

Seung Pil Pack

List of Publications by Year in descending order

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90
papers

1,738
citations

257357

24
h-index

330025

37
g-index

91
all docs

91
docs citations

91
times ranked

1845
citing authors

#	ARTICLE	IF	CITATIONS
1	Protein thermostability: structure-based difference of amino acid between thermophilic and mesophilic proteins. <i>Journal of Biotechnology</i> , 2004, 111, 269-277.	1.9	101
2	Fusion tags to enhance heterologous protein expression. <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 2411-2425.	1.7	94
3	Bioinspired Silica Nanocomposite with Autoencapsulated Carbonic Anhydrase as a Robust Biocatalyst for CO ₂ Sequestration. <i>ACS Catalysis</i> , 2014, 4, 4332-4340.	5.5	88
4	Stabilized and Immobilized Carbonic Anhydrase on Electrospun Nanofibers for Enzymatic CO ₂ Conversion and Utilization in Expedited Microalgal Growth. <i>Environmental Science & Technology</i> , 2020, 54, 1223-1231.	4.6	69
5	A systematic study of hexavalent chromium adsorption and removal from aqueous environments using chemically functionalized amorphous and mesoporous silica nanoparticles. <i>Scientific Reports</i> , 2020, 10, 5558.	1.6	69
6	Translocation and Stability of Replicative DNA Helicases upon Encountering DNA-Protein Cross-links. <i>Journal of Biological Chemistry</i> , 2013, 288, 4649-4658.	1.6	57
7	Biomimetic and bioinspired silicifications: Recent advances for biomaterial design and applications. <i>Acta Biomaterialia</i> , 2021, 120, 38-56.	4.1	53
8	Recent progress in flocculation, dewatering, and drying technologies for microalgae utilization: Scalable and low-cost harvesting process development. <i>Bioresource Technology</i> , 2022, 344, 126404.	4.8	50
9	T7 RNA Polymerases Backed up by Covalently Trapped Proteins Catalyze Highly Error Prone Transcription. <i>Journal of Biological Chemistry</i> , 2012, 287, 6562-6572.	1.6	47
10	The NT11, a novel fusion tag for enhancing protein expression in <i>Escherichia coli</i> . <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 2205-2216.	1.7	46
11	High expression and biosilica encapsulation of alkaline-active carbonic anhydrase for CO ₂ sequestration system development. <i>Chemosphere</i> , 2016, 143, 128-134.	4.2	41
12	Direct immobilization of DNA oligomers onto the amine-functionalized glass surface for DNA microarray fabrication through the activation-free reaction of oxanine. <i>Nucleic Acids Research</i> , 2007, 35, e110.	6.5	40
13	Development of an efficient amine-functionalized glass platform by additional silanization treatment with alkylsilane. <i>Analytical and Bioanalytical Chemistry</i> , 2006, 386, 1649-1655.	1.9	39
14	Carbonic anhydrase: Its biocatalytic mechanisms and functional properties for efficient CO ₂ capture process development. <i>Engineering in Life Sciences</i> , 2013, 13, 422-431.	2.0	39
15	Highly thermostable carbonic anhydrase from <i>Persephonella marina</i> EX-H1: Its expression and characterization for CO ₂ -sequestration applications. <i>Process Biochemistry</i> , 2014, 49, 2114-2121.	1.8	37
16	Anticancer effect of nor-wogonin (5, 7, 8-trihydroxyflavone) on human triple-negative breast cancer cells via downregulation of TAK1, NF- κ B, and STAT3. <i>Pharmacological Reports</i> , 2019, 71, 289-298.	1.5	34
17	In-depth compositional analysis of water-soluble and -insoluble organic substances in fine (PM _{2.5}) airborne particles using ultra-high-resolution 15T FT-ICR MS and GCA—GC-TOFMS. <i>Environmental Pollution</i> , 2017, 225, 329-337.	3.7	32
18	Packing-based difference of structural features between thermophilic and mesophilic proteins. <i>International Journal of Biological Macromolecules</i> , 2005, 35, 169-174.	3.6	31

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19	Expression and Characterization of Codon-Optimized Carbonic Anhydrase from <i>Dunaliella</i> Species for CO ₂ Sequestration Application. <i>Applied Biochemistry and Biotechnology</i> , 2012, 167, 2341-2356.	1.4	30
20	Improvement in the Reproducibility of a Paper-based Analytical Device (PAD) Using Stable Covalent Binding between Proteins and Cellulose Paper. <i>Biotechnology and Bioprocess Engineering</i> , 2018, 23, 686-692.	1.4	30
21	A cold-adapted tyrosinase with an abnormally high monophenolase/diphenolase activity ratio originating from the marine archaeon <i>Candidatus Nitrosopumilus koreensis</i> . <i>Biotechnology Letters</i> , 2016, 38, 1535-1542.	1.1	29
22	Self-encapsulation and controlled release of recombinant proteins using novel silica-forming peptides as fusion linkers. <i>International Journal of Biological Macromolecules</i> , 2019, 125, 1175-1183.	3.6	27
23	Expression, reconstruction and characterization of codon-optimized carbonic anhydrase from <i>Hahella chejuensis</i> for CO ₂ sequestration application. <i>Bioprocess and Biosystems Engineering</i> , 2013, 36, 375-381.	1.7	25
24	Compartment-restricted and rate-controlled dual drug delivery system using a biosilica-enveloped ferritin cage. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 81, 367-374.	2.9	25
25	Biosilicated collagen/β ² -tricalcium phosphate composites as a BMP-2-delivering bone graft substitute for accelerated craniofacial bone regeneration. <i>Biomaterials Research</i> , 2021, 25, 13.	3.2	25
26	Buffer-free production of gamma-aminobutyric acid using an engineered glutamate decarboxylase from <i>Escherichia coli</i> . <i>Enzyme and Microbial Technology</i> , 2013, 53, 200-205.	1.6	24
27	Novel silica-forming peptides derived from <i>Ectocarpus siliculosus</i> . <i>Process Biochemistry</i> , 2017, 58, 193-198.	1.8	24
28	Chemical characterization of dissolved organic matter in moist acidic tussock tundra soil using ultra-high resolution 15T FT-ICR mass spectrometry. <i>Biotechnology and Bioprocess Engineering</i> , 2017, 22, 637-646.	1.4	23
29	Direct immobilization and recovery of recombinant proteins from cell lysates by using EctP1-peptide as a short fusion tag for silica and titania supports. <i>International Journal of Biological Macromolecules</i> , 2019, 135, 969-977.	3.6	23
30	Protein thermostability: structure-based difference of residual properties between thermophilic and mesophilic proteins. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2003, 26, 257-264.	1.8	20
31	Title is missing!. <i>Biotechnology Letters</i> , 2002, 24, 1919-1925.	1.1	19
32	Surface immobilization of protein via biosilification catalyzed by silicatein fused to glutathione S-transferase (GST). <i>Bioprocess and Biosystems Engineering</i> , 2013, 36, 643-648.	1.7	19
33	Improved stability and reusability of endoglucanase from <i>Clostridium thermocellum</i> by a biosilica-based auto-encapsulation method. <i>Biochemical Engineering Journal</i> , 2016, 105, 144-149.	1.8	19
34	Biosilica-enveloped ferritin cage for more efficient drug deliveries. <i>Process Biochemistry</i> , 2018, 68, 182-189.	1.8	19
35	Chemical synthesis and thermodynamic characterization of oxanine-containing oligodeoxynucleotides. <i>Nucleic Acids Research</i> , 2005, 33, 5771-5780.	6.5	18
36	Conversion of carbon dioxide to oxaloacetate using integrated carbonic anhydrase and phosphoenolpyruvate carboxylase. <i>Bioprocess and Biosystems Engineering</i> , 2013, 36, 1923-1928.	1.7	17

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37	Design of bio-inspired silica-encapsulated protein A for improved immunoprecipitation assays. <i>Biochemical Engineering Journal</i> , 2017, 128, 12-18.	1.8	17
38	Hypothetical cathepsin-like protein from <i>Nematostella vectensis</i> and its silicatein-like cathepsin mutant for biosilica production. <i>Process Biochemistry</i> , 2014, 49, 95-101.	1.8	16
39	Oxaloacetate and malate production in engineered <i>Escherichia coli</i> by expression of codon-optimized phosphoenolpyruvate carboxylase2 gene from <i>Dunaliella salina</i> . <i>Bioprocess and Biosystems Engineering</i> , 2013, 36, 127-131.	1.7	15
40	Production of TiO ₂ -deposited Diatoms and Their Applications for Photo-catalytic Degradation of Aqueous Pollutants. <i>Biotechnology and Bioprocess Engineering</i> , 2020, 25, 758-765.	1.4	15
41	Increased expression level and catalytic activity of internally-duplicated carbonic anhydrase from <i>Dunaliella</i> species by reconstitution of two separate domains. <i>Process Biochemistry</i> , 2012, 47, 1423-1427.	1.8	14
42	Silaffin-3-derived pentyllysine cluster as a new fusion tag for one-step immobilization and purification of recombinant <i>Bacillus subtilis</i> catalase on bare silica particles. <i>International Journal of Biological Macromolecules</i> , 2020, 159, 1103-1112.	3.6	14
43	Chimeric protein of internally duplicated α -type carbonic anhydrase from <i>Dunaliella</i> species for improved expression and CO ₂ sequestration. <i>Process Biochemistry</i> , 2016, 51, 1222-1229.	1.8	12
44	Increased incorporation of gaseous CO ₂ into succinate by <i>Escherichia coli</i> overexpressing carbonic anhydrase and phosphoenolpyruvate carboxylase genes. <i>Journal of Biotechnology</i> , 2017, 241, 101-107.	1.9	12
45	Nanosized and tunable design of biosilica particles using novel silica-forming peptide-modified chimeric ferritin templates. <i>Journal of Industrial and Engineering Chemistry</i> , 2019, 73, 198-204.	2.9	12
46	Tyrosinase-mediated rapid and permanent chitosan/gelatin and chitosan/gelatin/nanohydroxyapatite hydrogel. <i>Korean Journal of Chemical Engineering</i> , 2021, 38, 98-103.	1.2	12
47	pH-responsive phototherapeutic poly(acrylic acid)-calcium phosphate passivated TiO ₂ nanoparticle-based drug delivery system for cancer treatment applications. <i>Journal of Industrial and Engineering Chemistry</i> , 2022, 112, 258-270.	2.9	12
48	Highly-efficient T4 DNA ligase-based SNP analysis using a ligation fragment containing a modified nucleobase at the end. <i>Chemical Communications</i> , 2015, 51, 13090-13093.	2.2	11
49	Stabilization of Bovine carbonic anhydrase II through rational site-specific immobilization. <i>Biochemical Engineering Journal</i> , 2018, 138, 29-36.	1.8	11
50	Novel silica forming peptide, RSGH, from <i>Equus caballus</i> : Its unique biosilica formation under acidic conditions. <i>Biochemical Engineering Journal</i> , 2020, 153, 107389.	1.8	11
51	Colorimetric Sensing of Lactate in Human Sweat Using Polyaniline Nanoparticles-Based Sensor Platform and Colorimeter. <i>Biosensors</i> , 2022, 12, 248.	2.3	11
52	Protein Thermostabilizing Factors: High Relative Occurrence of Amino Acids, Residual Properties, and Secondary Structure Type in Different Residual State. <i>Applied Biochemistry and Biotechnology</i> , 2013, 171, 1212-1226.	1.4	10
53	Enhanced free fatty acid production by codon-optimized <i>Lactococcus lactis</i> acyl-ACP thioesterase gene expression in <i>Escherichia coli</i> using crude glycerol. <i>Enzyme and Microbial Technology</i> , 2014, 67, 8-16.	1.6	10
54	Decreased Expression of Sphingosine-1-Phosphate Receptor 1 in the Blood Leukocyte of Rheumatoid Arthritis Patients. <i>Immune Network</i> , 2018, 18, e39.	1.6	10

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55	Accurate guanine:cytosine discrimination in T4 DNA ligase-based single nucleotide polymorphism analysis using an oxanine-containing ligation fragment. <i>Analytical Biochemistry</i> , 2010, 398, 257-259.	1.1	8
56	Recombinant production of a shell matrix protein in <i>Escherichia coli</i> and its application to the biomimetic synthesis of spherulitic calcite crystals. <i>Biotechnology Letters</i> , 2016, 38, 809-816.	1.1	8
57	Expression and characterization of a codon-optimized alkaline-stable carbonic anhydrase from <i>Aliivibrio salmonicida</i> for CO ₂ sequestration applications. <i>Bioprocess and Biosystems Engineering</i> , 2017, 40, 413-421.	1.7	8
58	Novel enzymatic single-nucleotide modification of DNA oligomer: prevention of incessant incorporation of nucleotidyl transferase by ribonucleotide-borate complex. <i>Nucleic Acids Research</i> , 2019, 47, e102-e102.	6.5	8
59	Expression of Codon-Optimized Phosphoenolpyruvate Carboxylase Gene from <i>Glaciecola</i> sp. HTCC2999 in <i>Escherichia coli</i> and its Application for C ₄ Chemical Production. <i>Applied Biochemistry and Biotechnology</i> , 2012, 167, 1845-1853.	1.4	7
60	Synthesis of sub-50Ånm bio-inspired silica particles using a C-terminal-modified ferritin template with a silica-forming peptide. <i>Journal of Industrial and Engineering Chemistry</i> , 2021, 101, 262-269.	2.9	7
61	BMP2-Mediated Silica Deposition: An Effective Strategy for Bone Mineralization. <i>ACS Biomaterials Science and Engineering</i> , 2023, 9, 1823-1833.	2.6	7
62	Cyclization tag for the detection and facile purification of backbone-cyclized proteins. <i>Analytical Biochemistry</i> , 2013, 436, 137-141.	1.1	6
63	Nucleobase-involved native chemical ligation: a novel reaction between an oxanine nucleobase and N-terminal cysteine for oligonucleotide-peptide conjugation. <i>Chemical Communications</i> , 2020, 56, 5508-5511.	2.2	6
64	Biomolecular response of oxanine in DNA strands to T4 polynucleotide kinase, T4 DNA ligase, and restriction enzymes. <i>Biochemical and Biophysical Research Communications</i> , 2010, 391, 118-122.	1.0	5
65	Design of reactive-end DNA oligomers via incorporation of oxanine into oligonucleotides using terminal deoxynucleotidyl transferase. <i>Process Biochemistry</i> , 2017, 62, 99-105.	1.8	5
66	A dual-functional peptide, Kpt from <i>Ruegeria pomeroyi</i> DSS-3 for protein purification and silica precipitation. <i>Biochemical Engineering Journal</i> , 2020, 163, 107726.	1.8	5
67	Biophysical Stability and Enzymatic Recognition of Oxanine in Dna. <i>Nucleosides, Nucleotides and Nucleic Acids</i> , 2007, 26, 1589-1593.	0.4	4
68	Highly effective detection of inflamed cells using a modified bradykinin ligand labeled with FITC fluorescence. <i>Enzyme and Microbial Technology</i> , 2016, 82, 191-196.	1.6	4
69	Functional reactivity of oxanine: its biological meanings and biotechnological applications. <i>Nucleic Acids Symposium Series</i> , 2007, 51, 53-54.	0.3	3
70	Repair mechanism of DNA-protein cross-link damage in <i>Escherichia coli</i> . <i>Nucleic Acids Symposium Series</i> , 2007, 51, 213-214.	0.3	3
71	Reinvestigation of the Molecular Influence of Hypoxanthine on the DNA Cleavage Efficiency of Restriction Endonucleases BglII, EcoRI and BamHI. <i>Journal of Biochemistry</i> , 2009, 146, 201-208.	0.9	3
72	Stabilization of the immobilized linkers and DNA probes for DNA microarray fabrication by end-capping of the remaining unreacted silanol on the glass. <i>Journal of Biotechnology</i> , 2009, 140, 242-245.	1.9	3

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73	Solution structure and stability of the DNA undecamer duplexes containing oxanine mismatch. <i>Nucleic Acids Research</i> , 2012, 40, 1841-1855.	6.5	3
74	High activity and stability of codon-optimized phosphoenolpyruvate carboxylase from <i>Photobacterium profundum</i> SS9 at low temperatures and its application for in vitro production of oxaloacetate. <i>Bioprocess and Biosystems Engineering</i> , 2014, 37, 331-335.	1.7	3
75	Characterization of Phosphoenolpyruvate Carboxylase from <i>Oceanimonas smirnovii</i> in <i>Escherichia coli</i> . <i>Applied Biochemistry and Biotechnology</i> , 2015, 177, 217-225.	1.4	3
76	The role of extracellular polymeric substances in reducing copper inhibition to nitrification in activated sludge. <i>Biotechnology and Bioprocess Engineering</i> , 2016, 21, 683-688.	1.4	3
77	Solvo-hydrothermal synthesis of calcium phosphate nanostructures from calcium inositol hexakisphosphate precursor in water-ethanol mixed solutions. <i>Korean Journal of Chemical Engineering</i> , 2020, 37, 891-897.	1.2	3
78	Bio-inspired formation of silica particles using the silica-forming peptides found by silica-binding motif sequence, RRSSGRR. <i>Process Biochemistry</i> , 2021, 111, 262-269.	1.8	3
79	Comparison of the molecular influences of NO-induced lesions in DNA strands on the reactivity of polynucleotide kinases, DNA ligases and DNA polymerases. <i>Journal of Biochemistry</i> , 2010, 147, 697-703.	0.9	2
80	Specific detection of inflamed cells using TLR1 antibody and its secondary antibody-conjugated nano-beads. <i>Enzyme and Microbial Technology</i> , 2013, 53, 223-228.	1.6	2
81	Bone Graft Biomineral Complex Coderived from Marine Biocalcification and Biosilicification. <i>ACS Applied Bio Materials</i> , 2021, 4, 6046-6055.	2.3	2
82	Structural property and enzymatic response of oxanine in DNA strands. <i>Nucleic Acids Symposium Series</i> , 2006, 50, 97-98.	0.3	1
83	Base sequence- and T m-dependent DNA oligomer separation by open tubular capillary columns carrying complementary DNA oligomers as probes. <i>Analytical and Bioanalytical Chemistry</i> , 2007, 388, 919-928.	1.9	1
84	Synthesis of 2â€²-Deoxyoxanosine from 2â€²-Deoxyguanosine, Conversion to Its Phosphoramidite, and Incorporation into Oxanine-Containing Oligodeoxynucleotides. <i>Current Protocols in Nucleic Acid Chemistry</i> , 2010, 41, Unit 4.39.	0.5	1
85	Quantitative analysis of specific target DNA oligomers using a DNA-immobilized packed-column system. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 401, 667-676.	1.9	1
86	Effect of Human or Mouse IL-7 on the Homeostasis of Porcine T Lymphocytes. <i>Immune Network</i> , 2021, 21, e24.	1.6	1
87	Carbonic Anhydrase as CO2 capturing agent: its Classes and Catalytic Mechanisms. <i>International Journal of Mathematics and Computers in Simulation</i> , 2021, 15, 102-106.	0.2	1
88	Reactivity of oxanine: efficient fabrication of DNA microarray by using oxanine-containing DNA oligomer as probe molecule. <i>Nucleic Acids Symposium Series</i> , 2008, 52, 441-442.	0.3	0
89	Shadow image based high-throughput continuous cell monitoring for point-of-care and telemedicine applications. , 2012, , .		0
90	Application of Hypothetical Cathepsin-like Protein from <i>Nematostella vectensis</i> and Its Mutant Silicatein-like Cathepsin for Biosilica Production. <i>Materials Research Society Symposia Proceedings</i> , 2013, 1569, 251-258.	0.1	0