

# Sheng

## List of Publications by Year in descending order

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73  
papers

3,947  
citations

136950

32  
h-index

118850

62  
g-index

76  
all docs

76  
docs citations

76  
times ranked

5634  
citing authors

#	ARTICLE	IF	CITATIONS
1	Antibacterial amorphous calcium phosphate nanocomposites with a quaternary ammonium dimethacrylate and silver nanoparticles. <i>Dental Materials</i> , 2012, 28, 561-572.	3.5	286
2	The effect of 3D hydrogel scaffold modulus on osteoblast differentiation and mineralization revealed by combinatorial screening. <i>Biomaterials</i> , 2010, 31, 5051-5062.	11.4	265
3	Synthesis and characterization of dimethacrylates containing quaternary ammonium functionalities for dental applications. <i>Dental Materials</i> , 2012, 28, 219-228.	3.5	252
4	Synthesis and Characterization of PEG Dimethacrylates and Their Hydrogels. <i>Biomacromolecules</i> , 2004, 5, 1280-1287.	5.4	238
5	Measuring the Modulus of Soft Polymer Networks via a Buckling-Based Metrology. <i>Macromolecules</i> , 2006, 39, 4138-4143.	4.8	175
6	Relationship between dispersion metric and properties of PMMA/SWNT nanocomposites. <i>Polymer</i> , 2007, 48, 4855-4866.	3.8	162
7	The support of bone marrow stromal cell differentiation by airbrushed nanofiber scaffolds. <i>Biomaterials</i> , 2013, 34, 2389-2398.	11.4	142
8	Effects of dual antibacterial agents MDPB and nano-silver in primer on microcosm biofilm, cytotoxicity and dentine bond properties. <i>Journal of Dentistry</i> , 2013, 41, 464-474.	4.1	138
9	Antibacterial and physical properties of calcium phosphate and calcium fluoride nanocomposites with chlorhexidine. <i>Dental Materials</i> , 2012, 28, 573-583.	3.5	136
10	Structure-Property Relationships of Photopolymerizable Poly(ethylene glycol) Dimethacrylate Hydrogels. <i>Macromolecules</i> , 2005, 38, 2897-2902.	4.8	114
11	Characterization and optimization of RGD-containing silk blends to support osteoblastic differentiation. <i>Biomaterials</i> , 2008, 29, 2556-2563.	11.4	113
12	Modulus-driven differentiation of marrow stromal cells in 3D scaffolds that is independent of myosin-based cytoskeletal tension. <i>Biomaterials</i> , 2011, 32, 2256-2264.	11.4	113
13	Antibacterial activity and ion release of bonding agent containing amorphous calcium phosphate nanoparticles. <i>Dental Materials</i> , 2014, 30, 891-901.	3.5	106
14	Effect of amorphous calcium phosphate and silver nanocomposites on dental plaque microcosm biofilms. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2012, 100B, 1378-1386.	3.4	101
15	<i>In situ</i> formation of silver nanoparticles in photocrosslinking polymers. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2011, 97B, 124-131.	3.4	93
16	3D mapping of polymerization shrinkage using X-ray micro-computed tomography to predict microleakage. <i>Dental Materials</i> , 2009, 25, 314-320.	3.5	91
17	Synthesis and Characterization of Elastin-Mimetic Hybrid Polymers with Multiblock, Alternating Molecular Architecture and Elastomeric Properties. <i>Macromolecules</i> , 2009, 42, 2532-2541.	4.8	78
18	X-ray microcomputed tomography for measuring polymerization shrinkage of polymeric dental composites. <i>Dental Materials</i> , 2008, 24, 228-234.	3.5	77

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19	Reaction kinetics and gel properties of blocked diisocyanate crosslinked chitosan hydrogels. <i>Carbohydrate Polymers</i> , 2003, 54, 193-199.	10.2	73
20	Orientation of platelets in multilayered nanocomposite polymer films. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2003, 41, 3237-3248.	2.1	69
21	Evaluation of dental composite shrinkage and leakage in extracted teeth using X-ray microcomputed tomography. <i>Dental Materials</i> , 2009, 25, 1213-1220.	3.5	60
22	Tunable CO transport through mixed polyether membranes. <i>Journal of Membrane Science</i> , 2005, 251, 51-57.	8.2	57
23	Combinatorial investigation of the structure-properties characterization of photopolymerized dimethacrylate networks. <i>Biomaterials</i> , 2006, 27, 1711-1717.	11.4	56
24	Unusual Multilayered Structures in Poly(ethylene oxide)/Laponite Nanocomposite Films. <i>Macromolecular Rapid Communications</i> , 2005, 26, 143-149.	3.9	49
25	Systematic Investigation of Porogen Size and Content on Scaffold Morphometric Parameters and Properties. <i>Biomacromolecules</i> , 2007, 8, 1511-1518.	5.4	45
26	Simultaneous measurement of polymerization stress and curing kinetics for photo-polymerized composites with high filler contents. <i>Dental Materials</i> , 2014, 30, 1316-1324.	3.5	41
27	X-ray imaging optimization of 3D tissue engineering scaffolds via combinatorial fabrication methods. <i>Biomaterials</i> , 2008, 29, 1901-1911.	11.4	40
28	Effects of filler type and content on mechanical properties of photopolymerizable composites measured across two-dimensional combinatorial arrays. <i>Acta Biomaterialia</i> , 2009, 5, 2084-2094.	8.3	39
29	Nondestructive quantification of leakage at the tooth-composite interface and its correlation with material performance parameters. <i>Biomaterials</i> , 2009, 30, 4457-4462.	11.4	38
30	Two-dimensional gradient platforms for rapid assessment of dental polymers: A chemical, mechanical and biological evaluation. <i>Dental Materials</i> , 2007, 23, 1211-1220.	3.5	37
31	X-ray microcomputed tomography for the measurement of cell adhesion and proliferation in polymer scaffolds. <i>Biomaterials</i> , 2009, 30, 2967-2974.	11.4	37
32	Exploring Cellular Contact Guidance Using Gradient Nanogratings. <i>Biomacromolecules</i> , 2010, 11, 3067-3072.	5.4	36
33	Strategies for Achieving Measurement Assurance for Cell Therapy Products. <i>Stem Cells Translational Medicine</i> , 2016, 5, 705-708.	3.3	34
34	Tissue Engineering Scaffolds Based on Photocured Dimethacrylate Polymers for in Vitro Optical Imaging. <i>Biomacromolecules</i> , 2006, 7, 1751-1757.	5.4	27
35	Cooperative Calcium Phosphate Nucleation within Collagen Fibrils. <i>Langmuir</i> , 2011, 27, 8263-8268.	3.5	27
36	Novel Dental Cement to Combat Biofilms and Reduce Acids for Orthodontic Applications to Avoid Enamel Demineralization. <i>Materials</i> , 2016, 9, 413.	2.9	26

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37	Microstructure and Mechanical Properties of In Situ <i>Streptococcus mutans</i> Biofilms. ACS Applied Materials & Interfaces, 2014, 6, 327-332.	8.0	25
38	Encapsulated chondrocyte response in a pulsatile flow bioreactor. Acta Biomaterialia, 2007, 3, 13-21.	8.3	24
39	Effects of nanoparticle size and charge on interactions with self-assembled collagen. Journal of Colloid and Interface Science, 2014, 417, 244-249.	9.4	24
40	Manufacturing Cell Therapies: The Paradigm Shift in Health Care of This Century. NAM Perspectives, 2017, 7, .	2.9	23
41	In Situ Formation of Blends by Photopolymerization of Poly(ethylene glycol) Dimethacrylate and Polylactide. Biomacromolecules, 2005, 6, 1615-1622.	5.4	21
42	Effect of dental monomers and initiators on <i>Streptococcus mutans</i> oral biofilms. Dental Materials, 2018, 34, 776-785.	3.5	21
43	Effect of Polymer Degree of Conversion on <i>Streptococcus mutans</i> Biofilms. Macromolecular Bioscience, 2012, 12, 1706-1713.	4.1	20
44	Polyaspartic Acid Concentration Controls the Rate of Calcium Phosphate Nanorod Formation in High Concentration Systems. Biomacromolecules, 2017, 18, 3106-3113.	5.4	20
45	Examination of the Covalent Cationization Method Using Narrow Polydisperse Polystyrene. Macromolecules, 2005, 38, 1564-1572.	4.8	17
46	FDA and NIST collaboration on standards development activities supporting innovation and translation of regenerative medicine products. Cytotherapy, 2018, 20, 779-784.	0.7	17
47	Synthesis and Characterization of Poly(ethylene glycol) Dimethacrylate Hydrogels. Macromolecular Symposia, 2005, 227, 243-254.	0.7	16
48	Osteoblast response to dimethacrylate composites varying in composition, conversion and roughness using a combinatorial approach. Biomaterials, 2009, 30, 4480-4487.	11.4	16
49	Stability and Surface Topography Evolution in Nanoimprinted Polymer Patterns under a Thermal Gradient. Macromolecules, 2010, 43, 8191-8201.	4.8	16
50	Different Kinetic Pathways of Early Stage Calcium-Phosphate Cluster Aggregation Induced by Carboxylate-Containing Polymers. Biomacromolecules, 2013, 14, 3417-3422.	5.4	16
51	Defining quality attributes to enable measurement assurance for cell therapy products. Cytotherapy, 2016, 18, 1241-1244.	0.7	16
52	Evaluating the quality of a cell counting measurement process via a dilution series experimental design. Cytotherapy, 2017, 19, 1509-1521.	0.7	16
53	Reference standards for accurate validation and optimization of assays that determine integrated lentiviral vector copy number in transduced cells. Scientific Reports, 2021, 11, 389.	3.3	15
54	Primer containing dimethylaminododecyl methacrylate kills bacteria impregnated in human dentin blocks. International Journal of Oral Science, 2016, 8, 239-245.	8.6	14

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55	Kinetics of Aggregation and Crystallization of Polyaspartic Acid Stabilized Calcium Phosphate Particles at High Concentrations. <i>Biomacromolecules</i> , 2015, 16, 1550-1555.	5.4	13
56	Towards Quantitative and Standardized Serological and Neutralization Assays for COVID-19. <i>International Journal of Molecular Sciences</i> , 2021, 22, 2723.	4.1	12
57	Summary of the National Institute of Standards and Technology and US Food And Drug Administration cell counting workshop: Sharing practices in cell counting measurements. <i>Cytotherapy</i> , 2018, 20, 785-795.	0.7	11
58	Effect of fluorosurfactant on capillary instabilities in nanoimprinted polymer patterns. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2009, 47, 2591-2600.	2.1	10
59	Effects of Sample Preparation on Bacterial Colonization of Polymers. <i>Langmuir</i> , 2010, 26, 2659-2664.	3.5	9
60	Recent Industrial Roadmaps to Enable Smart Manufacturing of Biopharmaceuticals. <i>IEEE Transactions on Automation Science and Engineering</i> , 2021, 18, 176-183.	5.2	9
61	MALDI-TOF Mass Spectral Characterization of Covalently Cationized Polystyrene. <i>Macromolecules</i> , 2003, 36, 4669-4671.	4.8	8
62	Quantification of Cell Response to Polymeric Composites Using a Two- Dimensional Gradient Platform. <i>Combinatorial Chemistry and High Throughput Screening</i> , 2009, 12, 619-625.	1.1	8
63	Quantifying the sensitivity of the network structure and properties from simultaneous measurements during photopolymerization. <i>Soft Matter</i> , 2017, 13, 3975-3983.	2.7	8
64	Experimental and statistical methods to evaluate antibacterial activity of a quaternary pyridinium salt on planktonic, biofilm-forming, and biofilm states. <i>Biofouling</i> , 2017, 33, 222-234.	2.2	5
65	Points to Consider for Cell Manufacturing Equipment and Components. <i>Cell &amp; Gene Therapy Insights</i> , 2017, 3, 793-805.	0.1	5
66	Nanostructured Dental Composites and Adhesives with Antibacterial and Remineralizing Capabilities for Caries Inhibition. , 2013, , 109-129.		3
67	Computational Design of Photocured Polymers Using Stochastic Reaction-Diffusion Simulation. <i>Advanced Theory and Simulations</i> , 2018, 1, 1800028.	2.8	3
68	Nanostructured dental composites and adhesives with antibacterial and remineralizing capabilities for caries inhibition. , 2019, , 139-161.		3
69	Standards efforts and landscape for rapid microbial testing methodologies in regenerative medicine. <i>Cytotherapy</i> , 2021, 23, 390-398.	0.7	3
70	Toward Standardization in Biotechnology Platforms to Support Smart Manufacturing. <i>Smart and Sustainable Manufacturing Systems</i> , 2020, 4, 250-253.	0.7	2
71	Mechanics behind 4D interferometric measurement of biofilm mediated tooth decay. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2011, , 337-344.	0.5	1
72	The Critical Role of Standards in Tissue Engineering and Regenerative Medicine. , 2018, , .		0

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73	Simultaneous Measurement of Polymerization Stress Evolution, Conversion Kinetics, and Exotherm in Real-Time. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 149-153.	0.5	0