Seung-Wuk Lee

List of Publications by Year
in descending order

79 papers	6,741 citations	87888 38 h-index	71685 76 g-index
80 all docs	80 docs citations	80 times ranked	8091 citing authors

#	Article	IF	Citations
1	Ordering of Quantum Dots Using Genetically Engineered Viruses. Science, 2002, 296, 892-895.	12.6	975
2	A comprehensive review on piezoelectric energy harvesting technology: Materials, mechanisms, and applications. Applied Physics Reviews, 2018, 5, .	11.3	565
3	Light-Controlled Graphene-Elastin Composite Hydrogel Actuators. Nano Letters, 2013, 13, 2826-2830.	9.1	515
4	Biomimetic self-templating supramolecular structures. Nature, 2011, 478, 364-368.	27.8	382
5	Virus-based piezoelectric energy generation. Nature Nanotechnology, 2012, 7, 351-356.	31.5	377
6	Viruses as vehicles for growth, organization and assembly of materials11The Golden Jubilee Issueâ€"Selected topics in Materials Science and Engineering: Past, Present and Future, edited by S. Suresh.. Acta Materialia, 2003, 51, 5867-5880.	7.9	295
7	Biomimetic virus-based colourimetric sensors. Nature Communications, 2014, 5, 3043.	12.8	207
8	Virus-Based Fabrication of Micro- and Nanofibers Using Electrospinning. Nano Letters, 2004, 4, 387-390.	9.1	184
9	Genetically Engineered Nanofiber-Like Viruses For Tissue Regenerating Materials. Nano Letters, 2009, 9, 846-852.	9.1	183
10	Selective and Sensitive TNT Sensors Using Biomimetic Polydiacetylene-Coated CNT-FETs. ACS Nano, 2011, 5, 2824-2830.	14.6	143
11	Evolutionary Screening of Biomimetic Coatings for Selective Detection of Explosives. Langmuir, 2008, 24, 4938-4943.	3.5	141
12	Diphenylalanine Peptide Nanotube Energy Harvesters. ACS Nano, 2018, 12, 8138-8144.	14.6	136
13	Biomolecular Piezoelectric Materials: From Amino Acids to Living Tissues. Advanced Materials, 2020, 32, e1906989.	21.0	134
14	Highly Efficient Light-Emitting Diodes Based on an Organic-Soluble Poly(p-phenylenevinylene) Derivative Carrying the Electron-Transporting PBD Moiety. Advanced Materials, 1998, 10, 1112-1116.	21.0	129
15	Phage as templates for hybrid materials and mediators for nanomaterial synthesis. Current Opinion in Chemical Biology, 2006, 10, 246-252.	6.1	126
16	Genetically Driven Assembly of Nanorings Based on the M13 Virus. Nano Letters, 2004, 4, 23-27.	9.1	108
17	Phage-Based Structural Color Sensors and Their Pattern Recognition Sensing System. ACS Nano, 2017, 11, 3632-3641.	14.6	92
18	Assembly of Bacteriophage into Functional Materials. Chemical Record, 2013, 13, 43-59.	5.8	85

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19	Chiral Smectic C Structures of Virus-Based Filmsâ€. Langmuir, 2003, 19, 1592-1598.	3.5	82
20	Polymer-Oligopeptide Composite Coating for Selective Detection of Explosives in Water. Analytical Chemistry, 2009, 81, 4192-4199.	6.5	77
21	Facile patterning of genetically engineered M13 bacteriophage for directional growth of human fibroblast cells. Soft Matter, 2011, 7, 363-368.	2.7	76
22	Early Osteogenic Differentiation of Mouse Preosteoblasts Induced by Collagen-Derived DGEA-Peptide on Nanofibrous Phage Tissue Matrices. Biomacromolecules, 2011, 12, 987-996.	5.4	76
23	Evolutionary Screening of Collagen-like Peptides That Nucleate Hydroxyapatite Crystals. Langmuir, 2011, 27, 7620-7628.	3.5	75
24	Polydiacetylene Incorporated with Peptide Receptors for the Detection of Trinitrotoluene Explosives. Langmuir, 2011, 27, 3180-3187.	3.5	74
25	Biomimetic Self-Templated Hierarchical Structures of Collagen-Like Peptide Amphiphiles. Nano Letters, 2015, 15, 7138-7145.	9.1	64
26	Genetically Engineered Liquid-Crystalline Viral Films for Directing Neural Cell Growth. Langmuir, 2010, 26, 9885-9890.	3.5	60
27	Engineered phage-based therapeutic materials inhibit Chlamydia trachomatis intracellular infection. Biomaterials, 2012, 33, 5166-5174.	11.4	57
28	Self-Healing Elastinâ€“Bioglass Hydrogels. Biomacromolecules, 2016, 17, 2619-2625.	5.4	53
29	Title is missing!. Journal of Materials Chemistry, 2001, 11, 3023-3030.	6.7	50
30	Elastin-Like Polypeptide Based Hydroxyapatite Bionanocomposites. Biomacromolecules, 2011, 12, 672-680.	5.4	49
31	Phage-based nanomaterials for biomedical applications. Acta Biomaterialia, 2014, 10, 1741-1750.	8.3	48
32	Production of tunable nanomaterials using hierarchically assembled bacteriophages. Nature Protocols, 2017, 12, 1999-2013.	12.0	48
33	MoS₂ Liquid Cell Electron Microscopy Through Clean and Fast Polymer-Free MoS₂ Transfer. Nano Letters, 2019, 19, 1788-1795.	9.1	45
34	Phage-Chips for Novel Optically Readable Tissue Engineering Assays. Langmuir, 2012, 28, 2166-2172.	3.5	44
35	Proteinâ€based functional nanomaterial design for bioengineering applications. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2015, 7, 69-97.	6.1	43
36	Fabrication of engineered M13 bacteriophages into liquid crystalline films and fibers for directional growth and encapsulation of fibroblasts. Soft Matter, 2010, 6, 4454.	2.7	41

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37	Collagen mimetic peptide engineered M13 bacteriophage for collagen targeting and imaging in cancer. Biomaterials, 2014, 35, 9236-9245.	11.4	41
38	Effect of Salinity on Hydroxyapatite Dissolution Studied by Atomic Force Microscopy. Journal of Physical Chemistry C, 2009, 113, 3369-3372.	3.1	39
39	Vertical Self-Assembly of Polarized Phage Nanostructure for Energy Harvesting. Nano Letters, 2019, 19, 2661-2667.	9.1	39
40	Elastin-Based Thermoresponsive Shape-Memory Hydrogels. Biomacromolecules, 2020, 21, 1149-1156.	5.4	37
41	Elastin-Based Rubber-Like Hydrogels. Biomacromolecules, 2016, 17, 2409-2416.	5.4	34
42	Cyclic RGD Peptide Incorporation on Phage Major Coat Proteins for Improved Internalization by HeLa Cells. Bioconjugate Chemistry, 2014, 25, 216-223.	3.6	33
43	Facile growth factor immobilization platform based on engineered phage matrices. Soft Matter, 2011, 7, 1660.	2.7	32
44	M13 Virus-Incorporated Biotemplates on Electrode Surfaces To Nucleate Metal Nanostructures by Electrodeposition. ACS Applied Materials & Interfaces, 2017, 9, 32965-32976.	8.0	32
45	Catechol-Functionalized Elastin-like Polypeptides as Tissue Adhesives. Biomacromolecules, 2020, 21, 2938-2948.	5.4	31
46	Graphene-Based Materials Functionalized with Elastin-like Polypeptides. Langmuir, 2014, 30, 2223-2229.	3.5	30
47	Engineering Phage Materials with Desired Peptide Display: Rational Design Sustained through Natural Selection. Bioconjugate Chemistry, 2009, 20, 2300-2310.	3.6	29
48	Biomimetic self-templating optical structures fabricated by genetically engineered M13 bacteriophage. Biosensors and Bioelectronics, 2016, 85, 853-859.	10.1	29
49	Gold dendrites Co-deposited with M13 virus as a biosensor platform for nitrite ions. Biosensors and Bioelectronics, 2017, 94, 87-93.	10.1	29
50	Transient self-templating assembly of M13 bacteriophage for enhanced biopiezoelectric devices. Nano Energy, 2019, 56, 716-723.	16.0	29
51	Defect Induced Asymmetric Pit Formation on Hydroxyapatite. Langmuir, 2008, 24, 11063-11066.	3.5	28
52	M13 Bacteriophage and Adenoâ€Associated Virus Hybrid for Novel Tissue Engineering Material with Gene Delivery Functions. Advanced Healthcare Materials, 2016, 5, 88-93.	7.6	27
53	Improvement of physical properties of calcium phosphate cement by elastin-like polypeptide supplementation. Scientific Reports, 2018, 8, 5216.	3.3	27
54	Chimeric Adeno-Associated Virus-Mediated Cardiovascular Reprogramming for Ischemic Heart Disease. ACS Omega, 2018, 3, 5918-5925.	3.5	26

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55	Moisture-induced autonomous surface potential oscillations for energy harvesting. Nature Communications, 2021, 12, 5287.	12.8	26
56	Biomimetic sensor design. Nanoscale, 2015, 7, 18379-18391.	5.6	25
57	Characterization of the Dominant Molecular Step Orientations on Hydroxyapatite (100) Surfaces. Langmuir, 2009, 25, 7205-7208.	3.5	24
58	Directâ€Write Complementary Graphene Field Effect Transistors and Junctions via Nearâ€Field Electrospinning. Small, 2014, 10, 1920-1925.	10.0	23
59	M13 Bacteriophage Displaying DOPA on Surfaces: Fabrication of Various Nanostructured Inorganic Materials without Time-Consuming Screening Processes. ACS Applied Materials & Interfaces, 2014, 6, 18653-18660.	8.0	23
60	Impedimetric graphene-based biosensors for the detection of polybrominated diphenyl ethers. Nanoscale, 2013, 5, 6048.	5.6	22
61	Microscopic Study of Hydroxyapatite Dissolution As Affected by Fluoride Ions. Langmuir, 2011, 27, 5335-5339.	3.5	21
62	Synthetic Phage for Tissue Regeneration. Mediators of Inflammation, 2014, 2014, 1-11.	3.0	21
63	Engineered Phage Matrix Stiffness-Modulating Osteogenic Differentiation. ACS Applied Materials & Interfaces, 2018, 10, 4349-4358.	8.0	20
64	Engineered phage films as scaffolds for CaCO₃biomineralization. Nanoscale, 2016, 8, 15696-15701.	5.6	15
65	Engineered phage nanofibers induce angiogenesis. Nanoscale, 2017, 9, 17109-17117.	5.6	15
66	Selective and Sensitive Sensing of Flame Retardant Chemicals Through Phage Display Discovered Recognition Peptide. Nano Letters, 2015, 15, 7697-7703.	9.1	13
67	Eco-design and evaluation for production of 7-aminocephalosporanic acid from carbohydrate wastes discharged after microalgae-based biodiesel production. Journal of Cleaner Production, 2016, 133, 511-517.	9.3	12
68	Enhancing Effect of Elastinlike Polypeptide-based Matrix on the Physical Properties of Mineral Trioxide Aggregate. Journal of Endodontics, 2018, 44, 1702-1708.	3.1	12
69	Bacteriophage nanofiber fabrication using near field electrospinning. RSC Advances, 2019, 9, 39111-39118.	3.6	11
70	M13 Virus Triboelectricity and Energy Harvesting. Nano Letters, 2021, 21, 6851-6858.	9.1	11
71	Design of functional hydrogels using smart polymer based on elastin-like polypeptides. Chemical Engineering Journal, 2022, 435, 135155.	12.7	9
72	Engineering of M13 Bacteriophage for Development of Tissue Engineering Materials. Methods in Molecular Biology, 2018, 1776, 487-502.	0.9	7

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73	Molecular orientation of a ZnS-nanocrystal-modified M13 virus on a silicon substrate. Journal of Polymer Science, Part B: Polymer Physics, 2004, 42, 629-635.	2.1	6
74	Effect of elastinâ€like polypeptide incorporation on the adhesion maturation of mineral trioxide aggregates. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 2847-2856.	3.4	6
75	Phage Display for the Discovery of Hydroxyapatite-Associated Peptides. Methods in Enzymology, 2013, 532, 305-323.	1.0	5
76	Growth of Au and ZnS nanostructures via engineered peptide and M13 bacteriophage templates. Soft Matter, 2018, 14, 2996-3002.	2.7	2
77	Biomimetic virus-based colourimetric sensors. , 0, .		1
78	Field Effect Transistors: Directâ€Write Complementary Graphene Field Effect Transistors and Junctions via Nearâ€Field Electrospinning (Small 10/2014). Small, 2014, 10, 2112-2112.	10.0	0
79	Drug Delivery Using Novel Biological and Synthetic Materials. BioMed Research International, 2015, 2015, 1-2.	1.9	0