermometry using Er^{3+}, Yb^{3+}-doped YAG nanoparticles, RSC Adv., 11, 15933 (2021) Citare 9. Mykhailo Chaika, Oleh Vovk, Giulia Mancardi, Robert Tomala, Wiesław Strek, Dynamics of Yb^{2+} to Yb^{3+} ion valence transformations in $\text{Yb}:\text{YAG}$ ceramics used for high-power lasers, Opt. Mater. 101, 109774 (2020). Citare 8. Y. Feng, G. Toci, A. Pirri, B. Patrizi, Z. Hu, J. Wei, H. Pan, X. Zhang, X. Li, S. Su, M. Vannini, J. Li, Fabrication, microstructure, and optical properties of $\text{Yb}:\text{Y}_3\text{ScAl}_4\text{O}_{12}$ transparent ceramics with different doping levels, J Am Ceram Soc. 103, 224–234 (2020).	1.8947

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	Citare 7. Y. Feng, T. Xie, X. Chen, G. Toci, A. Pirri, B. Patrizi, M. Vannini, J. Li, Fabrication, microstructure and optical properties of Yb:Lu_xY_{3-x}Al₅O₁₂ transparent ceramics, <i>Opt. Mater.</i> 110, 110478 (2020). Citare 6. Chaika, MA; Tomala, R; Strek, W; Hreniak, D; Dluzewski, P; Morawiec, K; Mateychenko, PV; Fedorov, AG; Doroshenko, AG; Parkhomenko, SV; Lesniewska-Matys, K; Podniesinski, D; Kozłowska, A; Mancardi, G; Vovk, OM; "Kinetics of Cr³⁺ to Cr⁴⁺ ion valence transformations and intra-lattice cation exchange of Cr⁴⁺ in Cr,Ca:YAG ceramics used as laser gain and passive Q-switching media", <i>J. Chem. Phys.</i> 151 (13) Article Number: 134708 (2019). Citare 5. Chaika, MA; Dluzewski, P; Morawiec, K; Szczepanska, A; Jablonska, K; Mancardi, G; Tomala, R; Hreniak, D; Strek, W; Safronova, NA; Doroshenko, AG; Parkhomenko, SV; Vovk, OM; "The role of Ca²⁺ ions in the formation of high optical quality Cr⁴⁺,Ca:YAG ceramics", <i>JECS</i> 39 (11) 3344-3352 (2019). Citare 4. Zhang Y; Qian G; Tian X; Ma Z; Xu S; Yang Z; Qiu J; Xiao X; Guo H; Ding X; Yang L; "The preparation of Yttrium Aluminosilicate (YAS) Glass Fiber with heavy doping of Tm³⁺ from Polycrystalline YAG ceramics", <i>J. Am. Cer. Soc.</i> 101 (10), 4627-4633 (2018). Citare 3. Lavrentyev AA; Gabrelian BV; Tuan VVu; Isaenko LI; Yelisseyev AP; Khyzhun OY; "Electronic structure and optical properties of LiGa_{0.5}In_{0.5}Se₂ single crystal, a nonlinear optical mid-IR material", <i>Opt. Mater.</i> 80, 12–21 (2018). Citare 2. Yeming Zhang; Guoquan Qian; Xusheng Xiao; Xiangling Tian; Xinqi Ding; Zhijun Ma; Luyun Yang; Haitao Guo; Shanhui Xu; Zhongmin Yang; Jianrong Qiu, "The preparation of Yttrium Aluminosilicate (YAS) Glass Fiber with heavy doping of Tm³⁺ from Polycrystalline YAG ceramics", <i>JECS</i> 110 (10), 4627-4633 (2018). Citare 1. Qing Yao; Le Zhang; Zhigang Jiang; Guocan Huang; Tianyuan Zhou; Yue Ben; Shuai Wei; Rong Sun; Hao Chen; Yun Wang; "Isobam assisted slurry optimization and gel casting of transparent YAG ceramics", <i>Cer. Inter.</i> 44 (2), 1699-1704 (2018).	
Articol 46. 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", <i>J. Cryst. Growth</i> 277 (1-4), 410-415 (2005).	Citare 4. Wang, J.; Zhang, Y.; Li, Y.; "Quasi-three-level laser pumped Yb:GdCOB tunable laser from 1030 to 1036 nm"; <i>Laser Phys.</i> 34, 055002 (2024). Citare 3. Lin, W.; Huang, C.; Li, S.; Tao, S.; Chen, G.; Xu, M.; Zhao, C.; Fang, Q.; Ye, X.; Hang, Y.; "Tunable laser operations on Nd-doped strontium and lanthanum aluminate crystals"; <i>Infrared Physics & Technology</i> 136, 105066 (2024). Citare 2. Nana Zhang, Xiaodong Xu, Yuxin Pan, Jian Liu, Broadband Spectra and Efficient Laser Performance of a Disordered Nd:Sr_{0.7}La_{0.3}Mg_{0.3}Al_{11.7}O₁₉ Crystal, <i>Materials</i> 11, 1575-9p (2018). Citare 1. Sattayaporn S; Loiseau P; Aka G; Marzahl DT; Kränkel C; "Crystal growth, spectroscopy and laser performances of Pr³⁺:Sr_{0.7}La_{0.3}Mg_{0.3}Al_{11.7}O₁₉ (Pr:ASL)", <i>Opt. Expres</i> 26 (2), 1279-1289 (2018).	0.5714
Articol 47. S. Georgescu, O. Toma, A. M. Voiculescu, L. Gheorghe, A. Achim, "Energy level scheme of Eu³⁺:La₃Ga₅SiO₁₄ (langasite)", <i>OAM-RC</i> 6 (1-2), 22-24 (2012)	Citare 1. Reinhardt A; Zych A; Kohler I; Albert B; "Disordered langasites La₃Ga₅MO₁₄:Eu³⁺ (M = Si, Ge, Ti) as red-emitting LED phosphors", <i>Dalton Trans.</i> 47 (16) 5703-5713 (2018).	0.2
Articol 48. S. Constantinescu, L. Gheorghe, C. Stoicescu, S. Georgescu, O. Toma, I. Bibicu, "Growth and XRD, optical and Mössbauer investigations of Eu-doped trigonal langallosilicate crystals", <i>Rom. Rep. Phys.</i> 57 (2), 249–260 (2005).	Citare 1. Reinhardt A; Zych A; Kohler I; Albert B; "Disordered langasites La₃Ga₅MO₁₄:Eu³⁺ (M = Si, Ge, Ti) as red-emitting LED phosphors", <i>Dalton Trans.</i> 47 (16) 5703-5713 (2018).	0.18182

Articol 49. 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 $\text{Ca}_3(\text{Nb,Ga})_5\text{O}_{12}:\text{Dy}^{3+}$ and $\text{Ca}_3(\text{Li,Nb,Ga})_5\text{O}_{12}:\text{Dy}^{3+}$ single crystals", J. Alloys Compd. 739, 806-816 (2018).	Citare 14. Xu, Z.; Wang, W.; Wang, Q.; Xue, Y.; Zhang, C.; Li, D.; Fang, Q.; Tang, H.; Xu, X.; Xu, J. "The Investigations of Yellow Spectral Performances in Potentially Efficient $\text{Dy}^{3+}:\text{BaF}_2$ and $\text{Dy}^{3+}/\text{RE}^{3+}$ (RE = Tb, Eu):BaF_2 Crystals," J. Lumin. 275, 120792 (2024). Citare 13. Yaqian Zou, Yan Wang, Zhaojie Zhu, Zhenyu You, Jianfu Li, Chaoyang Tu, Researches on the yellow emission properties of 2 at.% Dy: $\text{Gd}_{0.1}\text{Y}_{0.9}\text{AlO}_3$ crystal, J. Lumin. 242, 118566 (2022). Citare 12. Rajagukguk, J; Sarumaha, CS; Chanthima, N; Wantana, N; Kothan, S; Wongdamnern, N; Kaewkhao, J; Radio and photo luminescence of Dy^{3+} doped lithium fluorophosphate scintillating glass, Rad. Phys. Chem. 185, 109520 (2021). Citare 11. Cai, XY; Wang, Y; Li, JF; Zhu, ZJ; You, ZY; Sun, YJ; Tu, CY; Spectral analyses of $\text{Dy}^{3+}/\text{Sr}^{2+}$: LaF_3 and $\text{Dy}^{3+}/\text{Ca}^{2+}$: LaF_3 mixed crystals for laser applications, Spectrochim. Acta A Mol. Biomol. Spectrosc. 250, 119341 (2021). Citare 10. Cai, XY; Wang, Y; Li, JF; Zhu, ZJ; You, ZY; Sun, YJ; Tu, CY; Thermal, and optical features study of Dy:YAlO₃ and Dy/Tb:YAlO₃ crystals for yellow laser applications, J. Lumin. 231, 117711 (2021). Citare 9. C. S. Sarumaha, N. Wantana, J. Rajagukguk, J. Kaewkhao, Optical absorption and photoluminescence investigations Dy³⁺ doped oxyfluoride phosphate glass system for active laser medium and solid-state lighting materials, J. Phys.: Conf. Ser. 2013, 012020 (2021). Citare 8. Huimin Lv, Siying Wang, Chunhui Su, Hongbo Zhang, Zhaohua Guo, Liying Wang, Tong Wang, Yulin Wei, Preparation and luminescence properties of Dy^{3+} doped transparent glass-ceramics containing $\text{NaGd}(\text{WO}_4)_2$, J. Mater. Sci.: Mater. Electron 31 (9), 6636-6644 (2020). Citare 7. T. Raghu Raman, Y.C. Ratnakaram, Concentration dependent Dy^{3+} activated LiPbB_5O_9 phosphor: Structure and luminescence studies for white LED applications, Opt. Mater. 99, 109515 (2020). Citare 6. By: Jafari, M; Rezvanpour, A; "Upconversion nanoparticles from synthesis to cancer treatment: A review", Adv. Powder Tech. 30 (9) 1731-1753 (2019). Citare 5. Zhou SD; Pan, YX; Liu, J; Song, QS; Xu, J; Li, DZ; Liu, P; Xu, XD; Xu, B; Xu, J; Buchvarov, I; Lebbou, K.; Diode-pumped continuous-wave a- and c-cut Pr:$\text{Sr}_{0.5}\text{La}_{0.5}\text{Mg}_{0.5}\text{Al}_{11.5}\text{O}_{19}$ (Pr:ASL) visible lasers at 645 and 726 nm, J. Alloys Compd. 792, 1200-1205 (2019). Citare 4. Abdessattar A; Hellali D; Zamali H; Boa D, "Experimental study and thermodynamic analysis of ($\text{CsNO}_3+\text{TlNO}_3$) binary system", J. Alloys Compd. 739, 827-836 (2018) Citare 3. Prado-Espinosa A; Camargo J; Castro M; Ramajo L; del Campo A; Rubio-Marcos F; "Exploring new methodologies for the identification of the morphotropic phase boundary region in the (BiNa)TiO₃-BaTiO₃ lead free piezoceramics: Confocal Raman Microscopy", J. Alloys Compd. 739, 799-805 (2018). Citare 2. Trusova E; Vaitkevicius A; Marciulionyte V; Tamulaitis G; Tratsiak Y; Korjik M; Mengucci P; Rinaldi D; Montalto L; "Barium and lithium silicate glass ceramics doped with rare earth ions for white LEDs", Opt. Mater. 84, 459-465 (2018). Citare 1. Krishna VM; Mahamuda S; Talewar RA; Swapna K; Venkateswarlu M; Rao AS; "Dy^{3+} ions doped oxy-fluoro boro tellurite glasses for the prospective optoelectronic device applications", J. Alloys Compd 762, 814-826 (2018).	2
Articol 50. L. Gheorghe, S. Georgescu, I. Mateescu, L. Dumitrache, E. Borca, C. Ranea, "Synthesis, growth and X-ray diffraction studies of langasite	Citare 3. Voiculescu AM; Georgescu S; Nastase S; Matei C; Berger D; Matei C; StefanA; Toma O; "Upconversion luminescence of $\text{Er}^{3+}/\text{Yb}^{3+}$ co-doped nanolangasite synthesized by a modified Pechini route", J. Sol-Gel Sci. Tech. 64 (3), 667-672, (2012).	0.54545

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

crystals," IEEE Ultrasonics Symposium Proceedings 1-2, 320-323 (2002).	Citare 2. Mateescu I; Dumitrache L; Bran C; Capelle B; Detaint J; Johnson G, " Vibration modes analysis by X-ray topography in quartz and langasite resonators", Proceedings of the IEEE International Frequency Control Symposium, Article number P2FC-B-1, 579-584 (2005) Citare 1. Ji X; Han T; Shi W; Zhang G, "Theoretical studies on the SAW properties of LGS at high-temperature in optimal cuts", J. Mater. Sci. Tech. 20 (5), 512-516 (2004).	
Articol 51. A. Lupei, V. Lupei, E. Osiac, L. Rogobete, L. Gheorghe, and A. Petraru, "Spectroscopy and energy transfer characteristics of Nd³⁺ in CNGG," Proc. SPIE 4430, 62-70 (2001)	Citare 1. Kuretake S; Tanaka N; Kintaka Y; Kageyama K; Nakao H; Shirakawa A; Ueda K; Kaminskii A; "Nd-doped Ba(Zr,Mg,Ta)O₃ ceramics as laser materials", Opt. Mater. 36 (3), 645-649 (2014).	0.18182
Articol 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).	Citare 8. Zihao Wang , Yimin Zhou , Xuan Li , Chenyang Li , Guowei Du and Fei Tang, Modulating excitation light to alter temperature-dependence of two-photon upconversion luminescence in Yb³⁺/Tm³⁺ co-doped LuAG transparent ceramics, J. Mater. Chem. C, 2025, https://doi.org/10.1039/D5TC00463B Citare 7. Vakalov, D.S.; Chikulina, I.S.; Kichuk, S.N.; et al. "Investigation of Luminescent Properties of Optical Ceramics Based on YAG and Luag Co-Activated by Yb³⁺ and Er³⁺", Glass Ceram 81, 278–285 (2024). Citare 6. Tarala, V.A.; Chapura, O.M.; Malyavin, F.F.; Brazhko, E.A.; Kravtsov, A.A.; Kuznetsov, S.V. "Comparison of the Thermophysical and Optical Properties of Ceramics Based on YAG: Yb,Er Solid Solutions with Different Forms of Crystal Lattice Disorder," Ceram. Int. 50(19), 34859-34869 (2024). Citare 5. Lei, B.; Lu, L.; Mi, X. "Effect of Alkali Metal Ions Introduction on the Fluorescence Properties of Er-Tm-Yb Synergistically Sensitized Phosphors," Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 311, 123944 (2024). Citare 4. Lei, Bohan and LU, Liping and Sun, Haiying and Zhang, Xiyan and Bai, Zhaohui and Mi, Xiaoyun, Co-Sensitization of Ho-Yb Ion Pairs Modulating the Up-Conversion Luminescence Properties of Fluoride Phosphors Under 1550 Nm Excitation, Dalton Trans. 52 (33), 11489-11502 (2023). Citare 3. Anna Prnová, Jana Valúchová, Nurshen Mutlu, Milan Parchovianský, Róbert Klement, Alfonz Plško, Dušan Galusek, Thermal behaviour and photoluminescence properties of Er and Nd doped yttrium aluminate glasses, J. Therm. Anal. Calorim. 142, 129-138 (2020). Citare 2. Liu, W; Jin, LL; Wang, SW; " Preparation of ZrO₂-doped Nd³⁺: Y₂O₃ transparent ceramic and the corresponding characteristic of luminescence", Mater. Chem. Phys. 236, Art. Nr: UNSP 121835 (2019) Citare 1. Kosyanov D; Vornovskikh A; Pogodaev A; Gridasova E; Shichalin O; Yavetskiy R; Tolmachev A; Kaidalova T; Kuryavyi V; "Fabrication of highly-doped Nd³⁺:YAG transparent ceramics by reactive SPS," Ceram. Int. 44 (18), 23145-23149 (2018).	1
Articol 53. A. Achim, L. Gheorghe, S. Georgescu, and F. Voicu, "Growth and characterization of Y_{0.7}Sc_{0.3}Ca₄O(BO₃)₃ single crystal for nonlinear optical applications," OAM-RC 4 (12), 1977-1980 (2010).	Citare 2. Azhar, SM; Anis, M; Rabbani, G; Shirsat, MD; Baig, MI; Hussaini, SS; AlFaify, S; Khan, MA; "Growth of NH₄H₂PO₄ crystal in urea environment to optimize linear-nonlinear optical traits for photonic device applications", Optik 185, 1247-1252 (2019). Citare 1. Shaikh RN; Mohd Anis; Shirsat MD; Hussaini SS; "Emphasized analysis on linear and laser induced nonlinear optical traits of citrulline doped NH₄H₂PO₄ (ADP) crystal," Optik 154, 435–440 (2018).	0.5
Articolul 54. L. Gheorghe, M. Greculeasa, F. Voicu, C. Gheorghe, S. Hau, A. M. Vlaicu, K. N. Belikov, E. Yu.	Citare 7. Xuhong Li, Zhaojie Zhu, Jianfu Li, Chaoyang Tu, Yan Wang, Growth and spectroscopic properties of Yb and Nd ions	1

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	Bryleva, O. V. Gaiduk, "Crystal growth and structural characterization of Sm^{3+}, Pr^{3+} and Dy^{3+} - doped CNGG and CLNGG single crystals," <i>Opt. Mater.</i> 84, 335-338 (2018).	doped $\text{Ca}_3\text{Li}_{0.275}\text{Nb}_{1.775}\text{Ga}_{2.95}\text{O}_{12}$ (CLNGG) laser crystals, <i>J. Cryst. Growth</i>, 652, 128029 (2025). Citare 6. Hong, Z.; Lin, Z.; Yue, H.; Luo, X.; Hou, H.; Lai, F.; Wang, W.; You, W.; Huang, J. "Effect of Network Modifiers on Spectroscopic Properties of Sm^{3+} Ions Doped Gallium Silicate Glasses," <i>Opt. Mater.</i> 152, 115445 (2024). Citare 5. Liu, X.; Yang, C.; Li, Y.; et al. High Recorded Color Rendering Performance of Single-Structured $\text{Ce,Mn:Y}_3(\text{Al,Sc})_2\text{Al}_3\text{O}_{12}$ Phosphor Ceramics for High-Power White LEDs/LDs, <i>J. Adv. Ceram.</i> 13(6), 810-820 (2024). Citare 4. Alvarez-Perez, JO; Cano-Torres, JM; Ruiz, A; Serrano, MD; Cascales, C; Zaldo, C; A roadmap for laser optimization of $\text{Yb:Ca}_3(\text{NbGa})_5\text{O}_{12}$-CNGG-type single crystal garnets dagger, <i>J. Mater. Chem. C</i> 9 (13), 4628-4642 (2021). Citare 3. Yuchong Ding, Shiping Mao, Jingjing Qu, Yue Gu, Shaoqin Hu, Kang An, Polarized spectroscopy and Judd-Ofelt analysis of Pr:LuYAP crystal, <i>Opt. Mater.</i> 109, 110290 (2020). Citare 2. Xue, YY; Li, N; Hu, DH; Song, QS; Xu, XD; Wang, DH; Wang, QG; Li, DZ; Wang, ZS; Xu, J; Spectral properties of Pr:CNGG crystals grown by micro-pulling-down method, <i>Chin. Phys. B</i> 28 (8), Art. Nr: 087801 (2019). Citare 1. Xiang J; Yang M, Che Y; Zhu J; Mao Y; Xiong; Zhao H; Photoluminescence investigation of novel reddish-orange phosphor $\text{Li}_2\text{NaBP}_2\text{O}_8\text{:Sm}^{3+}$ with high CP and low CCT, <i>Ceram. Int.</i> 45 (6), 7018-7024 (2019).	
	Articolul 55. G. Stanciu, L. Gheorghe, F. Voicu, S. Hau, C. Gheorghe, G. Croitoru, M. Enculescu, and R.P. Yavetskiy, "Highly transparent $\text{Yb:Y}_2\text{O}_3$ ceramics obtained by solid-state reaction and combined sintering procedures," <i>Ceram. Int.</i> 45(3), 3217-3222 (2019).	Citare 16. H. Tripathi, N. Sharma, J. Datt Sharma, Synergistic effects of ZrO_2 and La_2O_3 on the phase stability and optical-electronic properties of Y_2O_3, <i>J. Appl. Ceram. Technol.</i> 22 (3) e14909 (2025). Citare 15. Sinuo Zhang, Chang Woo Gal, Imam Akbar Sutejo, Shakeel Abbas, Yeong-Jin Choi, Ha-Neul Kim, Young-Jo Park, Hui-suk Yun, Overcoming transparency limitations in 3D-printed yttria ceramics, <i>J. Mater. Sci. & Technol.</i> 225, 59-71 (2025). Citare 14. Li, Z.; Ye, Y.; Han, W.; Tian, K.; Lu, K.; Qi, J.; Lu, T. "Transmittance Enhancement and Unique Optical Absorption of $\text{Yb}_2\text{Hf}_2\text{O}_7$ Ceramics via Air Annealing," <i>Ceram. Int.</i> 50 (16), 29006-29010 (2024). Citare 13. Lan, M.; Wang, X.; Xie, L.; Meng, D.; Wang, R.; Song, Y.; Sun, S.; Wei, S.-H. "Tailoring the Competition Between Electric Dipole and Magnetic Dipole Emission in Eu-Doped Cubic Sesquioxide M_2O_3 ($\text{M} = \text{Sc}, \text{Y}, \text{La}$)," <i>Phys. Rev. Appl.</i> 22, 014054 (2024). Citare 12. Zhang, C.; Shi, Y.; Wang, X.; Qi, J.; Lu, T. "Mechanical, Photoluminescent Properties, and Energy Transfer Mechanism of Highly Transparent $(\text{Y}_{0.99-x}\text{Gd}_x\text{Sm}_{0.01})_2\text{O}_3$ Ceramics for Scintillator Applications," <i>J ECS</i> 44 (3), 1783-1794 (2024). Citare 11. Fu, Z.; Wu, N.; Long, H.; Hou, Z. "Fabrication of Fine-Grained and High Thermal Properties Y_2O_3 Transparent Ceramics Without Sintering Aids," <i>Opt. Mater.</i> 147, 114618 (2024). Citare 10. S. Parkhomenko, A. Balabanov, O. Kryzhanovska, N. Safronova, I. Vorona, A. Doroshenko, O. Vovk, O. Vashchenko, A. Tolmachev, R. Yavetskiy, Effect of green body annealing on microstructure and optical properties of $\text{Y}_2\text{O}_3\text{:Yb}^{3+}$ ceramics, <i>Ceram. Int.</i> 49 (17), Part B, 29048-29054 (2023). Citare 9. Anees A. Ansari, M.R. Muthumareeswaran, Ruichan Lv, Coordination chemistry of the host matrices with dopant luminescent Ln^{3+} ion and their impact on luminescent properties, <i>Coord. Chem. Rev.</i> 466, 214584 (2022). Citare 8. Chengrui Liu, Guohong Zhou, Juan Jiang, Song Hu, Tianjin Zhang, Shiwei Wang, Zhenhai Xue, Hui Lin, Xianpeng Qin, Lin Gan, Fabrication and luminescence properties of highly	2.4615

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

		transparent and submicrometer-grained Yb:Y₂O₃ ceramics by hot-pressing sintering, J. Alloy. & Compd. 898, 163002 (2022). Citare 7. Liu C, Jiang J, Zhou G, Zhang T, Hu S, Gan L, et al. Highly transparent cerium-doped yttria ceramics for full-band UV-shielding window applications. J. Am. Ceram. Soc. 105, 3382–3390 (2022). Citare 6. Balabanov, S; Permin, D; Evstropov, T; Andreev, P; Basyrova, L; Camy, P; Baranov, M; Mateos, X; Loiko, P; Hot pressing of Yb:Y₂O₃ laser ceramics with LiF sintering aid, Opt. Mater. 119, Article Number: 111349 (2021). Citare 5. Lee, JH; Kim, BN; Jang, BK; Fabrication of transparent Y₂O₃ ceramics by two-step spark plasma sintering, J. Am. Cer. Soc. 104 (11), 5501-5508 (2021). Citare 4. Zhang, ZH; He, X; Wang, LL; Zhang, P; The S-1(0) -> P-3(1) transition position shift of Bi³⁺ ion doped Ln₂O₃ (Ln = Lu, Gd, La) phosphors, J. Lumin. 234, Article Number: 117971 (2021). Citare 3. Lee, JH; Kim, BN; Hata, S; Jang, BK; Microstructural and spectroscopic analysis in non-uniform Y₂O₃ ceramics fabricated by spark plasma sintering, J. Cer. Soc. Jap. 129 (1), 66-72 Special Issue: SI, (2021). Citare 2. Kryzhanovska, OS; Baumer, VN; Parkhomenko, SV; Doroshenko, AG; Yavetskiy, RP; Balabanov, AE; Tolmachev, AV; Skorik, SN; Li, J; Kuncser, A; "Formation peculiarities and optical properties of highly-doped (Y(0.86)La(0.09)Vb(0.05))(2)O-3 transparent ceramics", Cer. Inter. 45 (13) 16002-16007 (2019). Citare 1. Hao, DM; Chen, J; Ao, G; Tian, YN; Tang, YR; Yi, XZ; Zhou, SM; "Fabrication and performance investigation of Thulium-doped TAG transparent ceramics with high magneto-optical properties", Opt.Mater. 94, 311-315 (2019).	
	Articol 56. A. Lupei, V. Lupei, C. Gheorghe, L. Gheorghe, D. Vivien, G. Aka, E. Antic-Fidancev, "Disorder effects in Nd³⁺ doped strontium lanthanum aluminate laser crystals," J. Phys: Cond. Mater. 18 (2), 97-611 (2006).	Citare 3. Lin, W.; Huang, C.; Li, S.; Tao, S.; Chen, G.; Xu, M.; Zhao, C.; Fang, Q.; Ye, X.; Hang, Y.; "Tunable laser operations on Nd-doped strontium and lanthanum aluminate crystals"; Infrared Phys. Technol. 136, 105066 (2024). Citare 2. Poulouse, A.M.; Shaikh, H.; Anis, A.; Alhamidi, A.; Kumar, N.S.; Elnour, A.Y.; Al-Zahrani, S.M. Long Persistent Luminescent HDPE Composites with Strontium Aluminate and Their Phosphorescence, Thermal, Mechanical, and Rheological Characteristics. Materials 15, 1142 (2022). Citare 1. Suchinda Sattayaporn, Pascal Loiseau, Gerard Aka, Sergei Klimin, Kirill Boldyrev, Boris Mavrin, Fine spectroscopic study of Pr³⁺ doped Sr_{0.7}La_{0.3}Mg_{0.3}Al_{11.7}O₁₉ (Pr:ASL), J. Lumin. 219, 116895 (2020).	0.5
	Articol 57. C. A. Brandus, L. Gheorghe, T. Dascalu, "Efficient laser operation at 1.06 μm in co-doped Lu³⁺, Nd³⁺: GdCa₄O(BO₃)₃ single crystal", Opt. Mater. 42, 376-380 (2015).	Citare 2. Xuyang Yuan, Xuean Chen, Weiqiang Xiao, Xiaoyan Song, A new rare-earth orthoborate Ba₂CdSm₂(BO₃)₄: Synthesis, crystal structure, vibrational spectra, and luminescent properties, J. Solid State Chem. 321, 123934 (2023). Citare 1. C. A. Brandus, "Analysis of the self-frequency doubling nonlinear mirror mode-locking threshold. The case of Nd:GdCOB bi-functional material," Rom. Rep. Phys. 72(1), 401 (2020).	0.6666
	Articol 58. R. P. Yavetskiy, S. V. Parkhomenko, I. O. Vorona, A. V. Tolmachev, D. Yu. Kosyanov, V. G. Kuryavyi, V. Yu. Mayorov, L. Gheorghe, G. Croitoru, M. Enculescu, Effect of green body annealing on laser performance of YAG:Nd³⁺ ceramics, Ceram. Int. 44 (4), 4487-4490 (2018).	Citare 3. S. Parkhomenko, A. Balabanov, O. Kryzhanovska, N. Safronova, I. Vorona, A. Doroshenko, O. Vovk, O. Vashchenko, A. Tolmachev, R. Yavetskiy, Effect of green body annealing on microstructure and optical properties of Y₂O₃:Yb³⁺ ceramics, Ceram. Int. 49 (17), Part B, 29048-29054 (2023). Citare 2. Chengjie Zhan, Bingchu Mei, Zaichun Sun, Weiwei Li, Yu Yang, Xinwen Liu, Yongqiang Zhang, Fabrication and spectroscopic properties of hot-pressed Tb:CaF₂ transparent ceramics with different doping concentrations, Opt. Mater. 126, 112128, (2022). Citare 1. Neslihan Sakar, Hazal Gergeroglu, S. Alper Akalin, Sibel Oguzlar, Serdar Yildirim, Synthesis, structural and optical	0.4

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

		characterization of Nd: YAG powders via flame spray pyrolysis, Opt. Mater. 103, 109819 (2020).	
	Articol 59. A. G. Doroshenko, R. P. Yavetskiy, S. V. Parkhomenko, I. O. Vorona, O. S. Kryzhanovska, P. V. Mateychenko, A. V. Tolmachev, E. A. Vovk, V. A. Bovda, G. Croitoru, L. Gheorghe, "Effect of the sintering temperature on the microstructure and optical properties of YAG:Cr,Mg ceramics," Opt. Mater. 98, 109505 (2019).	Citare 8. Kravtsov, A.A., Suprunchuk, V.E., Tarala, V.A. <i>et al.</i>, Influence of the MgO/CaO Sintering Additive Ratio on the Optical Properties of YAG:Cr Ceramics, Glass Ceram. 81, 415–420 (2025). Citare 7. Chaika, M. "Advancements and Challenges in Sintering of Cr⁴⁺:YAG: A Review," JECS 44 (13), 7432-7450 (2024). Citare 6. N. Flores-Martinez, L. Ouamara, F. Remondiere, J. Jouin, G. Fiore, S. Oriol, S. Rossignol, Synthesis and robocasting of YAG xerogel: one-step conversion of ceramics, Sci Rep 12, 8454 (2022) Citare 5. Vojtěch Nečina, Jan Hostaša, Willi Pabst, Martin Veselý, Magnesium fluoride (MgF₂) – A novel sintering additive for the preparation of transparent YAG ceramics via SPS, J. Eur. Ceram. Soc. 42 (7) 3290-3296 (2022). Citare 4. J.C.A. Santos, E.P. Silva, D.V. Sampaio, D.C. Silva, N.R.S. Souza, C. Kucera, J. Ballato, R.S. Silva, Effect of the Ce³⁺ concentration on laser-sintered YAG ceramics for white LEDs applications, JECS 40, 3676-3678 (2020). Citare 3. Mykhailo Chaika, Oleh Vovk, Giulia Mancardi, Robert Tomala, Wiesław Strek, Dynamics of Yb²⁺ to Yb³⁺ ion valence transformations in Yb:YAG ceramics used for high-power lasers, Opt. Mater. 101, 109774 (2020). Citare 2. V.V. Bezotosnyi, A. Yu Kanaev, Yu.L. Kopylov, A.L. Koromyslov, K.V. Lopukhin, I. M. Tupitsyn, E.A. Cheshev, Influence of CaO/MgO ratio on Cr³⁺ to Cr⁴⁺ conversion efficiency in YAG: Cr⁴⁺ ceramic saturable absorbers, Opt. Mater. 100, 109671 (2020). Citare 1. A.A. Kravtsov, I.S. Chikulina, V.A. Tarala, D.S. Vakalov, M.S. Nikova, F.F. Malyavin, S.O. Krandievsky, A.V. Blinov, V.A. Lapin, Nucleation and growth of YAG: Yb crystallites: A step towards the dispersity control, Ceram. Int. 46 (18), Part A, 28585-28593 (2020).	1
	Articol 60. 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).	Citare 4. K.A. Kokh, A.Y. Jamous, V.A. Svetlichny, A.B. Kuznetsov, A.P. Yelissev, N.E. Bogdanov, A.A. Goreyavcheva, A.E. Kokh, Redistribution of rare-earth dopants (Eu, Dy, Ho, Er, Tm, Yb) in LaSc₃(BO₃)₄ structure and influence on optical properties, Opt. Mater. 159, 116655 (2025). Citare 3. Chen, P., Murshed, M.M. & Gesing, T.M. Synthesis and crystal structures of novel alkali rare-earth orthoborates K₃RE₃(BO₃)₄ (RE = Pr, Nd, Sm–Lu), J. Mater. Sci. 56, 3639–3652 (2021). Citare 2. Saeed Ghavami Sabouri, Overcoming the phase-mismatch by fundamental beam modulation, J. Opt. 22 (6) 065502 (2020). Citare 1. Shichao Cheng, Miriding Mutailipu, Zhihua Yang, and Shilie Pan, A Promising Fluorooxoborate Framework with the Flexibility Capable for Diverse Cations to Enhance the Second Harmonic Generation, Chem. Eur. J. 26 (17), 3723-3728 (2020).	0.6153
	Articol 61. 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).	Citare 9. Sun, L.; Lu, J.; Xu, Q.; Su, S.; Liu, R.; Lei, Z.; Xu, K.; Zou, Y.; Zhang, B.; Li, J.; Gao, J.; Teng, B.; Sun, S.; Zhong, D. "Crystal Growth and Spectral Properties of a Mixed Crystal Nd³⁺: LuYPO₄," J. Lumin. 266, 120297 (2024). Citare 8. Tang, J.; Bai, Z.; Zhang, D.; Qi, Y.; Ding, J.; Wang, Y.; Lu, Z. Advances in All-Solid-State Passively Q-Switched Lasers Based on Cr⁴⁺: YAG Saturable Absorber, Photonics 8, 93 (2021). Citare 7. Petersen, A; Taccheo, S; Mirov, S; Nilsson, J; Pask, H; Saraceno, C; Wetter, N; Wu, RF; Focus issue introduction: Advanced Solid-State Lasers 2020, Opt. Mater. Express 11 (4), 952-954 (2021). Citare 6. Petersen, A; Taccheo, S; Mirov, S; Nilsson, J; Pask, H; Saraceno, C; Wetter, N; Wu, RF; Focus issue introduction:	1.3846

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

	Advanced Solid-State Lasers 2020, Opt. Express 29 (6), 8365-8367 (2021). Citare 5. Xiaoqin Liu, Yun Dai, Shengjun Huang, Jie Liu, Anhua Wu, and Liangbi Su, "Compact Q-switched Nd: YAG single-crystal fiber laser with 794 nm laser diode pumping," Opt. Mater. Express 11, 3355-3362 (2021). Citare 4. Shuo Sun, Xiaoli Sun, Feng Ren, Carolina Romero, Javier R. Vázquez de Aldana, Yuechen Jia, Feng Chen, Tapered depressed-cladding waveguide lasers modulated by Ag nanoparticles embedded in SiO₂, Res. Phys. 30, 10489 (2021). Citare 3. 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). Citare 2. Chen, FF; Jiang, C; Yu, FP; Cheng, XF; Zhao, X; Temperature-dependent behaviours of electro-elastic constants for the Bi₂ZnB₂O₇ piezoelectric crystal, CrystEngComm. 23 (2), 391-396 (2021). Citare 1. C. A. Brandus, Analysis of the self-frequency doubling nonlinear mirror mode-locking threshold. The case of Nd: GdCOB bi-functional material, Rom. Rep. Phys. 72 (1), 401 (2020).	
Articol 62. R. P. Yavetskiya, A. G. Doroshenko, S. V. Parkhomenko, I. O. Vorona, A. V. Tolmachev, D. Yu. Kosyanov, A. A. Vornovskikh, A. M. Zakharenko, V. Yu. Mayoroc, L. Gheorghe, G. Croitoru, N. Pavel, V. V. Multian, V. Ya. Gayvoronsky, "Microstructure evolution during reactive sintering of Y₃Al₅O₁₂:Nd³⁺ transparent ceramics: Influence of green body annealing," J. Eur. Ceram. Soc. 39(13), 3867-3875 (2019).	Citare 11. Xiao, B., Zhang, X., Hou, Y., Wang, F., Wen, G. "Synthesis, Microstructure and Mechanical Properties of WBx/C Composites," Ceram. Int. 50 (24) Part C, 55470-55486 (2024). Citare 10. Chen, Y., Zhou, Q., Fan, J.-t., Zhao, Y.-a., Jiang, B.-x., Zhang, L. "Study on the Effect of Size and Density of Micropores on Transparent Ceramic Damage Induced Under Intense Laser Irradiation," J. Mater. Res. Techn. 31, 772-786 (2024). Citare 9. Picelli, F., Hostaša, J., Piancastelli, A., Biasini, V., Melandri, C., & Esposito, L. "Beyond Scanning Electron Microscopy: Comprehensive Pore Analysis in Transparent Ceramics Using Optical Microscopy," Ceramics 7(1), 401-410 (2024). Citare 8. Aravind Reddy, J., Kumar Lakshya, A., Chowdhury, A. "Insights into the Issues During Hot-Pressing and Vacuum Sintering of 10 mol.% CaO Doped Zirconia Ceramics," JACS 107 (8), 5190-5200 (2024). Citare 7. Chen, Y., Feng, T., Zhao, Y.-a., Jiang, B.-x., Zhang, L. "Surface Damage Induced by Micropores in Transparent Ceramics Under Nanosecond Laser Irradiation," Opt. Express 32, 11613-11628 (2024). Citare 6. V.S. Derevschikov, D.I. Prokhorov, Ya.V. Bazaikin, E.G. Malkovich, D.A. Yatsenko, V.V. Lisitsa, Phenomenology and modeling of Y₂O₃ porous grain sintering, Ceram. Int. 49 (6) 9452-9464 (2023). Citare 5. Serhii Parkhomenko, Anton Balabanov, Oleksandra Kryzhanovska, Nadiia Safronova, Ihor Vorona, Andrii Doroshenko, Olena Vovk, Olga Vashchenko, Alexander Tolmachev, Roman Yavetskiy, Effect of green body annealing on microstructure and optical properties of Y₂O₃:Yb³⁺ ceramics, Ceram. Int. 49 (17) Part B, 29048-29054 (2023). Citare 4. K.V. Nadaraia, S.N. Suchkov, I.M. Imshinetskiy, D.V. Mashtalyar, D.Yu. Kosianov, E.A. Belov, S.L. Sinebryukhov, S.V. Gnedenkov, New superhydrophobic composite coatings on Mg-Mn-Ce magnesium alloy, J. Magn. Alloy. 11 (5)5, 1721-1739 (2023). Citare 3. R. Selvamani, S. Kumar, G. Singh, D. Sen, P.U. Sastry, Effect of particle and pore morphology on optical transmission of yttria based laser host ceramics: A small-angle scattering investigation, Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, 537, 104-110 (2023).	1.1578

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

		Citare 2. Kosyanov, DY; Yavetskiy, RP; Kryzhanovska, OS; Vornovskikh, AA; Shichalin, OO; Papynov, EK; Gerasimenko, AV; Leonov, AA; Zavjalov, AP; Reactive SPS of Nd³⁺:YAG transparent ceramics with LiF sintering additive, Opt. Mater. 119, Article Number: 111389 (2021). Citare 1. Feng Tian, Cong Chen, Yang Liu, Qiang Liu, Maxim Ivanov, Qingqing Wang, Nan Jiang, Haohong Chen, Zhaoxiang Yang, Tengfei Xie, Jiang Li, Fabrication of Nd:YAG transparent ceramics from co-precipitated powders by vacuum pre-sintering and HIP post-treatment, Opt. Mater. 101,109728 (2020).	
	Articol 63. 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. Alloys Compd. 799, 288-301 (2019).	Citare 4. Ren, H.; Huang, L.; Cheng, Z.; Huang, B.; Hao, Y.; Xiong, G.; Zhu, Z.; Zhang, H.; Xu, S.; Deng, W. "The Effect of Pr³⁺ Concentration on the Microstructure, Luminescence and Scintillation Properties of Pr: LuAG Single Crystals," J. Alloy. Compd. 971, 172768 (2024). Citare 3. Laurenz Rößmann, Franziska Schröder, Thomas Jüstel, Effect of Gd³⁺ doping on the luminescence and up-conversion of Pr³⁺ activated Ca₂(Lu_{0.99-x}Gd_xPr_{0.01})Hf₂Al₃O₁₂, J. Lumin. 263, 120033 (2023). Citare 2. Zihao Wang, Zicheng Wen, Fei Tang, Kangzhen Tian, Chuandong Zuo, Lizhen Zhang, Role of localized phonon vibration in luminescence performance of Pr doped Ba(Mg_{0.28}Zr_{0.16}Ta_{0.56})O₃ transparent ceramics, J. Rare Earths, 40 (11), 1728-1733, (2022). Citare 1. N. W. Sangwaranatee, N Kiwsakunkran, J Kaewkhao, Investigation on Physical and Optical of Praseodymium Doped Sodium Aluminium Barium Phosphate Glasses, J. Phys.: Conf. Series 1428, 012031 (2020).	0.6153
	Articolul 64. M. Porębski, M. Kowalczyk, L. Gheorghe, M. Greculeasa, 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).	Citare 1. Maciej Kowalczyk, Xuzhao Zhang, Valentin Petrov, Pavel Loiko, Xavier Mateos, Yi Guo, Zhengping Wang, Xin-Guang Xu, and Jaroslaw Sotor, Self-frequency-doubling Yb:CNLS lasers operating in the femtosecond regime, JOSA B 37 (10). 2822-2829 (2020).	0.14285
	Articolul 65. L. Gheorghe, P. Loiseau, G. Aka, "Second-harmonic generation of 400 nm blue-violet light in Gd_{1-x}R_xCa₄O(BO₃)₃ (R = Lu, Sc) crystals through noncritical phase-matching," JOAM 12 (4), 821-823 (2010).	Citare 1 Liu, FF; Dong, L; Cao, SX; Chen, JX; Xu, HH; Han, WJ; Liu, JH; Crystal growth, structural characterization and laser operation of an Yb_{0.19}Y_{0.34}Lu_{0.12}Gd_{0.35}Ca₄O(BO₃)₃ mixed crystal, J. Cryst. Growth, 558, Article Number: 126023 (2021).	0.3333
	Articol 66. L. Gheorghe, P. Loiseau, G. Aka, V. Lupei, "Growth and type-I noncritical phase-matching second-harmonic-generation of Gd_{1-x}R_xCa₄O(BO₃)₃ (R³⁺= Sc³⁺ or Lu³⁺) crystals," J. Crystal Growth 294 (2), 442-446 (2006).	Citare 1. Xuean Chen, Ruru Bian, Weiqiang Xiaob, Xiaoyan Song, A new rare-earth oxyborate Ba₃BiPbEuO(BO₃)₄ and the luminescence properties of the Ba₃BiPbY_{1-x}Eu_xO(BO₃)₄ phosphors, Dalton Trans. 51, 9454-9466 (2022).	0.25
	Articol 67. 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_yR₂Sc_{4-x-y-z}(BO₃)₄ (R = Yb, Nd) crystals - A review of recent developments," Opt. Mater. X 7, 100052 (2020).	Citare 3. K.A. Kokh, A.Y. Jamous, V.A. Svetlichny, A.B. Kuznetsov, A.P. Yelisseyev, N.E. Bogdanov, A.A. Goreyavcheva, A.E. Kokh, Redistribution of rare-earth dopants (Eu, Dy, Ho, Er, Tm, Yb) in LaSc₃(BO₃)₄ structure and influence on optical properties, Opt. Mater. 159, 116655 (2025). Citare 2. A. B. Kuznetsov, A.Y. Jamous, V. A. Svetlichnyi, S. N. Volkov, I. V. Korolkov, K. A. Kokh, L. A. Gorelova, M. G. Krzhizhanovskaya, S. M. Aksenov, A. E. Kokh, Growth and characterization of Na₃R(BO₃)₂ (R = La–Gd) borates: crystal structure, high-temperature behavior, and optical properties, CrystEngComm 25, 2914-2924 (2023).	0.3529

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

		Citare 1. P. M. Kakade, A. R. Kachere, P.D. Sahare, A. V. Deshmukh, S.D. Dhole, S. R. Jadkar, N. T. Mandlik, Structural, compositional and luminescence studies of $Y_2O_3:Eu^{3+}$ nanophosphor synthesized by sol-gel method, J. Alloys Compd. 928, 167106, (2022).	
	Articol 68. 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).	Citare 4. M. Pianassola, M. Loveday, R. Lalk, K. Pestovich, C.L. Melcher, M. Zhuravleva, Crystal growth and phase formation of high-entropy rare-earth monoclinic aluminates, J. Am. Ceram. Soc. 106 (11), 7123-7132 (2023). Citare 3. M. Pianassola, B.C. Chakoumakos, C.L. Melcher, M. Zhuravleva, Crystal Growth and Phase Formation of High-Entropy Rare-Earth Aluminum Perovskites, Cryst. Growth Des. 23 (1), 480-488 (2023). Citare 2. M. Pianassola, M. Alexander, B. Chakoumakos, M. Koschan, C. Melcher and M. Zhuravleva, Effects of composition and growth parameters on phase formation in multicomponent aluminum garnet crystals, Acta Cryst. B 78, 476-484 (2022). Citare 1. Pianassola, M; Stand, L; Loveday, M; Chakoumakos, BC; Koschan, M; Melcher, CL; Zhuravleva, M; Czochralski growth and characterization of the multicomponent garnet $(Lu_{1/4}Yb_{1/4}Y_{1/4}Gd_{1/4})_3Al_5O_{12}$, Phys. Rev. Mater. 5 (8), Article Number: 083401 (2021).	0.5714
	Articol 69. 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 Compd. 844, 156143 (2020).	Citare 7. Mingliang Yang, Ruixian Wang, Wenli Qian, Hao Ren, Fei Zheng, Xiaofei Wang, Renqin Dou, Qingli Zhang, Guihua Sun, Growth, spectral characteristics, and laser performance of Yb:Lu₃Ga₅O₁₂ crystals, J. Alloys Compd. 1010, 178255 (2025). Citare 6. Xuewei Wen, Tianhao Liu, Jiayao Fan, Kai Gong, Jing Song, Electrically controlled liquid crystal nonlinear optical devices prepared by multi-layer composite structures, J. Mol. Liquids 382, 121889 (2023). Citare 5. Zhibin Chen, Dongmei Wang, Lehui Liu, Feifei Yuan, Yisheng Huang, Lizhen Zhang, Zhoubin Lin, Cr³⁺-doped Ca₃(VO₄)₂: A new tunable laser crystal, J. Alloy. Compd. 938, 168651 (2023). Citare 4. Baikun Han, Hanyu Xiao, Yujin Chen, Jianhua Huang, Xinghong Gong, Yanfu Lin, Zundu Luo, Yidong Huang, Polarized spectroscopic properties and 1046 nm laser operation of Yb³⁺:Ca₃TaGa₃Si₂O₁₄ crystal, J. Lumin. 251 119219 (2022). Citare 3. R. Lisiecki, J. Komar, B. Macalik, P. Solarz, M. Berkowski, W. Ryba-Romanowski, Investigating the structure-sensitive factors relevant to cryogenic laser operation of Yb³⁺ ions in oxide crystals, J. Lumin., 252, 119418 (2022). Citare 2. Prashant M. Kakade, Avinash R. Kachere, P.D. Sahare, Alka V. Deshmukh, S.D. Dhole, Sandesh R. Jadkar, Nandkumar T. Mandlik, Structural, compositional and luminescence studies of $Y_2O_3:Eu^{3+}$ nanophosphor synthesized by sol-gel method, J. Alloy. & Compd. 928, 167106, (2022). Citare 1. Guangda Wu, Xiaoqin Yin, Pingzhang Yu, Mengdi Fan, Fapeng Yu, Shuzhen Fan, Zhengping Wang, Xian Zhao, Growth, spectral and laser properties of a Yb-doped strontium yttrium phosphate crystal with a disordered structure, CrystEngComm. 23, 8131-8138 (2021).	1.0769
	Articol 70. 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:Y₂O₃ ceramics via multi-step sintering method fabrication," Opt. Mater. 109, 110411 (2020).	Citare 4. Yifei Cao, Haoyu Li, Xinyu Zheng, Siqing Wang, Chunming Zhou, Shiwei Chen, Peng Yang, Tianyuan Zhou, Hao Chen, Le Zhang, Simultaneous precipitation of Zr⁴⁺ and Y³⁺ ions induced refinement of precursors and powders in fabrication of Zr⁴⁺ doped Y₂O₃ transparent ceramics, Opt. Mater. 139, 113802 (2023). Citare 3. Parkhomenko, A. Balabanov, O. Kryzhanovska, N. Safronova, I. Vorona, A. Doroshenko, O. Vovk, O. Vashchenko, A. Tolmachev, R. Yavetskiy, Effect of green body annealing on microstructure and optical properties of Y₂O₃:Yb³⁺ ceramics, Ceram. Int. 49 (17), Part B, 29048-29054 (2023).	0.5714

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

		Citare 2. Chengrui Liu, Guohong Zhou, Juan Jiang, Song Hu, Tianjin Zhang, Shiwei Wang, Zhenhai Xue, Hui Lin, Xianpeng Qin, Lin Gan, Fabrication and luminescence properties of highly transparent and submicrometer-grained Yb:Y₂O₃ ceramics by hot-pressing sintering, J. Alloy. & Compd. 898, 163002 (2022). Citare 1. Balabanov, S; Permin, D; Evstropov, T; Andreev, P; Basyrova, L; Camy, P; Baranov, M; Mateos, X; Loiko, P; Hot pressing of Yb:Y₂O₃ laser ceramics with LiF sintering aid, Opt. Mater. 119, Article Number: 111349 (2021).	
	Articol 71. 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).0.0	Citare 1. Jinheng Du, Xiufang Chen, Haohai Yu, and Huaijin Zhang, Actively Q-switched self-frequency-doubled Yb:YCOB green laser with output power of a dozen watts," Opt. Lett. 48, 4969-4972 (2023).	0.1818
	Articol 72. Lupei, A.; Antic-Fidancev, E.; Aka, G.; Vivien, D.; Gheorghe, L.; Gheorghe, C.; "Spectral and structural studies of GdCOB and YCOB crystals"; Proc. SPIE 5581, 114-122 (2004).	Citare 1. Li, Y.; Liu, L.; Huang, Y.; Zhang, L.; Lin, Z.; "Growth and spectroscopic properties of Dy³⁺:GdCa₄O(BO₃)₃ crystals"; Opt. Mater. 157, Part 2, 116230 (2024).	0.1818
	Articol 73. R. P. Yavetskiy, A. E. Balabanov, S. V. Parkhomenko, O. S. Kryzhanovska, A. G. Doroshenko, P. V. Mateychenko, A. V. Tolmachev, Jiang Li, Nan Jiang, L. Gheorghe, M. Enculescu, "Effect of starting materials and sintering temperature on microstructure and optical properties of Y₂O₃:Yb³⁺ 5 at% transparent ceramics," J. Adv. Ceram. 10(1), 49-61 (2021).	Citare 43. Xiang Li, Qiang Liu, Lihao Guo, Chen Hu, Junlin Wu, Guido Toci, Angela Pirri, Barbara Patrizi, Matteo Vannini, Dariusz Hreniak, Jiang Li, Effect of powder calcination temperature on the microstructure and laser performance of Yb:CaF₂ transparent ceramics, Int. J. Appl. Ceram. Technol., Early View, e15108, (2025). https://doi.org/10.1111/ijac.15108 Citare 42. Amina Maou, Najwa Gouitaa, F. Z. Ahjyaje, T. D. Lamcharfi, F. Abdi, N. I. Kandri, Impact of sintering temperature on the structural, morphological, and dielectric properties of (1-x)LaFeO_{3-x}BaTiO₃ (x = 0.49), Helyon 11 (2), e41798 (2025). Citare 41. Wenhui Lou, Yang Tang, Haohong Chen, Yisong Lei, Hui Lin, Ruijin Hong, Zhaoxia Han, Dawei Zhang, Electron traps in (Y_{0.97}Zr_{0.03})₂O₃ transparent ceramics and its suppression by heavy Eu³⁺ doping, J. Am. Ceram. Soc. 108 (4), e20303 (2025). Citare 40. O.O. Matvienko, I.O. Vorona, S.V. Parkhomenko, A.E. Balabanov, A.T. Budnikov, A.D. Tymoshenko, P.V. Mateychenko, A.V. Tolmachev, V.N. Baumer, G.V. Grygorova, Ya. Korol, R.P. Yavetskiy, Impact of starting alumina powders on densification peculiarities of reactive-sintered YAG:Sm³⁺ ceramics, Open Ceram. 21, 100745 (2025). Citare 39. Jing, Y.; Tian, F.; Guo, L.; Li, T.; Wu, J.; Ivanov, M.; Hreniak, D.; Li, J. "Effect of TEOS Content on Microstructure Evolution and Optical Properties of Sm:YAG Transparent Ceramics," Opt. Mater. 147, 114681 (2024). Citare 38. Feng, Y.; Liu, Z.; Toci, G.; Pirri, A.; Patrizi, B.; Vannini, M.; et al. "Fabrication, Microstructure, Spectral Properties, and Laser Performance of Yb:Gd_xY_{3-x}Al₅O₁₂ Ceramics," J. Am. Ceram. Soc. 107, 4134–4146 (2024). Citare 37. Chernomorets, D.; Galizia, P.; Zanetti, G.; Varas, S.; Chiasera, A.; Piancastelli, A.; Yavetskiy, R.; Hostaša, J. "IR-Transparent Y₂O₃ Ceramics: Effect of Zirconia Concentration on Optical and Mechanical Properties," Open Ceramics 20, 100666 (2024). Citare 36. Tripathi, H.; Kumar, S.; Bhardwaj, S.; Sharma, J. D. "Impact of Nd³⁺, Er³⁺ Ions on the Structural, Morphological and Opto-Electrical Properties of ZrO₂/La₂O₃ Doped Y₂O₃ Ceramics," Ceram. Int. 50 (11) Part A, 18549-18558 (2024). Citare 35. Guo, X.; Chen, H.; Guo, H.; Qin, Y.; Zeng, Z.; Fei, Q.; Jian, Z.; Chen, H.; Wang, G. "Water-Induced Highly Transparent SiO₂ Porous Ceramics with Tunable Visible Transparency, Anti-	5.375

	Fogging and Thermal Insulation," <i>Ceram. Int.</i> 50 (9) Part B, 15472-15480 (2024). Citare 34. Zhang, L.; Starobor, A. V.; Hu, D.; Li, X.; Hu, C.; Wu, L.; et al. "Highly Transparent $Tb_3Al_5O_{12}$ Ceramics for Kilowatt-Level Faraday Isolator," <i>J. Am. Ceram. Soc.</i> 107, 3653–3658 (2024). Citare 33. Balabanov, S. S.; Timofeeva, N. A.; Evstropov, T. O.; et al. "Optical Ceramics Obtained by Hot Pressing of CVD-ZnSe Powder," <i>Russ. J. Inorg. Chem.</i> (2024). Citare 32. S. Balabanov, P. Loiko, L. Basyrova, D. Permin, D. Kosyanov, T. Evstropov, S. Filofeev, A. Braud, P. Camy, Mid-infrared laser operation of $(Er_{0.07}La_{0.10}Y_{0.83})_2O_3$ sesquioxide ceramic, <i>Laser Phys. Lett.</i> 20, 045801 (2023). Citare 31. Dariia G. Chernomorets, Andreana Piancastelli, Laura Esposito, Jan Hostaša, Effect of milling parameters on the morphology and sinterability of the yttrium oxide powders for transparent ceramics, <i>Open Ceram.</i> 15, 100391 (2023). Citare 30. Ma, L, Sun, X, Guo, H, Shan, Y, Han, X, Xu, J, et al., Study on robust additive of $CaCO_3$ for fast fabrication of highly transparent AlON ceramics by pressureless sintering, <i>J. Am. Ceram. Soc.</i> 106, 4770–4784 (2023). Citare 29. Zhang L, Hu D, Snetkov IL, et al., A review on magneto-optical ceramics for Faraday isolators. <i>J. Adv. Ceram.</i> 12(5), 873-915 (2023). Citare 28. Serhii Parkhomenko, Anton Balabanov, Oleksandra Kryzhanovska, Nadiia Safronova, Ihor Vorona, Andrii Doroshenko, Olena Vovk, Olga Vashchenko, Alexander Tolmachev, Roman Yavetskiy, Effect of green body annealing on microstructure and optical properties of $Y_2O_3:Yb_{3+}$ ceramics, <i>Ceram. Int.</i> 49 (17) Part B, 29048-29054 (2023). Citare 27. Minqiang Kang, Wenqiang Xu, Jun Wang, Ying Wang, Changhua Zhang, Jie Ma, Peng Liu, Ying Deng, Qihua Zhu, Deyuan Shen, Ling Bing Kong, Dingyuan Tang, Enhanced transmittance of Y_2O_3 transparent ceramics from near-UV to near-infrared through reduced atmosphere annealing, <i>JECS</i> 43 (15), 7096-7101 (2023). Citare 26. Liu, Z, Feng, Y, Chen, H, Toci, G, Pirri, A, Patrizi, B, et al., Microstructure and properties characterization of $Yb:Lu_2O_3$ transparent ceramics from co-precipitated nano-powders, <i>Int J Appl Ceram Technol.</i> 20, 3365–3375 (2023). Citare 25. Fang, H, Gu, S, Fan, S, Zhou, B, Huang, P, Luo, W, et al., Rapidly fabricating Y_2O_3 transparent ceramics at low temperature by SPS with mesoporous powder, <i>J Am Ceram Soc.</i> 106, 2491–2500 (2023). Citare 24. Chen, P., Li, X., Tian, F. et al. Fabrication, microstructure, and properties of 8 mol% yttria-stabilized zirconia (8YSZ) transparent ceramics, <i>J Adv Ceram</i> 11, 1153–1162 (2022). Citare 23. O. Bezkrivnyi, M. Vorokhta, M. Pawlyta, M. Ptak, L. Piliat, Xi. Xie, T. Ngan Dinhová, I. Khalakhan, I. Matolínová, L. Kepinski, In situ observation of highly oxidized Ru species in Ru/CeO₂ catalyst under propane oxidation, <i>J. Mater. Chem. A</i> 10, 16675-16684 (2022). Citare 22. Huang, Z., Shi, Y., Zhang, Y. et al., An effective strategy for preparing transparent ceramics using nanorod powders based on pressure-assisted particle fracture and rearrangement, <i>J Adv Ceram</i> 11, 1976–1987 (2022). Citare 21. K. Lu, Y. Ye, W. Han, C. Zhang, L. Liang, H. Yuan, Y. Shi, J. Qi, T. Lu, Defect Regulation of Terbium-Doped $Y_2Zr_2O_7$ Transparent Ceramic for Wide-Range Multimode Tunable Light-Shielding Windows, <i>The J. Phys.I Chem. Let.</i> 13 (34), 8097-8103 (2022).
--	--

	Citare 20. K. Lu, Z. Liu, Y. Wang, W. Yang, H. Peng, Y. Ye, Y. Shi, J. Qi, T. Lu, Optical transmission and transition properties of lanthanide doped highly transparent $Y_2Zr_2O_7$ ceramics, J. Alloy. Compds, 905, 164133 (2022). Citare 19. F. Mao, L. Long, G. Zeng, H. Chen, Y. Li, W. Zhou, Achieving excellent electromagnetic wave absorption property by constructing VO_2 coated biomass carbon heterostructures, Diamond and Related Materials, 130, 109422 (2022). Citare 18. Tao Li, Tianyuan Zhou, Yifei Cao, Zitao Cai, Changming Zhao, Mingxing Yuan, Xinyu Zheng, Guocan Huang, Zhongying Wang, Le Zhang, and Hao Chen, Optical properties and energy transfer performances in high quality Cr,Nd: YAG transparent laser ceramics for solar pumped lasers, Opt. Express 30, 8762-8776 (2022) Citare 17. L. Guo, Y. Shi, G. Chen, Y. Liu, X. Huang, Z. Dai, Z. Liu, F. Tian, D. Hreniak, J. Li, Fabrication of sub-micrometer sized Er:CaF₂ transparent ceramics for eye-safe lasers, Opt. Mater. 133, 113052 (2022). Citare 16. Li, Y., Cao, Z., Jiang, Z. et al., Synergistic effect of Ga and Yb co-doping on the structure and ionic conductivity of $Li_7La_3Zr_2O_{12}$ ceramics, Ionics 28, 5321–5331 (2022). Citare 15. Zhang, L., Li, X., Hu, D. et al. Fabrication and properties of non-stoichiometric $Tb_2(Hf_{1-x}Tb_x)_2O_{7-x}$ magneto-optical ceramics, J Adv Ceram 11, 784–793 (2022). Citare 14. Z. Liu, G. Toci, A. Pirri, B. Patrizi, Y. Feng, D. Hu, H. Chen, D. Hreniak, M. Vannini, J. Li, Fabrication and characterizations of Tm:Lu₂O₃ transparent ceramics for 2 μm laser applications, Opt. Mater. 131, 112705 (2022). Citare 13. B. Ratzker, A. Wagner, B. Favelukis, I. Ayalon, R. Shrem, S. Kalabukhov, N. Frage, Effect of synthesis route on optical properties of Cr:Al₂O₃ transparent ceramics sintered under high pressure, J. Alloy. Compds, 913, 165186 (2022). Citare 12. Li, Q., Wang, Y., Wang, J. et al., High transparency Pr:Y₂O₃ ceramics: A promising gain medium for red emission solid-state lasers, J Adv Ceram 11, 874–881 (2022). Citare 11. M. Yuan, Y. Cao, T. Zhou, C. Shao, X. Zheng, M. Liu, Z. Cai, C. Zhao, Y. Li, Le Zhang, H. Chen, Fabrication of heavily doped Nd:YAG transparent ceramics and their thin disc solid state laser performance, Ceram. Int. 48 (19) Part A, 27799-27806 (2022). Citare 10. Yang, C., Huang, J., Huang, Q. et al., Optical, thermal, and mechanical properties of $(Y_{1-x}Sc_x)_2O_3$ transparent ceramics, J Adv Ceram 11, 901–911 (2022). Citare 9. Chengrui Liu, Guohong Zhou, Juan Jiang, Song Hu, Tianjin Zhang, Shiwei Wang, Zhenhai Xue, Hui Lin, Xianpeng Qin, Lin Gan, Fabrication and luminescence properties of highly transparent and submicrometer-grained Yb:Y₂O₃ ceramics by hot-pressing sintering, J. Alloy. Compds. 898, 163002 (2022). Citare 8. D. Sofronov, M. Rucki, A. Doroshenko, A. Shaposhnyk, O. Kapustnik, P. Mateychenko, V. Baumer, W. Zurowski, Synthesis of TiO₂ nanoparticles out of fluoride solutions, J. Mater. Res. Tech. 17, 2267-2279 (2022). Citare 7. Tripathi, H., Kumar, S., Kumar, R. et al., Structural, morphological and opto-electric properties of $Y_{2-x}Yb_xO_3$ (x = 0.0, 0.04, 0.08, 0.12) nanopowders for laser host ceramic material applications, J Mater Sci: Mater Electron 33, 12157–12170 (2022). Citare 6. X. Zhang, G. Yang, R. Chi, Y. Shi, X. Zhao, H. Jiang, F. Guo, G. Wang, J. Guo, Z. Zhang, Preparation of YAG nanopowders and ceramics via coprecipitation: Effects of treatment modes of precipitates, Appl. Ceram. Tech. 19 (5), 2419-2426 (2022). Citare 5. Zhang, LX; Li, XY; Hu, DJ; Xie, TF; Wu, LX; Yang, ZX; Li, J; Transparent non-stoichiometric $Tb_{2.45}Hf_{2.68}O_{7.68}$ magneto-optical
--	--

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

		ceramics with high Verdet constant, <i>Scr. Mater.</i> 204, Article Number: 114158 (2021). Citare 4. Balabanov, S; Permin, D; Evstropov, T; Andreev, P; Basyrova, L; Camy, P; Baranov, M; Mateos, X; Loiko, P; Hot pressing of Yb:Y₂O₃ laser ceramics with LiF sintering aid, <i>Opt. Mater.</i> 119, Article Number: 111349 (2021). Citare 3. Liang, SS; Huang, M; Wang, Y; Li, QL; Yang, XX; Zhao, JT; Gao, XY; Yin, GZ; Liu, Q; Zhang, ZJ; The influence of Sc substitution on the crystal structure and scintillation properties of LuBO₃:Ce³⁺ based on a combinatorial materials chip and high-throughput XRD, <i>J. Mater. Chem. C</i> 9 (27) 8666-8673 (2021). Citare 2. Huang, XY; Chen, GM; Wei, JB; Liu, ZY; Feng, YG; Tian, F; Xie, TF; Li, J; Fabrication of Yb,La:CaF₂ transparent ceramics by air pre-sintering with hot isostatic pressing, <i>Opt. Mater.</i> 116, Article Number: 111108 (2021). Citare 1. Sepideh Khalili; Abolghasem Nourmohammadi; Mostafa Milani, Influence of process parameters in gel casting of a pure yttria nanopowder to fabricate transparent ceramics, <i>Ceram. Int.</i> 47 (21), 29977-29987 (2021).	
	Articol 74. 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," <i>Opt. Mater.</i> 123, 111832 (2022).	Citare 2. Kokh, A.; Kuznetsov, A.; Khan, E.; Simonova, E.; Ryadun, A.; Lapin, I.; Svetlichnyi, V.; Kokh, K. "Solid Solutions in EuSc₃(BO₃)₄-GdSc₃(BO₃)₄ System: Phase Diagram, Synthesis, Crystal Growth, Structure and Luminescence," <i>J. Cryst. Growth</i> 645, 127842 (2024). Citare 1. Pingzhang Yu, Xiaobo Pan, Zhengping Wang, Yanqing Liu, Fapeng Yu, and Xinguang Xu, Intra-cavity selective absorption polarizer for a 1 μm solid-state laser," <i>Opt. Mater. Express</i> 13, 2585-2593 (2023).	0.2666
	Articol 75. 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," <i>J. Alloys Compd.</i> 908, 164633 (2022).	Citare 1. Yiyang Lin, Ling Liang, Yijian Sun, Wei Wang, Jianhui Huang, Zhenggang Zou, Guoliang Gong, Herui Wen, Chaoyang Tu, Growth and visible spectral properties of Pr³⁺ doped melilite gallium crystals, <i>J. Lumin.</i> 280, 121082 (2025)	0.1666
	Articol 76. C. Gheorghe, S. Hau, G. Stanciu, D. Avram, A. Broasca, L. Gheorghe, "Novel optical temperature sensors based on the emission of the Pr³⁺ ions doped Ca₃(M,Ga)₅O₁₂ (M⁵⁺ = Nb, Ta) garnet phosphors," <i>J. Alloys Compd.</i> 922, 166178 (2022).	Citare 6. Song, Z.; Lü, W.; Kang, X.; Zhu, Z. "Pr³⁺ Ions, Another Alternative Near-Infrared Luminescence Emitter Though Energy Transfer from Eu²⁺ for NIR pc-LEDs," <i>J. Alloy. Compd.</i> 981, 173760 (2024). Citare 5. Xiao, R.; Liu, T.; Wang, S.; Lv, W.; Ouyang, R.; Guo, N. "Modulating the Antithermal-Quenching of Praseodymium-Activated Phosphor by the Position of Intervalence Charge Transfer State," <i>Ceram. Int.</i> 50 (1) Part B, 1607-1614 (2024). Citare 4. A. M. Voiculescu, S. Hau, G. Stanciu, and C. Gheorghe, Effects of Eu³⁺ concentration on the thermoluminescence properties of narrow-band red-emitting Eu³⁺: SrLaGaO₄ phosphor, <i>J. Alloys Compd.</i> 958, 170507 (2023). Citare 3. Pyaterikov, E.A., Pet'kov, V.I., Fukina, D.G. et al., Sodium Chromium Arsenate Phosphates: Preparation, Structure, and Thermal Properties. <i>Russ. J. Inorg. Chem.</i> 68 (10), 1388–1397 (2023). Citare 2. Zhenqi Yu, Xiaodong Li, Jing Wang, Su Zhang, Ratiometric optical temperature sensor with wide range and high sensitivity based on the emission of Dy³⁺ ion-doped Ca₅(PO₄)₂SiO₄ phosphor, <i>Mater. Today Chem.</i> 33, 101739 (2023). Citare 1. Anu, A.S. Rao, Luminescence and optical thermometry strategy based on emission spectra of Li₂Ba₅W₃O₁₅:Pr³⁺ phosphors, <i>Opt. Mater.</i> 145, 114476 (2023).	1.0909
	Articol 77. P. Loiseau, G. Aka, L. Gheorghe, T. Taira, "1W of 902 nm Laser Emission of Neodymium Doped	Citare 1. Lin, W.; Huang, C.; Li, S.; Tao, S.; Chen, G.; Xu, M.; Zhao, C.; Fang, Q.; Ye, X.; Hang, Y.; "Tunable Laser Operations on Nd-	0.25

FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

Strontium and Lanthanum Aluminate (Nd:ASL), Under a Fiber Coupled Diode Laser Pumping Source"; Advanced Solid-State Photonics, WB12, Denver, Colorado, United States, 1–4 February 2009. https://doi.org/10.1364/ASSP.2009.WB12	Doped Strontium and Lanthanum Aluminate Crystals"; Infrared Physics & Technology, 136, 105066 (2024).	
Articol 78. M. Reynaud, N. Luiselli, L. Gheorghe, P. Loiseau, G. Aka, C. Larat, "Spectroscopic Properties and Gain Cross Section of Er, Yb Doped Y₂O₃ Transparent Ceramic for Eye-Safe Laser"; 2009 Conference on Lasers and Electro-Optics and 2009 Conference on Quantum Electronics and Laser Science Conference, 2009. https://doi.org/10.1364/CLEO.2009.ITuD6	Citare 1. Vakalov, D. S.; Chikulina, I. S.; Skichuk, S. N.; Bedrakov, D. P.; Malyavin, F. F.; Kozitov, L. V.; "Combined Influence of MgO and TEOS Sintering Additives on the Structure and Optical Properties of the Ceramic YAG:Yb, Er," Glass Ceram., 80, 420–428 (2024).	0.1818
Articol 79. A. Broasca, L. Gheorghe, M. Greculeasa, F. Voicu, G. Stanciu, S. Hau, C. Gheorghe, G. Croitoru, and N. Pavel, "Czochralski Growth and Characterization of Pure and Yb-Doped La_xY_ySc_{4-x-y}(BO₃)₄ Nonlinear and Laser Crystal," in Laser Congress 2019 (ASSL, LAC, LS&C), OSA Technical Digest (Optica Publishing Group, 2019), paper JM5A.40.	Citare 2. K.A. Kokh, A.Y. Jamous, V.A. Svetlichny, A.B. Kuznetsov, A.P. Yelisseyev, N.E. Bogdanov, A.A. Goreyavcheva, A.E. Kokh, Redistribution of rare-earth dopants (Eu, Dy, Ho, Er, Tm, Yb) in LaSc₃(BO₃)₄ structure and influence on optical properties, Opt. Mater. 159, 116655 (2025). Citare 1. Chen, P., Murshed, M.M. & Gesing, T.M. Synthesis and crystal structures of novel alkali rare-earth orthoborates K₃RE₃(BO₃)₄ (RE = Pr, Nd, Sm–Lu), J. Mater. Sci. 56, 3639–3652 (2021).	0.2857
Articol 80. S. Hau, G. Stanciu, D. Avram, L. Gheorghe, C. Gheorghe, "Energy transfer and luminescent properties of Tb³⁺ and (Tb³⁺, Yb³⁺) doped CNGG phosphors," J. Rare Earths 40(9), 1445-1453 (2022).	Citare 24. R. Arunakumar, B.R. Radha Krushna, G. Ramakrishna, G.R. Mamatha, S.C. Sharma, Satish Kumar, P. Suvarna, Liza Mohapatra, Augustine George, R. Sudarmani, H. Nagabhushana, Development of highly thermal-stable blue emitting Y₄Al₂O₉:Bi³⁺ phosphors for w-LEDs, fingerprint and data security applications, Mater. Sci. Eng. B, 312, 117833 (2025). Citare 23. Xiyuan Chen, Quanwang Niu, Peiqing Cai, Xiangfu Wang, Thermally induced optical coding and encryption based on Y₂W₃O₁₂:Tb³⁺/Eu³⁺ ceramics, J Am. Ceram. Soc. Early view, e20518, https://doi.org/10.1111/jace.20518 Citare 22. Utpal Ghorai, Antika Das, Tanmoy Ghosh, Bishal Bhang, Karamjyoti Panigrahi, Nilesh Mazumder, Tapan Kumar Parya, Subhajit Saha, Volume compensation directed enhanced photoluminescence in Li⁺ Co-doped Y₄Al₂O₉:Eu³⁺ phosphors for solid state lighting applications, Surf. Interfac. 62, 106199 (2025). Citare 21. A. Ozdemir, V. Altunel, Z. Yegingil, Effects of Na⁺ cation on the luminescence enhancement and TL dosimetric properties of SrB₆O₁₀:Dy³⁺, J. Alloys Compd. 1015, 178823 (2025). Citare 20. S.C. Sharma, Exploring the potential of BaLa₂ZnO₅ doped with individual rare-earth ions (Ce³⁺, Er³⁺, Eu³⁺) for w-LEDs, latent fingerprints, and anti-counterfeiting applications, J. Lumin. 278, 120994 (2025). Citare 19. Haina Qi, Huazhi Huang, Yaolin Hu, Fei Bi, Xuejian Zhang, Yongtao Li, Huisheng Liu, Qianli Ma, Xiangting Dong, C.K. Mahadevan, Electrospinning fabrication and performances of [Double network]/[Single network] Janus nanobelt array hydrogel membrane endowed with luminescence and highly anisotropic conduction, J. Alloys Compd. 1010, 178291 (2025). Citare 18. Arya Gopinath, Sincy Anna Oommen, Ashika J. Ashok, Cyriac Joseph, P.R. Biju, Structural, morphological, optical, and down-conversion studies of NaLaMgTeO₆:Dy³⁺ single phase phosphor for white light emitting applications and solar spectral	4.8

	converter for photovoltaic applications, Mater. Sci. Semicond. Process. 185, 108875 (2025). Citare 17. Nan Yang, Zhuo Li, Junhui Liang, Weijie Huang, Zhibin Ye, Wen He, Yexiang Tong, Jianxin Shi, Designing of Eu^{2+}-activated single-phase white-emitting phosphor through modifying cationic sites for high color rendering full-spectrum illumination, J. Alloys Compd. 1010, 177667 (2025). Citare 16. Shuaiqi Zhao, Yujie Chen, Yumeng Ge, Hongbin Zhang, Kai Yang, Shiqing Xu, Xiaolei Yang, Gongxun Bai, Multicolored luminescence in double perovskite $\text{Gd}_2\text{ZnTiO}_6$ phosphors with $\text{Tb}^{3+}/\text{Eu}^{3+}$ codoping and energy transfer, J. Solid State Chem. 344, 125178 (2025). Citare 15. Mingxin Yu, Guojun Lu, Hongwei Zhao, Wang Yao, Xuanting Chen, Nihui Huang, Chunyan Cao, and An Xie, Photoluminescent properties and luminescent thermal stabilities of 100 mol% activator $\text{Tb}_2(\text{MoO}_4)_3$ green phosphor, Funct. Mater. Lett. 18 (03) 2551025 (2025). Citare 14. Li, R.; Cui, R.; Guo, X.; Zhang, J.; Gong, X.; Deng, C. "A Novel High-Brightness and Thermally-Stable Red Phosphor $\text{Ca}_2\text{GaNbO}_6: \text{Eu}^{3+}$ for WLEDs and Anti-Counterfeiting Inks," Ceram. Int. 50 (23) Part B, 50346-50357 (2024). Citare 13. Xu, C.; Liu, J.; Guo, J.; Liang, Z.; Yang, C.; Liu, L.; Wang, Z.; Wang, H.; Chen, P.; Xu, J.; Song, Q.; Ma, J.; Xu, X. "Growth, Spectroscopy Properties, and Laser Operation of Single Crystal Fiber: Nd^{3+}-Doped CNGG," Opt. Mater. Express 14, 2777-2785 (2024). Citare 12. Khan, P.S.; Jamalaiah, B.C.; Shaik, N.R. "UV-Excited $\text{Gd}_{1-x}\text{Eu}_x\text{Al}_3(\text{BO}_3)_4$ Red Phosphors for White Lighting Emission Diodes and Plant Growth Light-Emitting Diodes," Phys. Status Solidi A 221 (16), 2400092 (2024). Citare 11. Lv, Z.; Zhao, S.; Wang, R.; Cheng, Y.; Li, D.; Zhang, Y.; Wan, Y.; Zhang, H.; Zou, X.; Su, C., Effect of Li^+ on Luminescence Properties and Thermal Stability of Glass Ceramics Containing SrMoO_4, Ceram. Int. 50 (8) Part B, 33856-33867 (2024). Citare 10. Xiao, R.; Guo, N.; Qu, S.; Hu, D.; Xin, Y.; Lv, W.; Ouyang, R. "Enhancing Antithermal-Quenching Properties of Terbium-Doped Phosphors Through Nb/Ta Substitution: Insights into the Role of Intervalence Charge Transfer and Excitation-Driven Modulation," Ceram. Int. 50 (16) 28257-28265 (2024). Citare 9. Rao, A.S.; Anu, "Temperature Sensing Materials Based on the Fluorescence Intensity Ratio in $\text{Li}_2\text{Ba}_5\text{W}_3\text{O}_{15}:\text{Dy}^{3+}$ Phosphors," Sensors and Actuators A: Physical 372, 115336 (2024). Citare 8. Xing, X.; Liu, Y.; Liu, Y.; Xie, C.; Sun, T.; Yang, C.; Yang, J.; Wang, L.; Mei, L.; Mi, R. Optimizing Luminescence Intensity and Thermal Stability of $\text{Gd}_5\text{Si}_2\text{BO}_{13}:\text{Tb}^{3+}$ Through the Incorporation of Non-Rare Earth Bi^{3+}, Opt. Mater. 152, 115508 (2024). Citare 7. Huang, N.; Lu, G.; Bai, B.; Zhao, H.; Yao, W.; Cao, C.; Li, Y.; Xie, A. Preparation, Crystal Structure, and Photoluminescence Properties of Tb^{3+} Activated $\text{Lu}_2(\text{MoO}_4)_3$ Green-Emitting Phosphors, J. Lumin. 269, 120475 (2024). Citare 6. Okazaki, K.; Nakauchi, D.; Kato, T.; Kawaguchi, N.; Yanagida, T. X-Ray-Induced Scintillation Properties of Nd-Doped Calcium Niobium Gallium Garnet Single Crystals, Nucl. Instrum. Methods Phys. Res. B 547, 165197 (2024). Citare 5. Zhu, W.; Yang, A.; Hao, Z.; Cai, C.; Wei, J.; Zhang, Y. Luminous Properties of Highly Moisture-Resistant $\text{Dy}^{3+}\text{-Tm}^{3+}\text{-Eu}^{3+}$ Co-Doped Phosphate Glasses for W-LED, Ceram. Int. 50 (2) Part A, 3101-3109 (2024). Citare 4. Chhillar, P.; Boora Doon, P.; Facile Synthesis and Photophysical Properties of Combustion Derived Dy^{3+} Doped
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FISA DE INDEPLINIRE A STANDARDELOR MINIMALE

		$\text{Ca}_9\text{La}(\text{PO}_4)_7$ Nanophosphors for Advanced Solid-State Lighting Applications, Inorg. Chem. Commun. 159, 111844 (2024). Citare 3. Xunlong Zhang, Quangan Cai, Ke Liu, Guilong Yan, Jingyu Chen, Yuanpeng Wu, Zhenyu Li, Li Wang, Han Li, Flexible and robust Eu/cellulose acetate nanofibrous membrane for the rapid detection of Hg^{2+} with ultra-stable recycle capability, Measurement 222, 113660 (2023). Citare 2. Karan Kumar Gupta, Tzu-Heng Weng, Sudipta Som, Chung-Hsin Lu, Synthesis and photoluminescence characterizations of Zn^{2+} and Tb^{3+} codoped CeO_2 phosphors for temperature sensing applications, Ceram. Int. 49 (20) 32758-32767 (2023). Citare 1. Huan Tang, Dan Yang, Hong Li, Mingyang Li, Jing Zhu, A narrow-band $\text{RbBaBP}_2\text{O}_8:\text{Tb}^{3+}$ green phosphor with high thermal stability for backlighting display application, J. Lumin. 257, 119733 (2023).	
	Articol 81. C. Gheorghe, S. Hau, L. Gheorghe, F. Voicu, M. Greculeasa, A. Broasca, and G. Stanciu, "RE³⁺-Doped $\text{Ca}_3(\text{Nb,Ga})_5\text{O}_{12}$ and $\text{Ca}_3(\text{Li,Nb,Ga})_5\text{O}_{12}$ Crystals (RE = Sm, Dy, and Pr): A Review of Current Achievements," Materials 16(1), 269 (2023).	Citare 1. Ren, H.; Huang, L.; Cheng, Z.; Huang, B.; Hao, Y.; Xiong, G.; Zhu, Z.; Zhang, H.; Xu, S.; Deng, W. "The Effect of Pr^{3+} Concentration on the Microstructure, Luminescence and Scintillation Properties of Pr:LuAG Single Crystals," J. Alloy. Compd. 971, 172768 (2024).	0.1666
	Articol 82. 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).	Citare 4. Huanhuan Zhao, Chenxu Li, Juanjuan Lu, Zhihua Yang, Jian Han, Shilie Pan, Deep ultraviolet transparent borophosphates $\text{LiAB}_2\text{P}_2\text{O}_9$ (A = NH_4, K) and $\text{LiNaB}_2\text{P}_2\text{O}_8(\text{OH})_2 \cdot \text{H}_2\text{O}$ exhibiting a moderate second-harmonic generation response, J. Mater. Chem. C 13, 3251 (2025). Citare 3. Pingzhang Yu, Hongwei Qi, Yanqing Liu, Fapeng Yu, Zhengping Wang, Yangyang Dang, Bulk Growth, Thermal, and Polarized Spectral Characters of Nd^{3+}-Doped $\text{Ca}_3(\text{BO}_3)_2$ Single Crystals, Cryst. Res & Tech. 60 (2), 2400230 (2025). Citare 2. Chen, R.; Yang, Y.; Leng, Z.; Zeng, F.; Li, C.; Yang, W.; Liu, L.; Lin, H.; Li, S.; Growth, first-principles calculations and optical properties of a novel near-infrared Ho laser crystal, Ceram. Int. 50 (24) Part C, 55017-55025 (2024). Citare 1. Feng, J.; Shen, J.; Zhang, G.; Crystal Structure and Optical Characteristics of $\text{K}_2\text{Nd}_2\text{O}(\text{BO}_3)_2$, Z. Anorg. Allg. Chem. 650 (8) e202400014 (2024).	0.4444
	Articol 83. C. Gheorghe, S. Hau, L. Gheorghe, A. Broasca, M. Greculeasa, F. Voicu, G. Stanciu, M. Enculescu, "Growth and spectroscopic properties of $\text{Ca}_3(\text{Ta,Ga})_5\text{O}_{12}:\text{Pr}^{3+}$ single crystal as a promising new laser material in the visible domain," Opt. Mater. 150, 115286 (2024).	Citare 1. Yihao Shen, Xiangyu Han, Shuxian Wang, Haohai Yu, and Huaijin Zhang, High-Quantum Efficiency Pr^{3+}-Doped $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$ Garnet and Associated Temperature-Sensing Performance, Inorg. Chem. 64 (1), 133-141 (2025).	0.1538
C =			108.5164
2	Indicele HIRSCH	h =	16

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Standarde minime necesare si obligatorii pentru abilitare: $A \geq 2$, $I \geq 4$, $P \geq 4$, $C \geq 40$, $h \geq 10$, $T \geq 12$

Punctajul total CNATDCU se calculeaza conform formulei: $T = A + P/2 + I/2 + C/20 + h/5$

Indicator	A	I	P	C	h	T
obtinut de GHEORGHE Lucian Marian	13.5583	7.5193	16.133	108.5164	16	34.0102

Toate standardele minime sunt indeplinite.

14.04.2025

CS I, dr. GHEORGHE Lucian Marian

