

# Stephen B H Kent

## List of Publications by Citations

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118  
papers

9,259  
citations

47  
h-index

95  
g-index

128  
ext. papers

9,736  
ext. citations

9.8  
avg, IF

6.53  
L-index

#	Paper	IF	Citations
118	Synthesis of native proteins by chemical ligation. <i>Annual Review of Biochemistry</i> , <b>2000</b> , 69, 923-60	29.1	982
117	Total chemical synthesis of proteins. <i>Chemical Society Reviews</i> , <b>2009</b> , 38, 338-51	58.5	761
116	Insights into the mechanism and catalysis of the native chemical ligation reaction. <i>Journal of the American Chemical Society</i> , <b>2006</b> , 128, 6640-6	16.4	508
115	Chemical synthesis of peptides and proteins. <i>Annual Review of Biochemistry</i> , <b>1988</b> , 57, 957-89	29.1	436
114	A new synthetic route to tert-butyloxycarbonylaminoacyl-4-(oxymethyl)phenylacetamidomethyl-resin, an improved support for solid-phase peptide synthesis. <i>Journal of Organic Chemistry</i> , <b>1978</b> , 43, 2845-2852	4.2	320
113	A one-pot total synthesis of crambin. <i>Angewandte Chemie - International Edition</i> , <b>2004</b> , 43, 2534-8	16.4	307
112	Design and chemical synthesis of a homogeneous polymer-modified erythropoiesis protein. <i>Science</i> , <b>2003</b> , 299, 884-7	33.3	295
111	Kinetically controlled ligation for the convergent chemical synthesis of proteins. <i>Angewandte Chemie - International Edition</i> , <b>2006</b> , 45, 3985-8	16.4	251
110	Modulation of Reactivity in Native Chemical Ligation through the Use of Thiol Additives. <i>Journal of the American Chemical Society</i> , <b>1997</b> , 119, 4325-4329	16.4	239
109	Extending the Applicability of Native Chemical Ligation. <i>Journal of the American Chemical Society</i> , <b>1996</b> , 118, 5891-5896	16.4	238
108	Photosensitivity of neurons enabled by cell-targeted gold nanoparticles. <i>Neuron</i> , <b>2015</b> , 86, 207-17	13.9	221
107	Structure at 2.5-A resolution of chemically synthesized human immunodeficiency virus type 1 protease complexed with a hydroxyethylene-based inhibitor. <i>Biochemistry</i> , <b>1991</b> , 30, 1600-9	3.2	221
106	X-ray structure of snow flea antifreeze protein determined by racemic crystallization of synthetic protein enantiomers. <i>Journal of the American Chemical Society</i> , <b>2008</b> , 130, 9695-701	16.4	186
105	Selective desulfurization of cysteine in the presence of Cys(Acm) in polypeptides obtained by native chemical ligation. <i>Organic Letters</i> , <b>2007</b> , 9, 687-90	6.2	185
104	Total Chemical Synthesis of a Unique Transcription Factor-Related Protein: cMyc-Max. <i>Journal of the American Chemical Society</i> , <b>1995</b> , 117, 2998-3007	16.4	183
103	Properties of swollen polymer networks. Solvation and swelling of peptide-containing resins in solid-phase peptide synthesis. <i>Journal of the American Chemical Society</i> , <b>1980</b> , 102, 5463-5470	16.4	162
102	Convergent chemical synthesis and crystal structure of a 203 amino acid "covalent dimer" HIV-1 protease enzyme molecule. <i>Angewandte Chemie - International Edition</i> , <b>2007</b> , 46, 1667-70	16.4	153

101	Convergent chemical synthesis and high-resolution x-ray structure of human lysozyme. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 4846-51	11.5	148
100	In Situ Neutralization in Boc-chemistry Solid Phase Peptide Synthesis. <i>International Journal of Peptide Research and Therapeutics</i> , <b>2007</b> , 13, 31-44	2.1	143
99	Chemical Protein Synthesis by Solid Phase Ligation of Unprotected Peptide Segments. <i>Journal of the American Chemical Society</i> , <b>1999</b> , 121, 8720-8727	16.4	135
98	Medicinal chemistry applied to a synthetic protein: development of highly potent HIV entry inhibitors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2004</b> , 101, 16460-5	11.5	134
97	Racemic protein crystallography. <i>Annual Review of Biophysics</i> , <b>2012</b> , 41, 41-61	21.1	128
96	Chemical synthesis and X-ray structure of a heterochiral {D-protein antagonist plus vascular endothelial growth factor} protein complex by racemic crystallography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 14779-84	11.5	100
95	A One-Pot Total Synthesis of Crambin. <i>Angewandte Chemie</i> , <b>2004</b> , 116, 2588-2592	3.6	98
94	Total chemical synthesis of crambin. <i>Journal of the American Chemical Society</i> , <b>2004</b> , 126, 1377-83	16.4	89
93	Chemical Ligation of Cysteine-Containing Peptides: Synthesis of a 22 kDa Tethered Dimer of HIV-1 Protease. <i>Journal of the American Chemical Society</i> , <b>1995</b> , 117, 1881-1887	16.4	88
92	Towards the total chemical synthesis of integral membrane proteins: a general method for the synthesis of hydrophobic peptide-thioester building blocks. <i>Tetrahedron Letters</i> , <b>2007</b> , 48, 1795-1799	2	87
91	Chemical synthesis of lymphotactin: a glycosylated chemokine with a C-terminal mucin-like domain. <i>Chemistry - A European Journal</i> , <b>2001</b> , 7, 1129-32	4.8	87
90	Kinetically Controlled Ligation for the Convergent Chemical Synthesis of Proteins. <i>Angewandte Chemie</i> , <b>2006</b> , 118, 4089-4092	3.6	84
89	Probing intermolecular main chain hydrogen bonding in serine proteinase-protein inhibitor complexes: chemical synthesis of backbone-engineered turkey ovomucoid third domain. <i>Biochemistry</i> , <b>1997</b> , 36, 673-9	3.2	83
88	Protein conformational dynamics in the mechanism of HIV-1 protease catalysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 20982-7	11.5	77
87	Native chemical ligation at Asx-Cys, Glx-Cys: chemical synthesis and high-resolution X-ray structure of ShK toxin by racemic protein crystallography. <i>Journal of the American Chemical Society</i> , <b>2013</b> , 135, 11911-9	16.4	75
86	Fully convergent chemical synthesis of ester insulin: determination of the high resolution X-ray structure by racemic protein crystallography. <i>Journal of the American Chemical Society</i> , <b>2013</b> , 135, 3173-85	16.4	73
85	Convergent chemical synthesis of [lysine(24,38,83)] human erythropoietin. <i>Angewandte Chemie - International Edition</i> , <b>2012</b> , 51, 993-9	16.4	69
84	A one-pot approach to neoglycopeptides using orthogonal native chemical ligation and click chemistry. <i>Organic Letters</i> , <b>2009</b> , 11, 5270-3	6.2	69

83	Racemic crystallography of synthetic protein enantiomers used to determine the X-ray structure of plectasin by direct methods. <i>Protein Science</i> , <b>2009</b> , 18, 1146-54	6.3	68
82	Modular total chemical synthesis of a human immunodeficiency virus type 1 protease. <i>Journal of the American Chemical Society</i> , <b>2007</b> , 129, 11480-90	16.4	67
81	Mirror image forms of snow flea antifreeze protein prepared by total chemical synthesis have identical antifreeze activities. <i>Journal of the American Chemical Society</i> , <b>2008</b> , 130, 9702-7	16.4	64
80	Total chemical synthesis of enzymes. <i>Journal of Peptide Science</i> , <b>2003</b> , 9, 574-93	2.1	63
79	Total Chemical Synthesis and Catalytic Properties of the Enzyme Enantiomers L- and D-4-Oxalocrotonate Tautomerase. <i>Journal of the American Chemical Society</i> , <b>1995</b> , 117, 11075-11080	16.4	62
78	Biomimetic synthesis of lispro insulin via a chemically synthesized "mini-proinsulin" prepared by oxime-forming ligation. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 16313-8	16.4	56
77	Design and folding of [GluA4(ObetaThrB30)]insulin ("ester insulin"): a minimal proinsulin surrogate that can be chemically converted into human insulin. <i>Angewandte Chemie - International Edition</i> , <b>2010</b> , 49, 5489-93	16.4	54
76	His6 tag-assisted chemical protein synthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2005</b> , 102, 5014-9	11.5	54
75	A Potent d-Protein Antagonist of VEGF-A is Nonimmunogenic, Metabolically Stable, and Longer-Circulating in Vivo. <i>ACS Chemical Biology</i> , <b>2016</b> , 11, 1058-65	4.9	51
74	(Quasi-)racemic X-ray structures of glycosylated and non-glycosylated forms of the chemokine Ser-CCL1 prepared by total chemical synthesis. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 5194-8 <sup>4</sup>	16.4	50
73	Total synthesis by modern chemical ligation methods and high resolution (1.1 Å) X-ray structure of ribonuclease A. <i>Biopolymers</i> , <b>2008</b> , 90, 278-86	2.2	49
72	Total chemical synthesis, folding, and assay of a small protein on a water-compatible solid support. <i>Angewandte Chemie - International Edition</i> , <b>2006</b> , 45, 3283-7	16.4	49
71	Total chemical synthesis of biologically active vascular endothelial growth factor. <i>Angewandte Chemie - International Edition</i> , <b>2011</b> , 50, 8029-33	16.4	47
70	Chemical protein synthesis: Inventing synthetic methods to decipher how proteins work. <i>Bioorganic and Medicinal Chemistry</i> , <b>2017</b> , 25, 4926-4937	3.4	45
69	Determination of the X-ray structure of the snake venom protein omwaprin by total chemical synthesis and racemic protein crystallography. <i>Protein Science</i> , <b>2010</b> , 19, 1840-9	6.3	45
68	Novel protein science enabled by total chemical synthesis. <i>Protein Science</i> , <b>2019</b> , 28, 313-328	6.3	45
67	Comparative properties of insulin-like growth factor 1 (IGF-1) and [Gly7D-Ala]IGF-1 prepared by total chemical synthesis. <i>Angewandte Chemie - International Edition</i> , <b>2008</b> , 47, 1102-6	16.4	44
66	Synthetic erythropoietic proteins: tuning biological performance by site-specific polymer attachment. <i>Chemistry and Biology</i> , <b>2005</b> , 12, 371-83		43

65	Structural engineering of the HIV-1 protease molecule with a beta-turn mimic of fixed geometry. <i>Protein Science</i> , <b>1993</b> , 2, 1085-91	6.3	43
64	Design, total chemical synthesis, and X-ray structure of a protein having a novel linear-loop polypeptide chain topology. <i>Angewandte Chemie - International Edition</i> , <b>2012</b> , 51, 1481-6	16.4	42
63	Total chemical synthesis and X-ray structure of kaliotoxin by racemic protein crystallography. <i>Chemical Communications</i> , <b>2010</b> , 46, 8174-6	5.8	42
62	X-ray structure of native scorpion toxin BmBKTx1 by racemic protein crystallography using direct methods. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 1362-3	16.4	42
61	Studies on the insolubility of a transmembrane peptide from signal peptide peptidase. <i>Journal of the American Chemical Society</i> , <b>2006</b> , 128, 7140-1	16.4	36
60	Novel forms of chemical protein diversity -- in nature and in the laboratory. <i>Current Opinion in Biotechnology</i> , <b>2004</b> , 15, 607-14	11.4	36
59	A functional role of Rv1738 in Mycobacterium tuberculosis persistence suggested by racemic protein crystallography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 4310-5	11.5	34
58	Total chemical synthesis and biological activities of glycosylated and non-glycosylated forms of the chemokines CCL1 and Ser-CCL1. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 5188-93	16.4	33
57	Through the looking glass--a new world of proteins enabled by chemical synthesis. <i>Journal of Peptide Science</i> , <b>2012</b> , 18, 428-36	2.1	33
56	Convergent Chemical Synthesis of [Lysine24, 38, 83] Human Erythropoietin. <i>Angewandte Chemie</i> , <b>2012</b> , 124, 1017-1023	3.6	32
55	Mapping of voltage sensor positions in resting and inactivated mammalian sodium channels by LRET. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, E1857-E1865	11.5	29
54	Bringing the science of proteins into the realm of organic chemistry: total chemical synthesis of SEP (synthetic erythropoiesis protein). <i>Angewandte Chemie - International Edition</i> , <b>2013</b> , 52, 11988-96	16.4	28
53	Total chemical synthesis of biologically active fluorescent dye-labeled Ts1 toxin. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 8970-4	16.4	24
52	Ionization state of the catalytic dyad Asp25/25R in the HIV-1 protease: NMR studies of site-specifically <sup>13</sup> C labelled HIV-1 protease prepared by total chemical synthesis. <i>Organic and Biomolecular Chemistry</i> , <b>2012</b> , 10, 5887-91	3.9	22
51	Perplexing cooperative folding and stability of a low-sequence complexity, polyproline 2 protein lacking a hydrophobic core. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 2241-2246	11.5	21
50	Total chemical synthesis of the enzyme sortase A(N59) with full catalytic activity. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 4662-6	16.4	21
49	Contribution of residue B5 to the folding and function of insulin and IGF-I: constraints and fine-tuning in the evolution of a protein family. <i>Journal of Biological Chemistry</i> , <b>2010</b> , 285, 5040-55	5.4	20
48	Total chemical synthesis of human proinsulin. <i>Chemical Communications</i> , <b>2010</b> , 46, 8177-9	5.8	17

47	Total Chemical Synthesis, Folding, and Assay of a Small Protein on a Water-Compatible Solid Support. <i>Angewandte Chemie</i> , <b>2006</b> , 118, 3361-3365	3.6	16
46	Efficient Total Chemical Synthesis of (13) C=(18) O Isotopomers of Human Insulin for Isotope-Edited FTIR. <i>ChemBioChem</i> , <b>2016</b> , 17, 415-20	3.8	16
45	Deciphering a molecular mechanism of neonatal diabetes mellitus by the chemical synthesis of a protein diastereomer, [D-AlaB8]human proinsulin. <i>Journal of Biological Chemistry</i> , <b>2014</b> , 289, 23683-92	5.4	15
44	The critical role of peptide chemistry in the life sciences. <i>Journal of Peptide Science</i> , <b>2015</b> , 21, 136-8	2.1	14
43	Enhanced Solvation of Peptides Attached to "Solid-Phase" Resins: Straightforward Syntheses of the Elastin Sequence Pro-Gly-Val-Gly-Val-Pro-Gly-Val-Gly-Val. <i>Organic Letters</i> , <b>2015</b> , 17, 3521-3	6.2	13
42	Design, Total Chemical Synthesis, and X-Ray Structure of a Protein Having a Novel Linear-Loop Polypeptide Chain Topology. <i>Angewandte Chemie</i> , <b>2012</b> , 124, 1510-1515	3.6	13
41	Crystal structure of chemically synthesized HIV-1 protease and a ketomethylene isostere inhibitor based on the p2/NC cleavage site. <i>Bioorganic and Medicinal Chemistry Letters</i> , <b>2008</b> , 18, 4554-7	2.9	13
40	Elucidation of the Covalent and Tertiary Structures of Biologically Active Ts3 Toxin. <i>Angewandte Chemie - International Edition</i> , <b>2016</b> , 55, 8639-42	16.4	13
39	β-subunit-induced structural rearrangements of the Ca <sup>2+</sup> - and voltage-activated K <sup>+</sup> (BK) channel. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, E3231-9	11.5	13
38	Inversion of the Side-Chain Stereochemistry of Individual Thr or Ile Residues in a Protein Molecule: Impact on the Folding, Stability, and Structure of the ShK Toxin. <i>Angewandte Chemie - International Edition</i> , <b>2017</b> , 56, 3324-3328	16.4	12
37	Total Chemical Synthesis of Biologically Active Vascular Endothelial Growth Factor. <i>Angewandte Chemie</i> , <b>2011</b> , 123, 8179-8183	3.6	12
36	Role of a salt bridge in the model protein crambin explored by chemical protein synthesis: X-ray structure of a unique protein analogue, [V15A]crambin-alpha-carboxamide. <i>Molecular BioSystems</i> , <b>2009</b> , 5, 750-6		12
35	(Quasi-)Racemic X-ray Structures of Glycosylated and Non-Glycosylated Forms of the Chemokine Ser-CCL1 Prepared by Total Chemical Synthesis. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 5294-5298	3.6	11
34	Scope and Limitations of Fmoc Chemistry SPPS-Based Approaches to the Total Synthesis of Insulin Lispro via Ester Insulin. <i>Chemistry - A European Journal</i> , <b>2017</b> , 23, 1709-1716	4.8	10
33	Die Wissenschaft von Proteinen im Reich der organischen Chemie begründen: Totalsynthese von SEP (synthetisches Erythropoeseprotein). <i>Angewandte Chemie</i> , <b>2013</b> , 125, 12208-12217	3.6	10
32	Total chemical synthesis and biophysical characterization of the minimal isoform of the KChIP2 potassium channel regulatory subunit. <i>Protein Science</i> , <b>2007</b> , 16, 2056-64	6.3	10
31	Crystallization of Enantiomerically Pure Proteins from Quasi-Racemic Mixtures: Structure Determination by X-Ray Diffraction of Isotope-Labeled Ester Insulin and Human Insulin. <i>ChemBioChem</i> , <b>2016</b> , 17, 421-5	3.8	10
30	Obviation of hydrogen fluoride in Boc chemistry solid phase peptide synthesis of peptide-thioesters. <i>Chemical Communications</i> , <b>2016</b> , 52, 13979-13982	5.8	9

29	Single-wavelength phasing strategy for quasi-racemic protein crystal diffraction data. <i>Acta Crystallographica Section D: Biological Crystallography</i> , <b>2012</b> , 68, 62-8		9
28	Synthesis of photoactive analogues of a cystine knot trypsin inhibitor protein. <i>Organic Letters</i> , <b>2007</b> , 9, 5497-500	6.2	9
27	Total chemical synthesis of fully functional Photoactive Yellow Protein. <i>Bioorganic and Medicinal Chemistry</i> , <b>2013</b> , 21, 3436-42	3.4	8
26	Synthesis of tripeptide mimetics based on dihydroquinolinone and benzoxazinone scaffolds. <i>Chemistry - A European Journal</i> , <b>2011</b> , 17, 13983-6	4.8	8
25	Total Chemical Synthesis of the Enzyme Sortase AN59 with Full Catalytic Activity. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 4750-4754	3.6	6
24	Synthesis and comparative properties of two amide-generating resin linkers for use in solid phase peptide synthesis. <i>Journal of Peptide Science</i> , <b>2010</b> , 16, 545-50	2.1	6
23	Reinvestigation of the biological activity of d-allo-ShK protein. <i>Journal of Biological Chemistry</i> , <b>2017</b> , 292, 12599-12605	5.4	5
22	Single-Molecule Studies of HIV-1 Protease Catalysis Enabled by Chemical Protein Synthesis. <i>Israel Journal of Chemistry</i> , <b>2011</b> , 51, 960-967	3.4	5
21	Total synthesis of bovine pancreatic trypsin inhibitor and the protein diastereomer [Gly37D-Ala]BPTI using Boc chemistry solid phase peptide synthesis. <i>Peptide Science</i> , <b>2020</b> , 112, e24166 <sup>3</sup>		4
20	Determining the 3D structure of HIV-1 protease. <i>Science</i> , <b>2000</b> , 288, 1590	33.3	4
19	Synthesis and characterization of peptides and proteins <b>1988</b> , 173-178		4
18	Total Chemical Synthesis and Biological Activities of Glycosylated and Non-Glycosylated Forms of the Chemokines CCL1 and Ser-CCL1. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 5288-5293	3.6	3
17	Total Chemical Synthesis of Biologically Active Fluorescent Dye-Labeled Ts1 Toxin. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 9116-9120	3.6	3
16	Exploratory synthesis of peptide-alpha-thioester segments spanning the polypeptide sequence of the delta-opioid receptor, a G protein-coupled receptor. <i>Biopolymers</i> , <b>2007</b> , 88, 340-9	2.2	3
15	Reprint of "Crystal structure of chemically synthesized HIV-1 protease and a ketomethylene isostere inhibitor based on the p2/NC cleavage site" [Bioorg. Med. Chem. Lett. 18 (2008) 4554-4557]. <i>Bioorganic and Medicinal Chemistry Letters</i> , <b>2008</b> , 18, 6012-5	2.9	3
14	Visualizing Tetrahedral Oxyanion Bound in HIV-1 Protease Using Neutrons: Implications for the Catalytic Mechanism and Drug Design. <i>ACS Omega</i> , <b>2020</b> , 5, 11605-11617	3.9	2
13	Neoglycoprotein Synthesis Using the Copper-Catalyzed Azide-Alkyne Click Reaction and Native Chemical Ligation <b>2013</b> , 251-270		2
12	In situ neutralization in Boc chemistry SPPS: High yield assembly of difficult sequences <b>1992</b> , 623-624		2

11	Rapid manual Boc- and Fmoc-solid phase peptide synthesis <b>1991</b> , 174-175		2
10	Elucidation of the Covalent and Tertiary Structures of Biologically Active Ts3 Toxin. <i>Angewandte Chemie</i> , <b>2016</b> , 128, 8781-8784	3.6	2
9	Chemical synthesis and enzymatic properties of RNase A analogues designed to enhance second-step catalytic activity. <i>Organic and Biomolecular Chemistry</i> , <b>2016</b> , 14, 8804-8814	3.9	1
8	Studies on the total chemical synthesis of crystalline [Aba67,95,167,195]HIV-1 proteinase <b>1991</b> , 172-173		1
7	Inversion of the Side-Chain Stereochemistry of Individual Thr or Ile Residues in a Protein Molecule: Impact on the Folding, Stability, and Structure of the ShK Toxin. <i>Angewandte Chemie</i> , <b>2017</b> , 129, 3372-3376	3.6	0
6	A Non-immunogenic Bivalent d-Protein Potently Inhibits Retinal Vascularization and Tumor Growth. <i>ACS Chemical Biology</i> , <b>2021</b> , 16, 548-556	4.9	0
5	Chemical Synthesis of an Enzyme Containing an Artificial Catalytic Apparatus. <i>Australian Journal of Chemistry</i> , <b>2020</b> , 73, 321	1.2	
4	Special Issue □Tribute to Bruce Merrifield. <i>International Journal of Peptide Research and Therapeutics</i> , <b>2007</b> , 13, 29-29	2.1	
3	Chemistry of Peptide Synthesis. Von N. Leo Benoiton.. <i>Angewandte Chemie</i> , <b>2006</b> , 118, 4340-4340	3.6	
2	Total Chemical Protein Synthesis for the Determination of Novel X-ray Structures by Racemic Protein Crystallography. <i>NATO Science for Peace and Security Series A: Chemistry and Biology</i> , <b>2013</b> , 11-22 <sup>0.1</sup>		
1	Characterization of Protein Molecules Prepared by Total Chemical Synthesis <b>2021</b> , 1-15		