Andrea J O'connor

List of Publications by Year
in descending order

100 papers	4,198 citations	101543 36 h-index	123424 61 g-index
102 all docs	102 docs citations	102 times ranked	6160 citing authors

#	Article	IF	Citations
1	Controllable Surface Modification of Poly(lactic-co-glycolic acid) (PLGA) by Hydrolysis or Aminolysis I:Â Physical, Chemical, and Theoretical Aspects. Biomacromolecules, 2004, 5, 463-473.	5.4	373
2	Cryogels for biomedical applications. Journal of Materials Chemistry B, 2013, 1, 2682.	5.8	236
3	Engineering highly effective antimicrobial selenium nanoparticles through control of particle size. Nanoscale, 2019, 11, 14937-14951.	5.6	138
4	A Blank Slate? Layer-by-Layer Deposition of Hyaluronic Acid and Chitosan onto Various Surfaces. Biomacromolecules, 2006, 7, 1610-1622.	5.4	137
5	Separation of biological molecules using mesoporous molecular sieves. Microporous and Mesoporous Materials, 2001, 44-45, 769-774.	4.4	132
6	The influence of architecture on degradation and tissue ingrowth into three-dimensional poly(lactic-co-glycolic acid) scaffolds in vitro and in vivo. Biomaterials, 2006, 27, 2854-2864.	11.4	130
7	Dynamics of Micelleâˆ’Vesicle Transitions in Aqueous Anionic/Cationic Surfactant Mixtures. Langmuir, 1997, 13, 6931-6940.	3.5	113
8	Cell migration and proliferation during monolayer formation and wound healing. Chemical Engineering Science, 2009, 64, 247-253.	3.8	105
9	Adipose differentiation of bone marrow-derived mesenchymal stem cells using Pluronic F-127 hydrogel in vitro. Biomaterials, 2008, 29, 573-579.	11.4	102
10	Low cytotoxic trace element selenium nanoparticles and their differential antimicrobial properties against<i>S</i>.<i>aureus</i>and<i>E. coli</i>. Nanotechnology, 2016, 27, 045101.	2.6	98
11	Adipose Tissue Engineering Based on the Controlled Release of Fibroblast Growth Factor-2 in a Collagen Matrix. Tissue Engineering, 2006, 12, 3035-3043.	4.6	96
12	Microfiltration of skim milk using polymeric membranes for casein concentrate manufacture. Separation and Purification Technology, 2008, 60, 237-244.	7.9	86
13	Native and solubilized decellularized extracellular matrix: A critical assessment of their potential for improving the expansion of mesenchymal stem cells. Acta Biomaterialia, 2017, 55, 1-12.	8.3	82
14	Amino acid adsorption onto mesoporous silica molecular sieves. Separation and Purification Technology, 2006, 48, 197-201.	7.9	81
15	Integrin Clustering Matters: A Review of Biomaterials Functionalized with Multivalent Integrinâ€Binding Ligands to Improve Cell Adhesion, Migration, Differentiation, Angiogenesis, and Biomedical Device Integration. Advanced Healthcare Materials, 2018, 7, e1701324.	7.6	81
16	Increasing the Volume of Vascularized Tissue Formation in Engineered Constructs: An Experimental Study in Rats. Plastic and Reconstructive Surgery, 2003, 111, 1186-1192.	1.4	80
17	Long-Term Stability of Adipose Tissue Generated from a Vascularized Pedicled Fat Flap inside a Chamber. Plastic and Reconstructive Surgery, 2011, 127, 2283-2292.	1.4	78
18	Hierarchical mesoporous silica materials for separation of functional food ingredients â€" A review. Innovative Food Science and Emerging Technologies, 2008, 9, 243-248.	5.6	76

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19	Hydrogels with smart systems for delivery of hydrophobic drugs. Expert Opinion on Drug Delivery, 2017, 14, 879-895.	5.0	76
20	Modelling oxygen diffusion and cell growth in a porous, vascularising scaffold for soft tissue engineering applications. Chemical Engineering Science, 2005, 60, 4924-4934.	3.8	74
21	Comparative study of novel in situ decorated porous chitosan-selenium scaffolds and porous chitosan-silver scaffolds towards antimicrobial wound dressing application. Journal of Colloid and Interface Science, 2018, 515, 78-91.	9.4	71
22	Biofabrication of human articular cartilage: a path towards the development of a clinical treatment. Biofabrication, 2018, 10, 045006.	7.1	71
23	Selenium nanoparticles as anti-infective implant coatings for trauma orthopedics against methicillin-resistant Staphylococcus aureus and epidermidis: in vitro and in vivo assessment . International Journal of Nanomedicine, 2019, Volume 14, 4613-4624.	6.7	67
24	Fouling of NF membranes by dairy ultrafiltration permeates. Journal of Membrane Science, 2009, 330, 117-126.	8.2	61
25	Effect of rheology on coalescence rates and emulsion stability. AICHE Journal, 1999, 45, 1182-1190.	3.6	59
26	Creation of a Large Adipose Tissue Construct in Humans Using a Tissue-engineering Chamber: A Step Forward in the Clinical Application of Soft Tissue Engineering. EBioMedicine, 2016, 6, 238-245.	6.1	59
27	Comparative Study of Silylation Methods to Improve the Stability of Silicate MCM-41 in Aqueous Solutions. Chemistry of Materials, 2003, 15, 619-624.	6.7	55
28	In situ formation of antimicrobial silver nanoparticles and the impregnation of hydrophobic polycaprolactone matrix for antimicrobial medical device applications. Materials Science and Engineering C, 2015, 47, 63-69.	7.3	55
29	Spider-silk inspired polymeric networks by harnessing the mechanical potential of Î²-sheets through network guided assembly. Nature Communications, 2020, 11, 1630.	12.8	49
30	Multilayered Microspheres for the Controlled Release of Growth Factors in Tissue Engineering. Biomacromolecules, 2011, 12, 1494-1503.	5.4	48
31	Evaluation of sterilisation methods for bio-ink components: gelatin, gelatin methacryloyl, hyaluronic acid and hyaluronic acid methacryloyl. Biofabrication, 2019, 11, 035003.	7.1	44
32	Systematic selection of solvents for the fabrication of 3D combined macro- and microporous polymeric scaffolds for soft tissue engineering. Journal of Biomaterials Science, Polymer Edition, 2006, 17, 369-402.	3.5	41
33	Multifunctional Antimicrobial Polypeptide-Selenium Nanoparticles Combat Drug-Resistant Bacteria. ACS Applied Materials & Interfaces, 2020, 12, 55696-55709.	8.0	40
34	Effects of External Stimulators on Engineered Skeletal Muscle Tissue Maturation. Advanced Materials Interfaces, 2021, 8, 2001167.	3.7	40
35	Decellularized extracellular matrices produced from immortal cell lines derived from different parts of the placenta support primary mesenchymal stem cell expansion. PLoS ONE, 2017, 12, e0171488.	2.5	40
36	Intrinsic fluorescence of selenium nanoparticles for cellular imaging applications. Nanoscale, 2016, 8, 3376-3385.	5.6	39

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37	Development of functionalized mesoporous silica for adsorption and separation of dairy proteins. Chemical Engineering Journal, 2014, 235, 244-251.	12.7	38
38	Size and Phase Control of Cubic Lyotropic Liquid Crystal Nanoparticles. Journal of Physical Chemistry B, 2014, 118, 7430-7439.	2.6	34
39	Combining mechanical foaming and thermally induced phase separation to generate chitosan scaffolds for soft tissue engineering. Journal of Biomaterials Science, Polymer Edition, 2017, 28, 207-226.	3.5	33
40	A comparison between ceramic and polymeric membrane systems for casein concentrate manufacture. International Journal of Dairy Technology, 2010, 63, 284-289.	2.8	31
41	Enhanced Antibacterial Activity of Se Nanoparticles Upon Coating with Recombinant Spider Silk Protein eADF4(Îº16) . International Journal of Nanomedicine, 2020, Volume 15, 4275-4288.	6.7	31
42	Remote Control in Formation of 3D Multicellular Assemblies Using Magnetic Forces. ACS Biomaterials Science and Engineering, 2019, 5, 2532-2542.	5.2	29
43	Production and Surface Modification of Polylactide-Based Polymeric Scaffolds for Soft-Tissue Engineering. , 2004, 238, 87-112.		28
44	Electrophoretic mobilities of proteins and protein mixtures in porous membranes. Chemical Engineering Science, 1996, 51, 3459-3477.	3.8	27
45	Personalized, Mechanically Strong, and Biodegradable Coronary Artery Stents via Melt Electrowriting. ACS Macro Letters, 2020, 9, 1732-1739.	4.8	27
46	Nano-scale clustering of integrin-binding ligands regulates endothelial cell adhesion, migration, and endothelialization rate: novel materials for small diameter vascular graft applications. Journal of Materials Chemistry B, 2017, 5, 5942-5953.	5.8	26
47	The influence of dairy salts on nanofiltration membrane charge. Journal of Food Engineering, 2011, 107, 164-172.	5.2	25
48	Porous <scp>PLGA</scp> microspheres tailored for dual delivery of biomolecules via layerâ€byâ€layer assembly. Journal of Biomedical Materials Research - Part A, 2015, 103, 1849-1863.	4.0	25
49	Cubosomes and other potential ocular drug delivery vehicles for macromolecular therapeutics. Expert Opinion on Drug Delivery, 2015, 12, 1513-1526.	5.0	25
50	Biocompatible and Biodegradable Magnesium Oxide Nanoparticles with In Vitro Photostable Near-Infrared Emission: Short-Term Fluorescent Markers. Nanomaterials, 2019, 9, 1360.	4.1	25
51	The Challenge of Cartilage Integration: Understanding a Major Barrier to Chondral Repair. Tissue Engineering - Part B: Reviews, 2022, 28, 114-128.	4.8	25
52	Amphiphilic core cross-linked star polymers as water-soluble, biocompatible and biodegradable unimolecular carriers for hydrophobic drugs. Polymer Chemistry, 2015, 6, 6475-6487.	3.9	23
53	Fouling behaviour during the nanofiltration of dairy ultrafiltration permeate. Desalination, 2006, 199, 239-241.	8.2	22
54	Analysis of separation and fouling behaviour during nanofiltration of dairy ultrafiltration permeates. Desalination, 2009, 236, 23-29.	8.2	22

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55	Rejection of dairy salts by a nanofiltration membrane. Separation and Purification Technology, 2011, 79, 92-102.	7.9	22
56	A Simple, Scalable Process for the Production of Porous Polymer Microspheres by Inkâ€Jetting Combined with Thermally Induced Phase Separation. Particle and Particle Systems Characterization, 2014, 31, 685-698.	2.3	22
57	Beyond RGD; nanoclusters of syndecan- and integrin-binding ligands synergistically enhance cell/material interactions. Biomaterials, 2018, 187, 81-92.	11.4	22
58	Architecture control of three-dimensional polymeric scaffolds for soft tissue engineering. I. Establishment and validation of numerical models. Journal of Biomedical Materials Research Part B, 2004, 71A, 81-89.	3.1	21
59	Transferable Matrixes Produced from Decellularized Extracellular Matrix Promote Proliferation and Osteogenic Differentiation of Mesenchymal Stem Cells and Facilitate Scale-Up. ACS Biomaterials Science and Engineering, 2018, 4, 1760-1769.	5.2	20
60	Hydrophobic Domains in Thermogelling Solutions of Polyether-Modified Poly(Acrylic Acid). Langmuir, 2002, 18, 3005-3013.	3.5	19
61	Physicochemical and cytotoxicity analysis of glycerol monoolein-based nanoparticles. RSC Advances, 2015, 5, 26543-26549.	3.6	19
62	Probing the microporous nature of hierarchically templated mesoporous silica via positron annihilation spectroscopy. Progress in Solid State Chemistry, 2006, 34, 67-75.	7.2	17
63	Engineering tough, highly compressible, biodegradable hydrogels by tuning the network architecture. Chemical Communications, 2017, 53, 6756-6759.	4.1	17
64	Postsynthesis Vapor-Phase Functionalization of MCM-48 with Hexamethyldisilazane and 3-Aminopropyldimethylethoxylsilane for Bioseparation Applications. Journal of Physical Chemistry B, 2005, 109, 16263-16271.	2.6	16
65	Coating and release of an antiâ€inflammatory hormone from PLGA microspheres for tissue engineering. Journal of Biomedical Materials Research - Part A, 2012, 100A, 507-517.	4.0	16
66	The Biomechanics of eyelid tarsus tissue. Journal of Biomechanics, 2015, 48, 3455-3459.	2.1	16
67	Solute Diffusion in Associative Copolymer Solutions. Langmuir, 2001, 17, 3538-3544.	3.5	15
68	A theoretical and experimental analysis of calcium speciation and precipitation in dairy ultrafiltration permeate. International Dairy Journal, 2010, 20, 694-706.	3.0	15
69	An enzyme-responsive controlled release system based on a dual-functional peptide. Chemical Communications, 2016, 52, 5112-5115.	4.1	15
70	The co-micelle/emulsion templating route to tailor nano-engineered hierarchically porous macrospheres. Microporous and Mesoporous Materials, 2012, 149, 101-105.	4.4	14
71	Development of Macroporous Chitosan Scaffolds for Eyelid Tarsus Tissue Engineering. Tissue Engineering and Regenerative Medicine, 2019, 16, 595-604.	3.7	14
72	Adsorption of lysozyme and trypsin onto mesoporous silica materials. Studies in Surface Science and Catalysis, 2003, , 775-778.	1.5	13

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73	Use of a Short Peptide as a Building Block in the Layer-by-Layer Assembly of Biomolecules on Polymeric Surfaces. Journal of Physical Chemistry B, 2012, 116, 1120-1133.	2.6	13
74	Antimicrobial nanoparticle coatings for medical implants: Design challenges and prospects. Biointerphases, 2020, 15, 060801.	1.6	13
75	Formation and characterisation of a modifiable soft macro-porous hyaluronic acid cryogel platform. Journal of Biomaterials Science, Polymer Edition, 2015, 26, 881-897.	3.5	12
76	Innovative use of silvichemical biomass and its derivatives for heavy metal sorption from wastewater. International Journal of Environment and Pollution, 2008, 34, 427.	0.2	11
77	Interactions between circulating nanoengineered polymer particles and extracellular matrix components in vitro. Biomaterials Science, 2017, 5, 267-273.	5.4	11
78	Improved <i>ex vivo</i> expansion of mesenchymal stem cells on solubilized acellular fetal membranes. Journal of Biomedical Materials Research - Part A, 2019, 107, 232-242.	4.0	11
79	Synthesis of ultra small nanoparticles (<â€‰50Ânm) of mesoporous MCM-48 for bio-adsorption. Journal of Porous Materials, 2019, 26, 839-846.	2.6	11
80	Designing <I>In</I> <I>Vivo</I> Bioreactors for Soft Tissue Engineering. Journal of Biomaterials and Tissue Engineering, 2012, 2, 1-13.	0.1	11
81	Microbial Transglutaminase Improves ex vivo Adhesion of Gelatin Methacryloyl Hydrogels to Human Cartilage. Frontiers in Medical Technology, 2021, 3, 773673.	2.5	10
82	Tissue Engineering in Ophthalmology: Implications for Eyelid Reconstruction. Ophthalmic Plastic and Reconstructive Surgery, 2017, 33, 157-162.	0.8	9
83	On-Demand Cascade Release of Hydrophobic Chemotherapeutics from a Multicomponent Hydrogel System. ACS Biomaterials Science and Engineering, 2018, 4, 1696-1707.	5.2	8
84	Primary Study on Capturing Behavior for Transition Metal Ions on Mesoporous Silicate (MCM-41). Journal of Ion Exchange, 2003, 14, 173-176.	0.3	8
85	Microfiltration of skim milk for casein concentrate manufacture. Desalination, 2006, 200, 305-306.	8.2	7
86	Micropore Characterization of Mesocellular Foam and Hybrid Organic Functional Mesocellular Foam Materials. Journal of Physical Chemistry C, 2009, 113, 21283-21292.	3.1	7
87	Simple one-step method to produce titanium dioxideâ€"polycaprolactone composite films with increased hydrophilicity, enhanced cellular interaction and improved degradation for skin tissue engineering. Journal of Materials Science, 2014, 49, 6373-6382.	3.7	7
88	Improving the Hydro-stability of MCM-41 by Post-Synthesis Treatment and Hexamethyldisilazane Coating. Studies in Surface Science and Catalysis, 2002, , 221-228.	1.5	6
89	Interaction of preservation methods and radiation sterilization in human skin processing, with particular insight on the impact of the final water content and collagen disruption. Part I: process validation, water activity and collagen changes in tissues cryopreserved or processed using 50, 85 or 98% glycerol solutions. Cell and Tissue Banking, 2018, 19, 215-227.	1.1	5
90	Biomaterials functionalized with nanoclusters of integrinâ€•and syndecanâ€binding ligands improve cell adhesion and mechanosensing under shear flow conditions. Journal of Biomedical Materials Research - Part A, 2021, 109, 313-325.	4.0	4

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91	Amphiphilic Core Cross-Linked Star Polymers for the Delivery of Hydrophilic Drugs from Hydrophobic Matrices. Biomacromolecules, 2021, 22, 2554-2562.	5.4	4
92	BIOADSORPTION AND SEPARATION WITH NANOPOROUS MATERIALS. Series on Chemical Engineering, 2004, , 812-848.	0.2	2
93	To bind or not to bind. Nature, 2013, 502, 313-314.	27.8	2
94	Multivalent Ligands: Integrin Clustering Matters: A Review of Biomaterials Functionalized with Multivalent Integrin-Binding Ligands to Improve Cell Adhesion, Migration, Differentiation,		