# Beate Koksch

List of Publications by Year
in descending order

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|---|---|---|---|
| 95<br>papers | 4,632<br>citations | 136950<br>32<br>h-index | 102487<br>66<br>g-index |
| 101<br>all docs | 101<br>docs citations | 101<br>times ranked | 5666<br>citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Multivalency as a Chemical Organization and Action Principle. Angewandte Chemie - International Edition, 2012, 51, 10472-10498. | 13.8 | 854 |
| 2 | Fluorinated amino acids: compatibility with native protein structures and effects on proteinâ€“protein interactions. Chemical Society Reviews, 2012, 41, 2135-2171. | 38.1 | 365 |
| 3 | Synthetic strategies to Î±-trifluoromethyl and Î±-difluoromethyl substituted Î±-amino acids. Chemical Society Reviews, 2008, 37, 1727. | 38.1 | 247 |
| 4 | Approaches to Obtaining Fluorinated Î±-Amino Acids. Chemical Reviews, 2019, 119, 10718-10801. | 47.7 | 192 |
| 5 | Development of Zinc Finger Domains for Recognition of the 5â€²-CNN-3â€² Family DNA Sequences and Their Use in the Construction of Artificial Transcription Factors. Journal of Biological Chemistry, 2005, 280, 35588-35597. | 3.4 | 166 |
| 6 | Biocatalysis with Unnatural Amino Acids: Enzymology Meets Xenobiology. Angewandte Chemie - International Edition, 2017, 56, 9680-9703. | 13.8 | 164 |
| 7 | Fluorine in Peptide Design and Protein Engineering. European Journal of Organic Chemistry, 2005, 2005, 4483-4503. | 2.4 | 151 |
| 8 | Fluorine in a Native Protein Environmentâ€”How the Spatial Demand and Polarity of Fluoroalkyl Groups Affect Protein Folding. Angewandte Chemie - International Edition, 2006, 45, 4198-4203. | 13.8 | 134 |
| 9 | Deciphering the Fluorine Codeâ€”The Many Hats Fluorine Wears in a Protein Environment. Accounts of Chemical Research, 2017, 50, 2093-2103. | 15.6 | 125 |
| 10 | Nanoscale imaging reveals laterally expanding antimicrobial pores in lipid bilayers. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8918-8923. | 7.1 | 112 |
| 11 | Random Coils, Î²-Sheet Ribbons, and Î±-Helical Fibers:Â One Peptide Adopting Three Different Secondary Structures at Will. Journal of the American Chemical Society, 2006, 128, 2196-2197. | 13.7 | 109 |
| 12 | Direct One-Step<sup>18</sup>F-Labeling of Peptides via Nucleophilic Aromatic Substitution. Bioconjugate Chemistry, 2009, 20, 2254-2261. | 3.6 | 87 |
| 13 | Cationic membraneâ€active peptides â€“ anticancer and antifungal activity as well as penetration into human skin. Experimental Dermatology, 2014, 23, 326-331. | 2.9 | 78 |
| 14 | Proteolytically stable peptides by incorporation of Î±-Tfm amino acids. Journal of Peptide Science, 1997, 3, 157-167. | 1.4 | 76 |
| 15 | Fluorinated amino acids in amyloid formation: a symphony of size, hydrophobicity and Î±-helix propensity. Chemical Science, 2014, 5, 819-830. | 7.4 | 67 |
| 16 | Chemical Labeling Strategy with (R)- and (S)-Trifluoromethylalanine for Solid State <sup>19</sup>F NMR Analysis of Peptaibols in Membranes. Journal of the American Chemical Society, 2009, 131, 15596-15597. | 13.7 | 65 |
| 17 | Amide-I and -II Vibrations of the Cyclic Î²-Sheet Model Peptide Gramicidin S in the Gas Phase. Journal of the American Chemical Society, 2010, 132, 2085-2093. | 13.7 | 62 |
| 18 | Nanoparticleâ€Induced Folding and Fibril Formation of Coiledâ€Coilâ€Based Model Peptides. Small, 2010, 6, 1321-1328. | 10.0 | 59 |

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|---|---|---|---|
| 19 | Fineâ€Tuning the Proteolytic Stability of Peptides with Fluorinated Amino Acids. European Journal of Organic Chemistry, 2018, 2018, 3667-3679. | 2.4 | 58 |
| 20 | Evaluation of the Molecular Interactions of Fluorinated Amino Acids with Native Polypeptides. ChemBioChem, 2004, 5, 717-720. | 2.6 | 54 |
| 21 | Conjugate hydrotrifluoromethylation of Î±,Î²-unsaturated acyl-oxazolidinones: synthesis of chiral fluorinated amino acids. Organic and Biomolecular Chemistry, 2012, 10, 8583. | 2.8 | 54 |
| 22 | How Metal Ions Affect Amyloid Formation: Cu<sup>2+</sup>â€•and Zn<sup>2+</sup>â€Sensitive Peptides. ChemBioChem, 2008, 9, 531-536. | 2.6 | 53 |
| 23 | Self-Assembling Peptides as Extracellular Matrix Mimics to Influence Stem Cell's Fate. Frontiers in Chemistry, 2019, 7, 172. | 3.6 | 52 |
| 24 | Following polypeptide folding and assembly with conformational switches. Current Opinion in Chemical Biology, 2008, 12, 730-739. | 6.1 | 51 |
| 25 | How Cα-Fluoroalkyl Amino Acids and Peptides Interact with Enzymes:Studies Concerning the Influence on Proteolytic Stability, Enzymatic Resolution and Peptide Coupling. Current Topics in Medicinal Chemistry, 2006, 6, 1483-1498. | 2.1 | 50 |
| 26 | NFGAIL Amyloid Oligomers: The Onset of Beta-Sheet Formation and the Mechanism for Fibril Formation. Journal of the American Chemical Society, 2018, 140, 244-249. | 13.7 | 47 |
| 27 | Positionâ€Dependent Effects of Fluorinated Amino Acids on the Hydrophobic Core Formation of a Heterodimeric Coiled Coil. Chemistry - A European Journal, 2009, 15, 7628-7636. | 3.3 | 44 |
| 28 | Catalytically Active Peptideâ€“Gold Nanoparticle Conjugates: Prospecting for Artificial Enzymes. Angewandte Chemie - International Edition, 2020, 59, 8776-8785. | 13.8 | 43 |
| 29 | From Î±-helix to Î²-sheet â€“ a reversible metal ion induced peptide secondary structure switch. Organic and Biomolecular Chemistry, 2005, 3, 2500. | 2.8 | 42 |
| 30 | The Multiple Origins of the Hydrophobicity of Fluorinated Apolar Amino Acids. CheM, 2017, 3, 881-897. | 11.7 | 39 |
| 31 | Fluorine in Protein Environments: A QM and MD Study. Journal of Physical Chemistry B, 2009, 113, 16400-16408. | 2.6 | 37 |
| 32 | Impact of fluorination on proteolytic stability of peptides: a case study with Î±-chymotrypsin and pepsin. Amino Acids, 2014, 46, 2733-2744. | 2.7 | 36 |
| 33 | Breast cancer: insights in disease and influence of drug methotrexate. RSC Medicinal Chemistry, 2020, 11, 646-664. | 3.9 | 33 |
| 34 | Fluorine teams up with water to restore inhibitor activity to mutant BPTI. Chemical Science, 2015, 6, 5246-5254. | 7.4 | 32 |
| 35 | Intramolecular Charge Interactions as a Tool to Control the Coiledâ€Coilâ€toâ€Amyloid Transformation. Chemistry - A European Journal, 2008, 14, 11442-11451. | 3.3 | 31 |
| 36 | A Self-Assembling Peptide Scaffold for the Multivalent Presentation of Antigens. Biomacromolecules, 2015, 16, 2188-2197. | 5.4 | 31 |

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|---|---|---|---|
| 37 | Flow Synthesis of Fluorinated Î±â€Amino Acids. European Journal of Organic Chemistry, 2015, 2015, 3036-3039. | 2.4 | 31 |
| 38 | Catalytic Activity of Peptideâ€“Nanoparticle Conjugates Regulated by a Conformational Change. Biomacromolecules, 2017, 18, 3557-3562. | 5.4 | 31 |
| 39 | An Intrinsic Hydrophobicity Scale for Amino Acids and Its Application to Fluorinated Compounds. Angewandte Chemie - International Edition, 2019, 58, 8216-8220. | 13.8 | 30 |
| 40 | Multiomics Analysis Provides Insight into the Laboratory Evolution of Escherichia coli toward the Metabolic Usage of Fluorinated Indoles. ACS Central Science, 2021, 7, 81-92. | 11.3 | 27 |
| 41 | Towards identifying preferred interaction partners of fluorinated amino acids within the hydrophobic environment of a dimeric coiled coil peptide. Organic and Biomolecular Chemistry, 2010, 8, 1382. | 2.8 | 26 |
| 42 | Discovery and Investigation of Natural Editing Function against Artificial Amino Acids in Protein Translation. ACS Central Science, 2017, 3, 73-80. | 11.3 | 25 |
| 43 | Advanced approaches for the characterization of a de novo designed antiparallel coiled coil peptide. Organic and Biomolecular Chemistry, 2005, 3, 1189. | 2.8 | 24 |
| 44 | Accommodating fluorinated amino acids in a helical peptide environment. RSC Advances, 2013, 3, 6319. | 3.6 | 22 |
| 45 | Impact of fluorination on proteolytic stability of peptides in human blood plasma. Bioorganic and Medicinal Chemistry, 2013, 21, 3542-3546. | 3.0 | 22 |
| 46 | Inhibition of Amyloid Aggregation by Formation of Helical Assemblies. Chemistry - A European Journal, 2011, 17, 10651-10661. | 3.3 | 21 |
| 47 | Tailored Presentation of Carbohydrates on a Coiled Coil-Based Scaffold for Asialoglycoprotein Receptor Targeting. ACS Chemical Biology, 2015, 10, 2065-2072. | 3.4 | 21 |
| 48 | Effects of single substitutions with hexafluoroleucine and trifluorovaline on the hydrophobic core formation of a heterodimeric coiled coil. Journal of Fluorine Chemistry, 2015, 175, 32-35. | 1.7 | 21 |
| 49 | Effects of Fluorination on the Folding Kinetics of a Heterodimeric Coiled Coil. ChemBioChem, 2009, 10, 2867-2870. | 2.6 | 20 |
| 50 | Structure Analysis of an Amyloid-Forming Model Peptide by a Systematic Glycine and Proline Scan. Biomacromolecules, 2011, 12, 2988-2996. | 5.4 | 20 |
| 51 | Position-dependent impact of hexafluoroleucine and trifluoroisoleucine on protease digestion. Beilstein Journal of Organic Chemistry, 2017, 13, 2869-2882. | 2.2 | 20 |
| 52 | Coassembly Generates Peptide Hydrogel with Wound Dressing Material Properties. ACS Omega, 2020, 5, 8557-8563. | 3.5 | 20 |
| 53 | A Sustainable, Semiâ€Continuous Flow Synthesis of Hydantoins. Chemistry - A European Journal, 2016, 22, 13451-13454. | 3.3 | 19 |
| 54 | Specific in situ discrimination of amyloid fibrilsversus Î±-helical fibres by the fluorophore NIAD-4. Molecular BioSystems, 2012, 8, 557-564. | 2.9 | 17 |

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| 55 | Synthesis of enantiomerically pure (2S,3S)-5,5,5-trifluoroisoleucine and (2R,3S)-5,5,5-trifluoro-allo-isoleucine. Beilstein Journal of Organic Chemistry, 2013, 9, 2009-2014. | 2.2 | 17 |
| 56 | Peptideâ€Gold Nanoparticle Conjugates as Sequential Cascade Catalysts. ChemCatChem, 2018, 10, 4324-4328. | 3.7 | 17 |
| 57 | Synthesis and Incorporation of Îą-Trifluoromethyl-Substituted Amino Acids into Peptides. ACS Symposium Series, 1996, , 42-58. | 0.5 | 16 |
| 58 | <scp>S</scp>ubstrate specificity of an actively assembling amyloid catalyst. Biopolymers, 2017, 108, e23003. | 2.4 | 16 |
| 59 | Compatibility of the conformationally rigid CF3-Bpg side chain with the hydrophobic coiled-coil interface. Amino Acids, 2010, 39, 1589-1593. | 2.7 | 15 |
| 60 | Multiple glycosylation of de novo designed Îą-helical coiled coil peptides. Bioorganic and Medicinal Chemistry, 2010, 18, 3703-3706. | 3.0 | 13 |
| 61 | Exploiting Oligo(amido amine) Backbones for the Multivalent Presentation of Coiled-Coil Peptides. Biomacromolecules, 2015, 16, 2394-2402. | 5.4 | 13 |
| 62 | Short selfâ€assembling cationic antimicrobial peptide mimetics based on a 3,5â€diaminobenzoic acid scaffold. Peptide Science, 2020, 112, e24130. | 1.8 | 13 |
| 63 | The Impact of Halogenated Phenylalanine Derivatives on NFGAIL Amyloid Formation. ChemBioChem, 2020, 21, 3544-3554. | 2.6 | 13 |
| 64 | pH-induced insertion of pHLIP into a lipid bilayer: In-situ SEIRAS characterization of a folding intermediate at neutral pH. Biochimica Et Biophysica Acta - Biomembranes, 2022, 1864, 183873. | 2.6 | 13 |
| 65 | A systematic study of fundamentals in Îą-helical coiled coil mimicry by alternating sequences of Îē- and Îģ-amino acids. Amino Acids, 2011, 41, 733-742. | 2.7 | 12 |
| 66 | Peptideâ€“Gold Nanoparticle Conjugates as Artificial Carbonic Anhydrase Mimics. Catalysts, 2019, 9, 903. | 3.5 | 12 |
| 67 | Tuning the Catalytic Activity and Substrate Specificity of Peptideâ€Nanoparticle Conjugates. ChemCatChem, 2018, 10, 5665-5668. | 3.7 | 11 |
| 68 | Mechanism of discrimination of isoleucylâ€tRNA synthetase against nonproteinogenic Îąâ€aminobutyrate and its fluorinated analogues. FEBS Journal, 2020, 287, 800-813. | 4.7 | 10 |
| 69 | Functionalized peptide hydrogels as tunable extracellular matrix mimics for biological applications. Peptide Science, 2021, 113, e24201. | 1.8 | 10 |
| 70 | Rational Design of Amphiphilic Fluorinated Peptides: Evaluation of Self-Assembly Properties and Hydrogel Formation. Nanoscale, 0, , . | 5.6 | 9 |
| 71 | Îē- and Îģ-Amino Acids at Îą-Helical Interfaces: Toward the Formation of Highly Stable Foldameric Coiled Coils. ACS Medicinal Chemistry Letters, 2014, 5, 1300-1303. | 2.8 | 8 |
| 72 | Impact of multivalent charge presentation on peptideâ€“nanoparticle aggregation. Beilstein Journal of Organic Chemistry, 2015, 11, 792-803. | 2.2 | 8 |

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|---|---|---|---|
| 73 | Improved enantioselective gram scale synthesis route to N-Fmoc-protected monofluoroethylglycine. Journal of Fluorine Chemistry, 2020, 232, 109453. | 1.7 | 8 |
| 74 | Fluorine-induced polarity increases inhibitory activity of BPTI towards chymotrypsin. RSC Chemical Biology, 2022, 3, 773-782. | 4.1 | 8 |
| 75 | Hexafluoroacetone as a Protecting and Activating Reagent: Synthesis of New Types of Fluoro-Substituted Î±-Amino, Î±-Hydroxy and Î±-Mercapto Acids. Synthesis, 2004, 2004, 1821-1829. | 2.3 | 6 |
| 76 | The protofilament architecture of a de novo designed coiled coil-based amyloidogenic peptide. Journal of Structural Biology, 2018, 203, 263-272. | 2.8 | 6 |
| 77 | Enhancing Antimicrobial Peptide Potency through Multivalent Presentation on Coiled-Coil Nanofibrils. ACS Medicinal Chemistry Letters, 2021, 12, 67-73. | 2.8 | 5 |
| 78 | Systematic Evaluation of Fluorination as Modification for Peptideâ€Based Fusion Inhibitors against HIVâ€1 Infection. ChemBioChem, 2021, 22, 3443-3451. | 2.6 | 4 |
| 79 | An Approach for Simultaneous Synthesis of cis- and trans-3-Substituted Proline-Glutamic Acid Chimeras. Synthesis, 2012, 44, 3063-3070. | 2.3 | 3 |
| 80 | Coreâ€multishell nanotransporters enhance skin penetration of the cellâ€penetrating peptide low molecular weight protamine. Polymers for Advanced Technologies, 2014, 25, 1337-1341. | 3.2 | 3 |
| 81 | Global substitution of hemeproteins with noncanonical amino acids in Escherichia coli with intact cofactor maturation machinery. Enzyme and Microbial Technology, 2017, 106, 55-59. | 3.2 | 3 |
| 82 | Exploring the locking stage of NFGAILS amyloid fibrillation via transition manifold analysis. European Physical Journal B, 2021, 94, 1. | 1.5 | 3 |
| 83 | Proline-glutamate chimeraâ€™s side chain conformation directs the type of Î²-hairpin structure. Amino Acids, 2014, 46, 177-186. | 2.7 | 2 |
| 84 | Coiled-Coils in Phage Display Screening: Insight into Exceptional Selectivity Provided by Molecular Dynamics. Journal of Chemical Information and Modeling, 2015, 55, 495-500. | 5.4 | 2 |
| 85 | Concluding the Amyloid Formation Pathway of a Coiledâ€Coilâ€Based Peptide from the Size of the Critical Nucleus. ChemPhysChem, 2015, 16, 108-114. | 2.1 | 2 |
| 86 | Eine intrinsische Hydrophobieskala fÃ¼r AminosÃuren und ihre Anwendung auf fluorierte Verbindungen. Angewandte Chemie, 2019, 131, 8300-8304. | 2.0 | 2 |
| 87 | Investigations from the Belly of the Beast: N-Terminally Labeled Incretin Peptides That Are Both Potent Receptor Agonists and Stable to Protease Digestion. ACS Central Science, 2021, 7, 400-402. | 11.3 | 2 |
| 88 | Application of Artificial Model Systems to Study the Interactions of Fluorinated Amino Acids within the Native Environment of Coiled Coil Proteins. , 0, , 389-409. | | 1 |
| 89 | Inhibition of peptide aggregation by means of enzymatic phosphorylation. Beilstein Journal of Organic Chemistry, 2016, 12, 2462-2470. | 2.2 | 1 |
| 90 | Editorial overview: Synthetic biomolecules: Biopolymers. Current Opinion in Chemical Biology, 2017, 40, A4-A5. | 6.1 | 1 |

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| 91 | Catalytically Active Peptideâ€“Gold Nanoparticle Conjugates: Prospecting for Artificial Enzymes. Angewandte Chemie, 2020, 132, 8858-8867. | 2.0 | 1 |
| 92 | Balancing selectivity vs stability using molecular dynamics and umbrella sampling. Journal of Cheminformatics, 2014, 6, O22. | 6.1 | 0 |
| 93 | Klaus Burger. Journal of Fluorine Chemistry, 2016, 191, 42-43. | 1.7 | 0 |
| 94 | Peptide Engineering Meeting 8. Peptide Science, 2020, 112, e24146. | 1.8 | 0 |
| 95 | Fluorinated Protease Substrates Show Position-Dependent Degradation. , 2020, , 519-559. | | 0 |