Svetlana V Boriskina

List of Publications by Citations

119 papers	5,847 citations	41 h-index	74 g-index
153 ext. papers	6,985 ext. citations	7.4 avg, IF	6.12 L-index

#	Paper	IF	Citations
119	Steam generation under one sun enabled by a floating structure with thermal concentration. *Nature Energy*, **2016**, 1,	62.3	650
118	A salt-rejecting floating solar still for low-cost desalination. *Energy and Environmental Science*, **2018**, 11, 1510-1519	35.4	409
117	Volumetric solar heating of nanofluids for direct vapor generation. *Nano Energy*, **2015**, 17, 290-301	17.1	276
116	Plasmonic materials for energy: From physics to applications. *Materials Today*, **2013**, 16, 375-386	21.8	242
115	Deterministic aperiodic arrays of metal nanoparticles for surface-enhanced Raman scattering (SERS). *Optics Express*, **2009**, 17, 3741-53	3.3	193
114	Plasmonic nanogalaxies: multiscale aperiodic arrays for surface-enhanced Raman sensing. *Nano Letters*, **2009**, 9, 3922-9	11.5	188
113	Roadmap on plasmonics. *Journal of Optics (United Kingdom)*, **2018**, 20, 043001	1.7	174
112	Infrared-Transparent Visible-Opaque Fabrics for Wearable Personal Thermal Management. *ACS Photonics*, **2015**, 2, 769-778	6.3	162
111	Deterministic aperiodic nanostructures for photonics and plasmonics applications. *Laser and Photonics Reviews*, **2012**, 6, 178-218	8.3	143
110	Nanoparticle-based protein detection by optical shift of a resonant microcavity. *Applied Physics Letters*, **2011**, 99, 073701	3.4	133
109	15.7% Efficient 10-μm-thick crystalline silicon solar cells using periodic nanostructures. *Advanced Materials*, **2015**, 27, 2182-8	24	128
108	Photonic-plasmonic scattering resonances in deterministic aperiodic structures. *Nano Letters*, **2008**, 8, 2423-31	11.5	123
107	Contactless steam generation and superheating under one sun illumination. *Nature Communications*, **2018**, 9, 5086	17.4	112
106	Thin-film Tamm Plasmon Selective Emitters and Absorbers for High-Efficiency Thermophotovoltaics. *Scientific Reports*, **2015**, 5, 10661	4.9	98
105	Theoretical prediction of a dramatic Q-factor enhancement and degeneracy removal of whispering gallery modes in symmetrical photonic molecules. *Optics Letters*, **2006**, 31, 338-40	3	89
104	Optimizing Gold Nanoparticle Cluster Configurations (n ≤ 7) for Array Applications. *Journal of Physical Chemistry C*, **2011**, 115, 4578-4583	3.8	87
103	Design and Implementation of Noble Metal Nanoparticle Cluster Arrays for Plasmon Enhanced Biosensing. *Journal of Physical Chemistry C*, **2011**, 115, 24437-24453	3.8	81

102	Losses in plasmonics: from mitigating energy dissipation to embracing loss-enabled functionalities. *Advances in Optics and Photonics*, **2017**, 9, 775	16.7	79
101	Accurate simulation of two-dimensional optical microcavities with uniquely solvable boundary integral equations and trigonometric Galerkin discretization. *Journal of the Optical Society of America A: Optics and Image Science, and Vision*, **2004**, 21, 393-402	1.8	76
100	Spectroscopic ultra-trace detection of nitroaromatic gas vapor on rationally designed two-dimensional nanoparticle cluster arrays. *Analytical Chemistry*, **2011**, 83, 2243-9	7.8	74
99	Roadmap on optical energy conversion. *Journal of Optics (United Kingdom)*, **2016**, 18, 073004	1.7	69
98	Photonic-plasmonic mode coupling in on-chip integrated optoplasmonic molecules. *ACS Nano*, **2012**, 6, 951-60	16.7	68
97	Spectrally engineered photonic molecules as optical sensors with enhanced sensitivity: a proposal and numerical analysis. *Journal of the Optical Society of America B: Optical Physics*, **2006**, 23, 1565	1.7	61
96	Illuminating epidermal growth factor receptor densities on filopodia through plasmon coupling. *ACS Nano*, **2011**, 5, 6619-28	16.7	58
95	Ultrasensitive detection of a protein by optical trapping in a photonic-plasmonic microcavity. *Journal of Biophotonics*, **2012**, 5, 629-38	3.1	57
94	Singular optics and topological photonics. *Journal of Optics (United Kingdom)*, **2017**, 19, 010401	1.7	54
93	A Hybrid Electric and Thermal Solar Receiver. *Joule*, **2018**, 2, 962-975	27.8	54
92	Molding the flow of light on the nanoscale: from vortex nanogears to phase-operated plasmonic machinery. *Nanoscale*, **2012**, 4, 76-90	7.7	53
91	Coupling of whispering-gallery modes in size-mismatched microdisk photonic molecules. *Optics Letters*, **2007**, 32, 1557-9	3	52
90	Topological Engineering of Interfacial Optical Tamm States for Highly Sensitive Near-Singular-Phase Optical Detection. *ACS Photonics*, **2018**, 5, 929-938	6.3	51
89	Entropic and Near-Field Improvements of Thermoradiative Cells. *Scientific Reports*, **2016**, 6, 34837	4.9	50
88	Spectrally and spatially configurable superlenses for optoplasmonic nanocircuits. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 3147-51	11.5	50
87	Heat meets light on the nanoscale. *Nanophotonics*, **2016**, 5, 134-160	6.3	49
86	Directional Emission, Increased Free Spectral Range, and Mode Q-Factors in 2-D Wavelength-Scale Optical Microcavity Structures. *IEEE Journal of Selected Topics in Quantum Electronics*, **2006**, 12, 1175-1182	3.8	49
85	Spectral analysis of induced color change on periodically nanopatterned silk films. *Optics Express*, **2009**, 17, 21271-9	3.3	48

84	. *IEEE Journal of Quantum Electronics*, **2005**, 41, 857-862	2	48
83	The role of nanoparticle shapes and deterministic aperiodicity for the design of nanoplasmonic arrays. *Optics Express*, **2009**, 17, 9648-61	3.3	46
82	Enhanced light focusing in self-assembled optoplasmonic clusters with subwavelength dimensions. *Advanced Materials*, **2013**, 25, 115-9	24	44
81	Quantification of differential ErbB1 and ErbB2 cell surface expression and spatial nanoclustering through plasmon coupling. *Nano Letters*, **2012**, 12, 3231-7	11.5	43
80	Spatial and spectral detection of protein monolayers with deterministic aperiodic arrays of metal nanoparticles. *Proceedings of the National Academy of Sciences of the United States of America*, **2010** , 107, 12086-90	11.5	43
79	Test of the FDTD accuracy in the analysis of the scattering resonances associated with high-Q whispering-gallery modes of a circular cylinder. *Journal of the Optical Society of America A: Optics and Image Science, and Vision*, **2008**, 25, 1169-73	1.8	41
78	Optical gap formation and localization properties of optical modes in deterministic aperiodic photonic structures. *Optics Express*, **2008**, 16, 18813-26	3.3	40
77	Trends in microdisk laser research and linear optical modelling. *Optical and Quantum Electronics*, **2007**, 39, 1253-1272	2.4	40
76	Electrically tunable near-field radiative heat transfer via ferroelectric materials. *Applied Physics Letters*, **2014**, 105, 244102	3.4	39
75	Multiple-wavelength plasmonic nanoantennas. *Optics Letters*, **2010**, 35, 538-40	3	39
74	Enhancement and Tunability of Near-Field Radiative Heat Transfer Mediated by Surface Plasmon Polaritons in Thin Plasmonic Films. *Photonics*, **2015**, 2, 659-683	2.2	36
73	Q factor and emission pattern control of the WG modes in notched microdisk resonators. *IEEE Journal of Selected Topics in Quantum Electronics*, **2006**, 12, 52-58	3.8	36
72	Adaptive on-chip control of nano-optical fields with optoplasmonic vortex nanogates. *Optics Express*, **2011**, 19, 22305-15	3.3	34
71	Electromagnetic field enhancement and spectrum shaping through plasmonically integrated optical vortices. *Nano Letters*, **2012**, 12, 219-27	11.5	33
70	Self-referenced photonic molecule bio(chemical)sensor. *Optics Letters*, **2010**, 35, 2496-8	3	33
69	Spectral shift and Q change of circular and square-shaped optical microcavity modes due to periodic sidewall surface roughness. *Journal of the Optical Society of America B: Optical Physics*, **2004**, 21, 1792	1.7	31
68	Radiation and absorption losses of the whispering-gallery-mode dielectric resonators excited by a dielectric waveguide. *IEEE Transactions on Microwave Theory and Techniques*, **1999**, 47, 224-231	4.1	31
67	Enhancement of the 1.54 ħ Er3+ emission from quasiperiodic plasmonic arrays. *Applied Physics Letters*, **2010**, 96, 071113	3.4	29

66	Lens or resonator? Electromagnetic behavior of an extended hemielliptic lens for a sub-millimeter-wave receiver. *Microwave and Optical Technology Letters*, **2004**, 43, 515-518	1.2	29
65	Formation of colorimetric fingerprints on nano-patterned deterministic aperiodic surfaces. *Optics Express*, **2010**, 18, 14568-76	3.3	28
64	Efficient Analysis and Design of Low-Loss Whispering-Gallery-Mode Coupled Resonator Optical Waveguide Bends. *Journal of Lightwave Technology*, **2007**, 25, 2487-2494	4	28
63	Sustainable polyethylene fabrics with engineered moisture transport for passive cooling. *Nature Sustainability*, **2021**, 4, 715-724	22.1	28
62	Multi-wavelength mid-infrared plasmonic antennas with single nanoscale focal point. *Optics Express* , **2011**, 19, 22113-24	3.3	27
61	Solar passive distiller with high productivity and Marangoni effect-driven salt rejection. *Energy and Environmental Science*, **2020**, 13, 3646-3655	35.4	26
60	Spectral engineering of bends and branches in microdisk coupled-resonator optical waveguides. *Optics Express*, **2007**, 15, 17371-9	3.3	25
59	Engineering a Full Gamut of Structural Colors in All-Dielectric Mesoporous Network Metamaterials. *ACS Photonics*, **2018**, 5, 2120-2128	6.3	25
58	Sensitive label-free biosensing using critical modes in aperiodic photonic structures. *Optics Express*, **2008**, 16, 12511-22	3.3	24
57	Control of radiative processes for energy conversion and harvesting. *Optics Express*, **2015**, 23, A1533-40	3.3	23
56	Demonstration of efficient on-chip photon transfer in self-assembled optoplasmonic networks. *ACS Nano*, **2013**, 7, 4470-8	16.7	23
55	Mismatched front and back gratings for optimum light trapping in ultra-thin crystalline silicon solar cells. *Optics Communications*, **2016**, 377, 52-58	2	22
54	Tuning of elliptic whispering-gallery-mode microdisk waveguide filters. *Journal of Lightwave Technology*, **2003**, 21, 1987-1995	4	22
53	Nanomaterials for the water-energy nexus. *MRS Bulletin*, **2019**, 44, 59-66	3.2	22
52	Exceeding the solar cell Shockley□Queisser limit via thermal up-conversion of low-energy photons. *Optics Communications*, **2014**, 314, 71-78	2	21
51	Directed Assembly of Optoplasmonic Hybrid Materials with Tunable Photonic-Plasmonic Properties. *Journal of Physical Chemistry Letters*, **2015**, 6, 2056-64	6.4	21
50	Empirical Comparison of Random and Periodic Surface Light-Trapping Structures for Ultrathin Silicon Photovoltaics. *Advanced Optical Materials*, **2016**, 4, 858-863	8.1	21
49	Enhanced absorption of thin-film photovoltaic cells using an optical cavity. *Journal of Optics (United Kingdom)*, **2015**, 17, 055901	1.7	20

48	Optical engineering of polymer materials and composites for simultaneous color and thermal management. *Optical Materials Express*, **2019**, 9, 1990	2.6	20
47	Toward a High-Efficient Utilization of Solar Radiation by Quad-Band Solar Spectral Splitting. *Advanced Materials*, **2016**, 28, 10659-10663	24	19
46	MICRO-OPTICAL RESONATORS FOR MICROLASERS AND INTEGRATED OPTOELECTRONICS **2006**, 39-70		19
45	Highly efficient full-vectorial integral equation solution for the bound, leaky, and complex modes of dielectric waveguides. *IEEE Journal of Selected Topics in Quantum Electronics*, **2002**, 8, 1225-1232	3.8	19
44	Photonic Molecules and Spectral Engineering. *Springer Series in Optical Sciences*, **2010**, 393-421	0.5	19
43	Demonstration of laser action in a pseudorandom medium. *Applied Physics Letters*, **2010**, 97, 223101	3.4	18
42	Highly efficient design of spectrally engineered whispering-gallery-mode microlaser resonators. *Optical and Quantum Electronics*, **2003**, 35, 545-559	2.4	18
41	Optics on the Go. *Optics and Photonics News*, **2017**, 28, 34	1.9	17
40	Effect of a layered environment on the complex natural frequencies of two-dimensional WGM dielectric-ring resonators. *Journal of Lightwave Technology*, **2002**, 20, 1563-1572	4	17
39	Collective phenomena in photonic, plasmonic and hybrid structures. *Optics Express*, **2011**, 19, 22024-8	3.3	16
38	Nanoporous fabrics could keep you cool. *Science*, **2016**, 353, 986-987	33.3	15
37	Hybrid Optical-Thermal Antennas for Enhanced Light Focusing and Local Temperature Control. *ACS Photonics*, **2016**, 3, 1714-1722	6.3	15
36	Lasing in Thue-Morse structures with optimized aperiodicity. *Applied Physics Letters*, **2011**, 98, 201109	3.4	14
35	Fiber-microsphere system at cryogenic temperatures toward cavity QED using diamond NV centers. *Optics Express*, **2010**, 18, 15169-73	3.3	13
34	Sensitive singular-phase optical detection without phase measurements with Tamm plasmons. *Journal of Physics Condensed Matter*, **2018**, 30, 224003	1.8	9
33	Optical gaps, mode patterns and dipole radiation in two-dimensional aperiodic photonic structures. *Physica E: Low-Dimensional Systems and Nanostructures*, **2009**, 41, 1102-1106	3	9
32	Photonic molecules made of matched and mismatched microcavities: new functionalities of microlasers and optoelectronic components **2007**,		9
31	Effect of the imperfect flat Earth on the vertically polarized radiation of a cylindrical reflector antenna. *IEEE Transactions on Antennas and Propagation*, **2000**, 48, 285-292	4.9	8

30	High contrast cleavage detection for enhancing porous silicon sensor sensitivity. *Optics Express*, **2021**, 29, 1-11	3.3	8
29	Silicon Solar Cells: 15.7% Efficient 10-μm-Thick Crystalline Silicon Solar Cells Using Periodic Nanostructures (Adv. Mater. 13/2015). *Advanced Materials*, **2015**, 27, 2268-2268	24	7
28	Template-Guided Self-Assembly of Discrete Optoplasmonic Molecules and Extended Optoplasmonic Arrays. *Nanophotonics*, **2015**, 4, 250-260	6.3	7
27	Small hemielliptic dielectric lens antenna analysis boundary integral equations vs. GO and PO **2005**,		7
26	Numerical simulation of surface-wave band-stop filters. *Microwave and Optical Technology Letters*, **1996**, 13, 169-173	1.2	7
25	Limiting efficiencies of solar energy conversion and photo-detection via internal emission of hot electrons and hot holes in gold **2015**,		6
24	Hybrid optical-thermal devices and materials for light manipulation and radiative cooling **2015**,		6
23	Breaking the Limits of Optical Energy Conversion. *Optics and Photonics News*, **2015**, 26, 48	1.9	5
22	Daylighting. *Optics and Photonics News*, **2018**, 29, 24	1.9	4
21	Inverse design of a single-frequency diffractive biosensor based on the reporter cleavage detection mechanism. *Optics Express*, **2021**, 29, 10780-10799	3.3	4
20	Radiative heat and momentum transfer from materials with broken symmetries: opinion. *Optical Materials Express*, **2021**, 11, 3125	2.6	4
19	An ode to polyethylene. *MRS Energy & Sustainability*, **2019**, 6, 1	2.2	3
18	Efficient simulation and design of coupled optical resonator clusters and waveguides		3
17	Design and simulation tools for optical microresonators **2001**, 4277, 21		3
16	Self-powered broadband photo-detection and persistent energy generation with junction-free strained BiTe thin films. *Optics Express*, **2020**, 28, 27644-27656	3.3	3
15	High contrast cleavage detection. *Optics Letters*, **2021**, 46, 2593-2596	3	3
14	Theoretical and Experimental Study of Temperature-Dependent Spectral Properties of Multi-Layer Metal-Dielectric Nano-Film Structures **2007**,		2
13	Polymer Metamaterial Fabrics for Personal Radiative Thermal Management **2017**,		2

12	Spectral, spatial and polarization-selective perfect absorbers with large magnetic response for sensing and thermal emission control. *Optics Express*, **2019**, 27, A1041-A1059	3.3	2
11	Plasmonics with a Twist: Taming Optical Tornadoes on the Nanoscale. *Challenges and Advances in Computational Chemistry and Physics*, **2013**, 431-461	0.7	2
10	Roadmap on Universal Photonic Biosensors for Real-Time Detection of Emerging Pathogens. *Photonics*, **2021**, 8, 342	2.2	2
9	Diverging polygon-based modeling (DPBM) of concentrated solar flux distributions. *Solar Energy*, **2015**, 122, 24-35	6.8	1
8	Efficiency Limits of Solar Energy Harvesting via Internal Photoemission in Carbon Materials. *Photonics*, **2018**, 5, 4	2.2	1
7	Theory and numerical design of coupled-resonator optical waveguide sections with bends **2007**,		1
6	Microcavities: an inspiration for advanced modelling techniques		1
5	Optical Spectra and Output Coupling Engineering in Hybrid WG-Mode Micro- and Meso-scale Cavity Structures **2006**,		1
4	Planar nanophotonic structures for intensity based readout refractive index sensing applied to dissolved methane detection. *OSA Continuum*, **2020**, 3, 3556	1.4	1
3	Characterisation and modelling of water wicking and evaporation in capillary porous media for passive and energy-efficient applications. *Applied Thermal Engineering*, **2022**, 208, 118159	5.8	0
2	Inverse-designed waveguide-based biosensor for high-sensitivity, single-frequency detection of biomolecules. *Nanophotonics*, **2022**, 11, 1427-1442	6.3	0
1	Biomimetic photonics. *Journal of Optics (United Kingdom)*, **2019**, 21, 030201	1.7	