Robert Samuel Langer Jr

List of Publications by Year
in descending order

367	117,711	354 139	153 335
papers	citations	h-index	g-index

377	377	377	103411
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Tissue engineering. Science, 1993, 260, 920-926.	6.0	9,341
2	Nanocarriers as an emerging platform for cancer therapy. Nature Nanotechnology, 2007, 2, 751-760.	15.6	7,469
3	Hydrogels in Biology and Medicine: From Molecular Principles to Bionanotechnology. Advanced Materials, 2006, 18, 1345-1360.	11.1	3,481
4	Engineering precision nanoparticles for drug delivery. Nature Reviews Drug Discovery, 2021, 20, 101-124.	21.5	3,154
5	Designing materials for biology and medicine. Nature, 2004, 428, 487-492.	13.7	2,876
6	Impact of Nanotechnology on Drug Delivery. ACS Nano, 2009, 3, 16-20.	7.3	2,760
7	Biodegradable long-circulating polymeric nanospheres. Science, 1994, 263, 1600-1603.	6.0	2,705
8	Knocking down barriers: advances in siRNA delivery. Nature Reviews Drug Discovery, 2009, 8, 129-138.	21.5	2,639
9	Transdermal drug delivery. Nature Biotechnology, 2008, 26, 1261-1268.	9.4	2,445
10	Polymeric Systems for Controlled Drug Release. Chemical Reviews, 1999, 99, 3181-3198.	23.0	2,390
11	Biodegradable, Elastic Shape-Memory Polymers for Potential Biomedical Applications. Science, 2002, 296, 1673-1676.	6.0	1,971
12	Light-induced shape-memory polymers. Nature, 2005, 434, 879-882.	13.7	1,808
13	New methods of drug delivery. Science, 1990, 249, 1527-1533.	6.0	1,632
14	Drug delivery and targeting. Nature, 1998, 392, 5-10.	13.7	1,587
15	CRISPR-Cas9 Knockin Mice for Genome Editing and Cancer Modeling. Cell, 2014, 159, 440-455.	13.5	1,566
16	Delivery technologies for cancer immunotherapy. Nature Reviews Drug Discovery, 2019, 18, 175-196.	21.5	1,562
17	Nanoparticle Delivery of Cancer Drugs. Annual Review of Medicine, 2012, 63, 185-198.	5.0	1,347
18	Overcoming the challenges in administering biopharmaceuticals: formulation and delivery strategies. Nature Reviews Drug Discovery, 2014, 13, 655-672.	21.5	1,261

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19	Lipid nanoparticles for mRNA delivery. Nature Reviews Materials, 2021, 6, 1078-1094.	23.3	1,256
20	Supramolecular biomaterials. Nature Materials, 2016, 15, 13-26.	13.3	1,226
21	Small-scale systems for in vivo drug delivery. Nature Biotechnology, 2003, 21, 1184-1191.	9.4	1,225
22	Formulation of functionalized PLGAâ€“PEG nanoparticles for in vivo targeted drug delivery. Biomaterials, 2007, 28, 869-876.	5.7	1,151
23	Current status and future potential of transdermal drug delivery. Nature Reviews Drug Discovery, 2004, 3, 115-124.	21.5	1,121
24	Bioresponsive materials. Nature Reviews Materials, 2017, 2, .	23.3	1,117
25	Polymers for the sustained release of proteins and other macromolecules. Nature, 1976, 263, 797-800.	13.7	1,104
26	Large Porous Particles for Pulmonary Drug Delivery. Science, 1997, 276, 1868-1872.	6.0	1,080
27	A combinatorial library of lipid-like materials for delivery of RNAi therapeutics. Nature Biotechnology, 2008, 26, 561-569.	9.4	1,076
28	Advances in oligonucleotide drug delivery. Nature Reviews Drug Discovery, 2020, 19, 673-694.	21.5	1,036
29	Molecularly self-assembled nucleic acid nanoparticles for targeted in vivo siRNA delivery. Nature Nanotechnology, 2012, 7, 389-393.	15.6	1,015
30	New challenges in biomaterials. Science, 1994, 263, 1715-1720.	6.0	1,013
31	Preclinical Development and Clinical Translation of a PSMA-Targeted Docetaxel Nanoparticle with a Differentiated Pharmacological Profile. Science Translational Medicine, 2012, 4, 128ra39.	5.8	978
32	Targeted delivery of cisplatin to prostate cancer cells by aptamer functionalized Pt(IV) prodrug-PLGAâ€“PEG nanoparticles. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 17356-17361.	3.3	904
33	Self-Assembled Lipidâ˜Polymer Hybrid Nanoparticles: A Robust Drug Delivery Platform. ACS Nano, 2008, 2, 1696-1702.	7.3	851
34	A controlled-release microchip. Nature, 1999, 397, 335-338.	13.7	839
35	Lipid-like materials for low-dose, in vivo gene silencing. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 1864-1869.	3.3	776
36	Emerging Frontiers in Drug Delivery. Journal of the American Chemical Society, 2016, 138, 704-717.	6.6	776

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37	Therapeutic genome editing by combined viral and non-viral delivery of CRISPR system components in vivo. Nature Biotechnology, 2016, 34, 328-333.	9.4	732
38	Microfluidic Platform for Controlled Synthesis of Polymeric Nanoparticles. Nano Letters, 2008, 8, 2906-2912.	4.5	728
39	Ultrasound-mediated transdermal protein delivery. Science, 1995, 269, 850-853.	6.0	722
40	The controlled intravenous delivery of drugs using PEG-coated sterically stabilized nanospheres. Advanced Drug Delivery Reviews, 1995, 16, 215-233.	6.6	717
41	Size- and shape-dependent foreign body immune response to materials implanted in rodents and non-human primates. Nature Materials, 2015, 14, 643-651.	13.3	700
42	Therapeutic siRNA silencing in inflammatory monocytes in mice. Nature Biotechnology, 2011, 29, 1005-1010.	9.4	697
43	Biomaterials in Drug Delivery and Tissue Engineering:â€‰ One Laboratory's Experience. Accounts of Chemical Research, 2000, 33, 94-101.	7.6	662
44	In vitro and ex vivo strategies for intracellular delivery. Nature, 2016, 538, 183-192.	13.7	662
45	Efficiency of siRNA delivery by lipid nanoparticles is limited by endocytic recycling. Nature Biotechnology, 2013, 31, 653-658.	9.4	660
46	Precise engineering of targeted nanoparticles by using self-assembled biointegrated block copolymers. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 2586-2591.	3.3	649
47	PLGAâ€“lecithinâ€“PEG coreâ€“shell nanoparticles for controlled drug delivery. Biomaterials, 2009, 30, 1627-1634.	5.7	620
48	Present and future applications of biomaterials in controlled drug delivery systems. Biomaterials, 1981, 2, 201-214.	5.7	576
49	A decade of progress in tissue engineering. Nature Protocols, 2016, 11, 1775-1781.	5.5	570
50	Advances in Biomaterials for Drug Delivery. Advanced Materials, 2018, 30, e1705328.	11.1	565
51	Long-term glycemic control using polymer-encapsulated human stem cellâ€“derived beta cells in immune-competent mice. Nature Medicine, 2016, 22, 306-311.	15.2	564
52	Bioplastics for a circular economy. Nature Reviews Materials, 2022, 7, 117-137.	23.3	550
53	DRUG DELIVERY: Drugs on Target. Science, 2001, 293, 58-59.	6.0	549
54	Mechanistic understanding of in vivo protein corona formation on polymeric nanoparticles and impact on pharmacokinetics. Nature Communications, 2017, 8, 777.	5.8	507

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55	Lipid Nanoparticle Assisted mRNA Delivery for Potent Cancer Immunotherapy. Nano Letters, 2017, 17, 1326-1335.	4.5	506
56	Intracellular Delivery by Membrane Disruption: Mechanisms, Strategies, and Concepts. Chemical Reviews, 2018, 118, 7409-7531.	23.0	490
57	In vivo endothelial siRNA delivery using polymeric nanoparticles with low molecular weight. Nature Nanotechnology, 2014, 9, 648-655.	15.6	466
58	Niche-independent high-purity cultures of Lgr5+ intestinal stem cells and their progeny. Nature Methods, 2014, 11, 106-112.	9.0	466
59	Injectable Selfâ€Healing Glucoseâ€Responsive Hydrogels with pHâ€Regulated Mechanical Properties. Advanced Materials, 2016, 28, 86-91.	11.1	466
60	Managing diabetes with nanomedicine: challenges and opportunities. Nature Reviews Drug Discovery, 2015, 14, 45-57.	21.5	459
61	Semi-Automated Synthesis and Screening of a Large Library of Degradable Cationic Polymers for Gene Delivery. Angewandte Chemie - International Edition, 2003, 42, 3153-3158.	7.2	445
62	A BioMEMS Review: MEMS Technology for Physiologically Integrated Devices. Proceedings of the IEEE, 2004, 92, 6-21.	16.4	438
63	Degradable lipid nanoparticles with predictable in vivo siRNA delivery activity. Nature Communications, 2014, 5, 4277.	5.8	431
64	Self-assembled hydrogels utilizing polymerâ€“nanoparticle interactions. Nature Communications, 2015, 6, 6295.	5.8	425
65	Combinatorial hydrogel library enables identification of materials that mitigate the foreign body response in primates. Nature Biotechnology, 2016, 34, 345-352.	9.4	417
66	mRNA vaccine delivery using lipid nanoparticles. Therapeutic Delivery, 2016, 7, 319-334.	1.2	414
67	Photoswitchable Nanoparticles for Triggered Tissue Penetration and Drug Delivery. Journal of the American Chemical Society, 2012, 134, 8848-8855.	6.6	413
68	Multi-pulse drug delivery from a resorbable polymeric microchip device. Nature Materials, 2003, 2, 767-772.	13.3	411
69	Delivery of mRNA vaccines with heterocyclic lipids increases anti-tumor efficacy by STING-mediated immune cell activation. Nature Biotechnology, 2019, 37, 1174-1185.	9.4	398
70	Injectable Nano-Network for Glucose-Mediated Insulin Delivery. ACS Nano, 2013, 7, 4194-4201.	7.3	395
71	Lipidâ€based nanotherapeutics for siRNA delivery. Journal of Internal Medicine, 2010, 267, 9-21.	2.7	394
72	Accelerated Discovery of Synthetic Transfection Vectors:Â Parallel Synthesis and Screening of a Degradable Polymer Library. Journal of the American Chemical Society, 2001, 123, 8155-8156.	6.6	390

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73	A vector-free microfluidic platform for intracellular delivery. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2082-2087.	3.3	386
74	An ingestible bacterial-electronic system to monitor gastrointestinal health. Science, 2018, 360, 915-918.	6.0	380
75	Structure-guided chemical modification of guide RNA enables potent non-viral in vivo genome editing. Nature Biotechnology, 2017, 35, 1179-1187.	9.4	375
76	Polyanhydrides: an overview. Advanced Drug Delivery Reviews, 2002, 54, 889-910.	6.6	372
77	Lipopeptide nanoparticles for potent and selective siRNA delivery in rodents and nonhuman primates. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3955-3960.	3.3	366
78	Polymeric synthetic nanoparticles for the induction of antigen-specific immunological tolerance. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E156-65.	3.3	364
79	First-in-Human Testing of a Wirelessly Controlled Drug Delivery Microchip. Science Translational Medicine, 2012, 4, 122ra21.	5.8	360
80	Glucose-responsive insulin patch for the regulation of blood glucose in mice and minipigs. Nature Biomedical Engineering, 2020, 4, 499-506.	11.6	353
81	A Magnetically Triggered Composite Membrane for On-Demand Drug Delivery. Nano Letters, 2009, 9, 3651-3657.	4.5	335
82	Combinatorial discovery of polymers resistant to bacterial attachment. Nature Biotechnology, 2012, 30, 868-875.	9.4	328
83	Dendrimer-RNA nanoparticles generate protective immunity against lethal Ebola, H1N1 influenza, and Toxoplasma gondii challenges with a single dose. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E4133-42.	3.3	320
84	Micromolding of shape-controlled, harvestable cell-laden hydrogels. Biomaterials, 2006, 27, 5391-5398.	5.7	318
85	Development of Lipidoidâ€“siRNA Formulations for Systemic Delivery to the Liver. Molecular Therapy, 2009, 17, 872-879.	3.7	312
86	Ultrasound-enhanced polymer degradation and release of incorporated substances.. Proceedings of the National Academy of Sciences of the United States of America, 1989, 86, 7663-7666.	3.3	308
87	Advancing the field of drug delivery. Cancer Cell, 2003, 4, 337-341.	7.7	304
88	Enhancing tumor cell response to chemotherapy through nanoparticle-mediated codelivery of siRNA and cisplatin prodrug. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18638-18643.	3.3	302
89	Electrically Controlled Drug Delivery from Biotin-Doped Conductive Polypyrrole. Advanced Materials, 2006, 18, 577-581.	11.1	288
90	An ingestible self-orienting system for oral delivery of macromolecules. Science, 2019, 363, 611-615.	6.0	287

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91	Sustained antigen availability during germinal center initiation enhances antibody responses to vaccination. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E6639-E6648.	3.3	286
92	INVITED REVIEW POLYMERIC DELIVERY SYSTEMS FOR CONTROLLED DRUG RELEASE. Chemical Engineering Communications, 1980, 6, 1-48.	1.5	281
93	MATERIALS SCIENCE: Smart Biomaterials. Science, 2004, 305, 1923-1924.	6.0	281
94	Controlled Structure and Properties of Thermoresponsive Nanoparticleâ€“Hydrogel Composites. Advanced Materials, 2004, 16, 1074-1079.	11.1	278
95	Blocking CXCR4 alleviates desmoplasia, increases T-lymphocyte infiltration, and improves immunotherapy in metastatic breast cancer. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4558-4566.	3.3	274
96	A pH-responsive supramolecular polymer gel as an enteric elastomer for use in gastric devices. Nature Materials, 2015, 14, 1065-1071.	13.3	268
97	AB-polymer networks based on oligo(É›-caprolactone) segments showing shape-memory properties. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 842-847.	3.3	267
98	Molecularly engineered poly(ortho ester) microspheres for enhanced delivery of DNA vaccines. Nature Materials, 2004, 3, 190-196.	13.3	261
99	Alginate encapsulation as long-term immune protection of allogeneic pancreatic islet cells transplanted into the omental bursa of macaques. Nature Biomedical Engineering, 2018, 2, 810-821.	11.6	242
100	Polymeric Materials for Gene Delivery and DNA Vaccination. Advanced Materials, 2009, 21, 847-867.	11.1	241
101	Magnetically Triggered Nanocomposite Membranes: A Versatile Platform for Triggered Drug Release. Nano Letters, 2011, 11, 1395-1400.	4.5	241
102	Immunocompatibility properties of lipidâ€“polymer hybrid nanoparticles with heterogeneous surface functional groups. Biomaterials, 2009, 30, 2231-2240.	5.7	240
103	Layerâ€byâ€Layer Encapsulation of Probiotics for Delivery to the Microbiome. Advanced Materials, 2016, 28, 9486-9490.	11.1	239
104	Evolution of macromolecular complexity in drug delivery systems. Nature Reviews Chemistry, 2017, 1, .	13.8	233
105	Nanotechnology approaches for global infectious diseases. Nature Nanotechnology, 2021, 16, 369-384.	15.6	232
106	A materials-science perspective on tackling COVID-19. Nature Reviews Materials, 2020, 5, 847-860.	23.3	228
107	Biocompatible Semiconductor Quantum Dots as Cancer Imaging Agents. Advanced Materials, 2018, 30, e1706356.	11.1	227
108	Hyaluronic Acid-Based Microgels and Microgel Networks for Vocal Fold Regeneration. Biomacromolecules, 2006, 7, 3336-3344.	2.6	221

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109	Colony stimulating factor-1 receptor is a central component of the foreign body response to biomaterial implants in rodents and non-humanÂprimates. Nature Materials, 2017, 16, 671-680.	13.3	214
110	Restoration of tumour-growth suppression in vivo via systemic nanoparticle-mediated delivery of PTEN mRNA. Nature Biomedical Engineering, 2018, 2, 850-864.	11.6	214
111	Inhaled Nanoformulated mRNA Polyplexes for Protein Production in Lung Epithelium. Advanced Materials, 2019, 31, e1805116.	11.1	212
112	Cytoskeletal filament assembly and the control of cell spreading and function by extracellular matrix. Journal of Cell Science, 1995, 108, 2311-2320.	1.2	211
113	Polyanhydrides. I. Preparation of high molecular weight polyanhydrides. Journal of Polymer Science Part A, 1987, 25, 3373-3386.	2.5	210
114	Small RNA combination therapy for lung cancer. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E3553-61.	3.3	210
115	Engineering and physical sciences in oncology: challenges and opportunities. Nature Reviews Cancer, 2017, 17, 659-675.	12.8	204
116	A Novel Mechanism Is Involved in Cationic Lipid-Mediated Functional siRNA Delivery. Molecular Pharmaceutics, 2009, 6, 763-771.	2.3	195
117	Glucose-responsive insulin activity by covalent modification with aliphatic phenylboronic acid conjugates. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2401-2406.	3.3	190
118	Partial DNA-guided Cas9 enables genome editing with reduced off-target activity. Nature Chemical Biology, 2018, 14, 311-316.	3.9	186
119	Barcoded nanoparticles for high throughput in vivo discovery of targeted therapeutics. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2060-2065.	3.3	185
120	Oral, ultraâ€“long-lasting drug delivery: Application toward malaria elimination goals. Science Translational Medicine, 2016, 8, 365ra157.	5.8	181
121	Vascular Catheters with a Nonleaching Poly-Sulfobetaine Surface Modification Reduce Thrombus Formation and Microbial Attachment. Science Translational Medicine, 2012, 4, 153ra132.	5.8	180
122	Development of an oral once-weekly drug delivery system for HIV antiretroviral therapy. Nature Communications, 2018, 9, 2.	5.8	180
123	Near-infraredâ€“actuated devices for remotely controlled drug delivery. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 1349-1354.	3.3	177
124	Rapid, deep and precise profiling of the plasma proteome with multi-nanoparticle protein corona. Nature Communications, 2020, 11, 3662.	5.8	175
125	Synthesis and Biological Evaluation of Ionizable Lipid Materials for the In Vivo Delivery of Messenger RNA to B Lymphocytes. Advanced Materials, 2017, 29, 1606944.	11.1	174
126	Bioinspired Alkenyl Amino Alcohol Ionizable Lipid Materials for Highly Potent In Vivo mRNA Delivery. Advanced Materials, 2016, 28, 2939-2943.	11.1	172

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127	Probing nanoparticle translocation across the permeable endothelium in experimental atherosclerosis. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 1078-1083.	3.3	171
128	RNAi targeting multiple cell adhesion molecules reduces immune cell recruitment and vascular inflammation after myocardial infarction. Science Translational Medicine, 2016, 8, 342ra80.	5.8	169
129	A luminal unfolding microneedle injector for oral delivery of macromolecules. Nature Medicine, 2019, 25, 1512-1518.	15.2	167
130	Fabrication of fillable microparticles and other complex 3D microstructures. Science, 2017, 357, 1138-1142.	6.0	163
131	Silencing or Stimulation? siRNA Delivery and the Immune System. Annual Review of Chemical and Biomolecular Engineering, 2011, 2, 77-96.	3.3	161
132	Exhaled aerosol increases with COVID-19 infection, age, and obesity. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	161
133	High-throughput nuclear delivery and rapid expression of DNA via mechanical and electrical cell-membrane disruption. Nature Biomedical Engineering, 2017, 1, .	11.6	158
134	Regulation of drug release from polymer matrices by oscillating magnetic fields. Journal of Biomedical Materials Research Part B, 1985, 19, 67-83.	3.0	151
135	Combinatorial Modification of Degradable Polymers Enables Transfection of Human Cells Comparable to Adenovirus. Advanced Materials, 2007, 19, 2836-2842.	11.1	151
136	An implantable microdevice to perform high-throughput in vivo drug sensitivity testing in tumors. Science Translational Medicine, 2015, 7, 284ra57.	5.8	150
137	Reduction of measurement noise in a continuous glucose monitor by coating the sensor with a zwitterionic polymer. Nature Biomedical Engineering, 2018, 2, 894-906.	11.6	150
138	Reprogramming the microenvironment with tumor-selective angiotensin blockers enhances cancer immunotherapy. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 10674-10680.	3.3	150
139	Magnetically enhanced insulin release in diabetic rats. Journal of Biomedical Materials Research Part B, 1987, 21, 1367-1373.	3.0	148
140	Controlled delivery systems for proteins using polyanhydride microspheres. Pharmaceutical Research, 1993, 10, 487-496.	1.7	148
141	Prolonged energy harvesting for ingestible devices. Nature Biomedical Engineering, 2017, 1, .	11.6	148
142	Ingestible electronics for diagnostics and therapy. Nature Reviews Materials, 2019, 4, 83-98.	23.3	146
143	Adjuvant-carrying synthetic vaccine particles augment the immune response to encapsulated antigen and exhibit strong local immune activation without inducing systemic cytokine release. Vaccine, 2014, 32, 2882-2895.	1.7	144
144	Smart Biomaterials: Recent Advances and Future Directions. ACS Biomaterials Science and Engineering, 2018, 4, 3809-3817.	2.6	135

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145	Applications of ethylene vinyl acetate copolymers (EVA) in drug delivery systems. Journal of Controlled Release, 2017, 262, 284-295.	4.8	134
146	Microneedles for Drug Delivery via the Gastrointestinal Tract. Journal of Pharmaceutical Sciences, 2015, 104, 362-367.	1.6	133
147	Multiparametric approach for the evaluation of lipid nanoparticles for siRNA delivery. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12881-12886.	3.3	131
148	Design and Synthesis of Waterborne Polyurethanes. Advanced Materials, 2018, 30, e1706237.	11.1	131
149	Stimuli-responsive transdermal microneedle patches. Materials Today, 2021, 47, 206-222.	8.3	129
150	Characterization of Mechanically Matched Hydrogel Coatings to Improve the Biocompatibility of Neural Implants. Scientific Reports, 2017, 7, 1952.	1.6	126
151	The surface topography of silicone breast implants mediates the foreign body response in mice, rabbits and humans. Nature Biomedical Engineering, 2021, 5, 1115-1130.	11.6	126
152	Ly6Clo monocytes drive immunosuppression and confer resistance to anti-VEGFR2 cancer therapy. Journal of Clinical Investigation, 2017, 127, 3039-3051.	3.9	124
153	In vivo release from a drug delivery MEMS device. Journal of Controlled Release, 2004, 100, 211-219.	4.8	123
154	Nucleic acid delivery for therapeutic applications. Advanced Drug Delivery Reviews, 2021, 178, 113834.	6.6	122
155	Direct Patterning of Protein- and Cell-Resistant Polymeric Monolayers and Microstructures. Advanced Materials, 2003, 15, 1995-2000.	11.1	120
156	Genetic and hypoxic alterations of the micro <scp>RNA</scp> â€210â€•<scp>ISCU</scp> 1/2 axis promote ironâ€“sulfur deficiency and pulmonary hypertension. EMBO Molecular Medicine, 2015, 7, 695-713.	3.3	120
157	Chiral Supraparticles for Controllable Nanomedicine. Advanced Materials, 2020, 32, e1903878.	11.1	118
158	Engineered PLGA microparticles for long-term, pulsatile release of STING agonist for cancer immunotherapy. Science Translational Medicine, 2020, 12, .	5.8	117
159	Promoting Convergence in Biomedical Science. Science, 2011, 333, 527-527.	6.0	116
160	Long-term implant fibrosis prevention in rodents and non-human primates using crystallized drug formulations. Nature Materials, 2019, 18, 892-904.	13.3	114
161	Dendrimer-Inspired Nanomaterials for the in Vivo Delivery of siRNA to Lung Vasculature. Nano Letters, 2015, 15, 3008-3016.	4.5	113
162	Glucose-Responsive Nanoparticles for Rapid and Extended Self-Regulated Insulin Delivery. ACS Nano, 2020, 14, 488-497.	7.3	113

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163	Systemic RNAi-mediated Gene Silencing in Nonhuman Primate and Rodent Myeloid Cells. Molecular Therapy - Nucleic Acids, 2012, 1, e4.	2.3	112
164	The development of bioresorbable composite polymeric implants with high mechanical strength. Nature Materials, 2018, 17, 96-103.	13.3	112
165	Stabilization of tetanus and diphtheria toxoids against moisture-induced aggregation.. Proceedings of the National Academy of Sciences of the United States of America, 1995, 92, 11234-11238.	3.3	110
166	Magnetic modulation of release of macromolecules from polymers.. Proceedings of the National Academy of Sciences of the United States of America, 1981, 78, 1863-1867.	3.3	108
167	Nanoparticles for Immune Cytokine TRAIL-Based Cancer Therapy. ACS Nano, 2018, 12, 912-931.	7.3	107
168	Temporal study of the activity of matrix metalloproteinases and their endogenous inhibitors during wound healing. , 1996, 60, 379-386.		106
169	Glucose-responsive insulin by molecular and physical design. Nature Chemistry, 2017, 9, 937-944.	6.6	106
170	Triggerable tough hydrogels for gastric resident dosage forms. Nature Communications, 2017, 8, 124.	5.8	106
171	Progress in the Tissue Engineering and Stem Cell Industry â€œAre we there yet?â€• Tissue Engineering - Part B: Reviews, 2012, 18, 155-166.	2.5	105
172	Size and temperature effects on poly(lactic-co-glycolic acid) degradation and microreservoir device performance. Biomaterials, 2005, 26, 2137-2145.	5.7	104
173	Synthesis of Polymerâ€“Lipid Nanoparticles for Image-Guided Delivery of Dual Modality Therapy. Bioconjugate Chemistry, 2013, 24, 1429-1434.	1.8	104
174	Multiplexed RNAi therapy against brain tumor-initiating cells via lipopolymeric nanoparticle infusion delays glioblastoma progression. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E6147-E6156.	3.3	102
175	Actuation of untethered pneumatic artificial muscles and soft robots using magnetically induced liquid-to-gas phase transitions. Science Robotics, 2020, 5, .	9.9	101
176	Repeatable and adjustable on-demand sciatic nerve block with phototriggerable liposomes. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 15719-15724.	3.3	97
177	Exploiting Electrostatic Interactions in Polymerâ€“Nanoparticle Hydrogels. ACS Macro Letters, 2015, 4, 848-852.	2.3	95
178	Nanoparticles with photoinduced precipitation for the extraction of pollutants from water and soil. Nature Communications, 2015, 6, 7765.	5.8	95
179	Ultrasound-mediated gastrointestinal drug delivery. Science Translational Medicine, 2015, 7, 310ra168.	5.8	95
180	Ionizable Aminoâ€Polyesters Synthesized via Ring Opening Polymerization of Tertiary Aminoâ€Alcohols for Tissue Selective mRNA Delivery. Advanced Materials, 2018, 30, e1801151.	11.1	95

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181	Biocompatible near-infrared quantum dots delivered to the skin by microneedle patches record vaccination. Science Translational Medicine, 2019, 11, .	5.8	95
182	Coated alginate microspheres: Factors influencing the controlled delivery of macromolecules. Journal of Applied Polymer Science, 1991, 43, 2123-2135.	1.3	94
183	Live-cell protein labelling with nanometre precision by cell squeezing. Nature Communications, 2016, 7, 10372.	5.8	94
184	Biofilmâ€Inspired Encapsulation of Probiotics for the Treatment of Complex Infections. Advanced Materials, 2018, 30, e1803925.	11.1	93
185	Combinatorial Material Mechanics: High-Throughput Polymer Synthesis and Nanomechanical Screening. Advanced Materials, 2005, 17, 2599-2604.	11.1	92
186	Discovery of Novel Materials with Broad Resistance to Bacterial Attachment Using Combinatorial Polymer Microarrays. Advanced Materials, 2013, 25, 2542-2547.	11.1	92
187	Wireless on-demand drug delivery. Nature Electronics, 2021, 4, 464-477.	13.1	91
188	A retrievable implant for the long-term encapsulation and survival of therapeutic xenogeneic cells. Nature Biomedical Engineering, 2020, 4, 814-826.	11.6	90
189	Microfluidic squeezing for intracellular antigen loading in polyclonal B-cells as cellular vaccines. Scientific Reports, 2015, 5, 10276.	1.6	88
190	Endothelial siRNA delivery in nonhuman primates using ionizable lowâ€“molecular weight polymeric nanoparticles. Science Advances, 2018, 4, eaar8409.	4.7	81
191	Nonendocytic Delivery of Functional Engineered Nanoparticles into the Cytoplasm of Live Cells Using a Novel, High-Throughput Microfluidic Device. Nano Letters, 2012, 12, 6322-6327.	4.5	80
192	Ionizable Amphiphilic Dendrimerâ€Based Nanomaterials with Alkylâ€Chainâ€Substituted Amines for Tunable siRNA Delivery to the Liver Endothelium Inâ€...Vivo. Angewandte Chemie - International Edition, 2014, 53, 14397-14401.	7.2	80
193	Single-injection vaccines: Progress, challenges, and opportunities. Journal of Controlled Release, 2015, 219, 596-609.	4.8	80
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