

Alexander Baev

List of Publications by Year in descending order

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62
papers

2,765
citations

257450

24
h-index

175258

52
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62
all docs

62
docs citations

62
times ranked

4287
citing authors

#	ARTICLE	IF	CITATIONS
1	Two-dimensional MXenes: From morphological to optical, electric, and magnetic properties and applications. <i>Physics Reports</i> , 2020, 848, 1-58.	25.6	594
2	Sensitivity Improved Surface Plasmon Resonance Biosensor for Cancer Biomarker Detection Based on Plasmonic Enhancement. <i>ACS Nano</i> , 2011, 5, 4858-4864.	14.6	242
3	Multi-photon excitation properties of CdSe quantum dots solutions and optical limiting behavior in infrared range. <i>Optics Express</i> , 2007, 15, 12818.	3.4	156
4	Twisted π -System Chromophores for All-Optical Switching. <i>Journal of the American Chemical Society</i> , 2011, 133, 6675-6680.	13.7	128
5	Chiral Poly(fluorene-alt-benzothiadiazole) (PFBT) and Nanocomposites with Gold Nanoparticles: Plasmonically and Structurally Enhanced Chirality. <i>Journal of the American Chemical Society</i> , 2010, 132, 17346-17348.	13.7	123
6	Twisted Thiophene-Based Chromophores with Enhanced Intramolecular Charge Transfer for Cooperative Amplification of Third-Order Optical Nonlinearity. <i>Journal of the American Chemical Society</i> , 2016, 138, 6975-6984.	13.7	102
7	Molecular nonlinear optics: recent advances and applications. <i>Advances in Optics and Photonics</i> , 2016, 8, 328.	25.5	100
8	Manipulating Nonradiative Decay Channel by Intermolecular Charge Transfer for Exceptionally Improved Photothermal Conversion. <i>ACS Nano</i> , 2019, 13, 12006-12014.	14.6	84
9	Nanoparticle enhanced surface plasmon resonance biosensing: Application of gold nanorods. <i>Optics Express</i> , 2009, 17, 19041.	3.4	82
10	Metaphotonics: An emerging field with opportunities and challenges. <i>Physics Reports</i> , 2015, 594, 1-60.	25.6	76
11	Stimuli-Responsive Reversible Switching of Intersystem Crossing in Pure Organic Material for Smart Photodynamic Therapy. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 11105-11111.	13.8	72
12	Wide dynamic range phase-sensitive surface plasmon resonance biosensor based on measuring the modulation harmonics. <i>Biosensors and Bioelectronics</i> , 2007, 23, 627-632.	10.1	57
13	Scattering and Absorption Cross-Section Spectral Measurements of Gold Nanorods in Water. <i>Journal of Physical Chemistry C</i> , 2010, 114, 2853-2860.	3.1	56
14	Cooperative Coupling of Cyanine and Tictoid Twisted π -Systems to Amplify Organic Chromophore Cubic Nonlinearities. <i>Journal of the American Chemical Society</i> , 2015, 137, 4622-4625.	13.7	51
15	A quantum chemical approach to the design of chiral negative index materials. <i>Optics Express</i> , 2007, 15, 5730.	3.4	50
16	Design and Synthesis of Polymers for Chiral Photonics. <i>Macromolecules</i> , 2013, 46, 7158-7165.	4.8	44
17	Saturation of multiphoton absorption upon strong and ultrafast infrared laser excitation. <i>Journal of Applied Physics</i> , 2007, 101, 083108.	2.5	37
18	Nonlinear Optical Interactions and Relaxation in 2D Layered Transition Metal Dichalcogenides Probed by Optical and Photoacoustic Z-Scan Methods. <i>ACS Photonics</i> , 2020, 7, 3440-3447.	6.6	34

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19	Optical Limiting Properties of Zinc- and Platinum-Based Organometallic Compounds. <i>Journal of Physical Chemistry A</i> , 2004, 108, 7406-7416.	2.5	32
20	General theory for pulse propagation in two-photon active media. <i>Journal of Chemical Physics</i> , 2002, 117, 6214-6220.	3.0	31
21	Manipulating Magneto-Optic Properties of a Chiral Polymer by Doping with Stable Organic Biradicals. <i>Nano Letters</i> , 2016, 16, 5451-5455.	9.1	30
22	Interaction of Structured Light with a Chiral Plasmonic Metasurface: Giant Enhancement of Chiro-Optic Response. <i>ACS Photonics</i> , 2018, 5, 734-740.	6.6	27
23	Synthesis and nanoparticle encapsulation of 3,5-difuranylvinyl-boradiaza-s-indacenes for near-infrared fluorescence imaging. <i>Journal of Materials Chemistry</i> , 2009, 19, 3181.	6.7	25
24	In-situ second harmonic generation by cancer cell targeting ZnO nanocrystals to effect photodynamic action in subcellular space. <i>Biomaterials</i> , 2016, 104, 78-86.	11.4	25
25	Experimental and Quantum Chemical Studies of Cooperative Enhancement of Three-Photon Absorption, Optical Limiting, and Stabilization Behaviors in Multibranching and Dendritic Structures. <i>Journal of Physical Chemistry B</i> , 2006, 110, 14604-14610.	2.6	23
26	Theoretical Simulations of Clamping Levels in Optical Power Limiting. <i>Journal of Physical Chemistry B</i> , 2006, 110, 20912-20916.	2.6	22
27	Optical nanotrapping using cloaking metamaterial. <i>Physical Review E</i> , 2009, 79, 026607.	2.1	22
28	Nonlinear optical absorption and stimulated Mie scattering in metallic nanoparticle suspensions. <i>Journal of Chemical Physics</i> , 2013, 138, 024202.	3.0	22
29	Plasmon-Enhanced Metasurfaces for Controlling Optical Polarization. <i>ACS Photonics</i> , 2014, 1, 507-515.	6.6	21
30	Quantum Chemical Studies of Three-Photon Absorption of Some Stilbenoid Chromophores. <i>Journal of Physical Chemistry A</i> , 2005, 109, 11037-11042.	2.5	20
31	Large-Area, Near-Infrared (IR) Photonic Crystals with Colloidal Gold Nanoparticles Embedding. <i>ACS Applied Materials & Interfaces</i> , 2010, 2, 1242-1246.	8.0	20
32	Toward Single-Organelle Lipidomics in Live Cells. <i>Analytical Chemistry</i> , 2019, 91, 11380-11387.	6.5	20
33	Doubly resonant sum frequency spectroscopy of mixed photochromic isomers on surfaces reveals conformation-specific vibronic effects. <i>Journal of Chemical Physics</i> , 2019, 150, 114704.	3.0	20
34	Ab initio studies of two-photon absorption of some stilbenoid chromophores. <i>Journal of Chemical Physics</i> , 2005, 122, 224309.	3.0	18
35	Novel Pathways for Enhancing Nonlinearity of Organics Utilizing Metal Clusters. <i>Journal of Physical Chemistry A</i> , 2010, 114, 7590-7594.	2.5	17
36	Organic NIR-II Photoacoustic Agent Utilizing Combined Two-Photon and Excited State Absorption at 1064 nm. <i>ACS Photonics</i> , 2020, 7, 3161-3165.	6.6	17

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37	Quantum-Classical Modeling of Nonlinear Pulse Propagation in a Dissolved Two-photon Active Chromophore. <i>Journal of Physical Chemistry B</i> , 2006, 110, 5379-5385.	2.6	16
38	Dramatic Structural Enhancement of Chirality in Photopatternable Nanocomposites of Chiral Poly(fluorene- <i>alt</i> -benzothiadiazole) (PFBT) in Achiral SU-8 Photoresist. <i>Advanced Functional Materials</i> , 2012, 22, 5074-5080.	14.9	16
39	Polarimetric <i>in situ</i> Study of Nonlinear Chiroptic Properties of Chiral Polyfluorene. <i>Advanced Optical Materials</i> , 2013, 1, 763-767.	7.3	16
40	Coupled plasmons induce broadband circular dichroism in patternable films of silver nanoparticles with chiral ligands. <i>Nanoscale</i> , 2013, 5, 10550.	5.6	16
41	Manipulating Nanoscale Interactions in a Polymer Nanocomposite for Chiral Control of Linear and Nonlinear Optical Functions. <i>Advanced Materials</i> , 2014, 26, 1607-1611.	21.0	16
42	Plasmon-enhanced two-photon-induced isomerization for highly-localized light-based actuation of inorganic/organic interfaces. <i>Nanoscale</i> , 2016, 8, 4194-4202.	5.6	16
43	Modeling nanomaterial physical properties: theory and simulation. <i>International Journal of Smart and Nano Materials</i> , 2019, 10, 116-143.	4.2	16
44	Microscopic cascading of second-order molecular nonlinearity: new design principles for enhancing third-order nonlinearity. <i>Optics Express</i> , 2010, 18, 8713.	3.4	14
45	Photothermal-reaction-assisted two-photon lithography of silver nanocrystals capped with thermally cleavable ligands. <i>Applied Physics Letters</i> , 2011, 98, .	3.3	14
46	Extreme local field enhancement by hybrid epsilon-near-zero plasmon mode in thin films of transparent conductive oxides. <i>Optics Letters</i> , 2020, 45, 5744.	3.3	13
47	Free-space excitation of resonant cavities formed from cloaking metamaterial. <i>Journal of Modern Optics</i> , 2009, 56, 523-529.	1.3	12
48	Chiral polymer photonics. <i>Optical Materials Express</i> , 2017, 7, 2432.	3.0	12
49	Radicals from the gas-phase pyrolysis of a lignin model compound: p-coumaryl alcohol. <i>RSC Advances</i> , 2016, 6, 62399-62405.	3.6	11
50	Stimuli-Responsive Reversible Switching of Intersystem Crossing in Pure Organic Material for Smart Photodynamic Therapy. <i>Angewandte Chemie</i> , 2019, 131, 11222-11228.	2.0	11
51	Dynamically controlling local field enhancement at an epsilon-near-zero/dielectric interface via nonlinearities of an epsilon-near-zero medium. <i>Nanophotonics</i> , 2020, 9, 4831-4837.	6.0	10
52	Third- and Fifth-Order Nonlinear Optical Response of a TICT/Stilbene Hybrid Chromophore. <i>Journal of Physical Chemistry C</i> , 2020, 124, 5363-5370.	3.1	9
53	Bidirectional description of amplified spontaneous emission induced by three-photon absorption. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2005, 22, 385.	2.1	8
54	Negative refractivity assisted optical power limiting. <i>Journal of Applied Physics</i> , 2007, 102, 043101.	2.5	8

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55	Laser nanotrapping and manipulation of nanoscale objects using subwavelength apertured plasmonic media. <i>Journal of Applied Physics</i> , 2008, 103, 084316.	2.5	8
56	Interplay between structure and chiral properties of polyfluorene derivatives. <i>Polymer</i> , 2017, 132, 98-105.	3.8	8
57	Control of Spontaneous Emission of CdSe Nanorods in a Multirefringent Triangular Lattice Photonic Crystal. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 1437-1441.	4.6	7
58	A QUANTUM MECHANICAL "ELECTRODYNAMICAL APPROACH TO NONLINEAR PROPERTIES: APPLICATION TO OPTICAL POWER LIMITING WITH PLATINUM-ORGANIC COMPOUNDS. <i>Journal of Nonlinear Optical Physics and Materials</i> , 2007, 16, 157-169.	1.8	3
59	Halo-substituted azobenzenes adsorbed at Ag(111) and Au(111) interfaces: Structures and optical properties. <i>Physical Review B</i> , 2017, 95, .	3.2	2
60	Mechanism of stimulated Mie scattering: Light-induced redistribution of self-assembled nanospheres of two-photon absorbing chromophore. <i>Journal of Chemical Physics</i> , 2019, 151, 104202.	3.0	2
61	Pulsed response theory prediction of ZnO nanocluster polarizabilities: A benchmark study. <i>Chemical Physics Letters</i> , 2021, 778, 138746.	2.6	1
62	Light-Matter Interaction of Strong Laser Pulses in the Micro-, Nano-, and Pico-second Regimes. <i>Materials Research Society Symposia Proceedings</i> , 2007, 1015, 1.	0.1	0