Hui-wang Ai

List of Publications by Year
in descending order

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53 papers	3,443 citations	218677 26 h-index	161849 54 g-index
61 all docs	61 docs citations	61 times ranked	4772 citing authors

#	Article	IF	Citations
1	Engineering and exploiting synthetic allostery of NanoLuc luciferase. Nature Communications, 2022, 13, 789.	12.8	21
2	Improved Red Fluorescent Redox Indicators for Monitoring Cytosolic and Mitochondrial Thioredoxin Redox Dynamics. Biochemistry, 2022, 61, 377-384.	2.5	5
3	Ratiometric Imaging of Mitochondrial Hydrogen Peroxide in AÎ²₄₂-Mediated Neurotoxicity. ACS Sensors, 2022, 7, 722-729.	7.8	2
4	A luciferase prosubstrate and a red bioluminescent calcium indicator for imaging neuronal activity in mice. Nature Communications, 2022, 13, .	12.8	13
5	A high-performance genetically encoded fluorescent biosensor for imaging physiological peroxynitrite. Cell Chemical Biology, 2021, 28, 1542-1553.e5.	5.2	14
6	Genetically Encoded Fluorescent Redox Indicators for Unveiling Redox Signaling and Oxidative Toxicity. Chemical Research in Toxicology, 2021, 34, 1826-1845.	3.3	9
7	A Smartphone-Fluidic Digital Imaging Analysis System for Pancreatic Islet Mass Quantification. Frontiers in Bioengineering and Biotechnology, 2021, 9, 692686.	4.1	4
8	Genetically Encoded Green Fluorescent Biosensors for Monitoring UDP-GlcNAc in Live Cells. ACS Central Science, 2021, 7, 1763-1770.	11.3	7
9	Complexities of the chemogenetic toolkit: Differential mDAAO activation by d-amino substrates and subcellular targeting. Free Radical Biology and Medicine, 2021, 177, 132-142.	2.9	8
10	Circularly Permuted Far-Red Fluorescent Proteins. Biosensors, 2021, 11, 438.	4.7	9
11	A general strategy to red-shift green fluorescent protein-based biosensors. Nature Chemical Biology, 2020, 16, 1434-1439.	8.0	20
12	Genetically Encoded, Photostable Indicators to Image Dynamic Zn²⁺ Secretion of Pancreatic Islets. Analytical Chemistry, 2019, 91, 12212-12219.	6.5	20
13	Enabling technologies in super-resolution fluorescence microscopy: reporters, labeling, and methods of measurement. Current Opinion in Structural Biology, 2019, 58, 224-232.	5.7	15
14	A Genetically Encoded, Ratiometric Fluorescent Biosensor for Hydrogen Sulfide. ACS Sensors, 2019, 4, 1626-1632.	7.8	38
15	Molecular Tools to Generate Reactive Oxygen Species in Biological Systems. Bioconjugate Chemistry, 2019, 30, 1297-1303.	3.6	26
16	ATP-Independent Bioluminescent Reporter Variants To Improve in Vivo Imaging. ACS Chemical Biology, 2019, 14, 959-965.	3.4	50
17	Development and Applications of Bioluminescent and Chemiluminescent Reporters and Biosensors. Annual Review of Analytical Chemistry, 2019, 12, 129-150.	5.4	124
18	Identification of Factors Complicating Bioluminescence Imaging. Biochemistry, 2019, 58, 1689-1697.	2.5	28

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19	An Intramolecular Interaction of UHRF1 Reveals Dual Control for Its Histone Association. Structure, 2018, 26, 304-311.e3.	3.3	32
20	A Sensitive Near-Infrared Fluorescent Sensor for Mitochondrial Hydrogen Sulfide. ACS Sensors, 2018, 3, 992-997.	7.8	57
21	Monitoring thioredoxin redox with a genetically encoded red fluorescent biosensor. Nature Chemical Biology, 2017, 13, 1045-1052.	8.0	61
22	Photocontrol of the Src Kinase in Mammalian Cells with a Photocaged Intein. Methods in Molecular Biology, 2017, 1495, 217-226.	0.9	1
23	Illuminating Brain Activities with Fluorescent Protein-Based Biosensors. Chemosensors, 2017, 5, 32.	3.6	19
24	Red-shifted luciferaseâ€“luciferin pairs for enhanced bioluminescence imaging. Nature Methods, 2017, 14, 971-974.	19.0	141
25	A Genetically Encoded FRET Sensor for Hypoxia and Prolyl Hydroxylases. ACS Chemical Biology, 2016, 11, 2492-2498.	3.4	15
26	The Nâ€“B Interaction through a Water Bridge: Understanding the Chemoselectivity of a Fluorescent Protein Based Probe for Peroxynitrite. Journal of the American Chemical Society, 2016, 138, 4900-4907.	13.7	59
27	Single Fluorescent Protein-Based Indicators for Zinc Ion (Zn²⁺). Analytical Chemistry, 2016, 88, 9029-9036.	6.5	45
28	Development of redox-sensitive red fluorescent proteins for imaging redox dynamics in cellular compartments. Analytical and Bioanalytical Chemistry, 2016, 408, 2901-2911.	3.7	16
29	A membrane-activatable near-infrared fluorescent probe with ultra-photostability for mitochondrial membrane potentials. Analyst, The, 2016, 141, 3679-3685.	3.5	9
30	Expanding the Genetic Code for a Dinitrophenyl Hapten. ChemBioChem, 2015, 16, 2007-2010.	2.6	16
31	Monitoring Redox Dynamics in Living Cells with a Redox-Sensitive Red Fluorescent Protein. Analytical Chemistry, 2015, 87, 2802-2810.	6.5	64
32	Light Activation of Protein Splicing with a Photocaged Fast Intein. Journal of the American Chemical Society, 2015, 137, 2155-2158.	13.7	73
33	Study of the Binding Energies between Unnatural Amino Acids and Engineered Orthogonal Tyrosyl-tRNA Synthetases. Scientific Reports, 2015, 5, 12632.	3.3	16
34	Fluorescent-protein-based probes: general principles and practices. Analytical and Bioanalytical Chemistry, 2015, 407, 9-15.	3.7	22
35	Fluorescent Sensors for Biological Applications. Sensors, 2014, 14, 17829-17831.	3.8	15
36	Engineering and characterizing monomeric fluorescent proteins for live-cell imaging applications. Nature Protocols, 2014, 9, 910-928.	12.0	51

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37	Evolution of Iron(II)â€Finger Peptides by Using a Bipyridyl Amino Acid. ChemBioChem, 2014, 15, 822-825.	2.6	35
38	A Highly Responsive and Selective Fluorescent Probe for Imaging Physiological Hydrogen Sulfide. Biochemistry, 2014, 53, 5966-5974.	2.5	57
39	Genetically Encoded Fluorescent Probe for the Selective Detection of Peroxynitrite. Journal of the American Chemical Society, 2013, 135, 14940-14943.	13.7	148
40	Genetically Encoded Fluorescent Redox Probes. Sensors, 2013, 13, 15422-15433.	3.8	26
41	Efficient viral delivery system for unnatural amino acid mutagenesis in mammalian cells. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 11803-11808.	7.1	103
42	Reaction-Based Genetically Encoded Fluorescent Hydrogen Sulfide Sensors. Journal of the American Chemical Society, 2012, 134, 9589-9592.	13.7	305
43	Biochemical analysis with the expanded genetic lexicon. Analytical and Bioanalytical Chemistry, 2012, 403, 2089-2102.	3.7	37
44	FÃ¶rster Resonance Energy Transfer-Based Biosensors for Multiparameter Ratiometric Imaging of Ca²⁺ Dynamics and Caspase-3 Activity in Single Cells. Analytical Chemistry, 2011, 83, 9687-9693.	6.5	52
45	Probing Proteinâ€“Protein Interactions with a Genetically Encoded Photoâ€crosslinking Amino Acid. ChemBioChem, 2011, 12, 1854-1857.	2.6	105
46	Red Fluorescent Protein pH Biosensor to Detect Concentrative Nucleoside Transport. Journal of Biological Chemistry, 2009, 284, 20499-20511.	3.4	61
47	Hue-shifted monomeric variants of Clavulariacyan fluorescent protein: identification of the molecular determinants of color and applications in fluorescence imaging. BMC Biology, 2008, 6, 13.	3.8	127
48	Fluorescent protein FRET pairs for ratiometric imaging of dual biosensors. Nature Methods, 2008, 5, 401-403.	19.0	320
49	Structural basis for reversible photobleaching of a green fluorescent protein homologue. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 6672-6677.	7.1	213
50	Exploration of New Chromophore Structures Leads to the Identification of Improved Blue Fluorescent Proteins. Biochemistry, 2007, 46, 5904-5910.	2.5	281
51	Identification of Sites Within a Monomeric Red Fluorescent Protein that Tolerate Peptide Insertion and Testing of Corresponding Circular Permutations. Photochemistry and Photobiology, 2007, 84, 071018085748006-???.	2.5	21
52	Directed evolution of a monomeric, bright and photostable version of Clavularia cyan fluorescent protein: structural characterization and applications in fluorescence imaging. Biochemical Journal, 2006, 400, 531-540.	3.7	401
53	Peptide sequencing through N-terminal phosphonylation and electrospray ionization mass spectrometry. Journal of Mass Spectrometry, 2005, 40, 772-776.	1.6	12