Lay Poh Tan

List of Publications by Year
in descending order

106 papers	5,883 citations	66250 44 h-index	87275 74 g-index
108 all docs	108 docs citations	108 times ranked	10347 citing authors

#	Article	IF	Citations
1	Scaffolds for the manufacture of cultured meat. Critical Reviews in Biotechnology, 2022, 42, 311-323.	5.1	64
2	Nanoparticles-reinforced poly-l-lactic acid composite materials as bioresorbable scaffold candidates for coronary stents: Insights from mechanical and finite element analysis. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 125, 104977.	1.5	4
3	Progress in drug-delivery systems in cardiovascular applications: stents, balloons and nanoencapsulation. Nanomedicine, 2022, 17, 325-347.	1.7	5
4	Synthesis and fabrication of gelatin-based elastomeric hydrogels through cosolvent-induced polymer restructuring. RSC Advances, 2022, 12, 7922-7934.	1.7	6
5	Investigating the Behavior of Mucoadhesive Polysaccharide-Functionalized Graphene Oxide in Bladder Environment. ACS Applied Bio Materials, 2021, 4, 630-639.	2.3	5
6	Direct and Labelâ€Free Cell Status Monitoring of Spheroids and Microcarriers Using Microfluidic Impedance Cytometry. Small, 2021, 17, e2007500.	5.2	28
7	Polymer blends and polymer composites for cardiovascular implants. European Polymer Journal, 2021, 146, 110249.	2.6	64
8	Synthesis and characterization of site selective photo-crosslinkable glycidyl methacrylate functionalized gelatin-based 3D hydrogel scaffold for liver tissue engineering. Materials Science and Engineering C, 2021, 123, 111694.	3.8	25
9	Bioactive micropatterned platform to engineer myotube-like cells from stem cells. Biofabrication, 2021, 13, 035017.	3.7	1
10	Microfluidics: Direct and Labelâ€Free Cell Status Monitoring of Spheroids and Microcarriers Using Microfluidic Impedance Cytometry (Small 21/2021). Small, 2021, 17, 2170101.	5.2	0
11	Revealing the nanoindentation response of a single cell using a 3D structural finite element model. Journal of Materials Research, 2021, 36, 2591-2600.	1.2	6
12	3D Hepatic Organoid-Based Advancements in LIVER Tissue Engineering. Bioengineering, 2021, 8, 185.	1.6	10
13	Commercialization of Plant-Based Meat Alternatives. Trends in Plant Science, 2020, 25, 1055-1058.	4.3	81
14	Investigation of bone reconstruction using an attenuated immunogenicity xenogenic composite scaffold fabricated by 3D printing. Bio-Design and Manufacturing, 2020, 3, 396-409.	3.9	18
15	Bioresorbable Polymeric Scaffold in Cardiovascular Applications. International Journal of Molecular Sciences, 2020, 21, 3444.	1.8	50
16	Robust Fabrication of Composite 3D Scaffolds with Tissue-Specific Bioactivity: A Proof-of-Concept Study. ACS Applied Bio Materials, 2020, 3, 4974-4986.	2.3	9
17	Collagen-I and fibronectin modified three-dimensional electrospun PLGA scaffolds for long-term in vitro maintenance of functional hepatocytes. Materials Science and Engineering C, 2020, 111, 110723.	3.8	27
18	Bioprinting of 3D in vitro skeletal muscle models: A review. Materials and Design, 2020, 193, 108794.	3.3	57

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19	A facile method for fabricating a three-dimensional aligned fibrous scaffold for vascular application. RSC Advances, 2019, 9, 13054-13064.	1.7	2
20	Epithelial-mesenchymal transition of cancer cells using bioengineered hybrid scaffold composed of hydrogel/3D-fibrous framework. Scientific Reports, 2019, 9, 8997.	1.6	30
21	Effect of laser induced topography with moderate stiffness on human mesenchymal stem cell behavior. JPhys Materials, 2019, 2, 034006.	1.8	5
22	Layer-by-layer ultraviolet assisted extrusion-based (UAE) bioprinting of hydrogel constructs with high aspect ratio for soft tissue engineering applications. PLoS ONE, 2019, 14, e0216776.	1.1	99
23	4D printing and stimuli-responsive materials in biomedical aspects. Acta Biomaterialia, 2019, 92, 19-36.	4.1	191
24	Migration and Phenotype Control of Human Dermal Fibroblasts by Electrospun Fibrous Substrates. Advanced Healthcare Materials, 2019, 8, e1801378.	3.9	31
25	Cardiovascular engineering materials in translational medicine. , 2019, , 57-91.		1
26	Microbial transglutaminase induced controlled crosslinking of gelatin methacryloyl to tailor rheological properties for 3D printing. Biofabrication, 2019, 11, 025011.	3.7	76
27	The effects of biâ€functional antiâ€adhesion scaffolds on flexor tendon healing in a rabbit model. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2018, 106, 2605-2614.	1.6	14
28	Nanofibrous PLGA electrospun scaffolds modified with type I collagen influence hepatocyte function and support viability in vitro. Acta Biomaterialia, 2018, 73, 217-227.	4.1	88
29	Effect of solvent composition of electrospun PLGA fibers on paclitaxel release. Materials Technology, 2018, 33, 716-722.	1.5	6
30	Colloidal templating of highly ordered gelatin methacryloyl-based hydrogel platforms for three-dimensional tissue analogues. NPG Asia Materials, 2017, 9, e412-e412.	3.8	42
31	A dual crosslinking strategy to tailor rheological properties of gelatin methacryloylÂ. International Journal of Bioprinting, 2017, 3, 130.	1.7	41
32	Electrospun 3D Fibrous Scaffolds for Chronic Wound Repair. Materials, 2016, 9, 272.	1.3	69
33	Synthesis and Characterization of Types A and B Gelatin Methacryloyl for Bioink Applications. Materials, 2016, 9, 797.	1.3	154
34	A Solvent-Free Surface Suspension Melt Technique for Making Biodegradable PCL Membrane Scaffolds for Tissue Engineering Applications. Molecules, 2016, 21, 386.	1.7	5
35	Current Status of Bioinks for Micro-Extrusion-Based 3D Bioprinting. Molecules, 2016, 21, 685.	1.7	354
36	Precise Tuning of Facile One-Pot Gelatin Methacryloyl (GelMA) Synthesis. Scientific Reports, 2016, 6, 31036.	1.6	270

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37	Novel method to improve vascularization of tissue engineered constructs with biodegradable fibers. Biofabrication, 2016, 8, 015004.	3.7	42
38	Micropatterning Extracellular Matrix Proteins on Electrospun Fibrous Substrate Promote Human Mesenchymal Stem Cell Differentiation Toward Neurogenic Lineage. ACS Applied Materials & Interfaces, 2016, 8, 563-573.	4.0	31
39	Electrospun 3D multi-scale fibrous scaffold for enhanced human dermal fibroblast infiltration. International Journal of Bioprinting, 2016, 2, .	1.7	9
40	Role of Cytoskeletal Tension in the Induction of Cardiomyogenic Differentiation in Micropatterned Human Mesenchymal Stem Cell. Advanced Healthcare Materials, 2015, 4, 1399-1407.	3.9	28
41	Modulation of Huh7.5 Spheroid Formation and Functionality Using Modified PEG-Based Hydrogels of Different Stiffness. PLoS ONE, 2015, 10, e0118123.	1.1	47
42	Efficient and controllable synthesis of highly substituted gelatin methacrylamide for mechanically stiff hydrogels. RSC Advances, 2015, 5, 106094-106097.	1.7	118
43	Calcium phosphate coated Keratinâ€“PCL scaffolds for potential bone tissue regeneration. Materials Science and Engineering C, 2015, 49, 746-753.	3.8	59
44	Cross-talk between TGF-beta/SMAD and integrin signaling pathways in regulating hypertrophy of mesenchymal stem cell chondrogenesis under deferral dynamic compression. Biomaterials, 2015, 38, 72-85.	5.7	96
45	Bio-inspired micropatterned hydrogel to direct and deconstruct hierarchical processing of geometry-force signals by human mesenchymal stem cells during smooth muscle cell differentiation. NPG Asia Materials, 2015, 7, e199-e199.	3.8	51
46	Molecular Architecture Governs Cytotoxicity and Gene Transfection Efficacy of Polyethylenimine Based Nanoplexes in Mammalian Cell Lines. Journal of Inorganic and Organometallic Polymers and Materials, 2015, 25, 301-311.	1.9	9
47	Role of RhoA/Rho kinase signaling pathway in microgroove induced stem cell myogenic differentiation. Biointerphases, 2015, 10, 021003.	0.6	5
48	Preparation, characterization and properties of polycaprolactone diol-functionalized multi-walled carbon nanotube/thermoplastic polyurethane composite. Composites Part A: Applied Science and Manufacturing, 2015, 70, 8-15.	3.8	47
49	Multifunctional wettability patterns prepared by laser processing on superhydrophobic TiO₂nanostructured surfaces. Journal of Materials Chemistry B, 2015, 3, 342-347.	2.9	72
50	Modulating Human Mesenchymal Stem Cell Plasticity Using Micropatterning Technique. PLoS ONE, 2014, 9, e113043.	1.1	6
51	Induction of Myogenic Differentiation of Human Mesenchymal Stem Cells Cultured on Notch Agonist (Jagged-1) Modified Biodegradable Scaffold Surface. ACS Applied Materials & Interfaces, 2014, 6, 1652-1661.	4.0	24
52	Investigating the Spatial Distribution of Integrin Î²₁ in Patterned Human Mesenchymal Stem Cells Using Super-Resolution Imaging. ACS Applied Materials & Interfaces, 2014, 6, 15686-15696.	4.0	10
53	A 3D Biomimetic Model of Tissue Stiffness Interface for Cancer Drug Testing. Molecular Pharmaceutics, 2014, 11, 2016-2021.	2.3	53
54	Nanoparticles Strengthen Intracellular Tension and Retard Cellular Migration. Nano Letters, 2014, 14, 83-88.	4.5	191

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55	Graphene-crosslinked polyurethane block copolymer nanocomposites with enhanced mechanical, electrical, and shape memory properties. RSC Advances, 2013, 3, 13796.	1.7	63
56	Human Mesenchymal Stemâ€Cell Behaviour On Direct Laser Micropatterned Electrospun Scaffolds with Hierarchical Structures. Macromolecular Bioscience, 2013, 13, 299-310.	2.1	47
57	Mechanoregulation of stem cell fate via micro-/nano-scale manipulation for regenerative medicine. Nanomedicine, 2013, 8, 623-638.	1.7	44
58	Advanced nanobiomaterials for tissue engineering and regenerative medicine. Nanomedicine, 2013, 8, 501-503.	1.7	3
59	A Generic Micropatterning Platform to Direct Human Mesenchymal Stem Cells from Different Origins Towards Myogenic Differentiation. Macromolecular Bioscience, 2013, 13, 799-807.	2.1	17
60	Advanced nanobiomaterial strategies for the development of organized tissue engineering constructs. Nanomedicine, 2013, 8, 591-602.	1.7	37
61	Functional Morphometric Analysis in Cellular Behaviors: Shape and Size Matter. Advanced Healthcare Materials, 2013, 2, 1188-1197.	3.9	39
62	A Bioâ€inspired Platform to Modulate Myogenic Differentiation of Human Mesenchymal Stem Cells Through Focal Adhesion Regulation. Advanced Healthcare Materials, 2013, 2, 442-449.	3.9	40
63	Increasing solvent polarity and addition of salts promote Î²â€phase poly(vinylidene fluoride) formation. Journal of Applied Polymer Science, 2013, 128, 2902-2910.	1.3	47
64	Insights into the Role of Focal Adhesion Modulation in Myogenic Differentiation of Human Mesenchymal Stem Cells. Stem Cells and Development, 2013, 22, 136-147.	1.1	42
65	Loss of TAK1 increases cell traction force in a ROS-dependent manner to drive epithelialâ€“mesenchymal transition of cancer cells. Cell Death and Disease, 2013, 4, e848-e848.	2.7	40
66	Hemodynamic Contribution of Stem Cell Scaffolding in Acute Injured Myocardium. Tissue Engineering - Part A, 2012, 18, 1652-1663.	1.6	30
67	Engineered Polymeric Biomaterials for Tissue Engineering. Current Tissue Engineering, 2012, 1, 41-53.	0.2	17
68	Cyclic tensile loading regulates human mesenchymal stem cell differentiation into neuron-like phenotype. Journal of Tissue Engineering and Regenerative Medicine, 2012, 6, s68-s79.	1.3	28
69	Human keratin hydrogels support fibroblast attachment and proliferation in vitro. Cell and Tissue Research, 2012, 347, 795-802.	1.5	116
70	A novel and simple microcontact printing technique for tacky, soft substrates and/or complex surfaces in soft tissue engineering. Acta Biomaterialia, 2012, 8, 1267-1272.	4.1	42
71	Direct laser machining-induced topographic pattern promotes up-regulation of myogenic markers in human mesenchymal stem cells. Acta Biomaterialia, 2012, 8, 531-539.	4.1	55
72	Esophageal tissue engineering: An inâ€depth review on scaffold design. Biotechnology and Bioengineering, 2012, 109, 1-15.	1.7	59

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73	Functionalized carbon nanomaterials as nanocarriers for loading and delivery of a poorly water-soluble anticancer drug: a comparative study. Chemical Communications, 2011, 47, 5235.	2.2	298
74	In vitro studies of magnetically enhanced transfection in COS-7 cells. Materials Science and Engineering C, 2011, 31, 1445-1457.	3.8	18
75	Bioâ€inspired Micropatterned Platform to Steer Stem Cell Differentiation. Small, 2011, 7, 1416-1421.	5.2	52
76	Microâ€/Nanoâ€engineered Cellular Responses for Soft Tissue Engineering and Biomedical Applications. Small, 2011, 7, 1361-1378.	5.2	127
77	Preparation and Characterization of Quercetin Nanocrystals. Journal of Pharmaceutical Sciences, 2011, 100, 2379-2390.	1.6	115
78	Cell-Matrix Interaction Study during Human Mesenchymal Stem Cells Differentiation. IFMBE Proceedings, 2011, , 51-51.	0.2	0
79	Micropatterned matrix directs differentiation of human mesenchymal stem cells towards myocardial lineage. Experimental Cell Research, 2010, 316, 1159-1168.	1.2	148
80	Annealing of Biodegradable Polymer Induced by Femtosecond Laser Micromachining. Advanced Engineering Materials, 2010, 12, B89.	1.6	6
81	Porous polycaprolactone scaffold for cardiac tissue engineering fabricated by selective laser sintering. Acta Biomaterialia, 2010, 6, 2028-2034.	4.1	310
82	Oligomer adsorption on dry and wet collagen surfaces. Acta Biomaterialia, 2010, 6, 2674-2680.	4.1	1
83	Cellular behavior of human mesenchymal stem cells cultured on single-walled carbon nanotube film. Carbon, 2010, 48, 1095-1104.	5.4	94
84	Diallyl Tartrate as a Multifunctional Monomer for Bio-polymer Synthesis. Journal of Biomaterials Science, Polymer Edition, 2010, 21, 1459-1481.	1.9	1
85	Multiscale Topological Guidance for Cell Alignment via Direct Laser Writing on Biodegradable Polymer. Tissue Engineering - Part C: Methods, 2010, 16, 1011-1021.	1.1	64
86	Control of <i>in vitro</i> neural differentiation of mesenchymal stem cells in 3D macroporous, cellulosic hydrogels. Regenerative Medicine, 2010, 5, 245-253.	0.8	36
87	Mechanical behavior of human mesenchymal stem cells during adipogenic and osteogenic differentiation. Biochemical and Biophysical Research Communications, 2010, 393, 150-155.	1.0	98
88	Thickness sensing of hMSCs on collagen gel directs stem cell fate. Biochemical and Biophysical Research Communications, 2010, 401, 287-292.	1.0	74
89	Release of Hydrophilic Drug from Biodegradable Polymer Blends. Journal of Biomaterials Science, Polymer Edition, 2009, 20, 1381-1392.	1.9	7
90	Biodegradable elastomer for soft tissue engineering. European Polymer Journal, 2009, 45, 3249-3256.	2.6	38

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91	Using oxidation to increase the electrical conductivity of carbon nanotube electrodes. Carbon, 2009, 47, 1867-1870.	5.4	152
92	Interaction force measurements for the design of tissue adhesives. Acta Biomaterialia, 2009, 5, 84-92.	4.1	10
93	Species-Dependent Energy Transfer of Surfactant-Dispersed Semiconducting Single-Walled Carbon Nanotubes. Journal of Physical Chemistry C, 2009, 113, 20061-20065.	1.5	15
94	Effects of controlled-released sirolimus from polymer matrices on human coronary artery smooth muscle cells. Journal of Biomaterials Science, Polymer Edition, 2007, 18, 1401-1414.	1.9	13
95	Porous calcium phosphate ceramics modified with PLGAâ€"bioactive glass. Materials Science and Engineering C, 2007, 27, 274-279.	3.8	76
96	Biodegradable stents with elastic memory. Biomaterials, 2006, 27, 1573-1578.	5.7	158
97	Controlled release of sirolimus from a multilayered PLGA stent matrix. Biomaterials, 2006, 27, 5588-5595.	5.7	136
98	Collapse pressures of bilayered biodegradable stents. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2006, 79B, 102-107.	1.6	13
99	Factors that Affect Fibrillation of the Liquid Crystalline Polymer (LCP)Phase in an Injection Moulded Polycarbonate / LCP Blend. Key Engineering Materials, 2006, 312, 133-138.	0.4	1
100	Phase Diagram for Predicting In Situ Fibrillation of LCP During Molding. Materials and Manufacturing Processes, 2006, 21, 127-134.	2.7	4
101	Effect of plasticization on heparin release from biodegradable matrices. International Journal of Pharmaceutics, 2004, 283, 89-96.	2.6	47
102	Collapse pressures of biodegradable stents. Biomaterials, 2003, 24, 2105-2111.	5.7	104
103	Relaxation of liquid-crystalline polymer fibers in polycarbonate-liquid-crystalline polymer blend system. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 2307-2312.	2.4	12
104	Effect of shear heating during injection molding on the morphology of PC/LCP blends. Acta Materialia, 2003, 51, 6269-6276.	3.8	24
105	Effects of shear rate, viscosity ratio and liquid crystalline polymer content on morphological and mechanical properties of polycarbonate and LCP blends. Polymer International, 2002, 51, 398-405.	1.6	27
106	Fabrication and Characterization of Electrospun Nano to Microfiber Made of Poly(L-Lactide-co-Îµ-Caprolactone). Solid State Phenomena, 0, 185, 122-125.	0.3	0