

Keiji Numata

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/8234197/keiji-numata-publications-by-year.pdf>

Version: 2024-04-27

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

197
papers

5,834
citations

40
h-index

68
g-index

222
ext. papers

7,059
ext. citations

6
avg, IF

6.53
L-index

#	Paper	IF	Citations
197	A Synthetic Multidomain Peptide That Drives a Macropinocytosis-Like Mechanism for Cytosolic Transport of Exogenous Proteins into Plants.. <i>Jacs Au</i> , 2022 , 2, 223-233		0
196	Engineered Mutants of a Marine Photosynthetic Purple Nonsulfur Bacterium with Increased Volumetric Productivity of Polyhydroxyalkanoate Bioplastics.. <i>ACS Synthetic Biology</i> , 2022 ,	5.7	1
195	A silk composite fiber reinforced by telechelic-type polyalanine and its strengthening mechanism. <i>Polymer Chemistry</i> , 2022 , 13, 1869-1879	4.9	0
194	Non-transgenic Gene Modulation Spray Delivery of Nucleic Acid/Peptide Complexes into Plant Nuclei and Chloroplasts.. <i>ACS Nano</i> , 2022 ,	16.7	3
193	Engineered Nanogel Particles Enhance the Photoautotrophic Biosynthesis of Polyhydroxyalkanoate in Marine Photosynthetic Bacteria. <i>ACS Sustainable Chemistry and Engineering</i> , 2022 , 10, 4133-4142	8.3	1
192	An oomycete NLP cytolysin forms transient small pores in lipid membranes.. <i>Science Advances</i> , 2022 , 8, eabj9406	14.3	1
191	Polymer-coated carbon nanotube hybrids with functional peptides for gene delivery into plant mitochondria.. <i>Nature Communications</i> , 2022 , 13, 2417	17.4	1
190	Imaging of the Entry Pathway of a Cell-Penetrating Peptide-DNA Complex From the Extracellular Space to Chloroplast Nucleoids Across Multiple Membranes in Leaves.. <i>Frontiers in Plant Science</i> , 2021 , 12, 759871	6.2	1
189	Peptide-Based Polyion Complex Vesicles That Deliver Enzymes into Intact Plants To Provide Antibiotic Resistance without Genetic Modification. <i>Biomacromolecules</i> , 2021 , 22, 1080-1090	6.9	4
188	Mitochondrial movement during its association with chloroplasts in Arabidopsis thaliana. <i>Communications Biology</i> , 2021 , 4, 292	6.7	4
187	Fusion Peptide-Based Biomacromolecule Delivery System for Plant Cells. <i>ACS Biomaterials Science and Engineering</i> , 2021 , 7, 2246-2254	5.5	2
186	Visualization of the Necking Initiation and Propagation Processes during Uniaxial Tensile Deformation of Crystalline Polymer Films via the Generation of Fluorescent Radicals.. <i>ACS Macro Letters</i> , 2021 , 10, 623-627	6.6	5
185	Construction and Piezoelectric Properties of a Single-Peptide Nanotube Composed of Cyclic Peptides with Helical Peptides on the Side Chains. <i>Biomacromolecules</i> , 2021 , 22, 2815-2821	6.9	2
184	Nanoscale Polyion Complex Vesicles for Delivery of Cargo Proteins and Cas9 Ribonucleoprotein Complexes to Plant Cells. <i>ACS Applied Nano Materials</i> , 2021 , 4, 5630-5635	5.6	2
183	Effects of mitochondria-selective fluorescent probes on mitochondrial movement in mesophyll cells evaluated by using the quantification. <i>Plant Biotechnology</i> , 2021 , 38, 257-262	1.3	1
182	Aqueous spinning system with a citrate buffer for highly extensible silk fibers. <i>Polymer Journal</i> , 2021 , 53, 179-189	2.7	5
181	Microbial prospection of an Amazonian blackwater lake and whole-genome sequencing of bacteria capable of polyhydroxyalkanoate synthesis. <i>Polymer Journal</i> , 2021 , 53, 191-202	2.7	1

180 Experimental details **2021**, 255-285

179 General introduction of polypeptide and protein materials **2021**, 1-15

178 Applications as bulk material and future perspective **2021**, 247-254

177 Crystallization-induced mechanofluorescence for visualization of polymer crystallization. *Nature Communications*, **2021**, 12, 126 17.4 21

176 Reconsidering the "glass transition" hypothesis of intrinsically unstructured CAHS proteins in desiccation tolerance of tardigrades. *Molecular Cell*, **2021**, 81, 409-410 17.6 7

175 Synthetic Mitochondria-Targeting Peptides Incorporating β -Aminoisobutyric Acid with a Stable Amphiphilic Helix Conformation in Plant Cells. *ACS Biomaterials Science and Engineering*, **2021**, 7, 1475-1484 5.5 2

174 Multicomponent nature underlies the extraordinary mechanical properties of spider dragline silk. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118, 11.5 15

173 Draft Whole-Genome Sequence of *Bacillus paramycoides* LB_RP2, a Putative Polyhydroxyalkanoate-Producing Bacterium Isolated from an Amazonian Blackwater River. *Microbiology Resource Announcements*, **2021**, 10, e0043821 1.3

172 The balance of crystalline and amorphous regions in the fibroin structure underpins the tensile strength of bagworm silk. *Zoological Letters*, **2021**, 7, 11 3 5

171 Biopolymer material and composite **2021**, 205-246

170 Structural proteins in nature **2021**, 179-204

169 Biological properties with cells **2021**, 121-142

168 Physical properties **2021**, 89-120

167 Lipid Membrane Interaction of Peptide/DNA Complexes Designed for Gene Delivery. *Langmuir*, **2021**, 37, 1882-1893 4 0

166 Endosome-escaping micelle complexes dually equipped with cell-penetrating and endosome-disrupting peptides for efficient DNA delivery into intact plants. *Nanoscale*, **2021**, 13, 5679-5692 7.7 8

165 Darwin's bark spider shares a spidroin repertoire with but achieves extraordinary silk toughness through gene expression.. *Open Biology*, **2021**, 11, 210242 7 5

164 Spider silk self-assembly via modular liquid-liquid phase separation and nanofibrillation. *Science Advances*, **2020**, 6, 14.3 24

163 Dual Peptide-Based Gene Delivery System for the Efficient Transfection of Plant Callus Cells. *Biomacromolecules*, **2020**, 21, 2735-2744 6.9 12

162	Computational study on the polymerization reaction of d-aminopeptidase for the synthesis of d-peptides.. <i>RSC Advances</i> , 2020 , 10, 17582-17592	3.7	0
161	How to define and study structural proteins as biopolymer materials. <i>Polymer Journal</i> , 2020 , 52, 1043-1056	6.6	21
160	A marine photosynthetic microbial cell factory as a platform for spider silk production. <i>Communications Biology</i> , 2020 , 3, 357	6.7	6
159	Zwitterionic Polypeptides: Chemoenzymatic Synthesis and Loosening Function for Cellulose Crystals. <i>Biomacromolecules</i> , 2020 , 21, 1785-1794	6.9	3
158	Viscosity-adjustable grease matrices for serial nanocrystallography. <i>Scientific Reports</i> , 2020 , 10, 1371	4.9	6
157	Poly(alanine-nylon-alanine) as a bioplastic: chemoenzymatic synthesis, thermal properties and biological degradation effects. <i>Polymer Chemistry</i> , 2020 , 11, 4920-4927	4.9	1
156	Surface Analysis of Native Spider Draglines by FE-SEM and XPS. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020 , 8, 231	5.8	3
155	Artificial Cell-Penetrating Peptide Containing Periodic β -Aminoisobutyric Acid with Long-Term Internalization Efficiency in Human and Plant Cells. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 3287-3298	5.5	12
154	Simultaneous effect of strain rate and humidity on the structure and mechanical behavior of spider silk. <i>Communications Materials</i> , 2020 , 1,	6	24
153	A covalently crosslinked silk fibroin hydrogel using enzymatic oxidation and chemoenzymatically synthesized copolypeptide crosslinkers consisting of a GPG tripeptide motif and tyrosine: control of gelation and resilience. <i>Polymer Chemistry</i> , 2020 , 11, 3152-3161	4.9	1
152	Efficient callus induction and a temperature condition for flowering and seed setting in kenaf. <i>Plant Biotechnology</i> , 2020 , 37, 9-14	1.3	2
151	Method for the facile transformation of marine purple photosynthetic bacteria using chemically competent cells. <i>MicrobiologyOpen</i> , 2020 , 9, e00953	3.4	7
150	Silk/Natural Rubber (NR) and 3,4-Dihydroxyphenylalanine (DOPA)-Modified Silk/NR Composites: Synthesis, Secondary Structure, and Mechanical Properties. <i>Molecules</i> , 2020 , 25,	4.8	8
149	Facile terminal functionalization of peptides by protease-catalyzed chemoenzymatic polymerization toward synthesis of polymeric architectures consisting of peptides. <i>Polymer Chemistry</i> , 2020 , 11, 560-567	4.9	4
148	Raman image-activated cell sorting. <i>Nature Communications</i> , 2020 , 11, 3452	17.4	55
147	Peptide-Mediated Gene Transfer into Marine Purple Photosynthetic Bacteria. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	2
146	High Capacity Functionalized Protein Superabsorbents from an Agricultural Co-Product: A Cradle-to-Cradle Approach. <i>Advanced Sustainable Systems</i> , 2020 , 4, 2000110	5.9	6
145	Development of Reactive Oxygen Species-Triggered Degradable Nanoparticles Using Oligoproline-Containing Peptides. <i>Biomacromolecules</i> , 2020 , 21, 4116-4122	6.9	2

144	Cellular internalization mechanism of novel Raman probes designed for plant cells. <i>RSC Chemical Biology</i> , 2020 , 1, 204-208	3	2
143	Nearly complete H, C and N chemical shift assignment of monomeric form of N-terminal domain of <i>Nephila clavipes</i> major ampullate spidroin 2. <i>Biomolecular NMR Assignments</i> , 2020 , 14, 335-338	0.7	1
142	Simultaneous introduction of multiple biomacromolecules into plant cells using a cell-penetrating peptide nanocarrier. <i>Nanoscale</i> , 2020 , 12, 18844-18856	7.7	9
141	Carotenoids in the eyespot apparatus are required for triggering phototaxis in <i>Euglena gracilis</i> . <i>Plant Journal</i> , 2020 , 101, 1091-1102	6.9	5
140	Revealing the Architecture of the Cell Wall in Living Plant Cells by Bioimaging and Enzymatic Degradation. <i>Biomacromolecules</i> , 2020 , 21, 95-103	6.9	12
139	Mechanistic insights into silk fibroin's adhesive properties via chemical functionalization of serine side chains. <i>ACS Biomaterials Science and Engineering</i> , 2019 , 5, 5960-5967	5.5	8
138	Vacuum/Compression Infiltration-mediated Permeation Pathway of a Peptide-pDNA Complex as a Non-Viral Carrier for Gene Delivery in Planta. <i>Scientific Reports</i> , 2019 , 9, 271	4.9	13
137	Insights into the Stereospecificity in Papain-Mediated Chemoenzymatic Polymerization from Quantum Mechanics/Molecular Mechanics Simulations. <i>ACS Chemical Biology</i> , 2019 , 14, 1280-1292	4.9	8
136	Molecular Interactions and Toughening Mechanisms in Silk Fibroin-Epoxy Resin Blend Films. <i>Biomacromolecules</i> , 2019 , 20, 2295-2304	6.9	10
135	Optimal iron concentrations for growth-associated polyhydroxyalkanoate biosynthesis in the marine photosynthetic purple bacterium <i>Rhodovulum sulfidophilum</i> under photoheterotrophic condition. <i>PLoS ONE</i> , 2019 , 14, e0212654	3.7	13
134	Cell-Penetrating Peptide-Mediated Transformation of Large Plasmid DNA into <i>Escherichia coli</i> . <i>ACS Synthetic Biology</i> , 2019 , 8, 1215-1218	5.7	7
133	The bagworm genome reveals a unique fibroin gene that provides high tensile strength. <i>Communications Biology</i> , 2019 , 2, 148	6.7	18
132	Chemical modification and biosynthesis of silk-like polymers. <i>Current Opinion in Chemical Engineering</i> , 2019 , 24, 61-68	5.4	15
131	A centrifugation-assisted peptide-mediated gene transfer method for high-throughput analyses. <i>Plant Biotechnology</i> , 2019 , 36, 49-52	1.3	1
130	Synthesis of Polypeptides. <i>Green Chemistry and Sustainable Technology</i> , 2019 , 233-265	1.1	
129	Periodic introduction of aromatic units in polypeptides via chemoenzymatic polymerization to yield specific secondary structures with high thermal stability. <i>Polymer Journal</i> , 2019 , 51, 1287-1298	2.7	9
128	Integrating tough <i>Antheraea pernyi</i> silk and strong carbon fibres for impact-critical structural composites. <i>Nature Communications</i> , 2019 , 10, 3786	17.4	27
127	Ion effects on the conformation and dynamics of repetitive domains of a spider silk protein: implications for solubility and β -sheet formation. <i>Chemical Communications</i> , 2019 , 55, 9761-9764	5.8	9

126	Native protein delivery into rice callus using ionic complexes of protein and cell-penetrating peptides. <i>PLoS ONE</i> , 2019 , 14, e0214033	3.7	13
125	Acetate-Inducing Metabolic States Enhance Polyhydroxyalkanoate Production in Marine Purple Non-sulfur Bacteria Under Aerobic Conditions. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019 , 7, 118	5.8	15
124	Marine Purple Photosynthetic Bacteria as Sustainable Microbial Production Hosts. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019 , 7, 258	5.8	16
123	3,4-Dihydroxyphenylalanine (DOPA)-Containing Silk Fibroin: Its Enzymatic Synthesis and Adhesion Properties. <i>ACS Biomaterials Science and Engineering</i> , 2019 , 5, 5644-5651	5.5	22
122	Targeted Gene Delivery into Various Plastids Mediated by Clustered Cell-Penetrating and Chloroplast-Targeting Peptides. <i>Advanced Science</i> , 2019 , 6, 1902064	13.6	25
121	Targeted Gene Delivery: Targeted Gene Delivery into Various Plastids Mediated by Clustered Cell-Penetrating and Chloroplast-Targeting Peptides (Adv. Sci. 23/2019). <i>Advanced Science</i> , 2019 , 6, 1970142	13.6	0
120	The Biomedical Use of Silk: Past, Present, Future. <i>Advanced Healthcare Materials</i> , 2019 , 8, e1800465	10.1	299
119	Role of Skin Layers on Mechanical Properties and Supercontraction of Spider Dragline Silk Fiber. <i>Macromolecular Bioscience</i> , 2019 , 19, e1800220	5.5	15
118	Development of regenerated silk films coated with fluorinated polypeptides to achieve high water repellency and biodegradability in seawater. <i>Polymer Degradation and Stability</i> , 2019 , 160, 96-101	4.7	10
117	Block Copolymer/Plasmid DNA Micelles Postmodified with Functional Peptides via Thiol-Maleimide Conjugation for Efficient Gene Delivery into Plants. <i>Biomacromolecules</i> , 2019 , 20, 653-661	6.9	18
116	Stimulus-Responsive Peptide for Effective Delivery and Release of DNA in Plants. <i>Biomacromolecules</i> , 2018 , 19, 1154-1163	6.9	30
115	Spider dragline silk composite films doped with linear and telechelic polyalanine: Effect of polyalanine on the structure and mechanical properties. <i>Scientific Reports</i> , 2018 , 8, 3654	4.9	9
114	Chemoenzymatic synthesis of polypeptides consisting of periodic di- and tri-peptide motifs similar to elastin. <i>Polymer Chemistry</i> , 2018 , 9, 2336-2344	4.9	12
113	Efficient 3-Hydroxybutyrate Production by Quiescent Escherichia coli Microbial Cell Factories is Facilitated by Indole-Induced Proteomic and Metabolomic Changes. <i>Biotechnology Journal</i> , 2018 , 13, e1700571	5.6	6
112	Combination of Amorphous Silk Fiber Spinning and Postspinning Crystallization for Tough Regenerated Silk Fibers. <i>Biomacromolecules</i> , 2018 , 19, 2227-2237	6.9	30
111	Selective Gene Delivery for Integrating Exogenous DNA into Plastid and Mitochondrial Genomes Using Peptide-DNA Complexes. <i>Biomacromolecules</i> , 2018 , 19, 1582-1591	6.9	35
110	Silk Composite with a Fluoropolymer as a Water-Resistant Protein-Based Material. <i>Polymers</i> , 2018 , 10,	4.5	8
109	Library screening of cell-penetrating peptide for BY-2 cells, leaves of Arabidopsis, tobacco, tomato, poplar, and rice callus. <i>Scientific Reports</i> , 2018 , 8, 10966	4.9	30

108	The interplay between silk fibroin's structure and its adhesive properties. <i>ACS Biomaterials Science and Engineering</i> , 2018 , 4, 2815-2824	5.5	23
107	Morphological and mechanical properties of flexible resilin joints on damselfly wings (<i>Rhincocypha</i> spp.). <i>PLoS ONE</i> , 2018 , 13, e0193147	3.7	15
106	Protease-Catalyzed Polymerization of Tripeptide Esters Containing Unnatural Amino Acids: β -Disubstituted and N-Alkylated Amino Acids. <i>ACS Symposium Series</i> , 2018 , 95-105	0.4	2
105	Screening of a Cell-Penetrating Peptide Library in <i>Escherichia coli</i> : Relationship between Cell Penetration Efficiency and Cytotoxicity. <i>ACS Omega</i> , 2018 , 3, 16489-16499	3.9	11
104	Two Birds with One Stone: Spontaneous Size Separation and Growth Inhibition of Femtosecond Laser-Generated Surfactant-Free Metallic Nanoparticles via ex Situ SU-8 Functionalization. <i>ACS Omega</i> , 2018 , 3, 10953-10966	3.9	7
103	Conformation and dynamics of soluble repetitive domain elucidates the initial β -sheet formation of spider silk. <i>Nature Communications</i> , 2018 , 9, 2121	17.4	35
102	Chemical Synthesis of Multiblock Copolypeptides Inspired by Spider Dragline Silk Proteins. <i>ACS Macro Letters</i> , 2017 , 6, 103-106	6.6	26
101	Tensile Reinforcement of Silk Films by the Addition of Telechelic-Type Polyalanine. <i>Biomacromolecules</i> , 2017 , 18, 1002-1009	6.9	25
100	Liquid Crystalline Granules Align in a Hierarchical Structure To Produce Spider Dragline Microfibrils. <i>Biomacromolecules</i> , 2017 , 18, 1350-1355	6.9	37
99	Silk Resin with Hydrated Dual Chemical-Physical Cross-Links Achieves High Strength and Toughness. <i>Biomacromolecules</i> , 2017 , 18, 1937-1946	6.9	29
98	Chemoenzymatic synthesis of polypeptides containing the unnatural amino acid 2-aminoisobutyric acid. <i>Chemical Communications</i> , 2017 , 53, 7318-7321	5.8	31
97	Chemoenzymatic synthesis of a peptide containing nylon monomer units for thermally processable peptide material application. <i>Polymer Chemistry</i> , 2017 , 8, 4172-4176	4.9	10
96	Hydroxyethyl cellulose matrix applied to serial crystallography. <i>Scientific Reports</i> , 2017 , 7, 703	4.9	55
95	Sucrose supplementation suppressed the growth inhibition in polyhydroxyalkanoate-producing plants. <i>Plant Biotechnology</i> , 2017 , 34, 39-43	1.3	1
94	Analysis of repetitive amino acid motifs reveals the essential features of spider dragline silk proteins. <i>PLoS ONE</i> , 2017 , 12, e0183397	3.7	34
93	Class I Polyhydroxyalkanoate Synthase from the Purple Photosynthetic Bacterium Predominantly Exists as a Functional Dimer in the Absence of a Substrate. <i>ACS Omega</i> , 2017 , 2, 5071-5078	3.9	8
92	Chemoenzymatic Synthesis of Polypeptides for Use as Functional and Structural Materials. <i>Macromolecular Bioscience</i> , 2017 , 17, 1700177	5.5	31
91	Atomic resolution structure of serine protease proteinase K at ambient temperature. <i>Scientific Reports</i> , 2017 , 7, 45604	4.9	19

90	Influence of Hydroxyl Groups on the Cell Viability of Polyhydroxyalkanoate (PHA) Scaffolds for Tissue Engineering. <i>ACS Biomaterials Science and Engineering</i> , 2017 , 3, 3064-3075	5.5	28
89	Characterization of the depolymerizing activity of commercial lipases and detection of lipase-like activities in animal organ extracts using poly(3-hydroxybutyrate-co-4-hydroxybutyrate) thin film. <i>AMB Express</i> , 2016 , 6, 97	4.1	12
88	Relationships between physical properties and sequence in silkworm silks. <i>Scientific Reports</i> , 2016 , 6, 27573	4.9	99
87	Synthesis of peptides with narrow molecular weight distributions via exopeptidase-catalyzed aminolysis of hydrophobic amino-acid alkyl esters. <i>Polymer Journal</i> , 2016 , 48, 955-961	2.7	13
86	Peptide-derived Method to Transport Genes and Proteins Across Cellular and Organellar Barriers in Plants. <i>Journal of Visualized Experiments</i> , 2016 ,	1.6	9
85	Biosynthesis of polyhydroxyalkanoates containing hydroxyl group from glycolate in <i>Escherichia coli</i> . <i>AMB Express</i> , 2016 , 6, 29	4.1	20
84	The Benzyl Ester Group of Amino Acid Monomers Enhances Substrate Affinity and Broadens the Substrate Specificity of the Enzyme Catalyst in Chemoenzymatic Copolymerization. <i>Biomacromolecules</i> , 2016 , 17, 314-23	6.9	28
83	Chemoenzymatic modification of silk fibroin with poly(2,6-dimethyl-1,5-phenylene ether) using horseradish peroxidase. <i>RSC Advances</i> , 2016 , 6, 28737-28744	3.7	12
82	Influence of Water Content on the Sheet Formation, Thermal Stability, Water Removal, and Mechanical Properties of Silk Materials. <i>Biomacromolecules</i> , 2016 , 17, 1057-66	6.9	115
81	Intracellular Delivery of Proteins via Fusion Peptides in Intact Plants. <i>PLoS ONE</i> , 2016 , 11, e0154081	3.7	36
80	Synthesis of High-Molecular-Weight Polyhydroxyalkanoates by Marine Photosynthetic Purple Bacteria. <i>PLoS ONE</i> , 2016 , 11, e0160981	3.7	51
79	Direct introduction of neomycin phosphotransferase II protein into apple leaves to confer kanamycin resistance. <i>Plant Biotechnology</i> , 2016 , 33, 403-407	1.3	10
78	A Screening Method for the Isolation of Polyhydroxyalkanoate-Producing Purple Non-sulfur Photosynthetic Bacteria from Natural Seawater. <i>Frontiers in Microbiology</i> , 2016 , 7, 1509	5.7	12
77	Papain-Catalyzed Synthesis of Polyglutamate Containing a Nylon Monomer Unit. <i>Polymers</i> , 2016 , 8,	4.5	14
76	Papain-Catalyzed Chemoenzymatic Synthesis of Telechelic Polypeptides Using Bis(Leucine Ethyl Ester) Initiator. <i>Macromolecular Bioscience</i> , 2016 , 16, 1001-8	5.5	18
75	Oil-free hyaluronic acid matrix for serial femtosecond crystallography. <i>Scientific Reports</i> , 2016 , 6, 24484	4.9	38
74	Synthetic Short Peptides for Rapid Fabrication of Monolayer Cell Sheets. <i>ACS Biomaterials Science and Engineering</i> , 2016 , 2, 697-706	5.5	10
73	Derivatization of Proteinase K with Heavy Atoms Enhances Its Thermal Stability. <i>ACS Catalysis</i> , 2016 , 6, 3036-3046	13.1	17

72	Self-Assembled Peptide-Based System for Mitochondrial-Targeted Gene Delivery: Functional and Structural Insights. <i>Biomacromolecules</i> , 2016 , 17, 3547-3557	6.9	40
71	Enzyme-Mimic Peptide Assembly To Achieve Amidolytic Activity. <i>Biomacromolecules</i> , 2016 , 17, 3375-3385	9.9	23
70	Chemoenzymatic Synthesis of Oligo(L-cysteine) for Use as a Thermostable Bio-Based Material. <i>Macromolecular Bioscience</i> , 2016 , 16, 151-9	5.5	19
69	Use of extension-deformation-based crystallisation of silk fibres to differentiate their functions in nature. <i>Soft Matter</i> , 2015 , 11, 6335-42	3.6	33
68	Chemo-Enzymatic Synthesis of Linear and Branched Cationic Peptides: Evaluation as Gene Carriers. <i>Macromolecular Bioscience</i> , 2015 , 15, 990-1003	5.5	15
67	Screening of Marine Bacteria To Synthesize Polyhydroxyalkanoate from Lignin: Contribution of Lignin Derivatives to Biosynthesis by <i>Oceanimonas doudoroffii</i> . <i>ACS Sustainable Chemistry and Engineering</i> , 2015 , 3, 569-573	8.3	52
66	Crystal structure and physical properties of <i>Antheraea yamamai</i> silk fibers: Long poly(alanine) sequences are partially in the crystalline region. <i>Polymer</i> , 2015 , 77, 87-94	3.9	43
65	Double-stranded DNA introduction into intact plants using peptide-DNA complexes. <i>Plant Biotechnology</i> , 2015 , 32, 39-45	1.3	15
64	Poly(amino acid)s/polypeptides as potential functional and structural materials. <i>Polymer Journal</i> , 2015 , 47, 537-545	2.7	72
63	Influence of Cross-Linking on the Physical Properties and Cytotoxicity of Polyhydroxyalkanoate (PHA) Scaffolds for Tissue Engineering. <i>ACS Biomaterials Science and Engineering</i> , 2015 , 1, 567-576	5.5	37
62	Optimization of poly(N-isopropylacrylamide) as an artificial amidase. <i>Biomacromolecules</i> , 2015 , 16, 411-21	9.9	22
61	Co-expression of two polyhydroxyalkanoate synthase subunits from <i>Synechocystis</i> sp. PCC 6803 by cell-free synthesis and their specific activity for polymerization of 3-hydroxybutyryl-coenzyme A. <i>Biochemistry</i> , 2015 , 54, 1401-7	3.2	17
60	Gene introduction into the mitochondria of <i>Arabidopsis thaliana</i> via peptide-based carriers. <i>Scientific Reports</i> , 2015 , 5, 7751	4.9	56
59	Short one-pot chemo-enzymatic synthesis of L-lysine and L-alanine diblock co-oligopeptides. <i>Biomacromolecules</i> , 2014 , 15, 735-43	6.9	41
58	Phasin proteins activate <i>Aeromonas caviae</i> polyhydroxyalkanoate (PHA) synthase but not <i>Ralstonia eutropha</i> PHA synthase. <i>Applied and Environmental Microbiology</i> , 2014 , 80, 2867-73	4.8	31
57	Understanding the Limitations in the Biosynthesis of Polyhydroxyalkanoate (PHA) from Lignin Derivatives. <i>ACS Sustainable Chemistry and Engineering</i> , 2014 , 2, 1106-1113	8.3	85
56	Synthesis of adhesive peptides similar to those found in blue mussel (<i>Mytilus edulis</i>) using papain and tyrosinase. <i>Biomacromolecules</i> , 2014 , 15, 3206-12	6.9	47
55	Modification of β -oxidation pathway in <i>Ralstonia eutropha</i> for production of poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) from soybean oil. <i>Journal of Bioscience and Bioengineering</i> , 2014 , 117, 184-190	3.3	40

54	Silk-pectin hydrogel with superior mechanical properties, biodegradability, and biocompatibility. <i>Macromolecular Bioscience</i> , 2014 , 14, 799-806	5.5	37
53	Pathway-level acceleration of glycogen catabolism by a response regulator in the cyanobacterium <i>Synechocystis</i> species PCC 6803. <i>Plant Physiology</i> , 2014 , 164, 1831-41	6.6	59
52	Recent advances in chemoenzymatic peptide syntheses. <i>Molecules</i> , 2014 , 19, 13755-74	4.8	69
51	Synthesis of homopolypeptides by aminolysis mediated by proteases encapsulated in silica nanospheres. <i>Macromolecular Bioscience</i> , 2014 , 14, 1619-26	5.5	17
50	Back Cover: Macromol. Biosci. 6/2014. <i>Macromolecular Bioscience</i> , 2014 , 14, 900-900	5.5	
49	Local gene silencing in plants via synthetic dsRNA and carrier peptide. <i>Plant Biotechnology Journal</i> , 2014 , 12, 1027-34	11.6	92
48	Biopolymer Synthesis from Plant and Marine Biomass via Enzymatic Reactions. <i>Oleoscience</i> , 2014 , 14, 103-108	0.1	
47	Engineering Peptide-based Carriers for Drug and Gene Delivery 2014 , 667-689		2
46	Monitoring and kinetic analysis of the molecular interactions by which a repressor protein, PhaR, binds to target DNAs and poly[(R)-3-hydroxybutyrate]. <i>AMB Express</i> , 2013 , 3, 6	4.1	5
45	Proteinase K-catalyzed synthesis of linear and star oligo(L-phenylalanine) conjugates. <i>Biomacromolecules</i> , 2013 , 14, 3635-42	6.9	40
44	Biosynthesis and characterization of polyhydroxyalkanoate containing 5-hydroxyvalerate units: Effects of 5HV units on biodegradability, cytotoxicity, mechanical and thermal properties. <i>Polymer Degradation and Stability</i> , 2013 , 98, 331-338	4.7	63
43	Synthesis of poly- and oligo(hydroxyalkanoate)s by deep-sea bacteria, <i>Colwellia</i> spp., <i>Moritella</i> spp., and <i>Shewanella</i> spp. <i>Polymer Journal</i> , 2013 , 45, 1094-1100	2.7	21
42	Biopolymer-based nanoparticles for drug/gene delivery and tissue engineering. <i>International Journal of Molecular Sciences</i> , 2013 , 14, 1629-54	6.3	457
41	Biodegradability of nylon 4 film in a marine environment. <i>Polymer Degradation and Stability</i> , 2013 , 98, 1847-1851	4.7	40
40	Rapid and efficient gene delivery into plant cells using designed peptide carriers. <i>Biomacromolecules</i> , 2013 , 14, 10-6	6.9	69
39	Characterization of site-specific mutations in a short-chain-length/medium-chain-length polyhydroxyalkanoate synthase: in vivo and in vitro studies of enzymatic activity and substrate specificity. <i>Applied and Environmental Microbiology</i> , 2013 , 79, 3813-21	4.8	29
38	Increased bioplastic production with an RNA polymerase sigma factor SigE during nitrogen starvation in <i>Synechocystis</i> sp. PCC 6803. <i>DNA Research</i> , 2013 , 20, 525-35	4.5	100
37	Biosynthesis of Polyhydroxyalkanoate by a Marine Bacterium <i>Vibrio</i> sp. Strain Using Sugars, Plant Oil, and Unsaturated Fatty Acids as Sole Carbon Sources. <i>ACS Symposium Series</i> , 2013 , 211-221	0.4	

36	Silk-based nanocomplexes with tumor-homing peptides for tumor-specific gene delivery. <i>Macromolecular Bioscience</i> , 2012 , 12, 75-82	5.5	65
35	Chemoenzymatic synthesis of poly(L-alanine) in aqueous environment. <i>Biomacromolecules</i> , 2012 , 13, 947-51	6.9	56
34	Active intermediates of polyhydroxyalkanoate synthase from <i>Aeromonas caviae</i> in polymerization reaction. <i>Biomacromolecules</i> , 2012 , 13, 3450-5	6.9	19
33	Biocompatible and biodegradable dual-drug release system based on silk hydrogel containing silk nanoparticles. <i>Biomacromolecules</i> , 2012 , 13, 1383-9	6.9	75
32	Biosynthesis of polyhydroxyalkanoates by a novel facultatively anaerobic <i>Vibrio</i> sp. under marine conditions. <i>Marine Biotechnology</i> , 2012 , 14, 323-31	3.4	32
31	Spider silk-based gene carriers for tumor cell-specific delivery. <i>Bioconjugate Chemistry</i> , 2011 , 22, 1605-1613	6.3	77
30	State of water, molecular structure, and cytotoxicity of silk hydrogels. <i>Biomacromolecules</i> , 2011 , 12, 2137-44	6.4	98
29	Dual biosyntheses of poly[(R)-3-hydroxybutyric acid] and silk protein for the fabrication of biofunctional bioplastic. <i>Polymer Journal</i> , 2011 , 43, 642-647	2.7	6
28	Differences in cytotoxicity of β-sheet peptides originated from silk and amyloid β. <i>Macromolecular Bioscience</i> , 2011 , 11, 60-4	5.5	24
27	AFM study of morphology and mechanical properties of a chimeric spider silk and bone sialoprotein protein for bone regeneration. <i>Biomacromolecules</i> , 2011 , 12, 1675-85	6.9	26
26	Surface-patterned electrode bioreactor for electrical stimulation. <i>Lab on A Chip</i> , 2010 , 10, 692-700	7.2	81
25	Quantifying osteogenic cell degradation of silk biomaterials. <i>Biomacromolecules</i> , 2010 , 11, 3592-9	6.9	50
24	Mechanisms of enzymatic degradation of amyloid Beta microfibrils generating nanofilaments and nanospheres related to cytotoxicity. <i>Biochemistry</i> , 2010 , 49, 3254-60	3.2	39
23	Silk-based gene carriers with cell membrane destabilizing peptides. <i>Biomacromolecules</i> , 2010 , 11, 3189-95	6.9	66
22	Silk-based delivery systems of bioactive molecules. <i>Advanced Drug Delivery Reviews</i> , 2010 , 62, 1497-508	18.5	282
21	Gene delivery mediated by recombinant silk proteins containing cationic and cell binding motifs. <i>Journal of Controlled Release</i> , 2010 , 146, 136-43	11.7	81
20	Reinforcing silk scaffolds with silk particles. <i>Macromolecular Bioscience</i> , 2010 , 10, 599-611	5.5	102
19	Mechanism of enzymatic degradation of beta-sheet crystals. <i>Biomaterials</i> , 2010 , 31, 2926-33	15.6	192

18	Biodegradability of Poly(hydroxyalkanoate) Materials. <i>Materials</i> , 2009 , 2, 1104-1126	3.5	50
17	Bioengineered silk protein-based gene delivery systems. <i>Biomaterials</i> , 2009 , 30, 5775-84	15.6	103
16	Expression, cross-linking, and characterization of recombinant chitin binding resilin. <i>Biomacromolecules</i> , 2009 , 10, 3227-34	6.9	104
15	Enzymatic processes for biodegradation of poly(hydroxyalkanoate)s crystals. <i>Canadian Journal of Chemistry</i> , 2008 , 86, 471-483	0.9	19
14	Enzymatic degradation of monolayer for poly(lactide) revealed by real-time atomic force microscopy: effects of stereochemical structure, molecular weight, and molecular branches on hydrolysis rates. <i>Biomacromolecules</i> , 2008 , 9, 2180-5	6.9	38
13	Adsorption and hydrolysis reactions of poly(hydroxybutyric acid) depolymerases secreted from <i>Ralstonia pickettii</i> T1 and <i>Penicillium funiculosum</i> onto poly[(R)-3-hydroxybutyric acid]. <i>Biomacromolecules</i> , 2007 , 8, 2276-81	6.9	20
12	Adsorption effects of poly(hydroxybutyric acid) depolymerase on chain-folding surface of polyester single crystals revealed by mutant enzyme and frictional force microscopy. <i>Polymer Degradation and Stability</i> , 2007 , 92, 176-183	4.7	11
11	Branched poly(lactide) synthesized by enzymatic polymerization: effects of molecular branches and stereochemistry on enzymatic degradation and alkaline hydrolysis. <i>Biomacromolecules</i> , 2007 , 8, 3115-25	6.9	120
10	Adsorption of biopolyester depolymerase on silicon wafer and poly[(R)-3-hydroxybutyric acid] single crystal revealed by real-time AFM. <i>Macromolecular Bioscience</i> , 2006 , 6, 41-50	5.5	29
9	Nonspecific hydrophobic interactions of a repressor protein, PhaR, with poly[(R)-3-hydroxybutyrate] film studied with a quartz crystal microbalance. <i>Biomacromolecules</i> , 2006 , 7, 2449-54	6.9	22
8	Enzymatic degradation processes of poly[(R)-3-hydroxybutyric acid] and poly[(R)-3-hydroxybutyric acid-co-(R)-3-hydroxyvaleric acid] single crystals revealed by atomic force microscopy: effects of molecular weight and second-monomer composition on erosion rates. <i>Biomacromolecules</i> , 2005 , 6, 2008-16	6.9	41
7	Biosynthesis of polyhydroxyalkanoate (PHA) copolymer from fructose using wild-type and laboratory-evolved PHA synthases. <i>Macromolecular Bioscience</i> , 2005 , 5, 112-7	5.5	50
6	In-situ atomic force microscopy observation of enzymatic degradation in poly(hydroxyalkanoic acid) thin films: normal and constrained conditions. <i>Macromolecular Bioscience</i> , 2004 , 4, 276-85	5.5	16
5	Enzymatic degradation processes of lamellar crystals in thin films for poly[(R)-3-hydroxybutyric acid] and its copolymers revealed by real-time atomic force microscopy. <i>Biomacromolecules</i> , 2004 , 5, 2186-94	6.9	41
4	Plastics to fertilizers: chemical recycling of a bio-based polycarbonate as a fertilizer source. <i>Green Chemistry</i> ,	10	2
3	Synthetic peptide-induced internalization of biomolecules into various plant and algal cells via micropinocytosis		
2	Multicomponent nature underlies the extraordinary mechanical properties of spider dragline silk		1
1	Darwin's bark spider shares a spidroin repertoire with <i>Caerostris extrusa</i> but achieves extraordinary silk toughness through gene expression		1

