Kiyotaka Shiba

List of Publications by Year
in descending order

122	13,337	66343 42	24258 110
papers	citations	h-index	g-index

128	128	128	18445
all docs	docs citations	times ranked	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. Journal of Extracellular Vesicles, 2018, 7, 1535750.	12.2	6,961
2	Rapid Colorectal Adenoma Formation Initiated by Conditional Targeting of the Apc Gene. Science, 1997, 278, 120-123.	12.6	561
3	Intelligent Image-Activated Cell Sorting. Cell, 2018, 175, 266-276.e13.	28.9	395
4	Carbon Nanohorns as Anticancer Drug Carriers. Molecular Pharmaceutics, 2005, 2, 475-480.	4.6	369
5	A Hexapeptide Motif that Electrostatically Binds to the Surface of Titanium. Journal of the American Chemical Society, 2003, 125, 14234-14235.	13.7	329
6	Drug-Loaded Carbon Nanohorns:Â Adsorption and Release of Dexamethasone in Vitro. Molecular Pharmaceutics, 2004, 1, 399-405.	4.6	328
7	A temperature-sensitive mutant of E. coli exhibiting slow processing of exported proteins. Cell, 1983, 32, 789-797.	28.9	253
8	Specificity and Biomineralization Activities of Ti-Binding Peptide-1 (TBP-1). Langmuir, 2005, 21, 3090-3095.	3.5	217
9	Isolation of human salivary extracellular vesicles by iodixanol density gradient ultracentrifugation and their characterizations. Journal of Extracellular Vesicles, 2016, 5, 30829.	12.2	145
10	Direct transformation from amorphous to crystalline calcium phosphate facilitated by motif-programmed artificial proteins. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 16866-16870.	7.1	144
11	Label-free chemical imaging flow cytometry by high-speed multicolor stimulated Raman scattering. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15842-15848.	7.1	130
12	Incorporation of Lysyl-tRNA Synthetase into Human Immunodeficiency Virus Type 1. Journal of Virology, 2001, 75, 5043-5048.	3.4	122
13	Directional BMP-2 for functionalization of titanium surfaces. Biomaterials, 2009, 30, 1166-1175.	11.4	122
14	Affinity Selection of Peptide Phage Libraries against Single-Wall Carbon Nanohorns Identifies a Peptide Aptamer with Conformational Variability. Langmuir, 2004, 20, 8939-8941.	3.5	120
15	Endowing a Ferritin-Like Cage Protein with High Affinity and Selectivity for Certain Inorganic Materials. Small, 2005, 1, 826-832.	10.0	120
16	Mechanism Underlying Specificity of Proteins Targeting Inorganic Materials. Nano Letters, 2006, 6, 515-519.	9.1	118
17	Raman image-activated cell sorting. Nature Communications, 2020, 11, 3452.	12.8	116
18	Solubilization of Single-Wall Carbon Nanohorns Using a PEGâ^'Doxorubicin Conjugate. Molecular Pharmaceutics, 2006, 3, 407-414.	4.6	106

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19	Synthesis and Aminoacyl-tRNA Synthetase Inhibitory Activity of Prolyl Adenylate Analogs. Bioorganic Chemistry, 1996, 24, 273-289.	4.1	105
20	Utilization of the Pleiotropy of a Peptidic Aptamer To Fabricate Heterogeneous Nanodot-Containing Multilayer Nanostructures. Journal of the American Chemical Society, 2006, 128, 1717-1722.	13.7	94
21	Prevention of biofilm formation on titanium surfaces modified with conjugated molecules comprised of antimicrobial and titanium-binding peptides. Biofouling, 2010, 26, 103-110.	2.2	94
22	Precursor of Pro-apoptotic Cytokine Modulates Aminoacylation Activity of tRNA Synthetase. Journal of Biological Chemistry, 1999, 274, 16673-16676.	3.4	89
23	Biodistribution and Ultrastructural Localization of Single-Walled Carbon Nanohorns Determined In Vivo with Embedded Gd2O3 Labels. ACS Nano, 2009, 3, 1399-1406.	14.6	79
24	Cellular Distribution of Lysyl-tRNA Synthetase and Its Interaction with Gag during Human Immunodeficiency Virus Type 1 Assembly. Journal of Virology, 2004, 78, 7553-7564.	3.4	76
25	Selective Nanoscale Positioning of Ferritin and Nanoparticles by Means of Targetâ€Specific Peptides. Small, 2006, 2, 1148-1152.	10.0	76
26	Realizing a Two-Dimensional Ordered Array of Ferritin Molecules Directly on a Solid Surface Utilizing Carbonaceous Material Affinity Peptides. Langmuir, 2007, 23, 1615-1618.	3.5	76
27	Exploitation of peptide motif sequences and their use in nanobiotechnology. Current Opinion in Biotechnology, 2010, 21, 412-425.	6.6	73
28	Subtypes of tumour cellâ€derived small extracellular vesicles having differently externalized phosphatidylserine. Journal of Extracellular Vesicles, 2019, 8, 1579541.	12.2	73
29	Functional Role of the Prokaryotic Proline-tRNA Synthetase Insertion Domain in Amino Acid Editingâ€. Biochemistry, 2002, 41, 7108-7115.	2.5	71
30	Retrovirus-Specific Packaging of Aminoacyl-tRNA Synthetases with Cognate Primer tRNAs. Journal of Virology, 2002, 76, 13111-13115.	3.4	70
31	Human Lysyl-tRNA Synthetase Accepts Nucleotide 73 Variants and Rescues Escherichia coli Double-defective Mutant. Journal of Biological Chemistry, 1997, 272, 22809-22816.	3.4	69
32	Dispersion of Cisplatin-Loaded Carbon Nanohorns with a Conjugate Comprised of an Artificial Peptide Aptamer and Polyethylene Glycol. Molecular Pharmaceutics, 2007, 4, 723-729.	4.6	66
33	Chiral meta-molecules consisting of gold nanoparticles and genetically engineered tobacco mosaic virus. Optics Express, 2012, 20, 24856.	3.4	64
34	Species-Specific Differences in the Operational RNA Code for Aminoacylation of tRNAProÂâ€. Biochemistry, 1998, 37, 8605-8613.	2.5	62
35	Peptide-coated, self-assembled M12L24 coordination spheres and their immobilization onto an inorganic surface. Chemical Science, 2010, 1, 68.	7.4	57
36	In Aqua Structuralization of a Three-Dimensional Configuration Using Biomolecules. Nano Letters, 2007, 7, 3200-3202.	9.1	55

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37	A EubacterialMycobacterium tuberculosistRNA Synthetase Is Eukaryote-like and Resistant to a Eubacterial-Specific Antisynthetase Drugâ€. Biochemistry, 1996, 35, 9995-10003.	2.5	52
38	Maintaining genetic code through adaptations of tRNA synthetases to taxonomic domains. Trends in Biochemical Sciences, 1997, 22, 453-457.	7.5	51
39	Insertional disruption of the nusB (ssyB) gene leads to cold-sensitive growth of Escherichia coli and suppression of the secY24 mutation. Molecular Genetics and Genomics, 1992, 234, 429-432.	2.4	49
40	Binary Nanomaterials Based on Nanocarbons:â€‰ A Case for Probing Carbon Nanohorns' Biorecognition Properties. Nano Letters, 2003, 3, 1033-1036.	9.1	49
41	Critical Amino Acid Residues for the Specific Binding of the Ti-Recognizing Recombinant Ferritin with Oxide Surfaces of Titanium and Silicon. Langmuir, 2009, 25, 10901-10906.	3.5	48
42	Natural and artificial peptide motifs: their origins and the application of motif-programming. Chemical Society Reviews, 2010, 39, 117-126.	38.1	45
43	Human Alanyl-tRNA Synthetase: Conservation in Evolution of Catalytic Core and Microhelix Recognition. Biochemistry, 1995, 34, 10340-10349.	2.5	40
44	Prevention of Carbon Nanohorn Agglomeration Using a Conjugate Composed of Comb-Shaped Polyethylene Glycol and a Peptide Aptamer. Molecular Pharmaceutics, 2009, 6, 441-447.	4.6	40
45	Synthesis of Functional Proteins by Mixing Peptide Motifs. Chemistry and Biology, 2004, 11, 765-773.	6.0	36
46	A Tumor-Environment-Responsive Nanocarrier That Evolves Its Surface Properties upon Sensing Matrix Metalloproteinase-2 and Initiates Agglomeration to Enhance T₂ Relaxivity for Magnetic Resonance Imaging. Molecular Pharmaceutics, 2011, 8, 1970-1974.	4.6	36
47	On the Role of Periodism in the Origin of Proteins. Journal of Molecular Biology, 2002, 320, 833-840.	4.2	35
48	Designer Ribozymes:â€‰ Programming the tRNA Specificity into Flexizyme. Journal of the American Chemical Society, 2004, 126, 11454-11455.	13.7	35
49	Distinct macroscopic structures developed from solutions of chemical compounds and periodic proteins. EMBO Reports, 2003, 4, 148-153.	4.5	32
50	Carbon nanohorns accelerate bone regeneration in rat calvarial bone defect. Nanotechnology, 2011, 22, 065102.	2.6	31
51	Motif-Programmed Artificial Extracellular Matrix. Biomacromolecules, 2008, 9, 3098-3105.	5.4	30
52	Strong Selective Pressure To Use G:U To Mark an RNA Acceptor Stem for Alanineâ€. Biochemistry, 1998, 37, 9193-9202.	2.5	28
53	A Synthesis Approach to Understanding Repeated Peptides Conserved in Mineralization Proteins. Biomacromolecules, 2007, 8, 2659-2664.	5.4	28
54	Divergent Adaptation of tRNA Recognition byMethanococcus jannaschii Prolyl-tRNA Synthetase. Journal of Biological Chemistry, 2001, 276, 20286-20291.	3.4	26

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55	Direct Production of a Two-Dimensional Ordered Array of Ferritin-Nanoparticles on a Silicon Substrate. Japanese Journal of Applied Physics, 2007, 46, L713.	1.5	25
56	Growth of Giant Two-Dimensional Crystal of Protein Molecules from a Three-Phase Contact Line. Langmuir, 2008, 24, 12836-12841.	3.5	25
57	MolCraft: a hierarchical approach to the synthesis of artificial proteins. Journal of Molecular Catalysis B: Enzymatic, 2004, 28, 145-153.	1.8	24
58	Autonomous Silica Encapsulation and Sustained Release of Anticancer Protein. Langmuir, 2010, 26, 2231-2234.	3.5	24
59	Motif programming: a microgene-based method for creating synthetic proteins containing multiple functional motifs. Nucleic Acids Research, 2007, 35, e38-e38.	14.5	23
60	Intron Positions Delineate the Evolutionary Path of a Pervasively Appended Peptide in Five Human Aminoacyl-tRNA Synthetases. Journal of Molecular Evolution, 2002, 55, 727-733.	1.8	22
61	Probing the Conformational Features of a Phage Display Polypeptide Sequence Directed against Single-Walled Carbon Nanohorn Surfaces. Langmuir, 2005, 21, 11907-11914.	3.5	22
62	The role of peptide motifs in the evolution of a protein network. Nucleic Acids Research, 2007, 35, 6357-6366.	14.5	21
63	Human asparaginyl-tRNA synthetase: molecular cloning and the inference of the evolutionary history of Asx-tRNA synthetase family. Nucleic Acids Research, 1998, 26, 5045-5051.	14.5	20
64	Conservation of a tRNA core for aminoacylation. Nucleic Acids Research, 1999, 27, 4743-4750.	14.5	20
65	Functionalization of carbon nanomaterials by evolutionary molecular engineering: Potential application in drug delivery systems. Journal of Drug Targeting, 2006, 14, 512-518.	4.4	20
66	A novel bifunctional protein supramolecule for construction of carbon nanotubeâ€“titanium hybrid material. Chemical Communications, 2011, 47, 12649.	4.1	20
67	Identification of peptide motif that binds to the surface of zirconia. Dental Materials Journal, 2011, 30, 935-940.	1.8	20
68	Bridging Adhesion of a Protein onto an Inorganic Surface Using Self-Assembled Dual-Functionalized Spheres. Journal of the American Chemical Society, 2015, 137, 12890-12896.	13.7	20
69	Isolation of Extracellular Vesicles in Saliva Using Density Gradient Ultracentrifugation. Methods in Molecular Biology, 2017, 1660, 343-350.	0.9	19
70	Preferential capture of EpCAMâ€expressing extracellular vesicles on solid surfaces coated with an aptamerâ€conjugated zwitterionic polymer. Biotechnology and Bioengineering, 2018, 115, 536-544.	3.3	19
71	Frame shuffling: a novel method for in vitro protein evolution. Protein Engineering, Design and Selection, 2006, 19, 135-140.	2.1	18
72	Host Cell Prediction of Exosomes Using Morphological Features on Solid Surfaces Analyzed by Machine Learning. Journal of Physical Chemistry B, 2018, 122, 6224-6235.	2.6	16

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73	Translated products of tandem microgene repeats exhibit diverse properties also seen in natural proteins. Protein Engineering, Design and Selection, 2003, 16, 57-63.	2.1	15
74	Immobilization of a carbon nanomaterial-based localized drug-release system using a bispecific material-binding peptide. International Journal of Nanomedicine, 2018, Volume 13, 1643-1652.	6.7	15
75	In AquaManufacturing of a Three-Dimensional Nanostructure Using a Peptide Aptamer. MRS Bulletin, 2008, 33, 524-529.	3.5	14
76	An artificial fusion protein between bone morphogenetic protein 2 and titaniumâ€binding peptide is functional in vivo. Journal of Biomedical Materials Research - Part A, 2014, 102, 1180-1186.	4.0	14
77	Adsorption Properties of a Gold-Binding Peptide Assessed by its Attachment to a Recombinant Apoferritin Molecule. Applied Physics Express, 0, 1, 034006.	2.4	13
78	Pentapartite fractionation of particles in oral fluids by differential centrifugation. Scientific Reports, 2021, 11, 3326.	3.3	12
79	Suppression of Aggrus/podoplaninâ€induced platelet aggregation and pulmonary metastasis by a singleâ€chain antibody variable region fragment. Cancer Medicine, 2014, 3, 1595-1604.	2.8	11
80	Biochemical and phylogenetic analyses of methionyl-tRNA synthetase isolated from a pathogenic microorganism,Mycobacterium tuberculosis. FEBS Letters, 1998, 427, 259-262.	2.8	10
81	Motif-programmed artificial proteins mediated nucleation of octacalcium phosphate on titanium substrates. Chemical Communications, 2010, 46, 6675.	4.1	10
82	Nonvolatile Flash Memory Based on Biologically Integrated Hierarchical Nanostructures. Langmuir, 2013, 29, 12483-12489.	3.5	10
83	Structural Properties of an Artificial Protein That Regulates the Nucleation of Inorganic and Organic Crystals. Langmuir, 2007, 23, 3857-3863.	3.5	9
84	Motifâ€programmed artificial protein induces apoptosis in several cancer cells by disrupting mitochondria. Cancer Science, 2008, 99, 398-406.	3.9	9
85	Effect of Motifâ€Programmed Artificial Proteins on the Calcium Uptake in a Synthetic Hydrogel. Macromolecular Bioscience, 2009, 9, 959-967.	4.1	9
86	New Role for Growth/Differentiation Factor 15 in the Survival of Transplanted Brown Adipose Tissues in Cooperation with Interleukin-6. Cells, 2020, 9, 1365.	4.1	9
87	Three-Dimensional Nanodot-Type Floating Gate Memory Fabricated by Bio-Layer-by-Layer Method. Applied Physics Express, 2011, 4, 085004.	2.4	8
88	Encryption of agonistic motifs for TLR4 into artificial antigens augmented the maturation of antigen-presenting cells. PLoS ONE, 2017, 12, e0188934.	2.5	8
89	Guide Oligonucleotide-Dependent DNA Linkage That Facilitates Controllable Polymerization of Microgene Blocks. Journal of Biochemistry, 2002, 132, 689-696.	1.7	7
90	Specimen-specific drift of densities defines distinct subclasses of extracellular vesicles from human whole saliva. PLoS ONE, 2021, 16, e0249526.	2.5	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.	1.5	6
93	Stepwise accumulation of layers of aptamer-ornamented ferritins using biomimetic layer-by-layer. Journal of Materials Research, 2008, 23, 3236-3240.	2.6	5
94	Ultrastructural localization of intravenously injected carbon nanohorns in tumor. International Journal of Nanomedicine, 2014, 9, 3499.	6.7	5
95	Combinatorial Contextualization of Peptidic Epitopes for Enhanced Cellular Immunity. PLoS ONE, 2014, 9, e110425.	2.5	5
96	Not nanocarbon but dispersant induced abnormality in lysosome in macrophages in vivo. Nanotechnology, 2015, 26, 195102.	2.6	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.	1.7	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.	2.1	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.	2.1	4
101	Synthesis of Functional Signaling Domains by Combinatorial Polymerization of Phosphorylation Motifs. ACS Chemical Biology, 2009, 4, 751-758.	3.4	3
102	A Novel System to Detect Circulating Tumor Cells Using Two Different Size-selective Microfilters. Anticancer Research, 2020, 40, 5577-5582.	1.1	3
103	Bioâ€functionalized titanium surfaces with modified silk fibroin carrying titanium binding motif to enhance the ossific differentiation of MC3T3â€E1. Biotechnology and Bioengineering, 2021, 118, 2585-2596.	3.3	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 MetastasisIn Vivo. BioMed Research International, 2014, 2014, 1-13.	1.9	2
107	Programmable Bio-surfaces for Biomedical Applications. Advances in Experimental Medicine and Biology, 2017, 1030, 1-20.	1.6	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.	1.3	1
111	ãƒ¤ã,¿ãƒ³è¡¨é¢ã«ç‰¹ç•°çš„ã«å¸ç€ã™ã‚‹ãƒšãƒ—ãƒãƒ‰TBP-1ã®å‰µå‡ºã¨ãã®å¿œç”¨. Materia Japan, 2005, 44, 799-801.	0.3	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.	0.3	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.	0.1	0
117	Creation of novel signalling modulators from existing cytokine using scanning motif-programming. Chemical Communications, 2011, 47, 9357.	4.1	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.	0.1	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