

Sergey S Kruk

List of Publications by Year in descending order

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114
papers

4,641
citations

126907

33
h-index

197818

49
g-index

114
all docs

114
docs citations

114
times ranked

3863
citing authors

#	ARTICLE	IF	CITATIONS
1	Subwavelength dielectric resonators for nonlinear nanophotonics. Science, 2020, 367, 288-292.	12.6	575
2	Functional Meta-Optics and Nanophotonics Governed by Mie Resonances. ACS Photonics, 2017, 4, 2638-2649.	6.6	467
3	Invited Article: Broadband highly efficient dielectric metadevices for polarization control. APL Photonics, 2016, 1, .	5.7	320
4	Grayscale transparent metasurface holograms. Optica, 2016, 3, 1504.	9.3	290
5	Nonlinear Generation of Vector Beams From AlGaAs Nanoantennas. Nano Letters, 2016, 16, 7191-7197.	9.1	237
6	Quantum metasurface for multiphoton interference and state reconstruction. Science, 2018, 361, 1104-1108.	12.6	227
7	Nonlinear light generation in topological nanostructures. Nature Nanotechnology, 2019, 14, 126-130.	31.5	187
8	Nonlinear Wavefront Control with All-Dielectric Metasurfaces. Nano Letters, 2018, 18, 3978-3984.	9.1	180
9	Reversible Thermal Tuning of All-Dielectric Metasurfaces. Advanced Functional Materials, 2017, 27, 1700580.	14.9	146
10	Third-Harmonic Generation in Photonic Topological Metasurfaces. Physical Review Letters, 2019, 123, 103901.	7.8	144
11	Magnetic hyperbolic optical metamaterials. Nature Communications, 2016, 7, 11329.	12.8	113
12	Enhanced Magnetic Second-Harmonic Generation from Resonant Metasurfaces. ACS Photonics, 2015, 2, 1007-1012.	6.6	102
13	Nonlinear Optical Magnetism Revealed by Second-Harmonic Generation in Nanoantennas. Nano Letters, 2017, 17, 3914-3918.	9.1	100
14	From Fano to Quasi-BIC Resonances in Individual Dielectric Nanoantennas. Nano Letters, 2021, 21, 1765-1771.	9.1	96
15	High-harmonic generation at the nanoscale boosted by bound states in the continuum. Physical Review Research, 2019, 1, .	3.6	95
16	Nonlinear Imaging with All-Dielectric Metasurfaces. Nano Letters, 2020, 20, 4370-4376.	9.1	91
17	Selective Third-Harmonic Generation by Structured Light in Mie-Resonant Nanoparticles. ACS Photonics, 2018, 5, 728-733.	6.6	87
18	High-Harmonic Generation from Resonant Dielectric Metasurfaces Empowered by Bound States in the Continuum. ACS Photonics, 2022, 9, 567-574.	6.6	84

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19	Tunable Mie-Resonant Dielectric Metasurfaces Based on VO ₂ Phase-Transition Materials. ACS Photonics, 2021, 8, 1206-1213.	6.6	80
20	Edge States and Topological Phase Transitions in Chains of Dielectric Nanoparticles. Small, 2017, 13, 1603190.	10.0	77
21	Spin-Polarized Photon Emission by Resonant Multipolar Nanoantennas. ACS Photonics, 2014, 1, 1218-1223.	6.6	75
22	Room-temperature lasing from nanophotonic topological cavities. Light: Science and Applications, 2020, 9, 127.	16.6	74
23	Enhancing Eu ³⁺ magnetic dipole emission by resonant plasmonic nanostructures. Optics Letters, 2015, 40, 1659.	3.3	61
24	Resonant metasurfaces at oblique incidence: interplay of order and disorder. Scientific Reports, 2014, 4, 4484.	3.3	57
25	Mie-Resonant Membrane Huygens' Metasurfaces. Advanced Functional Materials, 2020, 30, 1906851.	14.9	52
26	Nonlinear Imaging of Nanoscale Topological Corner States. Nano Letters, 2021, 21, 4592-4597.	9.1	51
27	Shaping the third-harmonic radiation from silicon nanodimers. Nanoscale, 2017, 9, 2201-2206.	5.6	50
28	Asymmetric parametric generation of images with nonlinear dielectric metasurfaces. Nature Photonics, 2022, 16, 561-565.	31.4	45
29	Lasing Action from Anapole Metasurfaces. Nano Letters, 2021, 21, 6563-6568.	9.1	43
30	Photosensitive chalcogenide metasurfaces supporting bound states in the continuum. Optics Express, 2019, 27, 33847.	3.4	39
31	Nonlinear coupled-mode theory for periodic plasmonic waveguides and metamaterials with loss and gain. Optics Letters, 2014, 39, 462.	3.3	37
32	Transparent Dielectric Metasurfaces for Spatial Mode Multiplexing. Laser and Photonics Reviews, 2018, 12, 1800031.	8.7	37
33	Spatial dispersion of multilayer fishnet metamaterials. Optics Express, 2012, 20, 15100.	3.4	33
34	Optical metamaterials with quasicrystalline symmetry: Symmetry-induced optical isotropy. Physical Review B, 2013, 88, .	3.2	32
35	Polarization properties of optical metasurfaces of different symmetries. Physical Review B, 2015, 91, .	3.2	27
36	Near-field surface plasmons on quasicrystal metasurfaces. Scientific Reports, 2016, 6, 26.	3.3	27

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37	Polarization-Insensitive Dielectric Membrane Metasurfaces. Advanced Optical Materials, 2020, 8, 2000555.	7.3	24
38	Resonant dielectric metasurfaces in strong optical fields. APL Materials, 2021, 9, 060701.	5.1	23
39	Multipolar Third-Harmonic Generation in Fishnet Metamaterials. ACS Photonics, 2016, 3, 1494-1499.	6.6	20
40	Dielectric Broadband Metasurfaces for Fiber Mode-Multiplexed Communications. Advanced Optical Materials, 2019, 7, 1801679.	7.3	20
41	Strong Broadband Terahertz Optical Activity through Control of the Blaschke Phase with Chiral Metasurfaces. Physical Review Applied, 2017, 8, .	3.8	16
42	Topological nanophotonics for photoluminescence control. Nanophotonics, 2020, 10, 435-441.	6.0	16
43	Enhanced Second-Harmonic Generation with Structured Light in AlGaAs Nanoparticles Governed by Magnetic Response. JETP Letters, 2019, 109, 131-135.	1.4	15
44	Topology-empowered membrane devices for terahertz photonics. Advanced Photonics, 2022, 4, .	11.8	13
45	Tailoring transmission and reflection with metasurfaces. , 2020, , 145-174.		10
46	Topological states in disordered arrays of dielectric nanoparticles. Physical Review Research, 2020, 2, .	3.6	9
47	Mid-infrared cylindrical vector beams enabled by dielectric metasurfaces. APL Materials, 2021, 9, .	5.1	7
48	High-Harmonic Generation in Dielectric Metasurfaces Empowered by Bound States in the Continuum. , 2020, , .		5
49	Enhanced Five-Photon Photoluminescence in Subwavelength AlGaAs Resonators. Nano Letters, 2022, 22, 4200-4206.	9.1	5
50	Nonlinear mirror with all-dielectric metasurface. , 2017, , .		2
51	Quantum imaging with dielectric metasurfaces for multi-photon polarization tomography. , 2017, , .		2
52	Third-Harmonic Generation from Photonic Topological States in Zigzag Arrays of Silicon Nanodisks. , 2017, , .		2
53	Dielectric Metasurfaces for Optical Communications and Spatial Division Multiplexing. , 2018, , .		2
54	Tunable and nonlinear fishnet metamaterials based on liquid crystal infiltration. Proceedings of SPIE, 2012, , .	0.8	1

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55	Nonlinear coupled-mode theory for periodic waveguides and metamaterials with loss and gain. , 2012, , .		1
56	Symmetry properties of metamaterials at oblique incidence. , 2013, , .		1
57	Spin-Polarized Light Emission from Quantum Dots Coupled to Multipolar Nanoantennas. , 2014, , .		1
58	Enhanced Magnetic Second-Harmonic Generation from Resonant Metasurfaces. , 2015, , .		1
59	Correction to “Functional Meta-Optics and Nanophotonics Govern by Mie Resonances” ACS Photonics, 2018, 5, 670-670.	6.6	1
60	Manipulating second-harmonic light from semiconductor nanocrystals. SPIE Newsroom, 0, , .	0.1	1
61	Disorder-Robust Nonlinear Light Generation in Topological Nanostructures. , 2019, , .		1
62	Quantum tomography with all-dielectric metasurfaces. , 2017, , .		1
63	Highly Efficient Broadband Polarization Control With All-Dielectric Metasurfaces. , 2016, , .		1
64	Observation of Extraordinary SHG from All-Dielectric Nanoantennas Governed by Bound States in the Continuum. , 2019, , .		1
65	Bound States in the Continuum for Enhanced Generation of High Optical Harmonics. , 2020, , .		1
66	Coupled-mode theory for nonlinear plasmonic structures and metamaterials. , 2013, , .		0
67	Properties of periodic metasurfaces versus amorphous arrangements at oblique incidence. , 2013, , .		0
68	Photon-spin control of quantum-dot emission with nanoantennas. , 2014, , .		0
69	Polarization phenomena in periodic metasurfaces at oblique incidence. , 2014, , .		0
70	Metasurfaces inner symmetries: from square lattices to quasicrystalline layouts (presentation video). Proceedings of SPIE, 2014, , .	0.8	0
71	Recent advances in metasurfaces and all-dielectric nanophotonics (Conference Presentation). , 2016, , .		0
72	Terahertz chiral structures with large optical activity (Conference Presentation). , 2017, , .		0

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73	Giant enhancement and control of second-harmonic radiation from AlGaAs nanoantennas. , 2017, , .		0
74	Highest efficiency grayscale all-dielectric meta-holograms. , 2017, , .		0
75	Quantum polarization tomography with all-dielectric metasurfaces. , 2017, , .		0
76	Fabrication of halide-perovskite resonant microcylinders by nanoimprint lithography. Journal of Physics: Conference Series, 2020, 1461, 012178.	0.4	0
77	Third-harmonic generation enhanced by topological corner states in valley-Hall dielectric metasurfaces. , 2021, , .		0
78	Topology-controlled Polarized Photoluminescence from Rare-earth Doped Nanocrystals. , 2021, , .		0
79	Fano Resonances in Individual Dielectric Nanoantennas. , 2021, , .		0
80	Nonlinear metasurfaces with asymmetric light generation. , 2021, , .		0
81	Silicon metasurfaces with bound states in the continuum for high-harmonic generation. , 2021, , .		0
82	Generation of High Harmonics in Silicon Metasurfaces Boosted by Bound States in the Continuum. , 2021, , .		0
83	Quasicrystal metamaterials: a route to optical isotropy. , 2012, , .		0
84	Probing plasmonic electro-magnetic environment with Eu ³⁺ . , 2014, , .		0
85	Multipolar Analysis of the Third Harmonic Radiation Pattern from Fishnet Metamaterials. , 2016, , .		0
86	Highly-Efficient Polarization-Insensitive Holograms Based on Dielectric Metasurfaces. , 2016, , .		0
87	Multipolar Origin of the Third Harmonic Generation from Fishnet Metamaterials. , 2016, , .		0
88	Three-Dimensional Optical Metamaterials with Magnetic Hyperbolic Dispersion. , 2016, , .		0
89	Nonlinear Beam Shaping with Si Nanodisks. , 2016, , .		0
90	Magnetic vs Electric Second-Harmonic Generation from AlGaAs Nanoantennas. , 2017, , .		0

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91	Broadband transparent all-dielectric metasurfaces. , 2017, , .		0
92	Directional second harmonic generation from AlGaAs nanoantennas (Conference Presentation). , 2017, , .		0
93	All-dielectric transparent metasurfaces for holography and quantum tomography (Conference) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 4		0
94	Nonlinear frequency conversion with all-dielectric nanoantennas (Conference Presentation). , 2017, , .		0
95	Nonlinear Unidirectional Topological States in Zigzag Arrays of Bianisotropic Dielectric Nanoparticles. , 2018, , .		0
96	Nonlinear Dielectric Metasurfaces for Wavefront Control. , 2018, , .		0
97	Structured Light for Selective Third-Harmonic Generation in Subwavelength Resonators. , 2018, , .		0
98	All-dielectric metasurfaces for measuring multi-photon quantum-polarization states (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 4		0
99	Structured Light for Second-Harmonic Spectroscopy in Mie-Resonant AlGaAs Nanoparticles. , 2019, , .		0
100	Nonlinear Imaging of Topological Edge States in Dielectric Metasurfaces. , 2019, , .		0
101	Dielectric Membrane Mie-Resonant Metasurfaces. , 2019, , .		0
102	Nonlinear dielectric metalenses: imaging and higher-order correlations. , 2019, , .		0
103	Second-harmonic spectroscopy with structured beams and the observation of quasi-BIC modes in all-dielectric nanoresonators. , 2019, , .		0
104	Observation of highly efficient second-harmonic generation at the nanoscale driven by bound states in the continuum. , 2020, , .		0
105	Observation of Quasi-BIC Modes and Fano Resonances in Individual Subwavelength Dielectric Resonators. , 2020, , .		0
106	Observation of Supercavity Modes in Individual Subwavelength Dielectric Resonators. , 2020, , .		0
107	Efficient High-order Optical Harmonics Generation from Resonant Semiconductor Metasurfaces Supporting Bound States in the Continuum. , 2020, , .		0
108	Observation of nonlinear topological corner states. , 2020, , .		0

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109	Fano resonances in individual AlGaAs nanoparticles driven by quasi-BIC modes. , 2020, , .		0
110	Membrane Metasurfaces. , 2020, , .		0
111	Room-Temperature Lasing from Topological Cavities. , 2020, , .		0
112	Tunable Mie-resonant dielectric metasurfaces based on VO2 phase-change materials. , 2020, , .		0
113	Nonlinear optics with nanoscale topological corner states. , 2020, , .		0
114	Dielectric metasurfaces with asymmetric generation of nonlinear images. , 2021, , .		0