

# Denis G Baranov

## List of Publications by Year in descending order

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Version: 2024-02-01

106  
papers

6,600  
citations

71097

41  
h-index

62593

80  
g-index

110  
all docs

110  
docs citations

110  
times ranked

5726  
citing authors

#	ARTICLE	IF	CITATIONS
1	Topological phase singularities in atomically thin high-refractive-index materials. Nature Communications, 2022, 13, 2049.	12.8	43
2	Single-Handedness Chiral Optical Cavities. ACS Photonics, 2022, 9, 2652-2659.	6.6	32
3	Abundance of cavity-free polaritonic states in resonant materials and nanostructures. Journal of Chemical Physics, 2021, 154, 024701.	3.0	33
4	Enhancing Vibrational Light-Matter Coupling Strength beyond the Molecular Concentration Limit Using Plasmonic Arrays. Nano Letters, 2021, 21, 1320-1326.	9.1	20
5	Giant optical anisotropy in transition metal dichalcogenides for next-generation photonics. Nature Communications, 2021, 12, 854.	12.8	154
6	Perfect Absorption of a Focused Light Beam by a Single Nanoparticle. Laser and Photonics Reviews, 2021, 15, 2000430.	8.7	5
7	Non-Planck thermal emission from two-level media. Optics Letters, 2021, 46, 3584-3587.	3.3	1
8	Microscopic metavehicles powered and steered by embedded optical metasurfaces. Nature Nanotechnology, 2021, 16, 970-974.	31.5	44
9	Tunable self-assembled Casimir microcavities and polaritons. Nature, 2021, 597, 214-219.	27.8	48
10	Embedded Eigenstate Enables Perfect Absorption Tunable with Twist. , 2021, , .		0
11	Electrical Control of Hybrid Monolayer Tungsten Disulfide-Plasmonic Nanoantenna Light-Matter States at Cryogenic and Room Temperatures. ACS Nano, 2020, 14, 1196-1206.	14.6	41
12	Visualizing Strong Light-matter Interactions Using Fast Electrons. Microscopy and Microanalysis, 2020, 26, 3182-3184.	0.4	0
13	Transition metal dichalcogenide metamaterials with atomic precision. Nature Communications, 2020, 11, 4604.	12.8	69
14	Ultrastrong coupling between nanoparticle plasmons and cavity photons at ambient conditions. Nature Communications, 2020, 11, 2715.	12.8	67
15	Room-Temperature Lasing from Mie-Resonant Nonplasmonic Nanoparticles. ACS Nano, 2020, 14, 8149-8156.	14.6	105
16	Broadband optical properties of monolayer and bulk MoS2. Npj 2D Materials and Applications, 2020, 4, .	7.9	112
17	Strong coupling as an interplay of quantum emitter hybridization with plasmonic dark and bright modes. Physical Review Research, 2020, 2, .	3.6	12
18	Optical material anisotropy in high-index transition metal dichalcogenide Mie nanoresonators. Optica, 2020, 7, 680.	9.3	37

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19	Circular dichroism mode splitting and bounds to its enhancement with cavity-plasmon-polaritons. Nanophotonics, 2020, 9, 283-293.	6.0	31
20	Towards Plasmon-Exciton Hybridization at the Nanoscale using STEM EELS. Microscopy and Microanalysis, 2019, 25, 624-625.	0.4	0
21	Visualizing Spatial Variations of Plasmon-Exciton Polaritons at the Nanoscale Using Electron Microscopy. Nano Letters, 2019, 19, 8171-8181.	9.1	77
22	Correlative Dark-Field and Photoluminescence Spectroscopy of Individual Plasmon-Molecule Hybrid Nanostructures in a Strong Coupling Regime. ACS Photonics, 2019, 6, 2570-2576.	6.6	33
23	Nanophotonic engineering of far-field thermal emitters. Nature Materials, 2019, 18, 920-930.	27.5	261
24	Transition metal dichalcogenide nanodisks as high-index dielectric Mie nanoresonators. Nature Nanotechnology, 2019, 14, 679-683.	31.5	235
25	Self-Hybridized Exciton-Polaritons in Multilayers of Transition Metal Dichalcogenides for Efficient Light Absorption. ACS Photonics, 2019, 6, 139-147.	6.6	80
26	Anomalies in light scattering. Advances in Optics and Photonics, 2019, 11, 892.	25.5	161
27	Photoluminescence quenching of dye molecules near a resonant silicon nanoparticle. Scientific Reports, 2018, 8, 6107.	3.3	32
28	Observation of Tunable Charged Exciton Polaritons in Hybrid Monolayer WS <sub>2</sub> -Plasmonic Nanoantenna System. Nano Letters, 2018, 18, 1777-1785.	9.1	200
29	All-Optical Switching and Unidirectional Plasmon Launching with Nonlinear Dielectric Nanoantennas. Physical Review Applied, 2018, 9, .	3.8	29
30	Boosting Terahertz Photoconductive Antenna Performance with Optimised Plasmonic Nanostructures. Scientific Reports, 2018, 8, 6624.	3.3	69
31	Coherently Enhanced Wireless Power Transfer. Physical Review Letters, 2018, 120, 143901.	7.8	35
32	Nonlinear metasurfaces: a paradigm shift in nonlinear optics. Materials Today, 2018, 21, 8-21.	14.2	403
33	Novel Nanostructures and Materials for Strong Light-Matter Interactions. ACS Photonics, 2018, 5, 24-42.	6.6	365
34	Metal-Dielectric Nanocavity for Real-Time Tracing Molecular Events with Temperature Feedback. Laser and Photonics Reviews, 2018, 12, 1700227.	8.7	45
35	Strong Coupling in Si Nanoparticle Core - 2D WS <sub>2</sub> Shell Structure. Journal of Physics: Conference Series, 2018, 1092, 012077.	0.4	1
36	Enhanced light outcoupling in microdisk lasers via Si spherical nanoantennas. Journal of Applied Physics, 2018, 124, .	2.5	17

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37	Valley-Selective Response of Nanostructures Coupled to 2D Transition-Metal Dichalcogenides. Applied Sciences (Switzerland), 2018, 8, 1157.	2.5	30
38	Quantum description and emergence of nonlinearities in strongly coupled single-emitter nanoantenna systems. Physical Review B, 2018, 98, .	3.2	32
39	Tunable Hybrid Fano Resonances in Halide Perovskite Nanoparticles. Nano Letters, 2018, 18, 5522-5529.	9.1	94
40	Strong Light-Matter Coupling between Plasmons in Individual Gold Bi-pyramids and Excitons in Mono- and Multilayer WSe <sub>2</sub> . Nano Letters, 2018, 18, 5938-5945.	9.1	131
41	Suppression of photo-oxidation of organic chromophores by strong coupling to plasmonic nanoantennas. Science Advances, 2018, 4, eaas9552.	10.3	199
42	Strong Coupling in Core-Shell Nanostructure Based on Silicon Nanoparticle and TMDC Monolayer. , 2018,, .		0
43	Anapole-Enhanced Intrinsic Raman Scattering from Silicon Nanodisks. ACS Photonics, 2018, 5, 2730-2736.	6.6	73
44	Fine-Tuning of the Magnetic Fano Resonance in Hybrid Oligomers via fs-Laser-Induced Reshaping. ACS Photonics, 2017, 4, 536-543.	6.6	28
45	High-quality laser cavity based on all-dielectric metasurfaces. Photonics and Nanostructures - Fundamentals and Applications, 2017, 24, 18-23.	2.0	18
46	Light Outcoupling from Quantum Dot-Based Microdisk Laser via Plasmonic Nanoantenna. ACS Photonics, 2017, 4, 275-281.	6.6	39
47	Modifying magnetic dipole spontaneous emission with nanophotonic structures. Laser and Photonics Reviews, 2017, 11, 1600268.	8.7	110
48	Enhancement of terahertz photoconductive antenna operation by optical nanoantennas. Laser and Photonics Reviews, 2017, 11, 1600199.	8.7	116
49	Modifying magnetic dipole spontaneous emission with nanophotonic structures (Laser Photonics Rev.) Tj ETQq1 1 0.784314rgBT /Ow	8.7	116
50	Approach for fine-tuning of hybrid dimer antennas via laser melting at the nanoscale. Annalen Der Physik, 2017, 529, 1600272.	2.4	9
51	Coherent perfect absorbers: linear control of light with light. Nature Reviews Materials, 2017, 2, .	48.7	280
52	Resonant optical properties of crystalline silicon nanoparticles fabricated by laser ablation-based methods. AIP Conference Proceedings, 2017, , .	0.4	0
53	All-dielectric nanophotonics: the quest for better materials and fabrication techniques. Optica, 2017, 4, 814.	9.3	328
54	Dielectric Yagi-Uda nanoantennas driven by electron-hole plasma photoexcitation. Journal of Physics: Conference Series, 2017, 917, 062054.	0.4	0

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55	All-Dielectric Nanophotonics: Fundamentals, Fabrication, and Applications. World Scientific Series in Nanoscience and Nanotechnology, 2017, , 337-385.	0.1	3
56	Dynamically reconfigurable metal-semiconductor Yagi-Uda nanoantenna. Physical Review B, 2017, 95, .	3.2	18
57	Dielectric chain driven by electron-hole plasma photoexcitation. , 2017, , .		0
58	Experimental demonstration of a reconfigurable magnetic Fano resonance in hybrid oligomers. , 2017, , .		0
59	Multifunctional sensing with hybrid nanophotonic structures. , 2017, , .		0
60	Ultrafast tunable hybrid Yagi-Uda nanoantenna. , 2017, , .		0
61	Coherent virtual absorption based on complex zero excitation for ideal light capturing. Optica, 2017, 4, 1457.	9.3	77
62	Core-shell Yagi-Uda nanoantenna for highly efficient and directive emission. Journal of Physics: Conference Series, 2017, 929, 012066.	0.4	1
63	Nonlinear core-shell Yagi-Uda nanoantenna for highly tunable directive emission. , 2017, , .		1
64	Virtual electromagnetic absorption and energy storage by a Hermitian system via complex frequency excitation. , 2017, , .		0
65	Fabrication of Hybrid Nanostructures via Nanoscale Laser-Induced Reshaping for Advanced Light Manipulation. Advanced Materials, 2016, 28, 3087-3093.	21.0	107
66	Enhancement of artificial magnetism via resonant bianisotropy. Scientific Reports, 2016, 6, 22546.	3.3	42
67	Solitary waves in chains of silicon nanoparticles. , 2016, , .		0
68	Chiral near-field formation with all-dielectric nanoantennas. , 2016, , .		0
69	Polarization and angle dependent enhancement of Raman scattering from silicon nanodisks. , 2016, , .		0
70	Demonstration of the enhanced Purcell factor in all-dielectric structures. Applied Physics Letters, 2016, 108, .	3.3	62
71	Reversible and non-reversible tuning of hybrid optical nanoresonators. , 2016, , .		0
72	Femtosecond laser transfer of silicon nanoparticles with enhanced Raman response. AIP Conference Proceedings, 2016, , .	0.4	3

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73	Resonant Raman scattering from silicon nanoparticles enhanced by magnetic response. <i>Nanoscale</i> , 2016, 8, 9721-9726.	5.6	128
74	Solitary Waves in Chains of High-Index Dielectric Nanoparticles. <i>ACS Photonics</i> , 2016, 3, 1869-1876.	6.6	18
75	Anisotropy-assisted non-scattering coherent absorption of surface plasmon-polaritons. <i>Annalen Der Physik</i> , 2016, 528, 537-542.	2.4	9
76	Controllable femtosecond laser-induced dewetting for plasmonic applications. <i>Laser and Photonics Reviews</i> , 2016, 10, 91-99.	8.7	66
77	Nonlinear Transient Dynamics of Photoexcited Resonant Silicon Nanostructures. <i>ACS Photonics</i> , 2016, 3, 1546-1551.	6.6	67
78	Nonlinear all-dielectric nanoantenna reconfigured by electron-hole plasma. , 2016, , .		0
79	Tuning of near- and far-field properties of all-dielectric dimer nanoantennas via ultrafast electron-hole plasma photoexcitation. <i>Laser and Photonics Reviews</i> , 2016, 10, 1009-1015.	8.7	55
80	Ultrafast magnetic light. , 2016, , .		0
81	Experimental Study of Elevated Temperature Composite Repair Materials to Guide Integrity Decisions. , 2016, , .		0
82	Perfect interferenceless absorption at infrared frequencies by a van der Waals crystal. <i>Physical Review B</i> , 2015, 92, .	3.2	51
83	An antenna model for the Purcell effect. <i>Scientific Reports</i> , 2015, 5, 12956.	3.3	160
84	All-dielectric nanoantennas for unidirectional excitation of electromagnetic guided modes. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	37
85	Enhanced emission extraction and selective excitation of NV centers with all-dielectric nanoantennas. <i>Laser and Photonics Reviews</i> , 2015, 9, 385-391.	8.7	24
86	Magneto-optics enhancement with gain-assisted plasmonic subdiffraction chains. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2015, 32, 281.	2.1	9
87	Comment on "Counterintuitive Dispersion Violating Kramers-Kronig Relations in Gain Slabs". <i>Physical Review Letters</i> , 2015, 114, 089301.	7.8	5
88	Towards all-dielectric metamaterials and nanophotonics. <i>Proceedings of SPIE</i> , 2015, , .	0.8	66
89	Lasing induced by resonant absorption. <i>Optics Express</i> , 2015, 23, 20394.	3.4	8
90	Superoscillating response of a nonlinear system on a harmonic signal. <i>Applied Physics B: Lasers and Optics</i> , 2015, 121, 209-211.	2.2	1

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91	Tuning of Magnetic Optical Response in a Dielectric Nanoparticle by Ultrafast Photoexcitation of Dense Electronâ€Hole Plasma. Nano Letters, 2015, 15, 6187-6192.	9.1	162
92	Abrupt Rabi oscillations in a superoscillating electric field. Optics Letters, 2014, 39, 6316.	3.3	9
93	Near-field mapping of Fano resonances in all-dielectric oligomers. Applied Physics Letters, 2014, 104, .	3.3	64
94	Experimental demonstration of superdirective dielectric antenna. Applied Physics Letters, 2014, 104, .	3.3	47
95	Bending of electromagnetic waves in all-dielectric particle array waveguides. Applied Physics Letters, 2014, 105, .	3.3	41
96	Superdirective dielectric nanoantennas. Nanoscale, 2014, 6, 7354-7361.	5.6	165
97	Exactly solvable toy model for surface plasmon amplification by stimulated emission of radiation. Optics Express, 2013, 21, 10779.	3.4	28
98	Magneto-optical spaser. Optics Letters, 2013, 38, 2002.	3.3	27
99	Loss compensation by spasers in plasmonic systems. Optics Express, 2013, 21, 13467.	3.4	15
100	Perfect absorption by semi-infinite indefinite medium. , 2012, , .		0
101	All-dielectric optical nanoantennas. , 2012, , .		5
102	All-dielectric optical nanoantennas. Optics Express, 2012, 20, 20599.	3.4	490
103	Exactly solvable toy model for spaser. , 2012, , .		0
104	Perfect absorption at Zenneck wave to plane wave transition. Metamaterials, 2012, 6, 70-75.	2.2	11
105	Experimental verification of the concept of all-dielectric nanoantennas. Applied Physics Letters, 2012, 100, .	3.3	119
106	On the electrodynamics of an absorbing uniaxial nonpositive determined (indefinite) medium. Journal of Experimental and Theoretical Physics, 2012, 114, 568-574.	0.9	6