Kiyotaka Shiba

List of Publications by Citations

120 papers	9,075 citations	41 h-index	95 g-index
128 ext. papers	11,304 ext. citations	7.9 avg, IF	5.37 L-index

#	Paper	IF	Citations
120	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	16.4	3642
119	Rapid colorectal adenoma formation initiated by conditional targeting of the Apc gene. *Science*, **1997**, 278, 120-3	33.3	490
118	Carbon nanohorns as anticancer drug carriers. *Molecular Pharmaceutics*, **2005**, 2, 475-80	5.6	326
117	Drug-loaded carbon nanohorns: adsorption and release of dexamethasone in vitro. *Molecular Pharmaceutics*, **2004**, 1, 399-405	5.6	303
116	A hexapeptide motif that electrostatically binds to the surface of titanium. *Journal of the American Chemical Society*, **2003**, 125, 14234-5	16.4	300
115	Intelligent Image-Activated Cell Sorting. *Cell*, **2018**, 175, 266-276.e13	56.2	241
114	A temperature-sensitive mutant of E. coli exhibiting slow processing of exported proteins. *Cell*, **1983**, 32, 789-97	56.2	231
113	Specificity and biomineralization activities of Ti-binding peptide-1 (TBP-1). *Langmuir*, **2005**, 21, 3090-5	4	194
112	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, 16866-70	11.5	128
111	Incorporation of lysyl-tRNA synthetase into human immunodeficiency virus type 1. *Journal of Virology*, **2001**, 75, 5043-8	6.6	115
110	Endowing a ferritin-like cage protein with high affinity and selectivity for certain inorganic materials. *Small*, **2005**, 1, 826-32	11	111
109	Mechanism underlying specificity of proteins targeting inorganic materials. *Nano Letters*, **2006**, 6, 515-9	11.5	110
108	Affinity selection of peptide phage libraries against single-wall carbon nanohorns identifies a peptide aptamer with conformational variability. *Langmuir*, **2004**, 20, 8939-41	4	110
107	Directional BMP-2 for functionalization of titanium surfaces. *Biomaterials*, **2009**, 30, 1166-75	15.6	108
106	Synthesis and Aminoacyl-tRNA Synthetase Inhibitory Activity of Prolyl Adenylate Analogs. *Bioorganic Chemistry*, **1996**, 24, 273-289	5.1	97
105	Solubilization of single-wall carbon nanohorns using a PEG-doxorubicin conjugate. *Molecular Pharmaceutics*, **2006**, 3, 407-14	5.6	95
104	Isolation of human salivary extracellular vesicles by iodixanol density gradient ultracentrifugation and their characterizations. *Journal of Extracellular Vesicles*, **2016**, 5, 30829	16.4	94

103	Prevention of biofilm formation on titanium surfaces modified with conjugated molecules comprised of antimicrobial and titanium-binding peptides. *Biofouling*, **2010**, 26, 103-10	3.3	88
102	Utilization of the pleiotropy of a peptidic aptamer to fabricate heterogeneous nanodot-containing multilayer nanostructures. *Journal of the American Chemical Society*, **2006**, 128, 1717-22	16.4	88
101	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	11.5	78
100	Biodistribution and ultrastructural localization of single-walled carbon nanohorns determined in vivo with embedded Gd2O3 labels. *ACS Nano*, **2009**, 3, 1399-406	16.7	74
99	Precursor of pro-apoptotic cytokine modulates aminoacylation activity of tRNA synthetase. *Journal of Biological Chemistry*, **1999**, 274, 16673-6	5.4	74
98	Realizing a two-dimensional ordered array of ferritin molecules directly on a solid surface utilizing carbonaceous material affinity peptides. *Langmuir*, **2007**, 23, 1615-8	4	71
97	Selective nanoscale positioning of ferritin and nanoparticles by means of target-specific peptides. *Small*, **2006**, 2, 1148-52	11	70
96	Exploitation of peptide motif sequences and their use in nanobiotechnology. *Current Opinion in Biotechnology*, **2010**, 21, 412-25	11.4	68
95	Functional role of the prokaryotic proline-tRNA synthetase insertion domain in amino acid editing. *Biochemistry*, **2002**, 41, 7108-15	3.2	68
94	Cellular distribution of Lysyl-tRNA synthetase and its interaction with Gag during human immunodeficiency virus type 1 assembly. *Journal of Virology*, **2004**, 78, 7553-64	6.6	67
93	Retrovirus-specific packaging of aminoacyl-tRNA synthetases with cognate primer tRNAs. *Journal of Virology*, **2002**, 76, 13111-5	6.6	67
92	Human lysyl-tRNA synthetase accepts nucleotide 73 variants and rescues Escherichia coli double-defective mutant. *Journal of Biological Chemistry*, **1997**, 272, 22809-16	5.4	65
91	Dispersion of cisplatin-loaded carbon nanohorns with a conjugate comprised of an artificial peptide aptamer and polyethylene glycol. *Molecular Pharmaceutics*, **2007**, 4, 723-9	5.6	58
90	Species-specific differences in the operational RNA code for aminoacylation of tRNAPro. *Biochemistry*, **1998**, 37, 8605-13	3.2	56
89	Peptide-coated, self-assembled M12L24 coordination spheres and their immobilization onto an inorganic surface. *Chemical Science*, **2010**, 1, 68	9.4	55
88	In aqua structuralization of a three-dimensional configuration using biomolecules. *Nano Letters*, **2007**, 7, 3200-2	11.5	55
87	Raman image-activated cell sorting. *Nature Communications*, **2020**, 11, 3452	17.4	55
86	Chiral meta-molecules consisting of gold nanoparticles and genetically engineered tobacco mosaic virus. *Optics Express*, **2012**, 20, 24856-63	3.3	53

85	Maintaining genetic code through adaptations of tRNA synthetases to taxonomic domains. *Trends in Biochemical Sciences*, **1997**, 22, 453-7	10.3	48
84	Binary Nanomaterials Based on Nanocarbons: A Case for Probing Carbon NanohornsT Biorecognition Properties. *Nano Letters*, **2003**, 3, 1033-1036	11.5	45
83	Subtypes of tumour cell-derived small extracellular vesicles having differently externalized phosphatidylserine. *Journal of Extracellular Vesicles*, **2019**, 8, 1579541	16.4	44
82	A eubacterial Mycobacterium tuberculosis tRNA synthetase is eukaryote-like and resistant to a eubacterial-specific antisynthetase drug. *Biochemistry*, **1996**, 35, 9995-10003	3.2	44
81	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, 429-32		44
80	Critical amino acid residues for the specific binding of the Ti-recognizing recombinant ferritin with oxide surfaces of titanium and silicon. *Langmuir*, **2009**, 25, 10901-6	4	42
79	Natural and artificial peptide motifs: their origins and the application of motif-programming. *Chemical Society Reviews*, **2010**, 39, 117-26	58.5	37
78	Prevention of carbon nanohorn agglomeration using a conjugate composed of comb-shaped polyethylene glycol and a peptide aptamer. *Molecular Pharmaceutics*, **2009**, 6, 441-7	5.6	36
77	Human alanyl-tRNA synthetase: conservation in evolution of catalytic core and microhelix recognition. *Biochemistry*, **1995**, 34, 10340-9	3.2	33
76	A tumor-environment-responsive nanocarrier that evolves its surface properties upon sensing matrix metalloproteinase-2 and initiates agglomeration to enhance T□relaxivity for magnetic resonance imaging. *Molecular Pharmaceutics*, **2011**, 8, 1970-4	5.6	31
75	Synthesis of functional proteins by mixing peptide motifs. *Chemistry and Biology*, **2004**, 11, 765-73		31
74	Distinct macroscopic structures developed from solutions of chemical compounds and periodic proteins. *EMBO Reports*, **2003**, 4, 148-53	6.5	30
73	Motif-programmed artificial extracellular matrix. *Biomacromolecules*, **2008**, 9, 3098-105	6.9	29
72	On the role of periodism in the origin of proteins. *Journal of Molecular Biology*, **2002**, 320, 833-40	6.5	29
71	A synthesis approach to understanding repeated peptides conserved in mineralization proteins. *Biomacromolecules*, **2007**, 8, 2659-64	6.9	27
70	Designer ribozymes: programming the tRNA specificity into flexizyme. *Journal of the American Chemical Society*, **2004**, 126, 11454-5	16.4	26
69	Autonomous silica encapsulation and sustained release of anticancer protein. *Langmuir*, **2010**, 26, 2231-4	4	24
68	Direct Production of a Two-Dimensional Ordered Array of Ferritin-Nanoparticles on a Silicon Substrate. *Japanese Journal of Applied Physics*, **2007**, 46, L713-L715	1.4	24

67	Strong selective pressure to use G:U to mark an RNA acceptor stem for alanine. *Biochemistry*, **1998**, 37, 9193-202	3.2	24
66	Growth of giant two-dimensional crystal of protein molecules from a three-phase contact line. *Langmuir*, **2008**, 24, 12836-41	4	23
65	MolCraft: a hierarchical approach to the synthesis of artificial proteins. *Journal of Molecular Catalysis B: Enzymatic*, **2004**, 28, 145-153		23
64	Carbon nanohorns accelerate bone regeneration in rat calvarial bone defect. *Nanotechnology*, **2011**, 22, 065102	3.4	22
63	Probing the conformational features of a phage display polypeptide sequence directed against single-walled carbon nanohorn surfaces. *Langmuir*, **2005**, 21, 11907-14	4	22
62	Divergent adaptation of tRNA recognition by Methanococcus jannaschii prolyl-tRNA synthetase. *Journal of Biological Chemistry*, **2001**, 276, 20286-91	5.4	22
61	Motif programming: a microgene-based method for creating synthetic proteins containing multiple functional motifs. *Nucleic Acids Research*, **2007**, 35, e38	20.1	20
60	Intron positions delineate the evolutionary path of a pervasively appended peptide in five human aminoacyl-tRNA synthetases. *Journal of Molecular Evolution*, **2002**, 55, 727-33	3.1	20
59	Conservation of a tRNA core for aminoacylation. *Nucleic Acids Research*, **1999**, 27, 4743-50	20.1	19
58	A novel bifunctional protein supramolecule for construction of carbon nanotube-titanium hybrid material. *Chemical Communications*, **2011**, 47, 12649-51	5.8	18
57	The role of peptide motifs in the evolution of a protein network. *Nucleic Acids Research*, **2007**, 35, 6357-66	20.1	18
56	Bridging Adhesion of a Protein onto an Inorganic Surface Using Self-Assembled Dual-Functionalized Spheres. *Journal of the American Chemical Society*, **2015**, 137, 12890-6	16.4	17
55	Functionalization of carbon nanomaterials by evolutionary molecular engineering: potential application in drug delivery systems. *Journal of Drug Targeting*, **2006**, 14, 512-8	5.4	17
54	Human asparaginyl-tRNA synthetase: molecular cloning and the inference of the evolutionary history of Asx-tRNA synthetase family. *Nucleic Acids Research*, **1998**, 26, 5045-51	20.1	17
53	Identification of peptide motif that binds to the surface of zirconia. *Dental Materials Journal*, **2011**, 30, 935-40	2.5	15
52	Translated products of tandem microgene repeats exhibit diverse properties also seen in natural proteins. *Protein Engineering, Design and Selection*, **2003**, 16, 57-63	1.9	14
51	Frame shuffling: a novel method for in vitro protein evolution. *Protein Engineering, Design and Selection*, **2006**, 19, 135-40	1.9	13
50	Preferential capture of EpCAM-expressing extracellular vesicles on solid surfaces coated with an aptamer-conjugated zwitterionic polymer. *Biotechnology and Bioengineering*, **2018**, 115, 536-544	4.9	13

49	An artificial fusion protein between bone morphogenetic protein 2 and titanium-binding peptide is functional in vivo. *Journal of Biomedical Materials Research - Part A*, **2014**, 102, 1180-6	5.4	12
48	In Aqua Manufacturing of a Three-Dimensional Nanostructure Using a Peptide Aptamer. *MRS Bulletin*, **2008**, 33, 524-529	3.2	12
47	Suppression of Aggrus/podoplanin-induced platelet aggregation and pulmonary metastasis by a single-chain antibody variable region fragment. *Cancer Medicine*, **2014**, 3, 1595-604	4.8	11
46	Isolation of Extracellular Vesicles in Saliva Using Density Gradient Ultracentrifugation. *Methods in Molecular Biology*, **2017**, 1660, 343-350	1.4	11
45	Adsorption Properties of a Gold-Binding Peptide Assessed by its Attachment to a Recombinant Apoferritin Molecule. *Applied Physics Express*, **2008**, 1, 034006	2.4	11
44	Motif-programmed artificial proteins mediated nucleation of octacalcium phosphate on titanium substrates. *Chemical Communications*, **2010**, 46, 6675-7	5.8	10
43	Nonvolatile flash memory based on biologically integrated hierarchical nanostructures. *Langmuir*, **2013**, 29, 12483-9	4	9
42	Structural properties of an artificial protein that regulates the nucleation of inorganic and organic crystals. *Langmuir*, **2007**, 23, 3857-63	4	9
41	Host Cell Prediction of Exosomes Using Morphological Features on Solid Surfaces Analyzed by Machine Learning. *Journal of Physical Chemistry B*, **2018**, 122, 6224-6235	3.4	9
40	Three-Dimensional Nanodot-Type Floating Gate Memory Fabricated by Bio-Layer-by-Layer Method. *Applied Physics Express*, **2011**, 4, 085004	2.4	8
39	Effect of motif-programmed artificial proteins on the calcium uptake in a synthetic hydrogel. *Macromolecular Bioscience*, **2009**, 9, 959-67	5.5	8
38	Biochemical and phylogenetic analyses of methionyl-tRNA synthetase isolated from a pathogenic microorganism, Mycobacterium tuberculosis. *FEBS Letters*, **1998**, 427, 259-62	3.8	8
37	Motif-programmed artificial protein induces apoptosis in several cancer cells by disrupting mitochondria. *Cancer Science*, **2008**, 99, 398-406	6.9	8
36	Immobilization of a carbon nanomaterial-based localized drug-release system using a bispecific material-binding peptide. *International Journal of Nanomedicine*, **2018**, 13, 1643-1652	7.3	7
35	Encryption of agonistic motifs for TLR4 into artificial antigens augmented the maturation of antigen-presenting cells. *PLoS ONE*, **2017**, 12, e0188934	3.7	6
34	Physicochemical properties of artificial proteins that accelerate nucleation of crystalline calcium phosphate. *Journal of Crystal Growth*, **2011**, 314, 190-195	1.6	6
33	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	0.4	6
32	Guide oligonucleotide-dependent DNA linkage that facilitates controllable polymerization of microgene blocks. *Journal of Biochemistry*, **2002**, 132, 689-96	3.1	6

31	Not nanocarbon but dispersant induced abnormality in lysosome in macrophages in vivo. *Nanotechnology*, **2015**, 26, 195102	3.4	5
30	Combinatorial contextualization of peptidic epitopes for enhanced cellular immunity. *PLoS ONE*, **2014**, 9, e110425	3.7	5
29	Stepwise accumulation of layers of aptamer-ornamented ferritins using biomimetic layer-by-layer. *Journal of Materials Research*, **2008**, 23, 3236-3240	2.5	5
28	Ultrastructural localization of intravenously injected carbon nanohorns in tumor. *International Journal of Nanomedicine*, **2014**, 9, 3499-508	7.3	4
27	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, 109-16	1.9	4
26	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	3.4	4
25	New Role for Growth/Differentiation Factor 15 in the Survival of Transplanted Brown Adipose Tissues in Cooperation with Interleukin-6. *Cells*, **2020**, 9,	7.9	3
24	Synthesis of functional signaling domains by combinatorial polymerization of phosphorylation motifs. *ACS Chemical Biology*, **2009**, 4, 751-8	4.9	3
23	Protein-Mediated Bioinspired Mineralization. *ACS Symposium Series*, **2005**, 150-163	0.4	3
22	Pentapartite fractionation of particles in oral fluids by differential centrifugation. *Scientific Reports*, **2021**, 11, 3326	4.9	3
21	Combinatorics of peptide sextets encoded by a single microgene. *Journal of Molecular Catalysis B: Enzymatic*, **2004**, 28, 215-221		2
20	Characterization of folding pathways of the type-1 and type-2 periplasmic binding proteins MglB and ArgT. *Journal of Biochemistry*, **2003**, 133, 371-6	3.1	2
19	Adhesion of pancreatic cancer cells in a liver-microvasculature mimicking coculture correlates with their propensity to form liver-specific metastasis in vivo. *BioMed Research International*, **2014**, 2014, 241371	2	1
18	Filamentous Phage-Based Extra Cellular Matrix **2008**,		1
17	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, 808-13	2.1	1
16	Toward development of nano-materials composed of artificial proteins and nano-carbons		1
15	??????????????????TBP-1????????. *Materia Japan*, **2005**, 44, 799-803	0.1	1
14	Autonomous folding of a C-terminal inhibitory fragment of Escherichia coli isoleucine-tRNA synthetase. *BBA - Proteins and Proteomics*, **1999**, 1433, 103-9		1

13	AFM and QCM-D Observations of the Binding of TBP-1 on Ti Surfaces. *Hyomen Kagaku*, **2005**, 26, 428-431		1
12	Intelligent Cell Search Engine. *SSRN Electronic Journal*,	1	1
11	A Novel System to Detect Circulating Tumor Cells Using Two Different Size-selective Microfilters. *Anticancer Research*, **2020**, 40, 5577-5582	2.3	1
10	Programmable Bio-surfaces for Biomedical Applications. *Advances in Experimental Medicine and Biology*, **2017**, 1030, 1-20	3.6	0
9	Bio-functionalized titanium surfaces with modified silk fibroin carrying titanium binding motif to enhance the ossific differentiation of MC3T3-E1. *Biotechnology and Bioengineering*, **2021**, 118, 2585-2596	4.9	0
8	Specimen-specific drift of densities defines distinct subclasses of extracellular vesicles from human whole saliva. *PLoS ONE*, **2021**, 16, e0249526	3.7	0
7	Creation of novel signalling modulators from existing cytokine using scanning motif-programming. *Chemical Communications*, **2011**, 47, 9357-9	5.8	
6	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	
5	Artificial Proteins that Interface between Biological and Inorganic Materials. *Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi]*, **2004**, 17, 409-410	0.7	
4	Liaison between Biology and Material Science. *Hyomen Kagaku*, **2006**, 27, 164-169		
3	Exploitation of Interface between Peptides and Inorganic Materials in Nano-Biotechnology. *Seibutsu Butsuri*, **2007**, 47, 139-144	0	
2	Isolation and Quantification of Exosomes. *Membrane*, **2015**, 40, 242-247	0	
1	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	