Virginia W Cornish

List of Publications by Year
in descending order

83 papers	9,688 citations	101543 36 h-index	58581 82 g-index
98 all docs	98 docs citations	98 times ranked	11430 citing authors

#	Article	IF	Citations
1	Regulation of Ferroptotic Cancer Cell Death by GPX4. Cell, 2014, 156, 317-331.	28.9	4,187
2	Super-multiplex vibrational imaging. Nature, 2017, 544, 465-470.	27.8	374
3	Live-cell super-resolution imaging with trimethoprim conjugates. Nature Methods, 2010, 7, 717-719.	19.0	315
4	In vivo protein labeling with trimethoprim conjugates: a flexible chemical tag. Nature Methods, 2005, 2, 255-257.	19.0	282
5	Slow peptide bond formation by proline and other N -alkylamino acids in translation. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 50-54.	7.1	282
6	Ordered and Dynamic Assembly of Single Spliceosomes. Science, 2011, 331, 1289-1295.	12.6	266
7	Probing Protein Structure and Function with an Expanded Genetic Code. Angewandte Chemie International Edition in English, 1995, 34, 621-633.	4.4	222
8	The Genome Project-Write. Science, 2016, 353, 126-127.	12.6	194
9	Chemical Tags for Labeling Proteins Inside Living Cells. Accounts of Chemical Research, 2011, 44, 784-792.	15.6	187
10	Programming peptidomimetic syntheses by translating genetic codes designed de novo. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 6353-6357.	7.1	184
11	Cytoskeletal coherence requires myosin-IIA contractility. Journal of Cell Science, 2010, 123, 413-423.	2.0	179
12	Site-Specific Protein Modification Using a Ketone Handle. Journal of the American Chemical Society, 1996, 118, 8150-8151.	13.7	170
13	Milestones in directed enzyme evolution. Current Opinion in Chemical Biology, 2002, 6, 858-864.	6.1	138
14	Selective chemical labeling of proteins in living cells. Current Opinion in Chemical Biology, 2005, 9, 56-61.	6.1	132
15	Second-Generation Covalent TMP-Tag for Live Cell Imaging. Journal of the American Chemical Society, 2012, 134, 13692-13699.	13.7	118
16	An In Vivo Covalent TMP-Tag Based on Proximity-Induced Reactivity. ACS Chemical Biology, 2009, 4, 547-556.	3.4	116
17	Screening and Selection Methods for Large-Scale Analysis of Protein Function. Angewandte Chemie - International Edition, 2002, 41, 4402-4425.	13.8	115
18	Amino Acid Backbone Specificity of theEscherichiacoliTranslation Machinery. Journal of the American Chemical Society, 2004, 126, 12752-12753.	13.7	101

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19	Methotrexate Conjugates: A Molecular In Vivo Protein Tag. Angewandte Chemie - International Edition, 2004, 43, 1672-1675.	13.8	99
20	Directed Evolution of a Glycosynthase via Chemical Complementation. Journal of the American Chemical Society, 2004, 126, 15051-15059.	13.7	99
21	Dexamethasoneâ˜Methotrexate:â€‰ An Efficient Chemical Inducer of Protein Dimerization In Vivo. Journal of the American Chemical Society, 2000, 122, 4247-4248.	13.7	97
22	A modular yeast biosensor for low-cost point-of-care pathogen detection. Science Advances, 2017, 3, e1603221.	10.3	97
23	Reiterative Recombination for the in vivo assembly of libraries of multigene pathways. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 15135-15140.	7.1	96
24	Chemical complementation: A reaction-independent genetic assay for enzyme catalysis. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 16537-16542.	7.1	92
25	Optimized Fluorescent Trimethoprim Derivatives for in vivo Protein Labeling. ChemBioChem, 2007, 8, 767-774.	2.6	89
26	Chemical tags: Applications in live cell fluorescence imaging. Journal of Biophotonics, 2011, 4, 391-402.	2.3	79
27	Mixed Quantum Mechanical/Molecular Mechanical (QM/MM) Study of the Deacylation Reaction in a Penicillin Binding Protein (PBP) versus in a Class C Î²-Lactamase. Journal of the American Chemical Society, 2004, 126, 7652-7664.	13.7	77
28	A Fluorogenic TMP-Tag for High Signal-to-Background Intracellular Live Cell Imaging. ACS Chemical Biology, 2013, 8, 1704-1712.	3.4	74
29	The ribosome can discriminate the chirality of amino acids within its peptidyl-transferase center. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6038-6043.	7.1	73
30	Genetic Code Expansion: A Brief History and Perspective. Biochemistry, 2021, 60, 3455-3469.	2.5	63
31	Conditional Glycosylation in Eukaryotic Cells Using a Biocompatible Chemical Inducer of Dimerization. Journal of the American Chemical Society, 2008, 130, 13186-13187.	13.7	55
32	An optimized dexamethasone-methotrexate yeast 3-hybrid system for high-throughput screening of small molecule-protein interactions. Analytical Biochemistry, 2003, 315, 134-137.	2.4	54
33	A Bacterial Small-Molecule Three-Hybrid System. Angewandte Chemie - International Edition, 2002, 41, 2327-2330.	13.8	47
34	Specificity of Translation forN-Alkyl Amino Acids. Journal of the American Chemical Society, 2007, 129, 11316-11317.	13.7	47
35	Pure translation display. Analytical Biochemistry, 2004, 333, 358-364.	2.4	44
36	High-Throughput Selection for Cellulase Catalysts Using Chemical Complementation. Journal of the American Chemical Society, 2008, 130, 17446-17452.	13.7	41

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37	A scalable peptide-GPCR language for engineering multicellular communication. Nature Communications, 2018, 9, 5057.	12.8	39
38	A Common Diaryl Ether Intermediate for the Gramâ€Scale Synthesis of Oxazine and Xanthene Fluorophores. Angewandte Chemie - International Edition, 2013, 52, 650-654.	13.8	38
39	Receptor-Dependence of the Transcription Read-Out in a Small-Molecule Three-Hybrid System. ChemBioChem, 2002, 3, 887-895.	2.6	36
40	Correlation between Ligandâ^'Receptor Affinity and the Transcription Readout in a Yeast Three-Hybrid Systemâ€. Biochemistry, 2004, 43, 10353-10363.	2.5	36
41	Natural amino acids do not require their native tRNAs for efficient selection by the ribosome. Nature Chemical Biology, 2009, 5, 947-953.	8.0	36
42	Cooperative Vinculin Binding to Talin Mapped by Time-Resolved Super Resolution Microscopy. Nano Letters, 2016, 16, 4062-4068.	9.1	35
43	Dynamic Nuclear Polarization Signal Enhancement with High-Affinity Biradical Tags. Journal of Physical Chemistry B, 2017, 121, 1169-1175.	2.6	33
44	Photoaffinity Labeling and Mass Spectrometry Identify Ribosomal Protein S3 as a Potential Target for Hybrid Polar Cytodifferentiation Agents. Journal of Biological Chemistry, 1999, 274, 14280-14287.	3.4	32
45	Identification of residues critical for catalysis in a class C Î²-lactamase by combinatorial scanning mutagenesis. Protein Science, 2003, 12, 1633-1645.	7.6	31
46	Chemical tags: inspiration for advanced imaging techniques. Current Opinion in Chemical Biology, 2013, 17, 637-643.	6.1	31
47	Transcription factor logic using chemical complementation. Molecular BioSystems, 2008, 4, 56-58.	2.9	28
48	Reprogramming eukaryotic translation with ligand-responsive synthetic RNA switches. Nature Methods, 2016, 13, 453-458.	19.0	28
49	Interrogation of Eukaryotic Stop Codon Readthrough Signals by in Vitro RNA Selection. Biochemistry, 2019, 58, 1167-1178.	2.5	27
50	In Vivo Protein-Protein Interaction Assays: Beyond Proteins. Angewandte Chemie - International Edition, 2001, 40, 871-875.	13.8	23
51	An orthogonal dexamethasoneâ€“trimethoprim yeast three-hybrid system. Analytical Biochemistry, 2007, 363, 160-162.	2.4	23
52	A Trimethoprimâ€Based Chemical Tag for Live Cell Twoâ€Photon Imaging. ChemBioChem, 2010, 11, 782-784.	2.6	23
53	A Heritable Recombination System for Synthetic Darwinian Evolution in Yeast. ACS Synthetic Biology, 2012, 1, 602-609.	3.8	23
54	Correlation between Catalytic Efficiency and the Transcription Read-Out in Chemical Complementation:Â A General Assay for Enzyme Catalysisâ€. Biochemistry, 2004, 43, 3570-3581.	2.5	18

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55	Synthesis of photoactivatable azido-acyl caged oxazine fluorophores for live-cell imaging. Chemical Communications, 2016, 52, 9442-9445.	4.1	18
56	Characterization of a New Glycosynthase Cloned by Using Chemical Complementation. ChemBioChem, 2008, 9, 681-684.	2.6	16
57	PCRless library mutagenesis via oligonucleotide recombination in yeast. Protein Science, 2010, 19, 2336-2346.	7.6	16
58	Screening- und Selektionsmethoden fÃ¼r die Analyse von Proteinfunktionen in groÃŸem MaÃŸstab. Angewandte Chemie, 2002, 114, 4580-4606.	2.0	15
59	Identification of PDE6D as a Molecular Target of Anecortave Acetate via a Methotrexate-Anchored Yeast Three-Hybrid Screen. ACS Chemical Biology, 2013, 8, 549-558.	3.4	15
60	The Covalent Trimethoprim Chemical Tag Facilitates Single Molecule Imaging with Organic Fluorophores. Biophysical Journal, 2014, 106, 272-278.	0.5	14
61	Detection of Nav1.5 Conformational Change in Mammalian Cells Using the Noncanonical Amino Acid ANAP. Biophysical Journal, 2019, 117, 1352-1363.	0.5	13
62	Catalytic competition for cells. Nature, 2006, 440, 156-157.	27.8	11
63	Heterologous Catalysis of the Final Steps of Tetracycline Biosynthesis by Saccharomyces cerevisiae. ACS Chemical Biology, 2021, 16, 1425-1434.	3.4	10
64	Investigation of the Mechanism of Resistance to Third-Generation Cephalosporins by Class C Î²-Lactamases by Using Chemical Complementation. ChemBioChem, 2005, 6, 2055-2067.	2.6	8
65	Optimized design and synthesis of chemical dimerizer substrates for detection of glycosynthase activity via chemical complementation. Bioorganic and Medicinal Chemistry, 2006, 14, 6940-6953.	3.0	8
66	Saturation mutagenesis of Asn152 reveals a substrate selectivity switch in P99 cephalosporinase. Protein Science, 2007, 16, 2636-2646.	7.6	8
67	Playing tag with proteins. Nature Chemistry, 2012, 4, 248-250.	13.6	8
68	<scp>d</scp>-Amino Acid-Mediated Translation Arrest Is Modulated by the Identity of the Incoming Aminoacyl-tRNA. Biochemistry, 2018, 57, 4241-4246.	2.5	8
69	Fluorescence Polarization Assay for Small Molecule Screening of FK506 Biosynthesized in 96-Well Microtiter Plates. Biochemistry, 2017, 56, 5260-5268.	2.5	7
70	Structural analysis of the Asn152Gly mutant of P99 cephalosporinase. Acta Crystallographica Section D: Biological Crystallography, 2012, 68, 1189-1193.	2.5	5
71	Design, Synthesis, and Application of the Trimethoprimâ€Based Chemical Tag for Liveâ€Cell Imaging. Current Protocols in Chemical Biology, 2013, 5, 131-155.	1.7	5
72	A Library Approach for the Discovery of Customized Yeast Threeâ€Hybrid Counter Selections. ChemBioChem, 2011, 12, 715-717.	2.6	4

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73	Transcriptional regulation improves the throughput of threeâ€hybrid counter selections in Saccharomyces cerevisiae. Biotechnology Journal, 2013, 8, 1485-1491.	3.5	4
74	In Vivo Protein-Protein Interaction Assays: Beyond Proteins We would like to thank Tony Siu, Dr. Charles Cho, and the members of our lab for their helpful comments as we were preparing this manuscript.. Angewandte Chemie - International Edition, 2001, 40, 871-875.	13.8	4
75	A Yeast Three Hybrid Assay for Metabolic Engineering of Tetracycline Derivatives. Biochemistry, 2018, 57, 4726-4734.	2.5	2
76	Synthetic biology: at the crossroads of genetic engineering and human therapeuticsâ€”a Keystone Symposia report. Annals of the New York Academy of Sciences, 2021, , .	3.8	2
77	Peptide-Dependent Growth in Yeast via Fine-Tuned Peptide/GPCR-Activated Essential Gene Expression. Biochemistry, 2022, 61, 150-159.	2.5	2
78	Draft Genome Sequence of Saccharomyces cerevisiae LW2591Y, a Laboratory Strain for In Vivo Multigene Assemblies. Microbiology Resource Announcements, 2021, 10, .	0.6	1
79	High-Titer Production of the Fungal Anhydrotetracycline, TAN-1612, in Engineered Yeasts. ACS Synthetic Biology, 0, , .	3.8	1
80	Yeast n-Hybrid Systems for Molecular Evolution. , 0, , 127-158.		0
81	Screening and Selection Methods for Large-Scale Analysis of Protein Function. ChemInform, 2003, 34, no.	0.0	0
82	Chemical Complementation. , 2006, , 183-219.		0
83	TMP-tag: a Chemical Surrogate to the Fluorescent Proteins for Live Cell Imaging. Biophysical Journal, 2020, 118, 351a.	0.5	0