

Kiyotaka Shiba

List of Publications by Year in descending order

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122
papers

13,337
citations

66234

42
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24179

110
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128
all docs

128
docs citations

128
times ranked

18445
citing authors

#	ARTICLE	IF	CITATIONS
1	Minimal information for studies of extracellular vesicles 2018 (MISEV2018): a position statement of the International Society for Extracellular Vesicles and update of the MISEV2014 guidelines. <i>Journal of Extracellular Vesicles</i> , 2018, 7, 1535750.	5.5	6,961
2	Rapid Colorectal Adenoma Formation Initiated by Conditional Targeting of the Apc Gene. <i>Science</i> , 1997, 278, 120-123.	6.0	561
3	Intelligent Image-Activated Cell Sorting. <i>Cell</i> , 2018, 175, 266-276.e13.	13.5	395
4	Carbon Nanohorns as Anticancer Drug Carriers. <i>Molecular Pharmaceutics</i> , 2005, 2, 475-480.	2.3	369
5	A Hexapeptide Motif that Electrostatically Binds to the Surface of Titanium. <i>Journal of the American Chemical Society</i> , 2003, 125, 14234-14235.	6.6	329
6	Drug-Loaded Carbon Nanohorns: Adsorption and Release of Dexamethasone in Vitro. <i>Molecular Pharmaceutics</i> , 2004, 1, 399-405.	2.3	328
7	A temperature-sensitive mutant of <i>E. coli</i> exhibiting slow processing of exported proteins. <i>Cell</i> , 1983, 32, 789-797.	13.5	253
8	Specificity and Biomineralization Activities of Ti-Binding Peptide-1 (TBP-1). <i>Langmuir</i> , 2005, 21, 3090-3095.	1.6	217
9	Isolation of human salivary extracellular vesicles by iodixanol density gradient ultracentrifugation and their characterizations. <i>Journal of Extracellular Vesicles</i> , 2016, 5, 30829.	5.5	145
10	Direct transformation from amorphous to crystalline calcium phosphate facilitated by motif-programmed artificial proteins. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 16866-16870.	3.3	144
11	Label-free chemical imaging flow cytometry by high-speed multicolor stimulated Raman scattering. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 15842-15848.	3.3	130
12	Incorporation of Lysyl-tRNA Synthetase into Human Immunodeficiency Virus Type 1. <i>Journal of Virology</i> , 2001, 75, 5043-5048.	1.5	122
13	Directional BMP-2 for functionalization of titanium surfaces. <i>Biomaterials</i> , 2009, 30, 1166-1175.	5.7	122
14	Affinity Selection of Peptide Phage Libraries against Single-Wall Carbon Nanohorns Identifies a Peptide Aptamer with Conformational Variability. <i>Langmuir</i> , 2004, 20, 8939-8941.	1.6	120
15	Endowing a Ferritin-Like Cage Protein with High Affinity and Selectivity for Certain Inorganic Materials. <i>Small</i> , 2005, 1, 826-832.	5.2	120
16	Mechanism Underlying Specificity of Proteins Targeting Inorganic Materials. <i>Nano Letters</i> , 2006, 6, 515-519.	4.5	118
17	Raman image-activated cell sorting. <i>Nature Communications</i> , 2020, 11, 3452.	5.8	116
18	Solubilization of Single-Wall Carbon Nanohorns Using a PEG-Doxorubicin Conjugate. <i>Molecular Pharmaceutics</i> , 2006, 3, 407-414.	2.3	106

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19	Synthesis and Aminoacyl-tRNA Synthetase Inhibitory Activity of Prolyl Adenylate Analogs. <i>Bioorganic Chemistry</i> , 1996, 24, 273-289.	2.0	105
20	Utilization of the Pleiotropy of a Peptidic Aptamer To Fabricate Heterogeneous Nanodot-Containing Multilayer Nanostructures. <i>Journal of the American Chemical Society</i> , 2006, 128, 1717-1722.	6.6	94
21	Prevention of biofilm formation on titanium surfaces modified with conjugated molecules comprised of antimicrobial and titanium-binding peptides. <i>Biofouling</i> , 2010, 26, 103-110.	0.8	94
22	Precursor of Pro-apoptotic Cytokine Modulates Aminoacylation Activity of tRNA Synthetase. <i>Journal of Biological Chemistry</i> , 1999, 274, 16673-16676.	1.6	89
23	Biodistribution and Ultrastructural Localization of Single-Walled Carbon Nanohorns Determined In Vivo with Embedded Gd ₂ O ₃ Labels. <i>ACS Nano</i> , 2009, 3, 1399-1406.	7.3	79
24	Cellular Distribution of Lysyl-tRNA Synthetase and Its Interaction with Gag during Human Immunodeficiency Virus Type 1 Assembly. <i>Journal of Virology</i> , 2004, 78, 7553-7564.	1.5	76
25	Selective Nanoscale Positioning of Ferritin and Nanoparticles by Means of Target-Specific Peptides. <i>Small</i> , 2006, 2, 1148-1152.	5.2	76
26	Realizing a Two-Dimensional Ordered Array of Ferritin Molecules Directly on a Solid Surface Utilizing Carbonaceous Material Affinity Peptides. <i>Langmuir</i> , 2007, 23, 1615-1618.	1.6	76
27	Exploitation of peptide motif sequences and their use in nanobiotechnology. <i>Current Opinion in Biotechnology</i> , 2010, 21, 412-425.	3.3	73
28	Subtypes of tumour cell-derived small extracellular vesicles having differently externalized phosphatidylserine. <i>Journal of Extracellular Vesicles</i> , 2019, 8, 1579541.	5.5	73
29	Functional Role of the Prokaryotic Proline-tRNA Synthetase Insertion Domain in Amino Acid Editing. <i>Biochemistry</i> , 2002, 41, 7108-7115.	1.2	71
30	Retrovirus-Specific Packaging of Aminoacyl-tRNA Synthetases with Cognate Primer tRNAs. <i>Journal of Virology</i> , 2002, 76, 13111-13115.	1.5	70
31	Human Lysyl-tRNA Synthetase Accepts Nucleotide 73 Variants and Rescues <i>Escherichia coli</i> Double-defective Mutant. <i>Journal of Biological Chemistry</i> , 1997, 272, 22809-22816.	1.6	69
32	Dispersion of Cisplatin-Loaded Carbon Nanohorns with a Conjugate Comprised of an Artificial Peptide Aptamer and Polyethylene Glycol. <i>Molecular Pharmaceutics</i> , 2007, 4, 723-729.	2.3	66
33	Chiral meta-molecules consisting of gold nanoparticles and genetically engineered tobacco mosaic virus. <i>Optics Express</i> , 2012, 20, 24856.	1.7	64
34	Species-Specific Differences in the Operational RNA Code for Aminoacylation of tRNA ^{Pro} . <i>Biochemistry</i> , 1998, 37, 8605-8613.	1.2	62
35	Peptide-coated, self-assembled M12L24 coordination spheres and their immobilization onto an inorganic surface. <i>Chemical Science</i> , 2010, 1, 68.	3.7	57
36	In Aqua Structuralization of a Three-Dimensional Configuration Using Biomolecules. <i>Nano Letters</i> , 2007, 7, 3200-3202.	4.5	55

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37	A Eubacterial Mycobacterium tuberculosis tRNA Synthetase Is Eukaryote-like and Resistant to a Eubacterial-Specific Antisynthetase Drug. <i>Biochemistry</i> , 1996, 35, 9995-10003.	1.2	52
38	Maintaining genetic code through adaptations of tRNA synthetases to taxonomic domains. <i>Trends in Biochemical Sciences</i> , 1997, 22, 453-457.	3.7	51
39	Insertional disruption of the nusB (ssyB) gene leads to cold-sensitive growth of Escherichia coli and suppression of the secY24 mutation. <i>Molecular Genetics and Genomics</i> , 1992, 234, 429-432.	2.4	49
40	Binary Nanomaterials Based on Nanocarbons: A Case for Probing Carbon Nanohorns' Biorecognition Properties. <i>Nano Letters</i> , 2003, 3, 1033-1036.	4.5	49
41	Critical Amino Acid Residues for the Specific Binding of the Ti-Recognizing Recombinant Ferritin with Oxide Surfaces of Titanium and Silicon. <i>Langmuir</i> , 2009, 25, 10901-10906.	1.6	48
42	Natural and artificial peptide motifs: their origins and the application of motif-programming. <i>Chemical Society Reviews</i> , 2010, 39, 117-126.	18.7	45
43	Human Alanyl-tRNA Synthetase: Conservation in Evolution of Catalytic Core and Microhelix Recognition. <i>Biochemistry</i> , 1995, 34, 10340-10349.	1.2	40
44	Prevention of Carbon Nanohorn Agglomeration Using a Conjugate Composed of Comb-Shaped Polyethylene Glycol and a Peptide Aptamer. <i>Molecular Pharmaceutics</i> , 2009, 6, 441-447.	2.3	40
45	Synthesis of Functional Proteins by Mixing Peptide Motifs. <i>Chemistry and Biology</i> , 2004, 11, 765-773.	6.2	36
46	A Tumor-Environment-Responsive Nanocarrier That Evolves Its Surface Properties upon Sensing Matrix Metalloproteinase-2 and Initiates Agglomeration to Enhance T_2 Relaxivity for Magnetic Resonance Imaging. <i>Molecular Pharmaceutics</i> , 2011, 8, 1970-1974.	2.3	36
47	On the Role of Periodism in the Origin of Proteins. <i>Journal of Molecular Biology</i> , 2002, 320, 833-840.	2.0	35
48	Designer Ribozymes: Programming the tRNA Specificity into Flexizyme. <i>Journal of the American Chemical Society</i> , 2004, 126, 11454-11455.	6.6	35
49	Distinct macroscopic structures developed from solutions of chemical compounds and periodic proteins. <i>EMBO Reports</i> , 2003, 4, 148-153.	2.0	32
50	Carbon nanohorns accelerate bone regeneration in rat calvarial bone defect. <i>Nanotechnology</i> , 2011, 22, 065102.	1.3	31
51	Motif-Programmed Artificial Extracellular Matrix. <i>Biomacromolecules</i> , 2008, 9, 3098-3105.	2.6	30
52	Strong Selective Pressure To Use G:U To Mark an RNA Acceptor Stem for Alanine. <i>Biochemistry</i> , 1998, 37, 9193-9202.	1.2	28
53	A Synthesis Approach to Understanding Repeated Peptides Conserved in Mineralization Proteins. <i>Biomacromolecules</i> , 2007, 8, 2659-2664.	2.6	28
54	Divergent Adaptation of tRNA Recognition by Methanococcus jannaschii Prolyl-tRNA Synthetase. <i>Journal of Biological Chemistry</i> , 2001, 276, 20286-20291.	1.6	26

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55	Direct Production of a Two-Dimensional Ordered Array of Ferritin-Nanoparticles on a Silicon Substrate. <i>Japanese Journal of Applied Physics</i> , 2007, 46, L713.	0.8	25
56	Growth of Giant Two-Dimensional Crystal of Protein Molecules from a Three-Phase Contact Line. <i>Langmuir</i> , 2008, 24, 12836-12841.	1.6	25
57	MolCraft: a hierarchical approach to the synthesis of artificial proteins. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2004, 28, 145-153.	1.8	24
58	Autonomous Silica Encapsulation and Sustained Release of Anticancer Protein. <i>Langmuir</i> , 2010, 26, 2231-2234.	1.6	24
59	Motif programming: a microgene-based method for creating synthetic proteins containing multiple functional motifs. <i>Nucleic Acids Research</i> , 2007, 35, e38-e38.	6.5	23
60	Intron Positions Delineate the Evolutionary Path of a Pervasively Appended Peptide in Five Human Aminoacyl-tRNA Synthetases. <i>Journal of Molecular Evolution</i> , 2002, 55, 727-733.	0.8	22
61	Probing the Conformational Features of a Phage Display Polypeptide Sequence Directed against Single-Walled Carbon Nanohorn Surfaces. <i>Langmuir</i> , 2005, 21, 11907-11914.	1.6	22
62	The role of peptide motifs in the evolution of a protein network. <i>Nucleic Acids Research</i> , 2007, 35, 6357-6366.	6.5	21
63	Human asparaginyl-tRNA synthetase: molecular cloning and the inference of the evolutionary history of Asx-tRNA synthetase family. <i>Nucleic Acids Research</i> , 1998, 26, 5045-5051.	6.5	20
64	Conservation of a tRNA core for aminoacylation. <i>Nucleic Acids Research</i> , 1999, 27, 4743-4750.	6.5	20
65	Functionalization of carbon nanomaterials by evolutionary molecular engineering: Potential application in drug delivery systems. <i>Journal of Drug Targeting</i> , 2006, 14, 512-518.	2.1	20
66	A novel bifunctional protein supramolecule for construction of carbon nanotube-titanium hybrid material. <i>Chemical Communications</i> , 2011, 47, 12649.	2.2	20
67	Identification of peptide motif that binds to the surface of zirconia. <i>Dental Materials Journal</i> , 2011, 30, 935-940.	0.8	20
68	Bridging Adhesion of a Protein onto an Inorganic Surface Using Self-Assembled Dual-Functionalized Spheres. <i>Journal of the American Chemical Society</i> , 2015, 137, 12890-12896.	6.6	20
69	Isolation of Extracellular Vesicles in Saliva Using Density Gradient Ultracentrifugation. <i>Methods in Molecular Biology</i> , 2017, 1660, 343-350.	0.4	19
70	Preferential capture of EpCAM-expressing extracellular vesicles on solid surfaces coated with an aptamer-conjugated zwitterionic polymer. <i>Biotechnology and Bioengineering</i> , 2018, 115, 536-544.	1.7	19
71	Frame shuffling: a novel method for in vitro protein evolution. <i>Protein Engineering, Design and Selection</i> , 2006, 19, 135-140.	1.0	18
72	Host Cell Prediction of Exosomes Using Morphological Features on Solid Surfaces Analyzed by Machine Learning. <i>Journal of Physical Chemistry B</i> , 2018, 122, 6224-6235.	1.2	16

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73	Translated products of tandem microgene repeats exhibit diverse properties also seen in natural proteins. <i>Protein Engineering, Design and Selection</i> , 2003, 16, 57-63.	1.0	15
74	Immobilization of a carbon nanomaterial-based localized drug-release system using a bispecific material-binding peptide. <i>International Journal of Nanomedicine</i> , 2018, Volume 13, 1643-1652.	3.3	15
75	<i>In Aqua</i> Manufacturing of a Three-Dimensional Nanostructure Using a Peptide Aptamer. <i>MRS Bulletin</i> , 2008, 33, 524-529.	1.7	14
76	An artificial fusion protein between bone morphogenetic protein 2 and titanium-binding peptide is functional <i>in vivo</i> . <i>Journal of Biomedical Materials Research - Part A</i> , 2014, 102, 1180-1186.	2.1	14
77	Adsorption Properties of a Gold-Binding Peptide Assessed by its Attachment to a Recombinant Apoferritin Molecule. <i>Applied Physics Express</i> , 0, 1, 034006.	1.1	13
78	Pentapartite fractionation of particles in oral fluids by differential centrifugation. <i>Scientific Reports</i> , 2021, 11, 3326.	1.6	12
79	Suppression of Aggrus/podoplanin-induced platelet aggregation and pulmonary metastasis by a single-chain antibody variable region fragment. <i>Cancer Medicine</i> , 2014, 3, 1595-1604.	1.3	11
80	Biochemical and phylogenetic analyses of methionyl-tRNA synthetase isolated from a pathogenic microorganism, <i>Mycobacterium tuberculosis</i> . <i>FEBS Letters</i> , 1998, 427, 259-262.	1.3	10
81	Motif-programmed artificial proteins mediated nucleation of octacalcium phosphate on titanium substrates. <i>Chemical Communications</i> , 2010, 46, 6675.	2.2	10
82	Nonvolatile Flash Memory Based on Biologically Integrated Hierarchical Nanostructures. <i>Langmuir</i> , 2013, 29, 12483-12489.	1.6	10
83	Structural Properties of an Artificial Protein That Regulates the Nucleation of Inorganic and Organic Crystals. <i>Langmuir</i> , 2007, 23, 3857-3863.	1.6	9
84	Motif-programmed artificial protein induces apoptosis in several cancer cells by disrupting mitochondria. <i>Cancer Science</i> , 2008, 99, 398-406.	1.7	9
85	Effect of Motif-programmed Artificial Proteins on the Calcium Uptake in a Synthetic Hydrogel. <i>Macromolecular Bioscience</i> , 2009, 9, 959-967.	2.1	9
86	New Role for Growth/Differentiation Factor 15 in the Survival of Transplanted Brown Adipose Tissues in Cooperation with Interleukin-6. <i>Cells</i> , 2020, 9, 1365.	1.8	9
87	Three-Dimensional Nanodot-Type Floating Gate Memory Fabricated by Bio-Layer-by-Layer Method. <i>Applied Physics Express</i> , 2011, 4, 085004.	1.1	8
88	Encryption of agonistic motifs for TLR4 into artificial antigens augmented the maturation of antigen-presenting cells. <i>PLoS ONE</i> , 2017, 12, e0188934.	1.1	8
89	Guide Oligonucleotide-Dependent DNA Linkage That Facilitates Controllable Polymerization of Microgene Blocks. <i>Journal of Biochemistry</i> , 2002, 132, 689-696.	0.9	7
90	Specimen-specific drift of densities defines distinct subclasses of extracellular vesicles from human whole saliva. <i>PLoS ONE</i> , 2021, 16, e0249526.	1.1	7

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91	The Interaction of 'Silicon' with Proteins: Part 2. The Rold of Bioinspired Peptide and Recombinant Proteins in Silica Polymerization. ACS Symposium Series, 2007, , 328-347.	0.5	6
92	Physicochemical properties of artificial proteins that accelerate nucleation of crystalline calcium phosphate. Journal of Crystal Growth, 2011, 314, 190-195.	0.7	6
93	Stepwise accumulation of layers of aptamer-ornamented ferritins using biomimetic layer-by-layer. Journal of Materials Research, 2008, 23, 3236-3240.	1.2	5
94	Ultrastructural localization of intravenously injected carbon nanohorns in tumor. International Journal of Nanomedicine, 2014, 9, 3499.	3.3	5
95	Combinatorial Contextualization of Peptidic Epitopes for Enhanced Cellular Immunity. PLoS ONE, 2014, 9, e110425.	1.1	5
96	Not nanocarbon but dispersant induced abnormality in lysosome in macrophages <i>in vivo</i> . Nanotechnology, 2015, 26, 195102.	1.3	5
97	Characterization of Folding Pathways of the Type-1 and Type-2 Periplasmic Binding Proteins MglB and ArgT. Journal of Biochemistry, 2003, 133, 371-376.	0.9	4
98	Protein-Mediated Bioinspired Mineralization. ACS Symposium Series, 2005, , 150-163.	0.5	4
99	Conversion of a monodispersed globular protein into an amyloid-like filament by appending an artificial peptide at the N-terminal. Protein Engineering, Design and Selection, 2007, 20, 109-116.	1.0	4
100	Wash-free and selective imaging of epithelial cell adhesion molecule (EpcAM) expressing cells with fluorogenic peptide ligands. Biochemical and Biophysical Research Communications, 2018, 500, 283-287.	1.0	4
101	Synthesis of Functional Signaling Domains by Combinatorial Polymerization of Phosphorylation Motifs. ACS Chemical Biology, 2009, 4, 751-758.	1.6	3
102	A Novel System to Detect Circulating Tumor Cells Using Two Different Size-selective Microfilters. Anticancer Research, 2020, 40, 5577-5582.	0.5	3
103	Biofunctionalized titanium surfaces with modified silk fibroin carrying titanium binding motif to enhance the ossific differentiation of MC3T3- α 1. Biotechnology and Bioengineering, 2021, 118, 2585-2596.	1.7	3
104	Combinatorics of peptide sextets encoded by a single microgene. Journal of Molecular Catalysis B: Enzymatic, 2004, 28, 215-221.	1.8	2
105	Filamentous Phage-Based Extra Cellular Matrix. , 2008, , .		2
106	Adhesion of Pancreatic Cancer Cells in a Liver-Microvasculature Mimicking Coculture Correlates with Their Propensity to Form Liver-Specific Metastasis <i>In Vivo</i> . BioMed Research International, 2014, 2014, 1-13.	0.9	2
107	Programmable Bio-surfaces for Biomedical Applications. Advances in Experimental Medicine and Biology, 2017, 1030, 1-20.	0.8	2
108	Autonomous folding of a C-terminal inhibitory fragment of Escherichia coli isoleucine-tRNA synthetase. BBA - Proteins and Proteomics, 1999, 1433, 103-109.	2.1	1

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109	Toward development of nano-materials composed of artificial proteins and nano-carbons. , 0, , .		1
110	Construction and Characterization of Chimeric Proteins Composed of Type-1 and Type-2 Periplasmic Binding Proteins MglB and ArgT. Bioscience, Biotechnology and Biochemistry, 2004, 68, 808-813.	0.6	1
111	ãfã,ãf³èj"éçã«ç%°¹ç°çš,,ã«ãçç€ãªmä,ãfšãf—ãfãf%°TBP-1ã@ã%°µã‡°ããã@ã^©ç””. Materia Japan, 2005, 44, 799-808.		1
112	AFM and QCM-D Observations of the Binding of TBP-1 on Ti Surfaces. Hyomen Kagaku, 2005, 26, 428-431.	0.0	1
113	Intelligent Cell Search Engine. SSRN Electronic Journal, 0, , .	0.4	1
114	Artificial Proteins that Interface between Biological and Inorganic Materials. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2004, 17, 409-410.	0.1	0
115	A synthetic approach for protein evolution and cell engineering. , 2006, , .		0
116	3TA1-02 Direct transformation from amorphous to crystalline calcium phosphate facilitated by motif-programmed artificial proteins(The 47th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2009, 49, S51.	0.0	0
117	Creation of novel signalling modulators from existing cytokine using scanning motif-programming. Chemical Communications, 2011, 47, 9357.	2.2	0
118	Liaison between Biology and Material Science. Hyomen Kagaku, 2006, 27, 164-169.	0.0	0
119	Exploitation of Interface between Peptides and Inorganic Materials in Nano-Biotechnology. Seibutsu Butsuri, 2007, 47, 139-144.	0.0	0
120	Morphological Evolution of Calcium Phosphate Crystals with the Assistance of Motif-Programmed Artificial Proteins. Transactions of the Materials Research Society of Japan, 2010, 35, 825-827.	0.2	0
121	Gold nanostructures using tobacco mosaic viruses for optical metamaterials. , 2011, , .		0
122	Isolation and Quantification of Exosomes. Membrane, 2015, 40, 242-247.	0.0	0