Mikhail Baranov

List of Publications by Year
in descending order

111 papers	1,996 citations	331259 21 h-index	315357 38 g-index
124 all docs	124 docs citations	124 times ranked	1886 citing authors

#	Article	IF	Citations
1	Local fitness landscape of the green fluorescent protein. Nature, 2016, 533, 397-401.	13.7	438
2	Conformationally Locked Chromophores as Models of Excited-State Proton Transfer in Fluorescent Proteins. Journal of the American Chemical Society, 2012, 134, 6025-6032.	6.6	164
3	The Chemical Basis of Fungal Bioluminescence. Angewandte Chemie - International Edition, 2015, 54, 8124-8128.	7.2	89
4	Mechanism and color modulation of fungal bioluminescence. Science Advances, 2017, 3, e1602847.	4.7	74
5	Redâ€Shifted Fluorescent Aminated Derivatives of a Conformationally Locked GFP Chromophore. Chemistry - A European Journal, 2014, 20, 13234-13241.	1.7	68
6	Protein labeling for live cell fluorescence microscopy with a highly photostable renewable signal. Chemical Science, 2017, 8, 7138-7142.	3.7	62
7	A Novel Type of Luciferin from the Siberian Luminous Earthworm Fridericia heliota: Structure Elucidation by Spectral Studies and Total Synthesis. Angewandte Chemie - International Edition, 2014, 53, 5566-5568.	7.2	41
8	Unveiling Structural Motions of a Highly Fluorescent Superphotoacid by Locking and Fluorinating the GFP Chromophore in Solution. Journal of Physical Chemistry Letters, 2017, 8, 5921-5928.	2.1	40
9	Designing redder and brighter fluorophores by synergistic tuning of ground and excited states. Chemical Communications, 2019, 55, 2537-2540.	2.2	40
10	Pyridinium Analogues of Green Fluorescent Protein Chromophore: Fluorogenic Dyes with Large Solvent-Dependent Stokes Shift. Journal of Physical Chemistry Letters, 2018, 9, 1958-1963.	2.1	37
11	Redâ€Shifted Substrates for FAST Fluorogenâ€Activating Protein Based on the GFPâ€Like Chromophores. Chemistry - A European Journal, 2019, 25, 9592-9596.	1.7	37
12	Bioinspired Fluorescent Dyes Based on a Conformationally Locked Chromophore of the Fluorescent Protein Kaede. European Journal of Organic Chemistry, 2015, 2015, 5716-5721.	1.2	36
13	Photoinduced Proton Transfer of GFP-Inspired Fluorescent Superphotoacids: Principles and Design. Journal of Physical Chemistry B, 2019, 123, 3804-3821.	1.2	32
14	Chemical introduction of the green fluorescence: imaging of cysteine cathepsins by an irreversibly locked GFP fluorophore. Organic and Biomolecular Chemistry, 2013, 11, 5913.	1.5	31
15	Novel Mechanism of Bioluminescence: Oxidative Decarboxylation of a Moiety Adjacent to the Light Emitter of Fridericia Luciferin. Angewandte Chemie - International Edition, 2015, 54, 7065-7067.	7.2	31
16	A synthetic approach to GFP chromophore analogs from 3-azidocinnamates. Role of methyl rotors in chromophore photophysics. Chemical Communications, 2013, 49, 5778.	2.2	29
17	Docking-guided identification of protein hosts for GFP chromophore-like ligands. Journal of Materials Chemistry C, 2016, 4, 3036-3040.	2.7	29
18	i-Clamp phenoxazine for the fine tuning of DNA i-motif stability. Nucleic Acids Research, 2018, 46, 2751-2764.	6.5	26

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19	Red fluorescent redox-sensitive biosensor Grx1-roCherry. Redox Biology, 2019, 21, 101071.	3.9	26
20	Synthesis and properties of 5-methylidene-3,5-dihydro-4H-imidazol-4-ones (microreview). Chemistry of Heterocyclic Compounds, 2016, 52, 444-446.	0.6	24
21	NanoFAST: structure-based design of a small fluorogen-activating protein with only 98 amino acids. Chemical Science, 2021, 12, 6719-6725.	3.7	22
22	Antiviral activity spectrum of phenoxazine nucleoside derivatives. Antiviral Research, 2019, 163, 117-124.	1.9	18
23	Color Tuning of Fluorogens for FAST Fluorogenâ€Activating Protein. Chemistry - A European Journal, 2021, 27, 3986-3990.	1.7	18
24	Benzothiazole-based cyanines as fluorescent â€œlight-upâ€•probes for duplex and quadruplex DNA. Biochimie, 2019, 162, 216-228.	1.3	17
25	Imidazol-5-one as an Acceptor in Donorâ€“Acceptor Cyclopropanes: Cycloaddition with Aldehydes. Organic Letters, 2020, 22, 2740-2745.	2.4	16
26	Developing Bright Green Fluorescent Protein (GFP)â€like Fluorogens for Liveâ€Cell Imaging with Nonpolar Proteinâ^'Chromophore Interactions. Chemistry - A European Journal, 2021, 27, 8946-8950.	1.7	16
27	Synthesis of oligonucleotides containing novel G-clamp analogue with C8-tethered group in phenoxazine ring: Implication to qPCR detection of the low-copy Kemerovo virus dsRNA. Bioorganic and Medicinal Chemistry, 2017, 25, 3597-3605.	1.4	15
28	Red-Shifted Aminated Derivatives of GFP Chromophore for Live-Cell Protein Labeling with Lipocalins. International Journal of Molecular Sciences, 2018, 19, 3778.	1.8	15
29	Pyridine analogue of fluorescent protein chromophore: Fluorogenic dye suitable for mitochondria staining. Dyes and Pigments, 2019, 170, 107550.	2.0	15
30	Shedding light on ultrafast ring-twisting pathways of halogenated GFP chromophores from the excited to ground state. Physical Chemistry Chemical Physics, 2021, 23, 14636-14648.	1.3	15
31	Phenoxazine nucleoside derivatives with a multiple activity against RNA and DNA viruses. European Journal of Medicinal Chemistry, 2021, 220, 113467.	2.6	15
32	Ultrafast excited-state proton transfer dynamics in dihalogenated non-fluorescent and fluorescent GFP chromophores. Journal of Chemical Physics, 2020, 152, 021101.	1.2	14
33	Novel condensations of nitroacetic esters with aromatic aldehydes leading to 5-hydroxy-1,2-oxazin-6-ones. Tetrahedron Letters, 2013, 54, 628-629.	0.7	13
34	The Role of Nâ€Substituents in Radiationless Deactivation of Aminated Derivatives of a Locked GFP Chromophore. European Journal of Organic Chemistry, 2017, 2017, 5219-5224.	1.2	13
35	Silver(I)-mediated base pairing in parallel-stranded DNA involving the luminescent cytosine analog 1,3-diaza-2-oxophenoxazine. Journal of Biological Inorganic Chemistry, 2019, 24, 693-702.	1.1	13
36	Nitroacetic Esters in the Regioselective Synthesis of Isoxazole-3,5-dicarboxylic Acid Derivatives. Journal of Organic Chemistry, 2019, 84, 15417-15428.	1.7	13

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37	Conformationally locked chromophores of CFP and Sirius protein. Tetrahedron Letters, 2016, 57, 3043-3045.	0.7	12
38	A key enzyme of animal steroidogenesis can function in plants enhancing their immunity and accelerating the processes of growth and development. BMC Plant Biology, 2017, 17, 189.	1.6	12
39	A Novel Dialkylamino GFP Chromophore as an Environment-Polarity Sensor Reveals the Role of Twisted Intramolecular Charge Transfer. Chemosensors, 2021, 9, 234.	1.8	12
40	Efficient silica synthesis from tetra(glycerol)orthosilicate with cathepsin- and silicatein-like proteins. Scientific Reports, 2018, 8, 16759.	1.6	11
41	Azidoacetic Acid Amides in the Synthesis of Substituted Arylideneâ€1â€Hâ€imidazolâ€5â€(4H)â€ones. ChemistrySelect, 2018, 3, 8593-8596.	0.7	11
42	Imidazol-5-ones as a substrate for [1,5]-hydride shift triggered cyclization. New Journal of Chemistry, 2021, 45, 1805-1808.	1.4	11
43	Copper-Catalyzed [1,3]-Dipolar Cycloaddition for the Synthesis of Macrocycles Containing Acyclic, Aromatic and Steroidal Moieties. Synthesis, 2009, 2009, 2605-2615.	1.2	10
44	A General Mechanism of Green-to-Red Photoconversions of GFP. Frontiers in Molecular Biosciences, 2020, 7, 176.	1.6	10
45	The Chemical Basis of Fungal Bioluminescence. Angewandte Chemie, 2015, 127, 8242-8246.	1.6	9
46	Novel Peptide Chemistry in Terrestrial Animals: Natural Luciferin Analogues from the Bioluminescent Earthworm Fridericia heliota. Chemistry - A European Journal, 2015, 21, 3942-3947.	1.7	9
47	pH-Sensitive fluorophores from locked GFP chromophores by a non-alternant analogue of the photochemical meta effect. Physical Chemistry Chemical Physics, 2016, 18, 26703-26711.	1.3	9
48	Live-cell nanoscopy with spontaneous blinking of conventional green fluorescent proteins. Biochemical and Biophysical Research Communications, 2020, 522, 852-854.	1.0	9
49	Structure-Based Rational Design of Two Enhanced Bacterial Lipocalin Blc Tags for Protein-PAINT Super-resolution Microscopy. ACS Chemical Biology, 2020, 15, 2456-2465.	1.6	9
50	Efficient Synthetic Approach to Fluorescent Oxazole-4-carboxylate Derivatives. Synthetic Communications, 2013, 43, 2337-2342.	1.1	8
51	Nambiscalarane, a novel sesterterpenoid comprising a furan ring, and other secondary metabolites from bioluminescent fungus Neonothopanus nambi. Mendeleev Communications, 2016, 26, 191-192.	0.6	8
52	Excited-state locked amino analogues of the green fluorescent protein chromophore with a giant Stokes shift. RSC Advances, 2019, 9, 38730-38734.	1.7	8
53	Phenoxazine-based scaffold for designing G4-interacting agents. Organic and Biomolecular Chemistry, 2020, 18, 6147-6154.	1.5	8
54	Design of red-shifted and environment-sensitive fluorogens based on GFP chromophore core. Dyes and Pigments, 2020, 177, 108258.	2.0	8

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55	Environment-sensitive fluorogens based on a GFP chromophore structural motif. Dyes and Pigments, 2022, 198, 110033.	2.0	8
56	A Novel Type of Luciferin from the Siberian Luminous Earthworm Fridericia heliota: Structure Elucidation by Spectral Studies and Total Synthesis. Angewandte Chemie, 2014, 126, 5672-5674.	1.6	7
57	Homophtalonitrile for Multicomponent Reactions: Syntheses and Optical Properties of oâ€Cyanophenylâ€or Indolâ€3â€ylâ€Substituted Chromeno[2,3â€c]isoquinolinâ€5â€Amines. ChemistryOpen, 2019, 8, 23-30.	0.9	7
58	Silver(I)-mediated base pairing in DNA involving the artificial nucleobase 7,8-dihydro-8-oxo-1,N6-ethenoadenine. Journal of Inorganic Biochemistry, 2021, 219, 111369.	1.5	7
59	Probing GFP Chromophore Analogs as Anti-HIV Agents Targeting LTR-III G-Quadruplex. Biomolecules, 2021, 11, 1409.	1.8	7
60	Fluorescence Modulation of ortho-Green Fluorescent Protein Chromophores Following Ultrafast Proton Transfer in Solution. Journal of Physical Chemistry B, 2022, 126, 5081-5093.	1.2	7
61	Ring-expanding rearrangement of 2-acyl-5-arylidene-3,5-dihydro-4H-imidazol-4-ones in synthesis of flutimide analogs. Tetrahedron, 2014, 70, 3714-3719.	1.0	6
62	Yellow and Orange Fluorescent Proteins with Tryptophan-based Chromophores. ACS Chemical Biology, 2017, 12, 1867-1873.	1.6	6
63	A water-soluble precursor for efficient silica polymerization by silicateins. Biochemical and Biophysical Research Communications, 2018, 495, 2066-2070.	1.0	6
64	An effective method for the synthesis of 1,5-disubstituted 4-halo-1H-1,2,3-triazoles from magnesium acetylides. Chemistry of Heterocyclic Compounds, 2018, 54, 755-757.	0.6	5
65	Derivatives of Azidocinnamic Acid in the Synthesis of 2-Amino-4-Arylidene-1H-Imidazol-5(4H)-Ones. Chemistry of Heterocyclic Compounds, 2018, 54, 625-629.	0.6	5
66	Naphthalene derivatives of a conformationally locked GFP chromophore with large stokes shifts. Tetrahedron Letters, 2019, 60, 150963.	0.7	5
67	DNA i-Motifs With Guanidino-i-Clamp Residues: The Counterplay Between Kinetics and Thermodynamics and Implications for the Design of pH Sensors. Computational and Structural Biotechnology Journal, 2019, 17, 527-536.	1.9	5
68	Enamineâ€“azide [2+3]-cycloaddition as a method to introduce functional groups into fluorescent dyes. Tetrahedron Letters, 2019, 60, 456-459.	0.7	5
69	Imidazolone-activated donor-acceptor cyclopropanes with a peripheral stereocenter. A study on stereoselectivity of cycloaddition with aldehydes. Chemistry of Heterocyclic Compounds, 2020, 56, 1092-1096.	0.6	5
70	Synthesis of 2-arylideneimidazo[1,2-a]pyrazine-3,6,8(2H,5H,7H)-triones as a result of oxidation of 4-arylidene-2-methyl-1H-imidazol-5(4H)-ones with selenium dioxide. Chemistry of Heterocyclic Compounds, 2020, 56, 116-119.	0.6	5
71	Phenoxazine pseudonucleotides in DNA i-motifs allow precise profiling of small molecule binders by fluorescence monitoring. Analyst, The, 2021, 146, 4436-4440.	1.7	5
72	Xanthates as Thiol Surrogates for Nucleophilic Substitution with Aryl Halides. European Journal of Organic Chemistry, 2021, 2021, 4350-4357.	1.2	5

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73	Towards a generic prototyping approach for therapeutically-relevant peptides and proteins in a cell-free translation system. Nature Communications, 2022, 13, 260.	5.8	5
74	BF‹sub›3‹/sub› Mediated [1,5]â€Hydride Shift Triggered Cyclization: Thioethers Join the Game. European Journal of Organic Chemistry, 2022, 2022, .	1.2	5
75	Structure-based rational design of an enhanced fluorogen-activating protein for fluorogens based on GFP chromophore. Communications Biology, 2022, 5, .	2.0	5
76	Total synthesis of AsLn2 â€“ a luciferin analogue from the Siberian bioluminescent earthworm Fridericia heliota. Mendeleev Communications, 2015, 25, 99-100.	0.6	4
77	Conformationally locked GFP chromophore derivatives as potential fluorescent sensors. Russian Journal of Bioorganic Chemistry, 2016, 42, 453-456.	0.3	4
78	Synthesis of spiro[imidazole-4,3'-quinolin]ones from [2-(dimethylamino)benzylidene]-2-(methylsulfanyl)imidazolones. Chemistry of Heterocyclic Compounds, 2021, 57, 695-699.	0.6	4
79	In-depth characterization of ubiquitin turnover in mammalian cells by fluorescence tracking. Cell Chemical Biology, 2021, 28, 1192-1205.e9.	2.5	4
80	Excitedâ€State Dynamics of a ‹i›meta‹/i›â€Dimethylamino Locked GFP Chromophore as a Fluorescence Turnâ€on Water Sensor‹sup›â€‹‹/sup›. Photochemistry and Photobiology, 2022, 98, 311-324.	1.3	4
81	Nucleophilic ring opening of imidazolone activated donorâ€“acceptor cyclopropanes with alcohols. Mendeleev Communications, 2021, 31, 657-658.	0.6	4
82	Novel Mechanism of Bioluminescence: Oxidative Decarboxylation of a Moiety Adjacent to the Light Emitter of ‹i›Fridericia‹/i› Luciferin. Angewandte Chemie, 2015, 127, 7171-7173.	1.6	3
83	Synthesis of 2-arylidene-6,7-dihydroimidazo[1,2-a]pyrazine-3,8(2H,5H)-diones by oxidation of 4-arylidene-2-methyl-1H-imidazol-5(4H)-ones with selenium dioxide. Chemistry of Heterocyclic Compounds, 2017, 53, 930-933.	0.6	3
84	The Sonogashira reaction as a new method for the modification of borated analogues of the green fluorescence protein chromophore. Russian Journal of Bioorganic Chemistry, 2017, 43, 612-615.	0.3	3
85	(3+2) Cycloaddition of N-benzylazomethine methylide with 4-arylidene-1H-imidazol-5(4H)-ones. Chemistry of Heterocyclic Compounds, 2020, 56, 108-111.	0.6	3
86	1,5-Hydride-Shift-Triggered Cyclization for the Synthesis of Unsymmetric Julolidines. Synthesis, 0, , .	1.2	3
87	‹i›O‹/i›â€Alkylation Redirected Condensation of 5â€Hydroxyâ€1,2â€oxazineâ€6â€ones with Primary Amines for Synthesis of 5â€Hydroxyiminopyridineâ€2,6(1‹i›H‹/i›,3‹i›H‹/i›)â€diones. ChemistrySelect, 2021, 6, 8938-8941.	0.7	3
88	Chemodivergent Spirocyclization of 2â€Secâ€Aminobenzilidene Imidazolones: Lewis Versus BrÃ¸nsted Acids Catalysis. Advanced Synthesis and Catalysis, 2022, 364, 1587-1595.	2.1	3
89	Separation of the 5- and 6-Carboxy Regioisomers of ROX and JOE Dyes with Examples of N-(3-Azidopropyl)amide Synthesis. SynOpen, 2018, 02, 0240-0245.	0.8	2
90	Synthesis of spirocyclic pyrrolidines from cyclopentylideneacetic acid derivatives. Chemistry of Heterocyclic Compounds, 2019, 55, 676-678.	0.6	2

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91	Oligonucleotide Primers with G8AE-Clamp Modifications for RT-qPCR Detection of the Low-Copy dsRNA. Methods in Molecular Biology, 2019, 1973, 281-297.	0.4	2
92	Synthesis of 5-(aminomethylidene)imidazol-4-ones by using N,N-dialkylformamide acetals. Chemistry of Heterocyclic Compounds, 2020, 56, 1097-1099.	0.6	2
93	Synthesis of 6H-1,2-oxazin-6-ones (microreview). Chemistry of Heterocyclic Compounds, 2020, 56, 1280-1282.	0.6	2
94	Convenient and Versatile Synthetic Protocol for Arylideneâ€1 Hâ€imidazolâ€5(4H)â€ones. ChemistrySelect, 2020, 5, 7000-7003.	0.7	2
95	Evaluation of the role that photoacid excited-state acidity has on photovoltage and photocurrent of dye-sensitized ion-exchange membranes. , 2019, , .		2
96	Total Synthesis of Elmenols A and B and Related Rearranged Angucyclinones. ChemistrySelect, 2021, 6, 11775-11778.	0.7	2
97	Designing Red-Shifted Molecular Emitters Based on the Annulated Locked GFP Chromophore Derivatives. International Journal of Molecular Sciences, 2021, 22, 13645.	1.8	2
98	Novel Macrocyclic Bile Acid Derivatives; Selective and Easy Binding of Two Cholic Acid Moieties at the 3- and 3â€²-Positions. Synthesis, 2009, 2009, 4175.	1.2	1
99	Unusual transformations of anthranilic acid imidazolides. Chemistry of Heterocyclic Compounds, 2012, 48, 1108-1110.	0.6	1
100	Reversible condensation of 4-arylidene-1,2-dimethyl-1H-imidazol-5(4H)-ones with aromatic acyl chlorides. Chemistry of Heterocyclic Compounds, 2015, 51, 944-947.	0.6	1
101	Modern approaches to the synthesis of 3-(acylamino)-and 3-(carbamoylamino)benzofuran-2(3H)-ones (microreview). Chemistry of Heterocyclic Compounds, 2020, 56, 1274-1276.	0.6	1
102	Synthesis of methylsulfanyl analogs of Kaede protein chromophore. Chemistry of Heterocyclic Compounds, 2020, 56, 399-402.	0.6	1
103	Short Duplex Module Coupled to G-Quadruplexes Increases Fluorescence of Synthetic GFP Chromophore Analogues. Sensors, 2020, 20, 915.	2.1	1
104	Snake Toxins Labeled by Green Fluorescent Protein or Its Synthetic Chromophore are New Probes for Nicotinic acetylcholine Receptors. Frontiers in Molecular Biosciences, 2021, 8, 753283.	1.6	1
105	Synthesis of julolidine derivatives via SnCl4-promoted spirocyclization of (1-alkyltetrahydroquinolin-8-yl)methylidene-1H-imidazol-5(4H)-ones. Chemistry of Heterocyclic Compounds, 2022, 58, 255-259.	0.6	1
106	Titelbild: The Chemical Basis of Fungal Bioluminescence (Angew. Chem. 28/2015). Angewandte Chemie, 2015, 127, 8113-8113.	1.6	0
107	Frontispiece: Novel Peptide Chemistry in Terrestrial Animals: Natural Luciferin Analogues from the Bioluminescent EarthwormFridericia heliota. Chemistry - A European Journal, 2015, 21, n/a-n/a.	1.7	0
108	Synthesis of Panal Terpenoid Core. Synlett, 2017, 28, 583-588.	1.0	0

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109	Computational redesign of a fluorogen activating protein with Rosetta. PLoS Computational Biology, 2021, 17, e1009555.	1.5	0
110	Selective Synthesis of 3â€Alkylâ€2â€thiohydantoins from Azidoacetamides and Carbon Disulfide. ChemistrySelect, 2022, 7, .	0.7	0
111	Add and Go: FRET Acceptor for Live-Cell Measurements Modulated by Externally Provided Ligand. International Journal of Molecular Sciences, 2022, 23, 4396.	1.8	0