Neal K Devaraj

List of Publications by Year
in descending order

		61984	39675
93	9,237	43	94
papers	citations	h-index	g-index

111	111	111	8590
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Tetrazine-Based Cycloadditions: Application to Pretargeted Live Cell Imaging. Bioconjugate Chemistry, 2008, 19, 2297-2299.	3.6	698
2	A Cytochrome c Oxidase Model Catalyzes Oxygen to Water Reduction Under Rate-Limiting Electron Flux. Science, 2007, 315, 1565-1568.	12.6	495
3	â€œClickingâ€•Functionality onto Electrode Surfaces. Langmuir, 2004, 20, 1051-1053.	3.5	464
4	Biomedical Applications of Tetrazine Cycloadditions. Accounts of Chemical Research, 2011, 44, 816-827.	15.6	430
5	Bioorthogonal Turnâ€On Probes for Imaging Small Molecules inside Living Cells. Angewandte Chemie - International Edition, 2010, 49, 2869-2872.	13.8	386
6	The Future of Bioorthogonal Chemistry. ACS Central Science, 2018, 4, 952-959.	11.3	367
7	Mixed Azide-Terminated Monolayers:Â A Platform for Modifying Electrode Surfaces. Langmuir, 2006, 22, 2457-2464.	3.5	354
8	Fast and Sensitive Pretargeted Labeling of Cancer Cells through a Tetrazine/<i>trans</i>â€Cyclooctene Cycloaddition. Angewandte Chemie - International Edition, 2009, 48, 7013-7016.	13.8	341
9	Bioorthogonal chemistry amplifies nanoparticle binding and enhances the sensitivity of cell detection. Nature Nanotechnology, 2010, 5, 660-665.	31.5	319
10	Reversing a model of Parkinsonâ€™s disease with in situ converted nigral neurons. Nature, 2020, 582, 550-556.	27.8	316
11	Liveâ€Cell Imaging of Cyclopropene Tags with Fluorogenic Tetrazine Cycloadditions. Angewandte Chemie - International Edition, 2012, 51, 7476-7479.	13.8	287
12	¹⁸F Labeled Nanoparticles for <i>in Vivo</i> PET-CT Imaging. Bioconjugate Chemistry, 2009, 20, 397-401.	3.6	229
13	Chemoselective Covalent Coupling of Oligonucleotide Probes to Self-Assembled Monolayers. Journal of the American Chemical Society, 2005, 127, 8600-8601.	13.7	215
14	Development of a Bioorthogonal and Highly Efficient Conjugation Method for Quantum Dots Using Tetrazineâ^'Norbornene Cycloaddition. Journal of the American Chemical Society, 2010, 132, 7838-7839.	13.7	202
15	Metalâ€Catalyzed Oneâ€Pot Synthesis of Tetrazines Directly from Aliphatic Nitriles and Hydrazine. Angewandte Chemie - International Edition, 2012, 51, 5222-5225.	13.8	195
16	Selective Functionalization of Independently Addressed Microelectrodes by Electrochemical Activation and Deactivation of a Coupling Catalyst. Journal of the American Chemical Society, 2006, 128, 1794-1795.	13.7	180
17	Reactive polymer enables efficient in vivo bioorthogonal chemistry. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4762-4767.	7.1	171
18	Advances in Tetrazine Bioorthogonal Chemistry Driven by the Synthesis of Novel Tetrazines and Dienophiles. Accounts of Chemical Research, 2018, 51, 1249-1259.	15.6	170

#	Article	IF	Citations
19	A Bioorthogonal Near-Infrared Fluorogenic Probe for mRNA Detection. Journal of the American Chemical Society, 2016, 138, 11429-11432.	13.7	168
20	Inâ€…Situ Synthesis of Alkenyl Tetrazines for Highly Fluorogenic Bioorthogonal Liveâ€Cell Imaging Probes. Angewandte Chemie - International Edition, 2014, 53, 5805-5809.	13.8	159
21	Communication and quorum sensing in non-living mimics of eukaryotic cells. Nature Communications, 2018, 9, 5027.	12.8	158
22	Self-reproducing catalyst drives repeated phospholipid synthesis and membrane growth. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 8187-8192.	7.1	141
23	Bioorthogonal Tetrazine-Mediated Transfer Reactions Facilitate Reaction Turnover in Nucleic Acid-Templated Detection of MicroRNA. Journal of the American Chemical Society, 2014, 136, 17942-17945.	13.7	130
24	Introduction: Click Chemistry. Chemical Reviews, 2021, 121, 6697-6698.	47.7	122
25	Rate of Interfacial Electron Transfer through the 1,2,3-Triazole Linkage. Journal of Physical Chemistry B, 2006, 110, 15955-15962.	2.6	121
26	Membrane Assembly Driven by a Biomimetic Coupling Reaction. Journal of the American Chemical Society, 2012, 134, 751-753.	13.7	105
27	Fluorescent Liveâ€Cell Imaging of Metabolically Incorporated Unnatural Cyclopropeneâ€Mannosamine Derivatives. ChemBioChem, 2013, 14, 205-208.	2.6	103
28	Synthesis and Reactivity Comparisons of 1â€Methylâ€3â€Substituted Cyclopropene Miniâ€tags for Tetrazine Bioorthogonal Reactions. Chemistry - A European Journal, 2014, 20, 3365-3375.	3.3	102
29	Inverse Electron-Demand Dielsâ€"Alder Bioorthogonal Reactions. Topics in Current Chemistry, 2016, 374, 3.	5.8	94
30	Tailoring the Shape and Size of Artificial Cells. ACS Nano, 2019, 13, 7396-7401.	14.6	94
31	Expanding room for tetrazine ligations in the in vivo chemistry toolbox. Current Opinion in Chemical Biology, 2013, 17, 761-767.	6.1	92
32	Rapid oligonucleotide-templated fluorogenic tetrazine ligations. Nucleic Acids Research, 2013, 41, e148-e148.	14.5	85
33	A minimal biochemical route towards de novo formation of synthetic phospholipid membranes. Nature Communications, 2019, 10, 300.	12.8	82
34	Site-Specific Covalent Labeling of RNA by Enzymatic Transglycosylation. Journal of the American Chemical Society, 2015, 137, 12756-12759.	13.7	76
35	Probing Intracellular Biomarkers and Mediators of Cell Activation Using Nanosensors and Bioorthogonal Chemistry. ACS Nano, 2011, 5, 3204-3213.	14.6	67
36	In Situ Vesicle Formation by Native Chemical Ligation. Angewandte Chemie - International Edition, 2014, 53, 14102-14105.	13.8	64

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37	Syntheses of Hemoprotein Models that can be Covalently Attached onto Electrode Surfaces by Click Chemistry. Journal of Organic Chemistry, 2007, 72, 2794-2802.	3.2	54
38	Enzyme-free synthesis of natural phospholipids in water. Nature Chemistry, 2020, 12, 1029-1034.	13.6	54
39	Lipids: chemical tools for their synthesis, modification, and analysis. Chemical Society Reviews, 2020, 49, 4602-4614.	38.1	54
40	Lightâ€Activated Control of Translation by Enzymatic Covalent mRNA Labeling. Angewandte Chemie - International Edition, 2018, 57, 2822-2826.	13.8	48
41	⁶⁸Ga chelating bioorthogonal tetrazine polymers for the multistep labeling of cancer biomarkers. Chemical Communications, 2014, 50, 5215-5217.	4.1	46
42	SNAP-Tag-Reactive Lipid Anchors Enable Targeted and Spatiotemporally Controlled Localization of Proteins to Phospholipid Membranes. Journal of the American Chemical Society, 2015, 137, 4884-4887.	13.7	46
43	Membrane Mimetic Chemistry in Artificial Cells. Journal of the American Chemical Society, 2021, 143, 8223-8231.	13.7	46
44	Synthesis of lipid membranes for artificial cells. Nature Reviews Chemistry, 2021, 5, 676-694.	30.2	46
45	Nonenzymatic biomimetic remodeling of phospholipids in synthetic liposomes. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8589-8594.	7.1	45
46	<i>De novo</i>vesicle formation and growth: an integrative approach to artificial cells. Chemical Science, 2017, 8, 7912-7922.	7.4	44
47	Towards Selfâ€Assembled Hybrid Artificial Cells: Novel Bottomâ€Up Approaches to Functional Synthetic Membranes. Chemistry - A European Journal, 2015, 21, 12564-12570.	3.3	40
48	Biomimetic Generation and Remodeling of Phospholipid Membranes by Dynamic Imine Chemistry. Journal of the American Chemical Society, 2018, 140, 8388-8391.	13.7	40
49	Electrochemical Control of Rapid Bioorthogonal Tetrazine Ligations for Selective Functionalization of Microelectrodes. Journal of the American Chemical Society, 2015, 137, 8876-8879.	13.7	38
50	Lipid sponge droplets as programmable synthetic organelles. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18206-18215.	7.1	37
51	Light-activated tetrazines enable precision live-cell bioorthogonal chemistry. Nature Chemistry, 2022, 14, 1078-1085.	13.6	36
52	In Situ Reconstitution of the Adenosine A2A Receptor in Spontaneously Formed Synthetic Liposomes. Journal of the American Chemical Society, 2017, 139, 3607-3610.	13.7	34
53	Spontaneous Reconstitution of Functional Transmembrane Proteins During Bioorthogonal Phospholipid Membrane Synthesis. Angewandte Chemie - International Edition, 2015, 54, 12738-12742.	13.8	30
54	Fluorescent turn-on probes for wash-free mRNA imaging via covalent site-specific enzymatic labeling. Chemical Science, 2017, 8, 7169-7173.	7.4	30

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55	Traceless synthesis of ceramides in living cells reveals saturation-dependent apoptotic effects. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 7485-7490.	7.1	28
56	Encapsulation of Living Cells within Giant Phospholipid Liposomes Formed by the Inverseâ€Emulsion Technique. ChemBioChem, 2016, 17, 886-889.	2.6	26
57	Multiplexed Photoactivation of mRNA with Single-Cell Resolution. ACS Chemical Biology, 2020, 15, 1773-1779.	3.4	24
58	Highly Stable Artificial Cells from Galactopyranose-Derived Single-Chain Amphiphiles. Journal of the American Chemical Society, 2018, 140, 17356-17360.	13.7	23
59	Designer Palmitoylation Motif-Based Self-Localizing Ligand for Sustained Control of Protein Localization in Living Cells and <i>Caenorhabditis elegans</i>. ACS Chemical Biology, 2020, 15, 837-843.	3.4	21
60	Site-Specific Covalent Conjugation of Modified mRNA by tRNA Guanine Transglycosylase. Molecular Pharmaceutics, 2018, 15, 737-742.	4.6	20
61	Single-Chain Î²-<scp>d</scp>-Glycopyranosylamides of Unsaturated Fatty Acids: Self-Assembly Properties and Applications to Artificial Cell Development. Journal of Physical Chemistry B, 2019, 123, 3711-3720.	2.6	20
62	A Small Molecule Fluorogenic Probe for the Detection of Sphingosine in Living Cells. Journal of the American Chemical Society, 2020, 142, 17887-17891.	13.7	18
63	Probing the Role of Chirality in Phospholipid Membranes. ChemBioChem, 2021, 22, 3148-3157.	2.6	18
64	Site-Specific and Enzymatic Cross-Linking of sgRNA Enables Wavelength-Selectable Photoactivated Control of CRISPR Gene Editing. Journal of the American Chemical Society, 2022, 144, 4487-4495.	13.7	18
65	Continual reproduction of self-assembling oligotriazole peptide nanomaterials. Nature Communications, 2017, 8, 730.	12.8	17
66	Lightâ€Activated Control of Translation by Enzymatic Covalent mRNA Labeling. Angewandte Chemie, 2018, 130, 2872-2876.	2.0	17
67	Advancing Tetrazine Bioorthogonal Reactions through the Development of New Synthetic Tools. Synlett, 2012, 23, 2147-2152.	1.8	15
68	In Situ Synthesis of Phospholipid Membranes. Journal of Organic Chemistry, 2017, 82, 5997-6005.	3.2	15
69	Amphiphile-Mediated Depalmitoylation of Proteins in Living Cells. Journal of the American Chemical Society, 2018, 140, 17374-17378.	13.7	14
70	Developing a Fluorescent Toolbox To Shed Light on the Mysteries of RNA. Biochemistry, 2017, 56, 5185-5193.	2.5	13
71	Chemoenzymatic Generation of Phospholipid Membranes Mediated by Type I Fatty Acid Synthase. Journal of the American Chemical Society, 2021, 143, 8533-8537.	13.7	13
72	Optimization of ClpXP activity and protein synthesis in an E. coli extract-based cell-free expression system. Scientific Reports, 2018, 8, 3488.	3.3	12

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73	Approach control. Stereoelectronic origin of geometric constraints on N-to-S and N-to-O acyl shifts in peptides. Chemical Science, 2018, 9, 1789-1794.	7.4	11
74	In Situ Lipid Membrane Formation Triggered by Intramolecular Photoinduced Electron Transfer. Langmuir, 2018, 34, 750-755.	3.5	10
75	Traceless native chemical ligation of lipid-modified peptide surfactants by mixed micelle formation. Nature Communications, 2020, 11, 2793.	12.8	10
76	Lipase mimetic cyclodextrins. Chemical Science, 2021, 12, 1090-1094.	7.4	10
77	Expression of Fatty Acyl-CoA Ligase Drives One-Pot <i>De Novo</i> Synthesis of Membrane-Bound Vesicles in a Cell-Free Transcription-Translation System. Journal of the American Chemical Society, 2021, 143, 11235-11242.	13.7	10
78	Enzymatic RNA Biotinylation for Affinity Purification and Identification of RNAâ€“Protein Interactions. ACS Chemical Biology, 2020, 15, 2247-2258.	3.4	9
79	Spontaneous Phospholipid Membrane Formation by Histidine Ligation. Synlett, 2016, 28, 108-112.	1.8	8
80	Enzymatic covalent labeling of RNA with RNA transglycosylation at guanosine (RNA-TAG). Methods in Enzymology, 2020, 641, 373-399.	1.0	6
81	Synthetic probes and chemical tools in sphingolipid research. Current Opinion in Chemical Biology, 2021, 65, 126-135.	6.1	6
82	Inhibition of NRAS Signaling in Melanoma through Direct Depalmitoylation Using Amphiphilic Nucleophiles. ACS Chemical Biology, 2020, 15, 2079-2086.	3.4	5
83	Engineering materials for artificial cells. Current Opinion in Solid State and Materials Science, 2022, 26, 101004.	11.5	5
84	Controlling Protein Enrichment in Lipid Sponge Phase Droplets using SNAPâ€Tag Bioconjugation. ChemBioChem, 2022, 23, .	2.6	4
85	Rapid and Sequential Dual Oxime Ligation Enables De Novo Formation of Functional Synthetic Membranes from Waterâ€Soluble Precursors. Angewandte Chemie - International Edition, 2022, 61, .	13.8	4
86	Tension Promoted Sulfur Exchange for Cellular Delivery. ACS Central Science, 2017, 3, 524-525.	11.3	2
87	Temperature-Dependent Reversible Morphological Transformations in N-Oleoyl Î²-d-Galactopyranosylamine. Journal of Physical Chemistry B, 2020, 124, 5426-5433.	2.6	1
88	Functionalizing Lipid Sponge Droplets with DNA**. ChemSystemsChem, 2022, 4, .	2.6	1
89	<i>In Situ</i> Assembly of Transmembrane Proteins from Expressed and Synthetic Components in Giant Unilamellar Vesicles. ACS Chemical Biology, 2022, 17, 1015-1021.	3.4	1
90	Mining Proteomes Using Bioorthogonal Probes. Cell Chemical Biology, 2016, 23, 751-753.	5.2	0

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91	Laccaseâ€Mediated Catalyzed Fluorescent Reporter Deposition for Liveâ€Cell Imaging. ChemBioChem, 2020, 21, 98-102.	2.6	0
92	Enzymatic Siteâ€Specific Labeling of RNA for Affinity Isolation of RNAâ€Protein Complexes. FASEB Journal, 2018, 32, 790.2.	0.5	0
93	Rapid and Sequential Dual Oxime Ligation Enables De Novo Formation of Functional Synthetic Membranes from Waterâ€Soluble Precursors. Angewandte Chemie, 0, , .	2.0	0