

СПИСЪК НА ПУБЛИКАЦИИТЕ на проф. дфн Александър Драйшу

Общо 251 научни публикации, от които 83 статии в реферирани международни списания с импакт-фактор (1-изпратена), 39 статии в реферирани международни списания с импакт-ранг, 4 статии в Bulgarian Journal of Physics и 1 в Годишника на Софийския университет, 2 обзора и 122 доклада на международни конференции (12 от тях - публикувани в пълен текст и 110 – с публикувано разширено резюме).

Редактор на 2 тома на Proc. of SPIE (САЩ), изнесени 28 поканени доклада, 19 от които-пленарни, както и редица популярни лекции за ученици и учители по физика.

60 от статиите са от квантил Q1, а 22 са от квантил Q2 (по Scopus).

СПИСАНИЕ	Брой статии / квантил	Импакт- Фактор IF	СПИСАНИЕ	Брой статии / квантил	Импакт- Фактор IF
Nature Physics (Nature)	1 / Q1	20.113	Journal of Physics B (IOP)	2 / Q2	1.703
Physical Review Letters (APS)	4 / Q1	8.385	Journal of the Optical Society of America B (OSA)	12 / Q1	2.180
Scientific Reports (Nature)	2 / Q1	3.998	Journal of Optics (EPS&IOP)	2 / Q1	2.379
New Journal of Physics (IOP)	1 / Q1	3.539	Applied Physics B (Springer)	10 / Q2	1.817
Optics Express (OSA)	7 / Q1	3.669	Optics Communications (Elsevier)	14 / Q1	2.125
Optics Letters (OSA)	3 / Q1	3.714	Physica Scripta (IOP)	4 / Q2	1.985
Physical Review A (APS)	2 / Q1	2.777	Journal of Modern Optics (Taylor & Francis)	2 / Q2	1.544
Physical Review E (APS)	4 / Q1	2.296	Optical and Quantum Electronics (Springer)	4 / Q2	1.842
IEEE Journal of Quantum Electronics (IEEE)	7 / Q1	2.384	Advanced Photonics (SPIE)	1	предстои
			ОБЩО:	82 (+1)	234.08

СПИСАНИЕ	Брой статии / квантил	Импакт- ранг (SJR)	СПИСАНИЕ	Брой статии / квантил	Импакт- ранг (SJR)
Proceedings of SPIE (USA)	36	0.215			
Optics and Photonics News	1 / Q1	0.742			
American Inst. of Physics Conference Proceedings	2	0.190	ОБЩО:	39	8.862

Стойностите на наукометричните данни (импакт-фактор IF, импакт-ранг SJR и съответните квантили) в горните таблици са по данни за 2019 г.

А. СТАТИИ В МЕЖДУНАРОДНИ СПИСАНИЯ С ИМПАКТ ФАКТОР

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С. ДОКЛАДИ НА МЕЖДУНАРОДНИ КОНФЕРЕНЦИИ, ПУБЛИКУВАНИ В ПЪЛЕН ТЕКСТ

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- D78.** A. Dreischuh, “Optical vortices as singular markers in cascaded four-wave frequency mixing process,” Laserlab User Meeting (Sept. 26-27, 2013, Marseille, France).
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- D82.** L. Stoyanov, S. Topuzoski, G. Maleshkov, I. Stefanov, L. Janicijevic, A. Dreischuh, “Far-field diffraction of singular dark beams by computer-generated holograms with encoded optical vortices,” XVIII-th Internat. School on Quantum Electronics: Lasers and Applications, Sept. 29 – Oct. 3, 2014, Sozopol, Bulgaria, (poster awarded 1st Best Student Paper Award of SPIE), Book of abstracts, pp.107-108.
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- D87.** L. Stoyanov, I. Stefanov, A. Dreischuh, "Diffraction of square-shaped optical vortex lattice by a second vortex lattice," XIX-th Internat. Conference and School on Quantum Electronics: Lasers and Applications, Sept. 26 – 30, 2016, Sozopol, Bulgaria, poster, Book of abstracts, pp. 105-106.
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- D89.** N. Dimitrov, P. Lazarova, L. Stoyanov, I. Stefanov, A. Dreischuh, "Dispersion control of femtosecond laser pulses in-and outside the laser cavity," Third National Congress in Physical Sciences, 29.09.-02.10.2016, Sofia, Bulgaria (poster), Book of abstracts, 2pp.
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- D91.** S. Topuzoski, Lj. Janicijevic, L. Stoyanov and A. Dreischuh, "Generation of coupled optical vortices by computer-constructed gratings," Winter College on Optics: Advanced Optical Techniques for Bio-imaging, The Abdus Salam International Centre for Theoretical Physics (ICTPsmr 3104), Feb. 13-24, 2017, Trieste, Italy (oral presentation).
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- D95.** L. Stoyanov, G. Maleshkov, M. Zhekova, I. Stefanov, G. G. Paulus, and A. Dreischuh, "Far-Field Pattern Formation by Manipulating the Topological Charges of Hexagonal Optical Vortex Lattices," 20th International Conference and School on Quantum Electronics: Laser Physics and Applications (Sept. 17-21, 2018, Nessebar, Bulgaria), Book of abstracts, pp.119-120.
- D96.** L. Stoyanov, G. Maleshkov, M. Zhekova, I. Stefanov, G. G. Paulus, and A. Dreischuh, "Far-Field Beam Manipulating by Mixing Square-Shaped and Hexagonal Optical Vortex Lattices," 20th International Conference and School on Quantum Electronics: Laser Physics and Applications (Sept. 17-21, 2018, Nessebar, Bulgaria), Book of abstracts, pp.116-117.
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- D98.** L. Stoyanov, G. Maleshkov, M. Zhekova, I. Stefanov, G. G. Paulus, and A. Dreischuh, "Far-field Beam Reshaping of Square and Hexagonal Optical Vortex Lattices by a Second Identical Lattice," 10th Jubilee Conference of the Balkan Physical Union (Aug. 26-30, 2018, Sofia, Bulgaria), Book of abstracts, pp. 188-189.
- D99.** L. Stoyanov, M. Zhekova, A. Stefanov, I. Stefanov, G. G. Paulus and A. Dreischuh, "Generation of zeroth- and first-order long range nondiffracting Gauss-Bessel beams by annihilating multiple-charged optical vortices," VII International School and Conference on

Photonics - PHOTONICA2019, Belgrade, Serbia (Aug. 26 – Aug. 30, 2019), Book of abstracts, p. 179.

- D100.** L. Stoyanov, G. Maleshkov, M. Zhekova, I. Stefanov, G. G. Paulus and A. Dreischuh, “Controllable multi-spot focal arrays created by optical vortex lattices,” Humboldt-Kolleg “Science without Borders: Alexander von Humboldt's Concept in Today's World”, Sept. 18-21, 2019 (Varna, Bulgaria).
- D101.** N. Dimitrov, M. Zhekova, G. G. Paulus and A. Dreischuh, “Inverted field interferometer for measuring the topological charge of optical vortices,” VII International School and Conference on Photonics - PHOTONICA2019, Belgrade, Serbia (Aug. 26 – Aug. 30, 2019), Book of abstracts, p. 186.
- D102.** L. Stoyanov, G. Maleshkov, M. Zhekova, I. Stefanov, G. G. Paulus, A. Dreischuh, “Multi-spot focal pattern formation and beam reshaping by mixing square-shaped and hexagonal vortex lattices,” Internat. Conf. of Quantum, Nonlinear and Nanophotonics'2019 (ICQNN'2019) and Symposium on Nanomaterials and Nanotechnologies (SNN'2019) (Sept. 02-05.2019, Sofia, Bulgaria), Book of abstracts, p. 42.
- D103.** M. Zhekova, L. Stoyanov, A. Dreischuh, “Gauss-Bessel beam formation via annihilating optical vortices,” 7th International Symposium Optics and its Applications, Yerevan-Ashtarak, Armenia (Sept. 20-24, 2019).
- D104.** M. Zhekova, L. Stoyanov, I. Stefanov, G. G. Paulus, A. Dreischuh, “Gauss-Bessel beam formation using annihilation and modification of optical vortices,” International Conference on Quantum, Nonlinear and Nanophotonics ICQNN'2019 (Sept. 02-04, 2019, Sofia, Bulgaria), Book of abstracts, p. 40.
- D105.** N. Dimitrov, L. Manova, M. Zhekova, I. Stefanov, A. Dreischuh, “Collinear inverted field autocorrelation of femtosecond vortex pulses/beams,” 20th International Conference and School on Quantum Electronics: Laser Physics and Applications (Sept. 17-21, 2018, Nessebar, Bulgaria), Book of abstracts, p. 42.
- D106.** M. Zhekova, L. Stoyanov, G. Maleshkov, I. Stefanov, G. G. Paulus, and A. Dreischuh, “Bessel-like beam formation by annihilating the topological charges of optical vortices,” 20th International Conference and School on Quantum Electronics: Laser Physics and Applications (Sept. 17-21, 2018, Nessebar, Bulgaria) Book of abstracts, pp.118-119.
- D107.** N. Dimitrov, M. Zhekova, G. G. Paulus, A. Dreischuh, “Interferometric approach for vortex beam topological charge characterization,” Internat. Conf. of Quantum, Nonlinear and Nanophotonics'2019 (ICQNN'2019) and Symposium on Nanomaterials and Nanotechnologies (SNN'2019) (Sept. 02-05.2019, Sofia, Bulgaria), Book of abstracts, p. 41.
- D108.** N. Dimitrov, M. Zhekova, I. Stefanov, G. G. Paulus, A. Dreischuh, “Measurement of few-cycle femtosecond pulses carried by vortex beams using an inverted-field autocorrelator,” XXI International Conference and School on Quantum Electronics: “Laser Physics and Applications”, Sept. 21-24., 2020, Sofia, virtual forum, Book of abstracts, pp. 56-57.
- D109.** L. Stoyanov, G. Maleshkov, B. Ivanov, I. Stefanov, G. G. Paulus, A. Dreischuh, “Triple mixing of optical vortex lattices for focused beams structuring,” XXI International Conference and School on Quantum Electronics: “Laser Physics and Applications”, Sept. 21-24., 2020, Sofia, virtual forum, Book of abstracts, pp. 58-59.
- D110.** L. Stoyanov, G. Maleshkov, B. Ivanov, I. Stefanov, G. G. Paulus, A. Dreischuh, “Convolution theorem revisited: Triple mixing of square optical vortex arrays,” XXI International Conference and School on Quantum Electronics: “Laser Physics and Applications”, Sept. 21-24., 2020, Sofia, virtual forum, Book of abstracts, pp. 105-106.

E. ОБЗОРНИ СТАТИИ

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- E2.** U. Reiter-Domiaty, D. Gruber, K. Iskra, R. Polly, L. Windholz, A. Dreischuh, V. Kamenov, "Conical and Collimated Emission in Dense Sodium Vapour," Inst. Für Experimentalphysik, Technische Universität Graz, Interne Berichte, Heft **31** (Aug. 1997).

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G. ИЗНЕСЕНИ ПОКАНЕНИ ЛЕКЦИИ/ДОКЛАДИ

- G1.** A. Dreischuh, "Nonlinear beam/pulse propagation in bulk third-order nonlinear media," Institut für Experimentalphysik der Technischen Universität Graz (Austria), Dezember 1994.
- G2.** A. Dreischuh, "Optical vortex solitons and dark ring solitary waves in bulk Kerr nonlinear media," Institut für Experimentalphysik der Technischen Universität Graz (Austria), April 1996.
- G3.** A. Dreischuh, "Zweidimensionale dunkle räumliche Solitonen," Ringberg Tagung der Max-Planck-Institut für Quantenoptik und der Sektion Physik der Universität München, 3. März 1997.
- G4.** A. Dreischuh, "Zweidimensionale dunkle räumliche Solitonen," Ringberg Tagung der Max-Planck-Institut für Quantenoptik und der Sektion Physik der Universität München, 9. Februar 1998.
- G5.** A. Dreischuh, "Sofia Optical Vortices," Nonlinear Physics Seminar, Research School of Physical Sciences and Engineering, The Australian National University, Canberra, Australia, Nov. 10, 2004.
- G6.** A. Dreischuh, K. Bezuhanov, G. G. Paulus, M. G. Schätzel, H. Walther, D. Neshev, W. Krolikowski, and Yu. S. Kivshar, "Femtosecond Optical Vortices," Alexander-von-Humboldt Foundation Conference "Advances in Physics and Astrophysics of the 21st Century" (Sept. 6-11, 2005, Varna, Bulgaria).
- G7.** A. Dreischuh, "Femtosecond lasers in the singular optics," XXXI-st Australian Conference on Optical Fibre Technology and Meeting of the Australian Optical Society (ACOFT&AOS), Royal Melbourne Institute of Technology (RMIT) (July 10-13, 2006, Melbourne, Australia), Invited talk Wed30 in Sec. Nonlinear Optics 1 (www.acoft.com.au).
- G8.** А. Драйшу, "Бързо, по-бързо, ... фемтосекунден лазер," Юлски лекторат на Съюза на физиците в България "Модерни направления във физиката", (30.06-04.07.2008г, Физически факултет, Софийски университет).

- G9.** A. Dreischuh, “Femtosecond and polychromatic optical vortices,” II-nd Alexander-von-Humboldt Foundation Conference “Modern Trends in Mathematics, Physics and Astrophysics (Sept. 5-9, 2008, Varna, Bulgaria).
- G10.** A. Dreischuh, “Optical vortices in self-focusing Kerr nonlinear media,” Fifth International Workshop on Control of Quantum Dynamics of Atoms, Molecules and Ensembles by Light (CAMEL-V) (June 23-28, 2009, Nessebar, Bulgaria).
- G11.** A. Dreischuh, “Nobel prizes in physics for 2009,” XXXVIII-th National conference devoted to the problems of the education in physics, April 8-11, 2010, Lovech, Bulgaria;
*The same presented at the July Seminar of the Bulgarian Physical Union “Modern trends in Physics”, July 5, 2010, Faculty of Physics, Sofia University, Sofia, Bulgaria.
- G12.** A. Dreischuh, “Discrete diffraction and discrete polychromatic solitons,” Faculty seminar of the Faculty of Physics, May 3, 2010, Sofia University, Sofia, Bulgaria.
- G13.** A. Dreischuh, “Polychromatic optical vortices and vortex solitons,” Seminar of the Institute of Optics and Quantum Electronics, Nov. 3, 2010, Friedrich-Schiller-University, Jena, Germany.
- G14.** A. Dreischuh, “Light emission in the optical communication systems,” Seminar for young scientists of the Institute of Electronics, Bulgarian Academy of Sciences, Feb. 23, 2011, Sofia, Bulgaria.
- G15.** A. Dreischuh, “Femtosecond white-light optical vortices,” Seventh International Workshop on Control of Quantum Dynamics of Atoms, Molecules and Ensembles by Light (CAMEL-VII), 03-09 July 2011, Nessebar, Bulgaria.
- G16.** A. Dreischuh, series of four lectures on “*Introduction to singular nonlinear optics*” presented at the Abbe School of Photonics of the Friedrich-Schiller-University Jena, Germany, from Oct. 21, 2011 to Nov. 8, 2011.
Lecture 1: Linear vs. nonlinear optics. Optical solitons.
Lecture 2: Singular optical beams. Dark optical solitons - physics and applications.
Lecture 3: Interactions between optical solitons.
Lecture 4: Polychromatic spatial solitons.
- G17.** А. Драйшу, “Сингулярна оптика? Това е нещо просто,” Юлски лекторат на Съюза на физиците в България “Съвременни проблеми на физиката и естествените науки”, (02.07-05.07.2013г, Физически факултет, Софийски университет).
- G18.** А. Драйшу, И. Лалов, „Корпускулярна, вълнова и квантова теория на светлината – Развитие на идеите,” Лятна школа по нанотехнологии за учители (07.07.-11.07.2014г., Физически факултет, Софийски университет).
- **** Изнасяна още два пъти на Лятна школа по фотоника за учители (13.07.-16.07.2015г., Физически факултет, Софийски университет) и на есенното издание на същата Школа (10.10. – 31.10.2015г.).
- G19.** A. Dreischuh, Plenary talk “Singular Optics Revisited: Algebraic Operations with Topological Charges of Optical Vortices,” 23rd Annual International Laser Physics Workshop LPHYS’14 (Sofia, July 14-18, 2014).
- G20.** Т. Ефтимов, А. Драйшу, пленарен доклад „Оптиката в специализираните курсове на оптични специалности,” 43-та Национална конференция по въпросите на обучението по физика „Оптика и оптични технологии в образованието”, 2 - 5 април 2015 г., Благоевград, България.
- G21.** G. Maleshkov, N. Dimitrov, L. Stoyanov, I. Stefanov, А. Dreischuh, P. Hansinger, G. G. Paulus, S. Topuzoski, and L. Janicijevic, “Characteristics, interactions and control of optical vortices and vortex lattices,” Internat. Workshop “Advances in Nanophysics and Nanophotonics”, Magurele-Bucharest (Romania), 31 August-2 September, 2015.
- G22.** А. Драйшу, „Оптични комуникации – принципи“, Лятна школа по фотоника за учители (13.07.-16.07.2015г., Физически факултет, Софийски университет).
- **** Изнесена и на есенното издание на същата Школа (10.10. – 31.10.2015г.).
- G23.** A. Dreischuh, series of three talks on “*Singular optics basics*” presented at the Seminar of the Department of Nonlinear Optics, Faculty of Physics and Astronomy, Friedrich-Schiller-University Jena, Germany, from Oct. 20, 2016 to Dec. 8, 2016.

Talk 1: Optical vortices, vortex lattices and azimuthons: Past, present and future.

Talk 2: Topological charge control in optical vortex lattices.

Talk 3: Hollow vortex phase plate as a filter for high-harmonic beams.

- G24.** L. Stoyanov, G. Maleshkov, N. Dimitrov, I. Stefanov, A. Dreischuh, S. Topuzoski, L. Janicijevic, G. G. Paulus, D. N. Neshev, "Azimuthons, vortices, and vortex lattices: Phase aspects, 4th NANOPHI consortium meeting, Fraunhofer Institute of Applied Optics, Campus Beutenberg, Jena, Germany, June 30, 2017.
- G25.** A. Dreischuh, L. Stoyanov, G. Maleshkov, M. Zhekova, I. Stefanov, S. Topuzoski, Lj. Janicijevic, P. Hansinger and G. G. Paulus, "Manipulating the Topological Charges of Singular Optical Beams," 10th Jubilee Conference of the Balkan Physical Union (Aug. 26-30, 2018, Sofia, Bulgaria).
- G.26.** L. Stoyanov, G. Maleshkov, M. Zhekova, I. Stefanov, A. Dreischuh, S. Topuzoski, Lj. Janicijevic, P. Hansinger, and G. G. Paulus, plenary talk: "Far-field beam reshaping by optical vortices and vortex lattices," 12th International Conference of the Society of Physicists of Macedonia (12-th CSPM) (Sept. 27-30, 2018, Ohrid, Macedonia).
(<https://dfrmconference2018.wixsite.com/12thconference-dfrm/plenary-speakers>)
- G27.** A. Dreischuh, "The light, the lasers, and the Nobel prizes in physics for 2019," the first one of a series of lectures "The World of Physics Life", Sofia City Library, Feb. 14, 2019.
The same talk is presented at the
/a2/ 47-th National conference devoted to the problems of the education in physics, April 4-7, 2019, Veliko Tarnovo, Bulgaria;
/a3/ July Seminar of the Bulgarian Physical Union "Modern trends in Physics", July 4, 2019, Faculty of Physics, Sofia University, Sofia, Bulgaria.
- G28.** A. Dreischuh, "Far-Field Beam Shaping By Singular Optical Lattices," High Intensity Coherent Nonlinear Optics (HICONO) Network Fellow Meeting (June 20, 2019, Nessebar, Bulgaria).

Н. НАУЧНОПОПУЛЯРНИ ПУБЛИКАЦИИ

- Н1.** А. Драйшу, „Лазерният лъч в светлината на прожекторите,” Природа **CXXVI**, бр. 4, стр. 38-42 (2019).
- Н2.** А. Драйшу, „Развитието на науката предполага приемственост, надграждане, натрупване и осмисляне на знания,” Светът на физиката, бр. 1, стр. 4-14 (2020).

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