

LIST OF PUBLICATIONS

1. PAPERS PUBLISHED IN PEER-REVIEW JOURNALS

20. **A. Enachi**, O. Toma, S. Georgescu, "Luminescent E^{r3+} centers in $CaSc_2O_4:Er^{3+}:Yb^{3+}$ upconversion phosphor," J. Lumin. **231**, 117816 (2021).
19. S. Georgescu, **A. Stefan**, O. Toma, "Phonon sidebands of Eu^{3+} in $BaGd_2ZnO_5$," J. Lumin. **228**, 117597 (2020).
18. **A. Stefan**, O. Toma, S. Georgescu, "Judd-Ofelt analysis of Eu^{3+} and Er^{3+} doped in ceramic $BaGd_2ZnO_5$," J. Luminesc. **204**, 261-268 (2018).
17. S. Georgescu, **A. Stefan**, O. Toma, "Judd-Ofelt analysis of Er-doped $CaSc_2O_4$ revisited," J. Luminesc. **199**, 488-491 (2018).
16. O. Toma, **A. Stefan**, S. Georgescu, "Excited-state absorption in light-scattering, ceramic erbium-doped langatate," J. Luminesc. **182**, 65-70 (2017).
15. **A. Stefan**, O. Toma, S. Georgescu, "Upconversion luminescence in $CaSc_2O_4$ doped with Er^{3+} and Yb^{3+} ," J. Luminesc. **180**, 376-383 (2016).
14. S. Georgescu, **A. Stefan**, A.M. Voiculescu, and O. Toma, "Judd-Ofelt analysis of Tm^{3+} doped in $CaSc_2O_4$ ceramic samples," J. Luminesc. **166**, 130-136 (2015).
13. S. Georgescu, **A. Stefan**, and O. Toma, "Judd-Ofelt and energy-transfer analysis of Er^{3+} doped in $CaSc_2O_4$ ceramic samples," J. Luminesc. **167**, 186-192 (2015).
12. A.M. Voiculescu, S. Georgescu, C. Matei, **A. Stefan**, and O. Toma, "Synthesis and characterization of $La_3Ga_{5.5}Ta_{0.5}O_{14}$ doped with holmium and ytterbium," Rom. J. Phys. **60**(3-4), 495-501 (2015).
11. S. Georgescu, **A. Stefan**, A. M. Voiculescu, O. Toma, "Judd-Ofelt analysis of ceramic $La_3Ga_{5.5}Ta_{0.5}O_{14}$ doped with Er^{3+} ," J. Luminesc. **162**, 168-173 (2015).
10. S. Georgescu, **A. Stefan**, O. Toma, A. M. Voiculescu, "Judd-Ofelt analysis of Ho^{3+} doped in ceramic $CaSc_2O_4$," J. Luminesc. **162**, 174-179 (2015).
9. S. Georgescu, O. Toma, C. Matei, A.M. Voiculescu, and **A. Stefan**, "Judd-Ofelt analysis of Tm^{3+} in $La_3Ga_{5.5}Ta_{0.5}O_{14}$ ceramic with granular structure," J. Luminesc. **157**, 35-38 (2015).
8. S. Georgescu, **A. Stefan**, A. M. Voiculescu, O. Toma, C. Matei, R. Birjega, "Peculiarities of the $Ho^{3+} \rightarrow Yb^{3+}$ energy transfer in $CaSc_2O_4:Ho:Yb$," J. Luminesc. **154**, 142-147 (2014).
7. S. Georgescu, A. M. Voiculescu, C. Matei, **A. Stefan**, O. Toma, R. Birjega, "Upconversion luminescence in langatate ceramics doped with Tm^{3+} and Yb^{3+} ," J. Luminesc. **154**, 74-79 (2014).
6. S. Georgescu, A. M. Voiculescu, S. Nastase, A. Zafir, C. Matei, D. Berger, C. Matei, **A. Stefan**, and O. Toma, "Luminescence of Eu-doped langasite nanopowders synthesized by a modified Pechini route," J. Luminesc. **145**, 690-696 (January 2014).
5. A. M. Voiculescu, S. Georgescu, C. Matei, **A.G. Stefan**, L. Gheorghe, A. Achim, and F. Voicu, "Infrared-excited red, green, violet and UV luminescence from langasite crystal doped with erbium and ytterbium," Rom. J. Phys. **58** (1-2), 136-142 (2013).
4. S. Georgescu, A. M. Voiculescu, C. Matei, **A.G. Stefan**, and O. Toma, "Violet and near-ultraviolet in $La_3Ga_{5.5}Ta_{0.5}O_{14}$ codoped with Er^{3+} and Yb^{3+} ," Physica B **413**, 55-58 (2013).

3. A. M. Voiculescu, S. Georgescu, S. Nastase, C. Matei, D. Berger, C. Matei, **A. Stefan**, and O. Toma, "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)
2. S.A. Moskalenko, M.A. Liberman, E.V. Dumanov, **A.G. Stefan**, and M.I. Shmiglyuk, "Intra-Landau-level excitation of the two-dimensional electron-hole liquid," *Journal of Physics: Condensed Matter* **21** (23), 235801 (2009).
1. S.A. Moskalenko, Ig.Ig. Dobynda, **A.G. Stefan**, V.I. Pavlenko, and Ig.A. Lelyakov, "Carrier multiplication in semiconductor quantum dots due to inseparable successive scatterings," *Journal of Nanoelectronics and Optoelectronics* **4** (1), 137-146 (2009).

2. PROCEEDINGS OF INTERNATIONAL CONFERENCES, OTHER PUBLICATIONS

(Presentations at International Meetings published in extended version)

5. S. Georgescu, A.M. Voiculescu, C. Matei, **A. G. Stefan**, and O. Toma, "Upconversion luminescence in $\text{La}_3\text{Ga}_{5.5}\text{Ta}_{0.5}\text{O}_{14}$ codoped with Er^{3+} and Yb^{3+} ," *Proc. SPIE* **8882**, ROMOPTO 2012: Tenth Conference on Optics: Micro- to Nanophotonics III, 888204 (June 10, 2013); doi: 10.1117/12.2032265; <http://dx.doi.org/10.1117/12.2032265>
4. S.A. Moskalenko, Ig.Ig. Dobynda, **A.G. Stefan**, V.I. Pavlenko, and Ig.A. Lelyakov, "Carrier multiplication in quantum dots. Billiards packet ball mechanism, quantum fluctuation, and accompanying Raman scattering phenomena," *Moldavian Journal Phys. Science* **7** (2), 182-196 (2008).
3. E.V. Dumanov, M.A. Liberman, S.A. Moskalenko, M.I. Shmiglyuk, and A.G. Stefan, "The plasma oscillations in a two-dimensional electron-hole liquid," *Journal of Physical Studies* **12** (4), 4702X 1-4 (2008). Publisher: West Ukrainian Physical Society; ISSN: 10274642.
2. S.A. Moskalenko, Ig.Ig. Dobinda, **A.G.Stefan**, V.I. Pavlenko, and Ig.A. Lelyakov, "Carrier multiplication in quantum dots accompanied by Raman scattering phenomena," *Physics, Chemistry and Application of Nanostructures, Reviews and Short Notes; Proceedings of the International Conference on Nanomeeting 2007 Minsk, 22-25 May 2007, Minsk, Belarus, 113-116* (2007).
1. S.A. Moskalenko, Ig.Ig. Dobynda, **A.G. Stefan**, V.I. Pavlenko, and Ig.A.Lelyakov, "The light Raman scattering as the origin of the frequency threshold on the carrier multiplication efficiency in quantum dots", *Proceedings of SPIE, ICOND - 2007; Novel Photonics Materials, Optics and Optical Diagnostics of Nanostructures, 22-25 May 2007, Minsk, Belarus vol. 6728* (2007).

3. COMMUNICATIONS AT INTERNATIONAL CONFERENCES

(Technical Digests, manuscripts up to 3 pages)

27. **A. Stefan**, S. Georgescu, and O. Toma, "Peculiarities of $\text{Er}^{3+} \leftrightarrow \text{Yb}^{3+}$ energy transfer in $\text{CaSc}_2\text{O}_4:\text{Er}:\text{Yb}$," 19th International Conference on Dynamical Processes in Excited States of Solids (DPC 2016), 17-22 July, 2016, Paris, France; Book of Abstracts, p. 202 (P29, poster presentation).
26. O. Toma, S. Georgescu, and **A. Stefan**, "Excited-state absorption in erbium-doped ceramic langatate," 2016 International Conference on Defects in Insulating Materials (ICDIM 2016)", 10-15 July 2016, Lyon, France (poster presentation).
25. **A. Stefan**, O. Toma, S. Georgescu, "Improving monochromaticity of green upconversion luminescence by codoping Eu^{3+} ions in $\text{CaSc}_2\text{O}_4:\text{Ho}^{3+}:\text{Yb}^{3+}$," The 16th International Balkan Workshop on Applied Physics, 7-9 July, 2016, Constanta, Romania; Book of Abstracts, pp. 166-167 (S5 P9, poster presentation).
24. G. Stanciu, C. A. Stanciu, **A. Stefan**, T. Dascalu, S. Georgescu, "Structural and optical properties of Neodymium-doped Yttrium Aluminum Garnet ($\text{Nd}:\text{YAG}$) transparent ceramics," The 16th

International Balkan Workshop on Applied Physics, 7-9 July, 2016, Constanta, Romania; Book of Abstracts, pp. 39-40 (S1 P21, poster presentation).

23. **A. Stefan**, S. Georgescu, O. Toma, and C. Matei, "Upconversion luminescence in CaSc_2O_4 codoped with Er^{3+} and Yb^{3+} ," The 8th International Conference on Advanced Materials, ROCAM 2015, 7-10 July 2015, Bucharest, Romania; (oral presentation).
22. C. Matei, S. Georgescu, C. Vasilescu, G. Stanciu, A.-M. Voiculescu and **A. Stefan**, "Synthesis and characterization of Eu^{3+} doped SrY_2O_4 phosphor," TIM 14 Physics Conference - Physics without frontiers, 20-22 November 2014, Timisoara, Romania; presentation CM-P17 (poster presentation).
21. **A. Stefan**, S. Georgescu, O. Toma, A.M. Voiculescu, and C. Matei, "Synthesis by solid state reaction and luminescence properties of calcium scandate (CaSc_2O_4) doped with Ho^{3+} and Yb^{3+} ," 5th International Student Conference on Photonics, Orastie, Romania, 23-26 September 2014; presentation P.24 (poster presentation).
20. A. M. Voiculescu, S. Georgescu, C. Matei, **A. Stefan**, and O. Toma, "Synthesis and Characterization of $\text{La}_3\text{Ga}_{5.5}\text{Ta}_{0.5}\text{O}_{14}$ Doped with Holmium and Ytterbium," The 14th International Balkan Workshop on Applied Physics, July 2-4, 2014, Constanta, Romania, presentation S2-P20, Book of Abstracts p. 127 (poster presentation).
19. C. Matei, S. Georgescu, A. M. Voiculescu, **A. Stefan**, and O. Toma, "Luminescence Properties in Langatate Ceramics Doped with Tm^{3+} and Yb^{3+} ," The 14th International Balkan Workshop on Applied Physics, July 2-4, 2014, Constanta, Romania, presentation S2-OP2, Book of Abstracts p. 111 (oral presentation).
18. C. Matei, S. Georgescu, A. M. Voiculescu, and **A. Stefan**, "Blue upconversion luminescence in Langanite and Langatate doped with Tm and Yb," The 13th International Balkan Workshop on Applied Physics, 4-6 July 2013, Constanta, Romania, poster presentation S1-P01, Book of Abstracts, p. 47.
17. A.M. Voiculescu, S. Georgescu, C. Matei, **A. Stefan**, and S. Nastase, "Upconversion processes in Langasite nanopowders doped with Thulium and Ytterbium," The 13th International Balkan Workshop on Applied Physics, 4-6 July 2013, Constanta, Romania, poster presentation S1-P02, Book of Abstracts, pages 47-48.
16. A. M. Voiculescu, S. Georgescu, C. Matei, **A. Stefan**, O. Toma, F. Voicu, and R. Birjega, "Synthesis and characterization of $\text{La}_3\text{Ga}_{5.5}\text{Ta}_{0.5}\text{O}_{14}$ doped with Yb and Tm for upconversion luminescence", Materials, Methods & Technologies, 15th International Symposium, 10-14 June 2013, Sunny Beach, Bulgaria, poster presentation - P66.
15. C. Matei, S. Georgescu, A. M. Voiculescu, **A. Stefan**, and R. Birjega, "Synthesis by solid state reaction and luminescence properties of langanite doped with Tm^{3+} and Yb^{3+} ," International Conference "MODERN LASER APPLICATIONS" Third Edition, INDLAS 2013, 20-24 May 2013 Bran, Romania, poster presentation - P2.
14. A. M. Voiculescu, S. Georgescu, C. Matei, **A. Stefan**, and R. Birjega, "Upconversion luminescence properties of $\text{La}_3\text{Ga}_{5.5}\text{Ta}_{0.5}\text{O}_{14}$ doped with Yb and Tm," International Conference "MODERN LASER APPLICATIONS" Third Edition, INDLAS 2013, 20-24 May 2013 Bran, Romania, poster presentation - P5.
13. A. M. Voiculescu, S. Georgescu, C. Matei, **A. Stefan**, O. Toma, and S. Nastase, "Synthesis and characterization of Europium-doped nano Langasite," 3rd International Conference on RARE EARTH MATERIALS (REMAT) Advances in Synthesis, Studies and Applications, 26-28 April 2013, Wroclaw, Poland (poster presentation).
12. S. Georgescu, A.M. Voiculescu, C. Matei, **A. Stefan**, and O. Toma " Upconversion luminescence in $\text{La}_3\text{Ga}_{5.5}\text{Ta}_{0.5}\text{O}_{14}$ codoped with Er^{3+} and Yb^{3+} ," International Conference on Optics "Micro- to Nano- Photonics III - ROMOPTO 2012", September 3-6 2012, Bucharest, Romania, oral presentation I.I.6.
11. A. M. Voiculescu, S. Georgescu, L. Gheorghe, A. Achim, C. Matei, and **A. Stefan**, "Infrared-excited red, green, violet and UV luminescence from langasite crystal doped with Erbium and Ytterbium," The 2rd International Conference on the Physics of Optical Materials and Devices, September 3-6 September, 2012, Belgrade, Serbia; poster presentation P1.2-31, Book of Abstract ISBN: 978-86-7306-116-0, (pg. 145).

10. A. M. Voiculescu, S. Georgescu, S. Nastase, O. Toma, C. Matei, and **A. Stefan**, "Upconversion processes in langasite nanopowders doped with erbium and ytterbium," 8th International Conference on *f*-Elements", Udine, Italy, August 26-31, 2012, poster presentation OPT 32P.
9. C. Matei, S. Georgescu, D. Berger, S. Nastase, A. M. Voiculescu, and **A. Stefan**, "Luminescence properties in ZrO₂ nanoparticles doped with Er and Yb, " 8th International Conference on *f*-Elements, Udine, Italy, August 26-31, 2012, poster presentation OPT 31P.
8. A. M. Voiculescu, S. Georgescu, Nastase, C. Matei, and **A. Stefan**, "Synthesis and characterization of langasite nanopowders doped with erbium and ytterbium", 8th BPU, the 8th General Conference of Balkan Physical Union, 5-7 July 2012, Constanta, Romania, presentation SP-P11; poster presentation.
7. S.A. Moskalenko, M.A. Liberman, E.V. Dumanov, M.I. Shmiglyuk, and **A.G. Stefan**, "Plasmon-type excitation of the two-dimensional electron-hole system in a strong perpendicular magnetic field", The 22nd General Conference of the Condensed Matter Division of the European Physical Society, 25-29 August, 2008, Rome, Italy, p. 25-29 (2008).
6. **A.G. Stefan** and O. Railean, "Carrier multiplication in semiconductor quantum dots and the Coulomb dipole-dipole interaction," The 4th International Conference on Materials Science and Condensed Matter Physics (MSCM), 23-26 September, Chisinau, Moldova; Abstracts, p. 226-227 (2008).
5. **A.G. Stefan** and O. Railean, "Creation of many electron-hole pairs due to inseparable, successive scatterings accompanied by Coulomb dipole-dipole interaction," International Conference of Young Researchers, 23-26 September, Chisinau, Moldova; Scientific Abstracts, p.129 (2008).
4. E.V. Dumanov, M.A. Liberman, S.A. Moskalenko, M.I. Shmiglyuk, and **A.G. Stefan**, "The plasma oscillations in a two-dimensional electron-hole liquid," The 3rd Ukrainian Conference on Semiconductor Physics, 17-22 June 2007, Odessa, (2007).
3. S.A. Moskalenko, Ig.Ig. Dobynda, **A.G. Stefan**, V.I. Pavlenko, and Ig.A. Lelyakov, "The light Raman scattering as the origin of the frequency threshold on the carrier multiplication efficiency in quantum dots," International Conference "Physics of low-dimensional structures", 11-13 octombrie 2007, Chisinau, Moldova, The book of Abstracts p. 66 (2007).
2. **A.G. Stefan**, "Carrier multiplication in quantum dots and accompanying by Raman scattering phenomena," 3rd International Conference on Materials Science and Condensed Matter Physics, State University of Tiraspol, Moldova, Abstracts, p. 65 (2007).
1. S.A. Moskalenko, Ig.Ig. Dobynda, **A.G. Stefan**, V.I. Pavlenko, and Ig.A. Lelyakov, "The light Raman scattering and the frequency threshold on the carrier multiplication efficiency in quantum dots", International Conference "Physics of low-dimensional structures", 27-28 June, 2007, Chisinau, Moldova, Abstracts, p. 66 (2007).

4. NATIONAL CONFERENCES

8. S.A. Moskalenko, Ig.Ig. Dobynda, **A.G. Stefan**, V.I. Pavlenko, and Ig.A. Lelyakov, "Carrier multiplication in quantum dots. Mechanism similar with billiards packeting balls and alternative Raman scattering phenomena," Conferinta Fizicienilor din Moldova, 11–13 octombrie 2007, Chisinau, Moldova; Rezumate, p. 37 (2007).
7. S.A.Moskalenko, M.A.Liberman, E.V.Dumanov, **A.G.Stefan** and M.I. Shmiglyuk, "The plasma oscillations in a two-dimensional electron-hole system," Rezumatele lucrarilor ale Conferintei Fizicienilor din Moldova, 11–13 octombrie 2007, Chisinau, Moldova, p. 30 (2007).
6. S.A. Moskalenko, M.A. Liberman, E. V.Dumanov, **A.G. Stefan**, and M.I.Shmiglyuk, "Intra - Landau level plasmon excitation in two-dimensional electron-hole system, Conference dedicated to Prof. E.P.Pocatilov, 28-29 June 2007, Chisinau, Moldova (2007).
5. A.G.Stefan, "Two-dimensional magnetoexcitons in the lateral electric field", The XIII International student, postgraduate and young scientist conference «Lomonosov», 9-13 April 2006, Lomonosov Moscow State University, Moscow, Russia p. 44 (2006).
4. **A.G. Stefan**, "Condensarea Bose-Einstein a excitonilor magnetici bidimensionali in prezenta campului electric lateral", Analele Stiintifice ale Universitatii de Stat din Moldova, Seria "Lucrari stiintifice studentesti", p. 43-47 (2006).
3. **A.G. Stefan**, "Condensarea Bose-Einstein a excitonilor magnetici bidimensionali in prezenta campului magnetic si electric lateral," Conferinta Stiintifica Studenteasca, 14-15 aprilie 2006, Chisinau, Moldova; Rezumatele comunicarilor stiintifice, p.154 (2006).
2. S.A. Moskalenko, M.A. Liberman, V.V. Botan, E.V. Dumanov, Ig.V. Podlesny, and **A.G. Stefan**, "Exciton-plasmon collective elementary excitation of Bose-Einstein Condensed two-dimensional magnetoexcitons," Conferinta Fizicienilor din Moldova (CFM), 23-28 martie 2005, Chisinau, Moldova; Rezumate p.12 (2005).
1. **A.G. Stefan**, "Excitatiile colective elementare in prezenta Condensarii Bose-Einstein a excitonilor magnetici bidimensionali", Conferinta Stiintifica Studenteasca, 5-8 aprilie 2005, Chisinau, Moldova; Rezumatele Comunicarilor Stiintifice, p. 123 (2005).