Jianghong Rao

List of Publications by Year
in descending order

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127 papers	14,499 citations	19657 61 h-index	19190 118 g-index
152 all docs	152 docs citations	152 times ranked	15746 citing authors

#	Article	IF	Citations
1	Semiconducting polymer nanoparticles as photoacoustic molecular imaging probes in living mice. Nature Nanotechnology, 2014, 9, 233-239.	31.5	1,057
2	Self-illuminating quantum dot conjugates for in vivo imaging. Nature Biotechnology, 2006, 24, 339-343.	17.5	757
3	Fluorescence imaging in vivo: recent advances. Current Opinion in Biotechnology, 2007, 18, 17-25.	6.6	693
4	Real-time imaging of oxidative and nitrosative stress in the liver of live animals for drug-toxicity testing. Nature Biotechnology, 2014, 32, 373-380.	17.5	521
5	Particle Size, Surface Coating, and PEGylation Influence the Biodistribution of Quantum Dots in Living Mice. Small, 2009, 5, 126-134.	10.0	418
6	Recent progress on semiconducting polymer nanoparticles for molecular imaging and cancer phototherapy. Biomaterials, 2018, 155, 217-235.	11.4	404
7	Bioorthogonal cyclization-mediated in situ self-assembly of small-molecule probes for imaging caspase activity in vivo. Nature Chemistry, 2014, 6, 519-526.	13.6	403
8	A biocompatible condensation reaction for controlled assembly of nanostructures in living cells. Nature Chemistry, 2010, 2, 54-60.	13.6	402
9	Diketopyrrolopyrroleâ€Based Semiconducting Polymer Nanoparticles for In Vivo Photoacoustic Imaging. Advanced Materials, 2015, 27, 5184-5190.	21.0	305
10	A Tumorâ€Specific Cascade Amplification Drug Release Nanoparticle for Overcoming Multidrug Resistance in Cancers. Advanced Materials, 2017, 29, 1702342.	21.0	278
11	MRI of Tumor-Associated Macrophages with Clinically Applicable Iron Oxide Nanoparticles. Clinical Cancer Research, 2011, 17, 5695-5704.	7.0	262
12	Strategies for in vivo imaging of enzyme activity: an overview and recent advances. Chemical Society Reviews, 2011, 40, 4186.	38.1	259
13	Self-luminescing BRET-FRET near-infrared dots for in vivo lymph-node mapping and tumour imaging. Nature Communications, 2012, 3, 1193.	12.8	229
14	A Biocompatible Condensation Reaction for the Labeling of Terminal Cysteine Residues on Proteins. Angewandte Chemie - International Edition, 2009, 48, 9658-9662.	13.8	217
15	Semiconducting Polymer Nanoprobe for Inâ€…Vivo Imaging of Reactive Oxygen and Nitrogen Species. Angewandte Chemie - International Edition, 2013, 52, 10325-10329.	13.8	207
16	Activatable Oligomerizable Imaging Agents for Photoacoustic Imaging of Furin-Like Activity in Living Subjects. Journal of the American Chemical Society, 2013, 135, 11015-11022.	13.7	196
17	How molecular imaging is speeding up antiangiogenic drug development. Molecular Cancer Therapeutics, 2006, 5, 2624-2633.	4.1	192
18	Nanotechnology Strategies To Advance Outcomes in Clinical Cancer Care. ACS Nano, 2018, 12, 24-43.	14.6	192

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19	Novel Fluorogenic Substrates for Imaging Î²-Lactamase Gene Expression. Journal of the American Chemical Society, 2003, 125, 11146-11147.	13.7	187
20	Quantum dot bioconjugates for in vitro diagnostics & in vivo imaging. Cancer Biomarkers, 2008, 4, 307-319.	1.7	186
21	microPET-Based Biodistribution of Quantum Dots in Living Mice. Journal of Nuclear Medicine, 2007, 48, 1511-1518.	5.0	182
22	Recent advances of semiconducting polymer nanoparticles in in vivo molecular imaging. Journal of Controlled Release, 2016, 240, 312-322.	9.9	182
23	Affinity capillary electrophoresis: A physical-organic tool for studying interactions in biomolecular recognition. Electrophoresis, 1998, 19, 367-382.	2.4	178
24	Imaging tuberculosis with endogenous Î²-lactamase reporter enzyme fluorescence in live mice. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 12239-12244.	7.1	168
25	Janus Iron Oxides @ Semiconducting Polymer Nanoparticle Tracer for Cell Tracking by Magnetic Particle Imaging. Nano Letters, 2018, 18, 182-189.	9.1	168
26	Superresolution Imaging of Targeted Proteins in Fixed and Living Cells Using Photoactivatable Organic Fluorophores. Journal of the American Chemical Society, 2010, 132, 15099-15101.	13.7	164
27	Multiplex Detection of Protease Activity with Quantum Dot Nanosensors Prepared by Intein-Mediated Specific Bioconjugation. Analytical Chemistry, 2008, 80, 8649-8655.	6.5	163
28	Mitochondrial copper depletion suppresses triple-negative breast cancer in mice. Nature Biotechnology, 2021, 39, 357-367.	17.5	163
29	Carbon-coated FeCo nanoparticles as sensitive magnetic-particle-imaging tracers with photothermal and magnetothermal properties. Nature Biomedical Engineering, 2020, 4, 325-334.	22.5	160
30	Semiconducting Polymer Nanoparticles with Persistent Nearâ€Infrared Luminescence for In Vivo Optical Imaging. Angewandte Chemie - International Edition, 2015, 54, 11477-11480.	13.8	159
31	Rapid point-of-care detection of the tuberculosis pathogen using a BlaC-specific fluorogenic probe. Nature Chemistry, 2012, 4, 802-809.	13.6	154
32	HaloTag Protein-Mediated Site-Specific Conjugation of Bioluminescent Proteins to Quantum Dots. Angewandte Chemie - International Edition, 2006, 45, 4936-4940.	13.8	153
33	Controlled Selfâ€Assembling of Gadolinium Nanoparticles as Smart Molecular Magnetic Resonance Imaging Contrast Agents. Angewandte Chemie - International Edition, 2011, 50, 6283-6286.	13.8	145
34	Nanoparticles for cancer imaging: The good, the bad, and the promise. Nano Today, 2013, 8, 454-460.	11.9	140
35	Engineered algae: A novel oxygen-generating system for effective treatment of hypoxic cancer. Science Advances, 2020, 6, eaba5996.	10.3	138
36	Cell-Permeable Near-Infrared Fluorogenic Substrates for Imaging Î²-Lactamase Activity. Journal of the American Chemical Society, 2005, 127, 4158-4159.	13.7	137

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37	A Review of Magnetic Particle Imaging and Perspectives on Neuroimaging. American Journal of Neuroradiology, 2019, 40, 206-212.	2.4	133
38	Biosensing and imaging based on bioluminescence resonance energy transfer. Current Opinion in Biotechnology, 2009, 20, 37-44.	6.6	130
39	Caspase-responsive smart gadolinium-based contrast agent for magnetic resonance imaging of drug-induced apoptosis. Chemical Science, 2014, 5, 3845-3852.	7.4	130
40	Ultrasound-guided delivery of microRNA loaded nanoparticles into cancer. Journal of Controlled Release, 2015, 203, 99-108.	9.9	128
41	Development of Novel Tumorâ€Targeted Theranostic Nanoparticles Activated by Membraneâ€Type Matrix Metalloproteinases for Combined Cancer Magnetic Resonance Imaging and Therapy. Small, 2014, 10, 566-575.	10.0	127
42	A Bioluminogenic Substrate for Inâ€…Vivo Imaging of Î²â€Lactamase Activity. Angewandte Chemie - International Edition, 2007, 46, 7031-7034.	13.8	117
43	Controlling Intracellular Macrocyclization for the Imaging of Protease Activity. Angewandte Chemie - International Edition, 2011, 50, 2275-2279.	13.8	116
44	Design, Synthesis, and Characterization of a High-Affinity Trivalent System Derived from Vancomycin andl-Lys-d-Ala-d-Ala. Journal of the American Chemical Society, 2000, 122, 2698-2710.	13.7	109
45	Using Surface Plasmon Resonance to Study the Binding of Vancomycin and Its Dimer to Self-Assembled Monolayers Presentingd-Ala-d-Ala. Journal of the American Chemical Society, 1999, 121, 2629-2630.	13.7	107
46	Protease-Modulated Cellular Uptake of Quantum Dots. Nano Letters, 2006, 6, 1988-1992.	9.1	104
47	A Selenium Analogue of Firefly <scp>D</scp>â€Luciferin with Redâ€Shifted Bioluminescence Emission. Angewandte Chemie - International Edition, 2012, 51, 3350-3353.	13.8	104
48	Positron Emission Tomography Imaging of Drugâ€Induced Tumor Apoptosis with a Caspaseâ€Triggered Nanoaggregation Probe. Angewandte Chemie - International Edition, 2013, 52, 10511-10514.	13.8	96
49	Creating self-illuminating quantum dot conjugates. Nature Protocols, 2006, 1, 1160-1164.	12.0	94
50	Near-Infrared Light Emitting Luciferase via Biomineralization. Journal of the American Chemical Society, 2010, 132, 6884-6885.	13.7	94
51	Tight Binding of a Dimeric Derivative of Vancomycin with Dimericl-Lys-d-Ala-d-Ala. Journal of the American Chemical Society, 1997, 119, 10286-10290.	13.7	91
52	A self-assembled quantum dot probe for detecting Î²-lactamase activity. Biochemical and Biophysical Research Communications, 2006, 344, 931-935.	2.1	89
53	In Vivo Bioluminescence Imaging of Furin Activity in Breast Cancer Cells Using Bioluminogenic Substrates. Bioconjugate Chemistry, 2009, 20, 1660-1666.	3.6	88
54	Shedding Light on Tumors Using Nanoparticles. ACS Nano, 2008, 2, 1984-1986.	14.6	85

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55	Recent Developments of Biological Reporter Technology for Detecting Gene Expression. Biotechnology and Genetic Engineering Reviews, 2008, 25, 41-76.	6.2	85
56	A Magneto-Optical Nanoplatform for Multimodality Imaging of Tumors in Mice. ACS Nano, 2019, 13, 7750-7758.	14.6	78
57	Fluorogenic Probes with Substitutions at the 2 and 7 Positions of Cephalosporin are Highly BlaCâ€Specific for Rapid Mycobacterium tuberculosis Detection. Angewandte Chemie - International Edition, 2014, 53, 9360-9364.	13.8	74
58	HaloTag protein-mediated specific labeling of living cells with quantum dots. Biochemical and Biophysical Research Communications, 2008, 374, 419-423.	2.1	69
59	Phosphorylcholineâ€Coated Semiconducting Polymer Nanoparticles as Rapid and Efficient Labeling Agents for In Vivo Cell Tracking. Advanced Healthcare Materials, 2014, 3, 1292-1298.	7.6	68
60	Magnetic Resonance Imaging of Stem Cell Apoptosis in Arthritic Joints with a Caspase Activatable Contrast Agent. ACS Nano, 2015, 9, 1150-1160.	14.6	67
61	[¹⁸F]GE-180 PET Detects Reduced Microglia Activation After LM11A-31 Therapy in a Mouse Model of Alzheimer's Disease. Theranostics, 2017, 7, 1422-1436.	10.0	64
62	Engineering of magnetic nanoparticles as magnetic particle imaging tracers. Chemical Society Reviews, 2021, 50, 8102-8146.	38.1	64
63	Efficient Method for Site-Specific ¹⁸F-Labeling of Biomolecules Using the Rapid Condensation Reaction between 2-Cyanobenzothiazole and Cysteine. Bioconjugate Chemistry, 2012, 23, 1902-1908.	3.6	63
64	Iron Administration before Stem Cell Harvest Enables MR Imaging Tracking after Transplantation. Radiology, 2013, 269, 186-197.	7.3	62
65	Improved QD-BRET conjugates for detection and imaging. Biochemical and Biophysical Research Communications, 2008, 372, 388-394.	2.1	61
66	Rapid and specific labeling of single live Mycobacterium tuberculosis with a dual-targeting fluorogenic probe. Science Translational Medicine, 2018, 10, .	12.4	59
67	Exploring the Condensation Reaction between Aromatic Nitriles and Amino Thiols To Optimize Inâ€...Situ Nanoparticle Formation for the Imaging of Proteases and Glycosidases in Cells. Angewandte Chemie - International Edition, 2020, 59, 3272-3279.	13.8	57
68	Novel Beta-Lactam Antibiotics Derivatives: Their New Applications as Gene Reporters, Antitumor Prodrugs and Enzyme Inhibitors. Mini-Reviews in Medicinal Chemistry, 2008, 8, 455-471.	2.4	56
69	Gold Nanoparticles for Brain Tumor Imaging: A Systematic Review. Frontiers in Neurology, 2018, 9, 328.	2.4	55
70	Comparison of Two Site-Specifically ¹⁸F-Labeled Affibodies for PET Imaging of EGFR Positive Tumors. Molecular Pharmaceutics, 2014, 11, 3947-3956.	4.6	54
71	PET imaging of tumor glycolysis downstream of hexokinase through noninvasive measurement of pyruvate kinase M2. Science Translational Medicine, 2015, 7, 310ra169.	12.4	54
72	Preâ€targeted Imaging of Protease Activity through Inâ€...Situ Assembly of Nanoparticles. Angewandte Chemie - International Edition, 2020, 59, 7864-7870.	13.8	54

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73	Binding of a dimeric derivative of vancomycin to l-Lys-d-Ala- d-lactate in solution and at a surface. Chemistry and Biology, 1999, 6, 353-359.	6.0	51
74	Using Capillary Electrophoresis To Study the Electrostatic Interactions Involved in the Association ofd-Ala-d-Ala with Vancomycin. Journal of the American Chemical Society, 1997, 119, 9336-9340.	13.7	50
75	A Systematic Comparison of 18F-C-SNAT to Established Radiotracer Imaging Agents for the Detection of Tumor Response to Treatment. Clinical Cancer Research, 2015, 21, 3896-3905.	7.0	48
76	Redox-Triggered Self-Assembly of Gadolinium-Based MRI Probes for Sensing Reducing Environment. Bioconjugate Chemistry, 2014, 25, 1526-1536.	3.6	47
77	Preclinical Kinetic Analysis of the Caspase-3/7 PET Tracer ¹⁸F-C-SNAT: Quantifying the Changes in Blood Flow and Tumor Retention After Chemotherapy. Journal of Nuclear Medicine, 2015, 56, 1415-1421.	5.0	47
78	Semiconductor Quantum Dots for Biosensing andIn VivoImaging. IEEE Transactions on Nanobioscience, 2009, 8, 4-12.	3.3	45
79	Molecular Magnetic Resonance Imaging of Tumor Response to Therapy. Scientific Reports, 2015, 5, 14759.	3.3	43
80	Semiconducting polymer nanoparticles as photoacoustic molecular imaging probes. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2017, 9, e1418.	6.1	42
81	Reduction TriggeredIn SituPolymerization in Living Mice. Journal of the American Chemical Society, 2020, 142, 15575-15584.	13.7	42
82	Combining SELEX Screening and Rational Design to Develop Light-Up Fluorophoreâ˜'RNA Aptamer Pairs for RNA Tagging. ACS Chemical Biology, 2010, 5, 1065-1074.	3.4	41
83	Engineering the Stereochemistry of Cephalosporin for Specific Detection of Pathogenic Carbapenemaseâ€Expressing Bacteria. Angewandte Chemie - International Edition, 2014, 53, 8113-8116.	13.8	41
84	A Fluorogenic Trehalose Probe for Tracking Phagocytosed Mycobacterium tuberculosis. Journal of the American Chemical Society, 2020, 142, 15259-15264.	13.7	41
85	Facile Synthesis, Silanization, and Biodistribution of Biocompatible Quantum Dots. Small, 2010, 6, 1520-1528.	10.0	39
86	Imaging Tetrahymena ribozyme splicing activity in single live mammalian cells. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 14892-14896.	7.1	38
87	CNOB/ChrR6, a new prodrug enzyme cancer chemotherapy. Molecular Cancer Therapeutics, 2009, 8, 333-341.	4.1	38
88	Bright sub-20-nm cathodoluminescent nanoprobes for electron microscopy. Nature Nanotechnology, 2019, 14, 420-425.	31.5	36
89	A Novel Theranostic Strategy for MMP-14â€"Expressing Glioblastomas Impacts Survival. Molecular Cancer Therapeutics, 2017, 16, 1909-1921.	4.1	35
90	Magnetic Particle Imaging in Neurosurgery. World Neurosurgery, 2019, 125, 261-270.	1.3	31

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91	Targeting MMP-14 for dual PET and fluorescence imaging of glioma in preclinical models. European Journal of Nuclear Medicine and Molecular Imaging, 2020, 47, 1412-1426.	6.4	29
92	Synthesis of ligand-functionalized water-soluble [18F]YF3 nanoparticles for PET imaging. Nanoscale, 2013, 5, 3253.	5.6	26
93	Single-Cell Detection of Trans-Splicing Ribozyme In Vivo Activity. Journal of the American Chemical Society, 2004, 126, 7158-7159.	13.7	25
94	Semiconducting Polymer Nanoprobe for Inâ€...Vivo Imaging of Reactive Oxygen and Nitrogen Species. Angewandte Chemie, 2013, 125, 10515-10519.	2.0	24
95	Quantitative detection of cells expressing BlaC using droplet-based microfluidics for use in the diagnosis of tuberculosis. Biomicrofluidics, 2015, 9, 044120.	2.4	24
96	Reversibly Photoswitching Upconversion Nanoparticles for Superâ€Sensitive Photoacoustic Molecular Imaging. Angewandte Chemie - International Edition, 2022, 61, .	13.8	21
97	Chemical Labeling of Protein in Living Cells. ChemBioChem, 2007, 8, 1099-1101.	2.6	20
98	Imaging Target mRNA and siRNAâ€Mediated Gene Silencing In Vivo with Ribozymeâ€Based Reporters. ChemBioChem, 2008, 9, 2682-2691.	2.6	20
99	A Near-Infrared Phosphorescent Nanoprobe Enables Quantitative, Longitudinal Imaging of Tumor Hypoxia Dynamics during Radiotherapy. Cancer Research, 2019, 79, 4787-4797.	0.9	20
100	Detection of mRNA in Mammalian Cells with a Split Ribozyme Reporter. ChemBioChem, 2006, 7, 925-928.	2.6	19
101	Point-of-Care Detection of Î²-Lactamase in Milk with a Universal Fluorogenic Probe. Analytical Chemistry, 2016, 88, 5605-5609.	6.5	19
102	Real-time Imaging ofMycobacterium tuberculosis, Using a Novel Near-Infrared Fluorescent Substrate. Journal of Infectious Diseases, 2017, 215, jiw298.	4.0	19
103	Intramolecular substitution uncages fluorogenic probes for detection of metallo-carbapenemase-expressing bacteria. Chemical Science, 2017, 8, 7669-7674.	7.4	18
104	Immobilizing Reporters for Molecular Imaging of the Extracellular Microenvironment in Living Animals. ACS Chemical Biology, 2011, 6, 1117-1126.	3.4	17
105	Preâ€targeted Imaging of Protease Activity through Inâ€...Situ Assembly of Nanoparticles. Angewandte Chemie, 2020, 132, 7938-7944.	2.0	17
106	Exploring the Condensation Reaction between Aromatic Nitriles and Amino Thiols To Optimize Inâ€...Situ Nanoparticle Formation for the Imaging of Proteases and Glycosidases in Cells. Angewandte Chemie, 2020, 132, 3298-3305.	2.0	16
107	In Vivo Optical Performance of a New Class of Near-Infrared-Emitting Conjugated Polymers: Borylated PF8-BT. ACS Applied Materials & Interfaces, 2019, 11, 46525-46535.	8.0	15
108	Multiparameter Longitudinal Imaging of Immune Cell Activity in Chimeric Antigen Receptor T Cell and Checkpoint Blockade Therapies. ACS Central Science, 2022, 8, 590-602.	11.3	15

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109	A dual-caged resorufin probe for rapid screening of infections resistant to lactam antibiotics. Chemical Science, 2021, 12, 9153-9161.	7.4	14
110	Theranostic nanoparticles enhance the response of glioblastomas to radiation. Nanotheranostics, 2019, 3, 299-310.	5.2	13
111	[18F]-C-SNAT4: an improved caspase-3-sensitive nanoaggregation PET tracer for imaging of tumor responses to chemo- and immunotherapies. European Journal of Nuclear Medicine and Molecular Imaging, 2021, 48, 3386-3399.	6.4	13
112	Visualizing the dynamics of tuberculosis pathology using molecular imaging. Journal of Clinical Investigation, 2021, 131, .	8.2	12
113	2-Cyanobenzothiazole (CBT) Condensation for Site-Specific Labeling of Proteins at the Terminal Cysteine Residues. Methods in Molecular Biology, 2015, 1266, 81-92.	0.9	12
114	[18F]-SuPAR: A Radiofluorinated Probe for Noninvasive Imaging of DNA Damage-Dependent Poly(ADP-ribose) Polymerase Activity. Bioconjugate Chemistry, 2019, 30, 1331-1342.	3.6	11
115	Intravital excitation increases detection sensitivity for pulmonary tuberculosis by wholeâ€body imaging with Î²â€lactamase reporter enzyme fluorescence. Journal of Biophotonics, 2017, 10, 821-829.	2.3	10
116	Different PEGâ€PLGA Matrices Influence In Vivo Optical/Photoacoustic Imaging Performance and Biodistribution of NIRâ€Emitting Ï€â€Conjugated Polymer Contrast Agents. Advanced Healthcare Materials, 2021, 10, e2001089.	7.6	9
117	In Vivo Imaging of Methionine Aminopeptidase II for Prostate Cancer Risk Stratification. Cancer Research, 2021, 81, 2510-2521.	0.9	8
118	Real-Time Imaging of Rab5 Activity Using a Prequenched Biosensor. ACS Chemical Biology, 2011, 6, 692-699.	3.4	7
119	Positron Emission Tomography Imaging of Tumor Apoptosis with a Caspase-Sensitive Nano-Aggregation Tracer [18F]C-SNAT. Methods in Molecular Biology, 2018, 1790, 181-195.	0.9	7
120	Visualizing RNA splicing in vivo. Molecular BioSystems, 2007, 3, 301.	2.9	5
121	Reversibly Photoswitching Upconversion Nanoparticles for Superâ€Sensitive Photoacoustic Molecular Imaging. Angewandte Chemie, 2022, 134, .	2.0	5
122	Evaluation of a procaspase-3 activator with hydroxyurea or temozolomide against high-grade meningioma in cell culture and canine cancer patients. Neuro-Oncology, 2021, 23, 1723-1735.	1.2	4
123	Imaging of tumour acidosis with PET. Nature Biomedical Engineering, 2020, 4, 250-251.	22.5	2
124	More Chemistry Is Needed for Molecular Imaging. Bioconjugate Chemistry, 2016, 27, 265-266.	3.6	1
125	Modulating the splicing activity ofTetrahymenaribozyme via RNA self-assembly. FEBS Letters, 2006, 580, 1592-1596.	2.8	0
126	Innentitelbild: Positron Emission Tomography Imaging of Drug-Induced Tumor Apoptosis with a Caspase-Triggered Nanoaggregation Probe (Angew. Chem. 40/2013). Angewandte Chemie, 2013, 125, 10584-10584.	2.0	0

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127	Editorial Overview: Non-invasive molecular imaging: dedicated to the memory of Professor Roger Tsien. Current Opinion in Chemical Biology, 2018, 45, iv-vi.	6.1	0