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	Peptide-Dependent Growth in Yeast via Fine-Tuned Peptide/GPCR-Activated Essential Gene Expression. Biochemistry, 2022, 61, 150-159.	2.5	2
2	Draft Genome Sequence of Saccharomyces cerevisiae LW2591Y, a Laboratory Strain for In Vivo Multigene Assemblies. Microbiology Resource Announcements, 2021, 10, .	0.6	1
3	Heterologous Catalysis of the Final Steps of Tetracycline Biosynthesis by Saccharomyces cerevisiae. ACS Chemical Biology, 2021, 16, 1425-1434.	3.4	10
4	Genetic Code Expansion: A Brief History and Perspective. Biochemistry, 2021, 60, 3455-3469.	2.5	63
5	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
6	TMP-tag: a Chemical Surrogate to the Fluorescent Proteins for Live Cell Imaging. Biophysical Journal, 2020, 118, 351a.	0.5	0
7	Detection of Nav1.5 Conformational Change in Mammalian Cells Using the Noncanonical Amino Acid ANAP. Biophysical Journal, 2019, 117, 1352-1363.	0.5	13
8	Interrogation of Eukaryotic Stop Codon Readthrough Signals by in Vitro RNA Selection. Biochemistry, 2019, 58, 1167-1178.	2.5	27
9	A scalable peptide-GPCR language for engineering multicellular communication. Nature Communications, 2018, 9, 5057.	12.8	39
10	A Yeast Three Hybrid Assay for Metabolic Engineering of Tetracycline Derivatives. Biochemistry, 2018, 57, 4726-4734.	2.5	2
11	<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
12	Dynamic Nuclear Polarization Signal Enhancement with High-Affinity Biradical Tags. Journal of Physical Chemistry B, 2017, 121, 1169-1175.	2.6	33
13	Super-multiplex vibrational imaging. Nature, 2017, 544, 465-470.	27.8	374
14	Fluorescence Polarization Assay for Small Molecule Screening of FK506 Biosynthesized in 96-Well Microtiter Plates. Biochemistry, 2017, 56, 5260-5268.	2.5	7
15	A modular yeast biosensor for low-cost point-of-care pathogen detection. Science Advances, 2017, 3, e1603221.	10.3	97
16	Cooperative Vinculin Binding to Talin Mapped by Time-Resolved Super Resolution Microscopy. Nano Letters, 2016, 16, 4062-4068.	9.1	35
17	The Genome Project-Write. Science, 2016, 353, 126-127.	12.6	194
18	Reprogramming eukaryotic translation with ligand-responsive synthetic RNA switches. Nature Methods, 2016, 13, 453-458.	19.0	28

#	Article	IF	Citations
19	Synthesis of photoactivatable azido-acyl caged oxazine fluorophores for live-cell imaging. Chemical Communications, 2016, 52, 9442-9445.	4.1	18
20	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
21	Regulation of Ferroptotic Cancer Cell Death by GPX4. Cell, 2014, 156, 317-331.	28.9	4,187
22	The Covalent Trimethoprim Chemical Tag Facilitates Single Molecule Imaging with Organic Fluorophores. Biophysical Journal, 2014, 106, 272-278.	0.5	14
23	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
24	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
25	Chemical tags: inspiration for advanced imaging techniques. Current Opinion in Chemical Biology, 2013, 17, 637-643.	6.1	31
26	A Fluorogenic TMP-Tag for High Signal-to-Background Intracellular Live Cell Imaging. ACS Chemical Biology, 2013, 8, 1704-1712.	3.4	74
27	Transcriptional regulation improves the throughput of threeâ€hybrid counter selections in Saccharomyces cerevisiae. Biotechnology Journal, 2013, 8, 1485-1491.	3.5	4
28	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
29	Structural analysis of the Asn152Gly mutant of P99 cephalosporinase. Acta Crystallographica Section D: Biological Crystallography, 2012, 68, 1189-1193.	2.5	5
30	A Heritable Recombination System for Synthetic Darwinian Evolution in Yeast. ACS Synthetic Biology, 2012, 1, 602-609.	3.8	23
31	Second-Generation Covalent TMP-Tag for Live Cell Imaging. Journal of the American Chemical Society, 2012, 134, 13692-13699.	13.7	118
32	Playing tag with proteins. Nature Chemistry, 2012, 4, 248-250.	13.6	8
33	Ordered and Dynamic Assembly of Single Spliceosomes. Science, 2011, 331, 1289-1295.	12.6	266
34	Chemical Tags for Labeling Proteins Inside Living Cells. Accounts of Chemical Research, 2011, 44, 784-792.	15.6	187
35	Chemical tags: Applications in live cell fluorescence imaging. Journal of Biophotonics, 2011, 4, 391-402.	2.3	79
36	A Library Approach for the Discovery of Customized Yeast Threeâ€Hybrid Counter Selections. ChemBioChem, 2011, 12, 715-717.	2.6	4

#	Article	IF	Citations
37	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
38	A Trimethoprimâ€Based Chemical Tag for Live Cell Twoâ€Photon Imaging. ChemBioChem, 2010, 11, 782-784.	2.6	23
39	PCRless library mutagenesis via oligonucleotide recombination in yeast. Protein Science, 2010, 19, 2336-2346.	7.6	16
40	Live-cell super-resolution imaging with trimethoprim conjugates. Nature Methods, 2010, 7, 717-719.	19.0	315
41	Cytoskeletal coherence requires myosin-IIA contractility. Journal of Cell Science, 2010, 123, 413-423.	2.0	179
42	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
43	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
44	An In Vivo Covalent TMP-Tag Based on Proximity-Induced Reactivity. ACS Chemical Biology, 2009, 4, 547-556.	3.4	116
45	Characterization of a New Glycosynthase Cloned by Using Chemical Complementation. ChemBioChem, 2008, 9, 681-684.	2.6	16
46	High-Throughput Selection for Cellulase Catalysts Using Chemical Complementation. Journal of the American Chemical Society, 2008, 130, 17446-17452.	13.7	41
47	Transcription factor logic using chemical complementation. Molecular BioSystems, 2008, 4, 56-58.	2.9	28
48	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
49	Specificity of Translation forN-Alkyl Amino Acids. Journal of the American Chemical Society, 2007, 129, 11316-11317.	13.7	47
50	Optimized Fluorescent Trimethoprim Derivatives for in vivo Protein Labeling. ChemBioChem, 2007, 8, 767-774.	2.6	89
51	An orthogonal dexamethasoneâ€“trimethoprim yeast three-hybrid system. Analytical Biochemistry, 2007, 363, 160-162.	2.4	23
52	Saturation mutagenesis of Asn152 reveals a substrate selectivity switch in P99 cephalosporinase. Protein Science, 2007, 16, 2636-2646.	7.6	8
53	Chemical Complementation. , 2006, , 183-219.		0
54	Catalytic competition for cells. Nature, 2006, 440, 156-157.	27.8	11

#	Article	IF	Citations
55	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
56	Selective chemical labeling of proteins in living cells. Current Opinion in Chemical Biology, 2005, 9, 56-61.	6.1	132
57	In vivo protein labeling with trimethoprim conjugates: a flexible chemical tag. Nature Methods, 2005, 2, 255-257.	19.0	282
58	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
59	Methotrexate Conjugates: A Molecular In Vivo Protein Tag. Angewandte Chemie - International Edition, 2004, 43, 1672-1675.	13.8	99
60	Pure translation display. Analytical Biochemistry, 2004, 333, 358-364.	2.4	44
61	Correlation between Ligandâ^'Receptor Affinity and the Transcription Readout in a Yeast Three-Hybrid Systemâ€. Biochemistry, 2004, 43, 10353-10363.	2.5	36
62	Amino Acid Backbone Specificity of theEscherichiacoliTranslation Machinery. Journal of the American Chemical Society, 2004, 126, 12752-12753.	13.7	101
63	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
64	Directed Evolution of a Glycosynthase via Chemical Complementation. Journal of the American Chemical Society, 2004, 126, 15051-15059.	13.7	99
65	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
66	Screening and Selection Methods for Large-Scale Analysis of Protein Function. ChemInform, 2003, 34, no.	0.0	0
67	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
68	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
69	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
70	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
71	Screening- und Selektionsmethoden fÃ¼r die Analyse von Proteinfunktionen in groÃŸem MaÃŸstab. Angewandte Chemie, 2002, 114, 4580-4606.	2.0	15
72	A Bacterial Small-Molecule Three-Hybrid System. Angewandte Chemie - International Edition, 2002, 41, 2327-2330.	13.8	47

#	Article	IF	Citations
73	Screening and Selection Methods for Large-Scale Analysis of Protein Function. Angewandte Chemie - International Edition, 2002, 41, 4402-4425.	13.8	115
74	Receptor-Dependence of the Transcription Read-Out in a Small-Molecule Three-Hybrid System. ChemBioChem, 2002, 3, 887-895.	2.6	36
75	Milestones in directed enzyme evolution. Current Opinion in Chemical Biology, 2002, 6, 858-864.	6.1	138
76	In Vivo Protein-Protein Interaction Assays: Beyond Proteins. Angewandte Chemie - International Edition, 2001, 40, 871-875.	13.8	23
77	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
78	Dexamethasoneâˆ’Methotrexate:â€‰ An Efficient Chemical Inducer of Protein Dimerization In Vivo. Journal of the American Chemical Society, 2000, 122, 4247-4248.	13.7	97
79	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
80	Site-Specific Protein Modification Using a Ketone Handle. Journal of the American Chemical Society, 1996, 118, 8150-8151.	13.7	170
81	Probing Protein Structure and Function with an Expanded Genetic Code. Angewandte Chemie International Edition in English, 1995, 34, 621-633.	4.4	222
82	Yeast n-Hybrid Systems for Molecular Evolution. , 0, , 127-158.		0
83	High-Titer Production of the Fungal Anhydrotetracycline, TAN-1612, in Engineered Yeasts. ACS Synthetic Biology, 0, , .	3.8	1