

Christian F W Becker

List of Publications by Year in descending order

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105
papers

3,106
citations

185998

28
h-index

174990

52
g-index

118
all docs

118
docs citations

118
times ranked

3961
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Substrates and Regulation Mechanisms for the Human Mitochondrial Sirtuins Sirt3 and Sirt5. <i>Journal of Molecular Biology</i> , 2008, 382, 790-801. | 2.0 | 474 |
| 2 | Native chemical ligation in protein synthesis and semi-synthesis. <i>Chemical Society Reviews</i> , 2018, 47, 9046-9068. | 18.7 | 232 |
| 3 | An acetylome peptide microarray reveals specificities and deacetylation substrates for all human sirtuin isoforms. <i>Nature Communications</i> , 2013, 4, 2327. | 5.8 | 179 |
| 4 | Silaffins in Silica Biomineralization and Biomimetic Silica Precipitation. <i>Marine Drugs</i> , 2015, 13, 5297-5333. | 2.2 | 96 |
| 5 | Semisynthesis of a Glycosylphosphatidylinositol-Anchored Prion Protein. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 8215-8219. | 7.2 | 93 |
| 6 | HIV-1 Nef membrane association depends on charge, curvature, composition and sequence. <i>Nature Chemical Biology</i> , 2010, 6, 46-53. | 3.9 | 88 |
| 7 | Green tea extracts interfere with the stress-protective activity of PrP ^C and the formation of PrP ^{Sc} . <i>Journal of Neurochemistry</i> , 2008, 107, 218-229. | 2.1 | 64 |
| 8 | Protein semi-synthesis: New proteins for functional and structural studies. <i>New Biotechnology</i> , 2005, 22, 153-172. | 2.7 | 63 |
| 9 | Total Chemical Synthesis of an Integral Membrane Enzyme: Diacylglycerol Kinase from <i>Escherichia coli</i> . <i>Angewandte Chemie - International Edition</i> , 2011, 50, 3988-3992. | 7.2 | 61 |
| 10 | A sequence-function analysis of the silica precipitating silaffin R5 peptide. <i>Journal of Peptide Science</i> , 2014, 20, 152-158. | 0.8 | 60 |
| 11 | One-shot NMR analysis of microbial secretions identifies highly potent proteasome inhibitor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 18367-18371. | 3.3 | 58 |
| 12 | Total chemical synthesis of a functional interacting protein pair: The protooncogene H-Ras and the Ras-binding domain of its effector c-Raf1. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 5075-5080. | 3.3 | 57 |
| 13 | Semisynthetic Murine Prion Protein Equipped with a GPI Anchor Mimic Incorporates into Cellular Membranes. <i>Chemistry and Biology</i> , 2007, 14, 994-1006. | 6.2 | 56 |
| 14 | A PEGylated Photocleavable Auxiliary Mediates the Sequential Enzymatic Glycosylation and Native Chemical Ligation of Peptides. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 7711-7715. | 7.2 | 55 |
| 15 | O-GlcNAc modification of small heat shock proteins enhances their anti-amyloid chaperone activity. <i>Nature Chemistry</i> , 2021, 13, 441-450. | 6.6 | 54 |
| 16 | Generation of Live-Cell Microarrays by Means of DNA-Directed Immobilization of Specific Cell-Surface Ligands. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 4180-4183. | 7.2 | 53 |
| 17 | Labeling and Natural Post-Translational Modification of Peptides and Proteins via Chemoselective Pd-Catalyzed Prenylation of Cysteine. <i>Journal of the American Chemical Society</i> , 2019, 141, 14931-14937. | 6.6 | 48 |
| 18 | Chemical synthesis and semisynthesis of membrane proteins. <i>Molecular BioSystems</i> , 2008, 4, 733. | 2.9 | 47 |

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|----|--|-----|-----------|
| 19 | Chemical Synthesis and Single Channel Properties of Tetrameric and Pentameric TASP _s (Template-assembled Synthetic Proteins) Derived from the Transmembrane Domain of HIV Virus Protein u (Vpu). <i>Journal of Biological Chemistry</i> , 2004, 279, 17483-17489. | 1.6 | 46 |
| 20 | Direct Readout of Protein-Protein Interactions by Mass Spectrometry from Protein-DNA Microarrays. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 7635-7639. | 7.2 | 43 |
| 21 | Surface immobilization of biomolecules by click sulfonamide reaction. <i>Chemical Communications</i> , 2008, , 3723. | 2.2 | 42 |
| 22 | Modified silaffin R5 peptides enable encapsulation and release of cargo molecules from biomimetic silica particles. <i>Bioorganic and Medicinal Chemistry</i> , 2013, 21, 3533-3541. | 1.4 | 42 |
| 23 | Conformational Selection in Substrate Recognition by Hsp70 Chaperones. <i>Journal of Molecular Biology</i> , 2013, 425, 466-474. | 2.0 | 38 |
| 24 | Single Posttranslational Modifications in the Central Repeat Domains of Tau4 Impact its Aggregation and Tubulin Binding. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 1616-1620. | 7.2 | 38 |
| 25 | Incorporation of spin-labelled amino acids into proteins. <i>Magnetic Resonance in Chemistry</i> , 2005, 43, S34-S39. | 1.1 | 37 |
| 26 | Site-Specific Attachment of Polyethylene Glycol-like Oligomers to Proteins and Peptides. <i>Bioconjugate Chemistry</i> , 2006, 17, 1492-1498. | 1.8 | 35 |
| 27 | Exploring the effect of native and artificial peptide modifications on silaffin induced silica precipitation. <i>Chemical Science</i> , 2012, 3, 3500. | 3.7 | 31 |
| 28 | Recent Advances in Peptide-Based Approaches for Cancer Treatment. <i>Current Medicinal Chemistry</i> , 2020, 27, 1174-1205. | 1.2 | 30 |
| 29 | MALDI TOF/TOF-Based Approach for the Identification of <sc>d</sc>- Amino Acids in Biologically Active Peptides and Proteins. <i>Journal of Proteome Research</i> , 2016, 15, 1487-1496. | 1.8 | 29 |
| 30 | Monitoring the real-time kinetics of the hydrolysis reaction of guanine nucleotide-binding proteins. <i>Biological Chemistry</i> , 2005, 386, 1105-14. | 1.2 | 27 |
| 31 | A C-terminal Membrane Anchor Affects the Interactions of Prion Proteins with Lipid Membranes. <i>Journal of Biological Chemistry</i> , 2014, 289, 30144-30160. | 1.6 | 27 |
| 32 | Immobilising proteins on silica with site-specifically attached modified silaffin peptides. <i>Biomaterials Science</i> , 2015, 3, 288-297. | 2.6 | 26 |
| 33 | Atomic-Level Quality Assessment of Enzymes Encapsulated in Bioinspired Silica. <i>Chemistry - A European Journal</i> , 2016, 22, 425-432. | 1.7 | 25 |
| 34 | On-Resin Assembly of a Linkerless Lanthanide(III)-Based Luminescence Label and Its Application to the Total Synthesis of Site-Specifically Labeled Mechanosensitive Channels. <i>Bioconjugate Chemistry</i> , 2004, 15, 1118-1124. | 1.8 | 24 |
| 35 | Functional Immobilization of the Small GTPase Rab6A on DNA-Gold Nanoparticles by Using a Site-Specifically Attached Poly(ethylene glycol) Linker and Thiol Place-Exchange Reaction. <i>ChemBioChem</i> , 2007, 8, 32-36. | 1.3 | 24 |
| 36 | Random coil shifts of posttranslationally modified amino acids. <i>Journal of Biomolecular NMR</i> , 2019, 73, 587-599. | 1.6 | 24 |

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|----|--|-----|-----------|
| 37 | A quantitative and site-specific chemoenzymatic glycosylation approach for PEGylated MUC1 peptides. <i>Chemical Science</i> , 2014, 5, 1634. | 3.7 | 23 |
| 38 | C-Terminal Fluorescence Labeling of Proteins for Interaction Studies on the Single-Molecule Level. <i>ChemBioChem</i> , 2006, 7, 891-895. | 1.3 | 22 |
| 39 | A sensitive fluorescence monitor for the detection of activated Ras: total chemical synthesis of site-specifically labeled Ras binding domain of c-Raf1 immobilized on a surface. <i>Chemistry and Biology</i> , 2001, 8, 243-252. | 6.2 | 21 |
| 40 | Chemical synthesis and characterization of elastin-like polypeptides (ELPs) with variable guest residues. <i>Journal of Peptide Science</i> , 2016, 22, 334-342. | 0.8 | 21 |
| 41 | Arginine side-chain modification that occurs during copper-catalysed azide-alkyne click reactions resembles an advanced glycation end product. <i>Organic and Biomolecular Chemistry</i> , 2016, 14, 6205-6211. | 1.5 | 21 |
| 42 | Biomimetic and biopolymer-based enzyme encapsulation. <i>Enzyme and Microbial Technology</i> , 2021, 150, 109864. | 1.6 | 21 |
| 43 | Assembly of a transmembrane b-Type cytochrome is mainly driven by transmembrane helix interactions. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2006, 1758, 1815-1822. | 1.4 | 20 |
| 44 | Protein immobilization on liposomes and lipid-coated nanoparticles by protein trans-splicing. <i>Journal of Peptide Science</i> , 2010, 16, 582-588. | 0.8 | 20 |
| 45 | Expressed Protein Selenoester Ligation. <i>Angewandte Chemie - International Edition</i> , 2022, 61, . | 7.2 | 20 |
| 46 | Impaired Chaperone Activity of Human Heat Shock Protein Hsp27 Site-Specifically Modified with Argpyrimidine. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 11397-11402. | 7.2 | 19 |
| 47 | A peptide extension dictates IgM assembly. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E8575-E8584. | 3.3 | 19 |
| 48 | Semisynthetic prion protein (PrP) variants carrying glycan mimics at position 181 and 197 do not form fibrils. <i>Chemical Science</i> , 2017, 8, 6626-6632. | 3.7 | 19 |
| 49 | Chemical Synthesis and Semisynthesis of Lipidated Proteins. <i>Angewandte Chemie - International Edition</i> , 2022, 61, e202111266. | 7.2 | 19 |
| 50 | Multifunctional V_6 Integrin-Specific Peptide-Pt(IV) Conjugates for Cancer Cell Targeting. <i>Bioconjugate Chemistry</i> , 2017, 28, 2429-2439. | 1.8 | 18 |
| 51 | SDS-Facilitated In vitro Formation of a Transmembrane B-Type Cytochrome Is Mediated by Changes in Local pH. <i>Journal of Molecular Biology</i> , 2011, 407, 594-606. | 2.0 | 17 |
| 52 | Utility of the Phenacyl Protecting Group in Traceless Protein Semisynthesis through Ligation-Desulfurization Chemistry. <i>ChemistryOpen</i> , 2018, 7, 106-110. | 0.9 | 16 |
| 53 | Conversion of a Mechanosensitive Channel Protein from a Membrane-embedded to a Water-soluble Form by Covalent Modification with Amphiphiles. <i>Journal of Molecular Biology</i> , 2004, 343, 747-758. | 2.0 | 15 |
| 54 | Continuous Flow Reactors from Microfluidic Compartmentalization of Enzymes within Inorganic Microparticles. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 32951-32960. | 4.0 | 15 |

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|----|--|-----|-----------|
| 55 | Chapter 9 Semisynthesis of Membrane-Attached Prion Proteins. <i>Methods in Enzymology</i> , 2009, 462, 177-193. | 0.4 | 13 |
| 56 | Efficient generation of peptide hydrazides via direct hydrazinolysis of Peptidyl-Wang-TentaGel resins. <i>Journal of Peptide Science</i> , 2015, 21, 201-207. | 0.8 | 13 |
| 57 | A dual functional peptide-auxiliary conjugate for C-to-N and N-to-C sequential native chemical ligation of glycopeptides. <i>Bioorganic and Medicinal Chemistry</i> , 2017, 25, 5016-5021. | 1.4 | 13 |
| 58 | Synthesis of a GPI anchor module suitable for protein post-translational modification. <i>Biopolymers</i> , 2010, 94, 457-464. | 1.2 | 12 |
| 59 | Protein-DNA Arrays as Tools for Detection of Protein-Protein Interactions by Mass Spectrometry. <i>ChemBioChem</i> , 2013, 14, 92-99. | 1.3 | 11 |
| 60 | Single Posttranslational Modifications in the Central Repeat Domains of Tau4 Impact its Aggregation and Tubulin Binding. <i>Angewandte Chemie</i> , 2019, 131, 1630-1634. | 1.6 | 11 |
| 61 | Alum triggers infiltration of human neutrophils ex vivo and causes lysosomal destabilization and mitochondrial membrane potential-dependent NET formation. <i>FASEB Journal</i> , 2020, 34, 14024-14041. | 0.2 | 11 |
| 62 | Multi-scale microporous silica microcapsules from gas-in water-in oil emulsions. <i>Soft Matter</i> , 2020, 16, 3082-3087. | 1.2 | 11 |
| 63 | Chemical Synthesis Approaches to the Engineering of Ion Channels. <i>Protein and Peptide Letters</i> , 2005, 12, 737-741. | 0.4 | 10 |
| 64 | Photocontrol of STAT6 dimerization and translocation. <i>Molecular BioSystems</i> , 2010, 6, 2423. | 2.9 | 10 |
| 65 | Studying Weak and Dynamic Interactions of Posttranslationally Modified Proteins using Expressed Protein Ligation. <i>ACS Chemical Biology</i> , 2014, 9, 347-352. | 1.6 | 10 |
| 66 | Synthetic integrin-binding immune stimulators target cancer cells and prevent tumor formation. <i>Scientific Reports</i> , 2017, 7, 17592. | 1.6 | 9 |
| 67 | Ovalbumin Epitope SIINFEKL Self-Assembles into a Supramolecular Hydrogel. <i>Scientific Reports</i> , 2019, 9, 2696. | 1.6 | 9 |
| 68 | Segmental and site-specific isotope labelling strategies for structural analysis of posttranslationally modified proteins. <i>RSC Chemical Biology</i> , 2021, 2, 1441-1461. | 2.0 | 9 |
| 69 | Synthesis of 2-Iodo- and 2-Bromo-ATP and GTP Analogues as Potential Phasing Tools for X-ray Crystallography. <i>Nucleosides & Nucleotides</i> , 1999, 18, 137-151. | 0.5 | 8 |
| 70 | N-terminal residues of silaffin peptides impact morphology of biomimetic silica particles. <i>Materials Letters</i> , 2018, 212, 114-117. | 1.3 | 8 |
| 71 | Silica particles with a quercetin-R5 peptide conjugate are taken up into HT-29 cells and translocate into the nucleus. <i>Chemical Communications</i> , 2019, 55, 9649-9652. | 2.2 | 8 |
| 72 | Design, synthesis, and conformational studies of [DOTA]-Octreotide analogs containing [1,2,3]triazolyl as a disulfide mimetic. <i>Peptide Science</i> , 2018, 110, e24071. | 1.0 | 7 |

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|----|---|-----|-----------|
| 73 | Prion proteinâ€”Semisynthetic prion protein (PrP) variants with posttranslational modifications. <i>Journal of Peptide Science</i> , 2019, 25, e3216. | 0.8 | 7 |
| 74 | Site-specific modification and segmental isotope labelling of HMGN1 reveals long-range conformational perturbations caused by posttranslational modifications. <i>RSC Chemical Biology</i> , 2021, 2, 537-550. | 2.0 | 7 |
| 75 | Semisynthesis of H-Ras with a glutamic acid methylester at position 61. <i>Biopolymers</i> , 2008, 90, 399-405. | 1.2 | 6 |
| 76 | Recombinant expression of soluble murine prion protein for Câ€”terminal modification. <i>FEBS Letters</i> , 2013, 587, 430-435. | 1.3 | 6 |
| 77 | Silaffinâ€”Inspired Peptide Assemblies Template Silica Particles with Variable Morphologies. <i>ChemNanoMat</i> , 2018, 4, 1209-1213. | 1.5 | 6 |
| 78 | Rapid Production of Functionalized Recombinant Proteins:â€”Marrying Ligation Independent Cloning and in Vitro Protein Ligation. <i>Bioconjugate Chemistry</i> , 2006, 17, 610-617. | 1.8 | 5 |
| 79 | Molecular dynamics simulations and conductance studies of the interaction of VP1 N-terminus from Polio virus and gp41 fusion peptide from HIV-1 with lipid membranes. <i>Molecular Membrane Biology</i> , 2012, 29, 9-25. | 2.0 | 5 |
| 80 | Impaired Chaperone Activity of Human Heat Shock Protein Hsp27 Siteâ€”Specifically Modified with Argpyrimidine. <i>Angewandte Chemie</i> , 2016, 128, 11569-11574. | 1.6 | 5 |
| 81 | A comparative study of synthetic and semisynthetic approaches for ligating the epidermal growth factor to a bivalent scaffold. <i>Journal of Peptide Science</i> , 2017, 23, 871-879. | 0.8 | 5 |
| 82 | Synthetic Cancerâ€”Targeting Innate Immune Stimulators Give Insights into Avidity Effects. <i>ChemBioChem</i> , 2018, 19, 459-469. | 1.3 | 5 |
| 83 | Synthetic Approach to Argpyrimidine as a Tool for Investigating Nonenzymatic Posttranslational Modification of Proteins. <i>Synlett</i> , 2017, 28, 1950-1955. | 1.0 | 4 |
| 84 | Cytoskeleton-dependent clustering of membrane-bound prion protein on the cell surface. <i>Journal of Biological Chemistry</i> , 2021, 296, 100359. | 1.6 | 4 |
| 85 | Probing Ras Effector Interactions on Nanoparticle Supported Lipid Bilayers. <i>Bioconjugate Chemistry</i> , 2008, 19, 1938-1944. | 1.8 | 3 |
| 86 | Multifunctional Scaffolds for Assembling Cancer-Targeting Immune Stimulators Using Chemoselective Ligations. <i>Frontiers in Chemistry</i> , 2019, 7, 113. | 1.8 | 3 |
| 87 | Biomimetic Silica Encapsulation of Lipid Nanodiscs and β -Sheet-Stabilized Diacylglycerol Kinase. <i>Bioconjugate Chemistry</i> , 2021, 32, 1742-1752. | 1.8 | 3 |
| 88 | Highly Precise Protein Semisynthesis through Ligationâ€”Desulfurization Chemistry in Combination with Phenacyl Protection of Native Cysteines. <i>Methods in Molecular Biology</i> , 2020, 2133, 343-358. | 0.4 | 3 |
| 89 | Expressed Protein Selenoester Ligation. <i>Angewandte Chemie</i> , 0, , . | 1.6 | 3 |
| 90 | Semisynthesis of human thymidine monophosphate kinase. <i>Biopolymers</i> , 2010, 94, 433-440. | 1.2 | 2 |

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|-----|---|-----|-----------|
| 91 | Chemical protein synthesis. <i>Journal of Peptide Science</i> , 2014, 20, 63-63. | 0.8 | 2 |
| 92 | Semisynthesis of Membrane-Attached Proteins Using Split Inteins. <i>Methods in Molecular Biology</i> , 2017, 1495, 93-109. | 0.4 | 2 |
| 93 | Just a spoonful of sugar: Short glycans affect protein properties and functions. <i>Journal of Peptide Science</i> , 2019, 25, e3167. | 0.8 | 2 |
| 94 | Mannosylated hemagglutinin peptides bind cyanovirin-N independent of disulfide-bonds in complementary binding sites. <i>RSC Advances</i> , 2020, 10, 11079-11087. | 1.7 | 2 |
| 95 | Chemical Synthesis and Semisynthesis of Lipidated Proteins. <i>Angewandte Chemie</i> , 0, , . | 1.6 | 2 |
| 96 | Chemical Synthesis of an Integral Membrane Enzyme – The Challenges of Diacylglycerol Kinase. <i>Israel Journal of Chemistry</i> , 2011, 51, 930-939. | 1.0 | 1 |
| 97 | Finding the best ligase. <i>Nature Chemical Biology</i> , 2018, 14, 2-3. | 3.9 | 1 |
| 98 | Tumor-Targeting Immune System Engagers (ISERs) Activate Human Neutrophils after Binding to Cancer Cells. <i>Biochemistry</i> , 2019, 58, 2642-2652. | 1.2 | 1 |
| 99 | Genome Mining-Based Discovery of Blenny Fish-Derived Peptides Targeting the Mouse μ -Opioid Receptor. <i>Frontiers in Pharmacology</i> , 2021, 12, 773029. | 1.6 | 1 |
| 100 | Protein Arrays as Tools for Detection of Protein-Protein Interactions by Mass Spectrometry. , 2006, , 725-727. | | 0 |
| 101 | Size Matters: Side Chain Length Affects SH2 Substrate Binding. <i>Chemistry and Biology</i> , 2010, 17, 211-212. | 6.2 | 0 |
| 102 | Ambiguous Origin: Two Sides of an Ephrin Receptor Tyrosine Kinase. <i>Chemistry and Biology</i> , 2011, 18, 279-281. | 6.2 | 0 |
| 103 | Titelbild: Impaired Chaperone Activity of Human Heat Shock Protein Hsp27 Site-Specifically Modified with Argpyrimidine (<i>Angew. Chem.</i> 38/2016). <i>Angewandte Chemie</i> , 2016, 128, 11473-11473. | 1.6 | 0 |
| 104 | Peptide & protein ligation. <i>Bioorganic and Medicinal Chemistry</i> , 2017, 25, 4925. | 1.4 | 0 |
| 105 | Protein Chemistry Looking Ahead: 8th Chemical Protein Synthesis Meeting 16-19 June 2019, Berlin, Germany. <i>Cell Chemical Biology</i> , 2019, 26, 1349-1354. | 2.5 | 0 |