

Toru Komatsu

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

97 papers	4,445 citations	37 h-index	65 g-index
106 ext. papers	5,016 ext. citations	8.8 avg, IF	5.19 L-index

#	Paper	IF	Citations
97	Discovery of an F-actin-binding small molecule serving as a fluorescent probe and a scaffold for functional probes. <i>Science Advances</i> , 2021 , 7, eabg8585	14.3	1
96	Establishment of live-cell-based coupled assay system for identification of compounds to modulate metabolic activities of cells. <i>Cell Reports</i> , 2021 , 36, 109311	10.6	0
95	Chemical toolbox for live-biochemistry to understand enzymatic functions in living systems. <i>Journal of Biochemistry</i> , 2020 , 167, 139-149	3.1	0
94	A Fluorescent Probe for Rapid, High-Contrast Visualization of Folate-Receptor-Expressing Tumors In Vivo. <i>Angewandte Chemie</i> , 2020 , 132, 6071-6076	3.6	0
93	A Fluorescent Probe for Rapid, High-Contrast Visualization of Folate-Receptor-Expressing Tumors In Vivo. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 6015-6020	16.4	19
92	Multiplexed single-molecule enzyme activity analysis for counting disease-related proteins in biological samples. <i>Science Advances</i> , 2020 , 6, eaay0888	14.3	14
91	Metabolic-Pathway-Oriented Screening Targeting -Adenosyl-l-methionine Reveals the Epigenetic Remodeling Activities of Naturally Occurring Catechols. <i>Journal of the American Chemical Society</i> , 2020 , 142, 21-26	16.4	1
90	Rational Design of a Near-infrared Fluorescence Probe for Ca Based on Phosphorus-substituted Rhodamines Utilizing Photoinduced Electron Transfer. <i>Chemistry - an Asian Journal</i> , 2020 , 15, 524-530	4.5	9
89	A cytosolically localized far-red to near-infrared rhodamine-based fluorescent probe for calcium ions. <i>Analyst, The</i> , 2020 , 145, 7736-7740	5	7
88	Covalent Self-Labeling of Tagged Proteins with Chemical Fluorescent Dyes in BY-2 Cells and Arabidopsis Seedlings. <i>Plant Cell</i> , 2020 , 32, 3081-3094	11.6	11
87	Design of spontaneously blinking fluorophores for live-cell super-resolution imaging based on quantum-chemical calculations. <i>Chemical Communications</i> , 2020 , 56, 13173-13176	5.8	8
86	Antibody Clicking as a Strategy to Modify Antibody Functionalities on the Surface of Targeted Cells. <i>Journal of the American Chemical Society</i> , 2020 , 142, 15644-15648	16.4	6
85	Separation-Based Enzymomics Assay for the Discovery of Altered Peptide-Metabolizing Enzymatic Activities in Biosamples. <i>Analytical Chemistry</i> , 2019 , 91, 11497-11501	7.8	2
84	Development of ratiometric carbohydrate sensor based on boron dipyrromethene (BODIPY) scaffold. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2019 , 29, 126684	2.9	6
83	Design and Synthesis of an Activatable Photoacoustic Probe for Hypochlorous Acid. <i>Analytical Chemistry</i> , 2019 , 91, 9086-9092	7.8	21
82	Red Fluorescence Probe Targeted to Dipeptidylpeptidase-IV for Highly Sensitive Detection of Esophageal Cancer. <i>Bioconjugate Chemistry</i> , 2019 , 30, 1055-1060	6.3	14
81	Development and validation of an improved diced electrophoresis gel assay cutter-plate system for enzymomics studies. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2019 , 1867, 82-87	4	6

80	Design strategy for germanium-rhodamine based pH-activatable near-infrared fluorescence probes suitable for biological applications. <i>Communications Chemistry</i> , 2019 , 2,	6.3	15
79	Development of a Novel Intraocular-Pressure-Lowering Therapy Targeting ATX. <i>Biological and Pharmaceutical Bulletin</i> , 2019 , 42, 1926-1935	2.3	7
78	Development of a platform for activatable fluorescent substrates of glucose transporters (GLUTs). <i>Bioorganic and Medicinal Chemistry</i> , 2019 , 27, 2122-2126	3.4	0
77	Development of a Series of Practical Fluorescent Chemical Tools To Measure pH Values in Living Samples. <i>Journal of the American Chemical Society</i> , 2018 , 140, 5925-5933	16.4	88
76	Establishment of Molecular Design Strategy To Obtain Activatable Fluorescent Probes for Carboxypeptidases. <i>Journal of the American Chemical Society</i> , 2018 , 140, 1767-1773	16.4	41
75	A protein-coupled fluorescent probe for organelle-specific imaging of Na ⁺ . <i>Sensors and Actuators B: Chemical</i> , 2018 , 265, 575-581	8.5	6
74	High-throughput single-molecule bioassay using micro-reactor arrays with a concentration gradient of target molecules. <i>Lab on A Chip</i> , 2018 , 18, 2849-2853	7.2	10
73	Rapid detection of metastatic lymph nodes of colorectal cancer with a gamma-glutamyl transpeptidase-activatable fluorescence probe. <i>Scientific Reports</i> , 2018 , 8, 17781	4.9	10
72	Red-Shifted Fluorogenic Substrate for Detection of lacZ-Positive Cells in Living Tissue with Single-Cell Resolution. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 15702-15706	16.4	21
71	Synthesis of unsymmetrical Si-rhodamine fluorophores and application to a far-red to near-infrared fluorescence probe for hypoxia. <i>Chemical Communications</i> , 2018 , 54, 6939-6942	5.8	23
70	Discovery and Mechanistic Characterization of Selective Inhibitors of HS-producing Enzyme: 3-Mercaptopyruvate Sulfurtransferase (3MST) Targeting Active-site Cysteine Persulfide. <i>Scientific Reports</i> , 2017 , 7, 40227	4.9	51
69	Development of an Azoreductase-based Reporter System with Synthetic Fluorogenic Substrates. <i>ACS Chemical Biology</i> , 2017 , 12, 558-563	4.9	28
68	Enzyme-Loaded Polyion Complex Vesicles as in Vivo Nanoreactors Working Sustainably under the Blood Circulation: Characterization and Functional Evaluation. <i>Biomacromolecules</i> , 2017 , 18, 1189-1196	6.9	48
67	Discovery of Cell-Type-Specific and Disease-Related Enzymatic Activity Changes via Global Evaluation of Peptide Metabolism. <i>Journal of the American Chemical Society</i> , 2017 , 139, 3465-3472	16.4	14
66	An Activatable Photosensitizer Targeted to γ -Glutamyltranspeptidase. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 10418-10422	16.4	95
65	Fluorescence detection of serum albumin with a turnover-based sensor utilizing Kemp elimination reaction. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2017 , 27, 3464-3467	2.9	10
64	Meeting Proceedings ICBS2016-Translating the Power of Chemical Biology to Clinical Advances. <i>ACS Chemical Biology</i> , 2017 , 12, 869-877	4.9	1
63	Development of Chemical Tools to Monitor and Control Isoaspartyl Peptide Methyltransferase Activity. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 153-157	16.4	11

62	Development of Chemical Tools to Monitor and Control Isoaspartyl Peptide Methyltransferase Activity. <i>Angewandte Chemie</i> , 2017 , 129, 159-163	3.6	1
61	Development of a reversible fluorescent probe for reactive sulfur species, sulfane sulfur, and its biological application. <i>Chemical Communications</i> , 2017 , 53, 1064-1067	5.8	55
60	Development of an Azo-Based Photosensitizer Activated under Mild Hypoxia for Photodynamic Therapy. <i>Journal of the American Chemical Society</i> , 2017 , 139, 13713-13719	16.4	142
59	Synthesis of practical red fluorescent probe for cytoplasmic calcium ions with greatly improved cell-membrane permeability. <i>Data in Brief</i> , 2017 , 12, 351-357	1.2	1
58	Potential of Enzymomics Methodologies to Characterize Disease-Related Protein Functions. <i>Chemical and Pharmaceutical Bulletin</i> , 2017 , 65, 605-610	1.9	3
57	Development of practical red fluorescent probe for cytoplasmic calcium ions with greatly improved cell-membrane permeability. <i>Cell Calcium</i> , 2016 , 60, 256-65	4	20
56	Identification of Lung Inflammation-Related Elevation of Acylamino Acid Releasing Enzyme (APEH) Activity Using an Enzymomics Approach. <i>Chemical and Pharmaceutical Bulletin</i> , 2016 , 64, 1533-1538	1.9	5
55	Rapid and sensitive detection of early esophageal squamous cell carcinoma with fluorescence probe targeting dipeptidylpeptidase IV. <i>Scientific Reports</i> , 2016 , 6, 26399	4.9	47
54	Unexpected Photo-instability of 2,6-Sulfonamide-Substituted BODIPYs and Its Application to Caged GABA. <i>ChemBioChem</i> , 2016 , 17, 1233-40	3.8	12
53	Protein-Coupled Fluorescent Probe To Visualize Potassium Ion Transition on Cellular Membranes. <i>Analytical Chemistry</i> , 2016 , 88, 2693-700	7.8	45
52	Toward total synthesis of cell function: Reconstituting cell dynamics with synthetic biology. <i>Science Signaling</i> , 2016 , 9, re1	8.8	15
51	Discovery of a pyruvylated peptide-metabolizing enzyme using a fluorescent substrate-based protein discovery technique. <i>Chemical Communications</i> , 2016 , 52, 4377-80	5.8	7
50	Detection of NAD(P)H-dependent enzyme activity by time-domain ratiometry of terbium luminescence. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2016 , 26, 2314-7	2.9	5
49	Analysis of chemical equilibrium of silicon-substituted fluorescein and its application to develop a scaffold for red fluorescent probes. <i>Analytical Chemistry</i> , 2015 , 87, 9061-9	7.8	41
48	Detection of NAD(P)H-dependent enzyme activity with dynamic luminescence quenching of terbium complexes. <i>Chemical Communications</i> , 2015 , 51, 8319-22	5.8	20
47	Development of a series of near-infrared dark quenchers based on Si-rhodamines and their application to fluorescent probes. <i>Journal of the American Chemical Society</i> , 2015 , 137, 4759-65	16.4	76
46	New class of bioluminogenic probe based on bioluminescent enzyme-induced electron transfer: BioLeT. <i>Journal of the American Chemical Society</i> , 2015 , 137, 4010-3	16.4	55
45	Artificial Ligands of Streptavidin (ALiS): Discovery, Characterization, and Application for Reversible Control of Intracellular Protein Transport. <i>Journal of the American Chemical Society</i> , 2015 , 137, 10464-7	16.4	19

44	Identification of tissue-restricted bioreaction suitable for in vivo targeting by fluorescent substrate library-based enzyme discovery. <i>Journal of the American Chemical Society</i> , 2015 , 137, 12187-90	16.4	17
43	Gliotoxin suppresses NF- κ B activation by selectively inhibiting linear ubiquitin chain assembly complex (LUBAC). <i>ACS Chemical Biology</i> , 2015 , 10, 675-81	4.9	58
42	Evaluation of enzymatic activities in living systems with small-molecular fluorescent substrate probes. <i>Analytical Sciences</i> , 2015 , 31, 257-65	1.7	34
41	Development of a Sensitive Bioluminogenic Probe for Imaging Highly Reactive Oxygen Species in Living Rats. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 14768-71	16.4	45
40	Development of a Sensitive Bioluminogenic Probe for Imaging Highly Reactive Oxygen Species in Living Rats. <i>Angewandte Chemie</i> , 2015 , 127, 14981-14984	3.6	10
39	Diced electrophoresis gel assay for screening enzymes with specified activities 2015 , 59, 115-117		
38	Fluorometric assay of integrin activity with a small-molecular probe that senses the binding site microenvironment. <i>Chemical Communications</i> , 2014 , 50, 15894-6	5.8	5
37	A design strategy for small molecule-based targeted MRI contrast agents: their application for detection of atherosclerotic plaques. <i>Organic and Biomolecular Chemistry</i> , 2014 , 12, 8611-8	3.9	10
36	Covalent attachment of mechanoresponsive luminescent micelles to glasses and polymers in aqueous conditions. <i>Journal of the American Chemical Society</i> , 2014 , 136, 4273-80	16.4	67
35	Boron dipyrromethene as a fluorescent caging group for single-photon uncaging with long-wavelength visible light. <i>ACS Chemical Biology</i> , 2014 , 9, 2242-6	4.9	70
34	Thermal or mechanical stimuli-induced photoluminescence color change of a molecular assembly composed of an amphiphilic anthracene derivative in water. <i>Chemistry - A European Journal</i> , 2014 , 20, 10397-403	4.8	28
33	Selective ablation of β -galactosidase-expressing cells with a rationally designed activatable photosensitizer. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 6772-5	16.4	85
32	Rapidly rendering cells phagocytic through a cell surface display technique and concurrent Rac activation. <i>Science Signaling</i> , 2014 , 7, rs4	8.8	6
31	A method to rapidly induce organelle-specific molecular activities and membrane tethering. <i>Methods in Molecular Biology</i> , 2014 , 1174, 231-45	1.4	3
30	Red Fluorescent Probe for Monitoring the Dynamics of Cytoplasmic Calcium Ions. <i>Angewandte Chemie</i> , 2013 , 125, 3966-3969	3.6	7
29	TokyoGreen derivatives as specific and practical fluorescent probes for UDP-glucuronosyltransferase (UGT) 1A1. <i>Chemical Communications</i> , 2013 , 49, 3101-3	5.8	17
28	Red fluorescent probe for monitoring the dynamics of cytoplasmic calcium ions. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 3874-7	16.4	63
27	Diced electrophoresis gel assay for screening enzymes with specified activities. <i>Journal of the American Chemical Society</i> , 2013 , 135, 6002-5	16.4	25

26	A Water-Soluble Mechanochromic Luminescent Pyrene Derivative Exhibiting Recovery of the Initial Photoluminescence Color in a High-Humidity Environment. <i>Advanced Functional Materials</i> , 2013 , 23, 5277-5284	15.6	71
25	Development of azo-based fluorescent probes to detect different levels of hypoxia. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 13028-32	16.4	204
24	Development of Azo-Based Fluorescent Probes to Detect Different Levels of Hypoxia. <i>Angewandte Chemie</i> , 2013 , 125, 13266-13270	3.6	29
23	Development of hypoxia-sensitive Gd ³⁺ -based MRI contrast agents. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2012 , 22, 2798-802	2.9	45
22	Red fluorescent scaffold for highly sensitive protease activity probes. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2012 , 22, 3908-11	2.9	32
21	Reversible off-on fluorescence probe for hypoxia and imaging of hypoxia-normoxia cycles in live cells. <i>Journal of the American Chemical Society</i> , 2012 , 134, 19588-91	16.4	95
20	Highly activatable and environment-insensitive optical highlighters for selective spatiotemporal imaging of target proteins. <i>Journal of the American Chemical Society</i> , 2012 , 134, 11153-60	16.4	98
19	A reversible near-infrared fluorescence probe for reactive oxygen species based on Te-rhodamine. <i>Chemical Communications</i> , 2012 , 48, 3091-3	5.8	127
18	Design strategy for a near-infrared fluorescence probe for matrix metalloproteinase utilizing highly cell permeable boron dipyrromethene. <i>Journal of the American Chemical Society</i> , 2012 , 134, 13730-7	16.4	102
17	Near-infrared fluorescence probes for enzymes based on binding affinity modulation of squarylium dye scaffold. <i>Analytical Chemistry</i> , 2012 , 84, 4404-10	7.8	43
16	Development of a fluorescein analogue, TokyoMagenta, as a novel scaffold for fluorescence probes in red region. <i>Chemical Communications</i> , 2011 , 47, 4162-4	5.8	130
15	Development of a highly sensitive fluorescence probe for hydrogen peroxide. <i>Journal of the American Chemical Society</i> , 2011 , 133, 10629-37	16.4	284
14	Development of a highly selective fluorescence probe for alkaline phosphatase. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2011 , 21, 5088-91	2.9	30
13	Development of a potassium ion-selective fluorescent sensor based on 3-styrylated BODIPY. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2011 , 21, 6090-3	2.9	28
12	Development of a highly selective fluorescence probe for hydrogen sulfide. <i>Journal of the American Chemical Society</i> , 2011 , 133, 18003-5	16.4	550
11	Selective two-step labeling of proteins with an off/on fluorescent probe. <i>Chemistry - A European Journal</i> , 2011 , 17, 14763-71	4.8	9
10	Rational design of boron dipyrromethene (BODIPY)-based photobleaching-resistant fluorophores applicable to a protein dynamics study. <i>Chemical Communications</i> , 2011 , 47, 10055-7	5.8	51
9	Fluorescence probe for lysophospholipase C/NPP6 activity and a potent NPP6 inhibitor. <i>Journal of the American Chemical Society</i> , 2011 , 133, 12021-30	16.4	33

8	Development of a far-red to near-infrared fluorescence probe for calcium ion and its application to multicolor neuronal imaging. <i>Journal of the American Chemical Society</i> , 2011 , 133, 14157-9	16.4	160
7	Real-time measurements of protein dynamics using fluorescence activation-coupled protein labeling method. <i>Journal of the American Chemical Society</i> , 2011 , 133, 6745-51	16.4	108
6	Organelle-specific, rapid induction of molecular activities and membrane tethering. <i>Nature Methods</i> , 2010 , 7, 206-8	21.6	110
5	The glycerophospho metabolome and its influence on amino acid homeostasis revealed by brain metabolomics of GDE1(-/-) mice. <i>Chemistry and Biology</i> , 2010 , 17, 831-40		31
4	Development of 2,6-carboxy-substituted boron dipyrromethene (BODIPY) as a novel scaffold of ratiometric fluorescent probes for live cell imaging. <i>Chemical Communications</i> , 2009 , 7015-7	5.8	60
3	Design and synthesis of highly sensitive fluorogenic substrates for glutathione S-transferase and application for activity imaging in living cells. <i>Journal of the American Chemical Society</i> , 2008 , 130, 14533-43	16.4	131
2	A Gd ³⁺ -based magnetic resonance imaging contrast agent sensitive to beta-galactosidase activity utilizing a receptor-induced magnetization enhancement (RIME) phenomenon. <i>Chemistry - A European Journal</i> , 2008 , 14, 987-95	4.8	65
1	Design and synthesis of an enzyme activity-based labeling molecule with fluorescence spectral change. <i>Journal of the American Chemical Society</i> , 2006 , 128, 15946-7	16.4	93