Robert Samuel Langer Jr

List of Publications by Year
in descending order

408	124,751	218 142	97 342
papers	citations	h-index	g-index

444	444	444	92884
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nanocarriers as an emerging platform for cancer therapy. Nature Nanotechnology, 2007, 2, 751-760.	30.5	7,609
2	Engineering precision nanoparticles for drug delivery. Nature Reviews Drug Discovery, 2021, 20, 101-124.	56.6	3,830
3	Hydrogels in Biology and Medicine: From Molecular Principles to Bionanotechnology. Advanced Materials, 2006, 18, 1345-1360.	24.1	3,562
4	Designing materials for biology and medicine. Nature, 2004, 428, 487-492.	36.3	2,908
5	Knocking down barriers: advances in siRNA delivery. Nature Reviews Drug Discovery, 2009, 8, 129-138.	56.6	2,700
6	Polymeric Systems for Controlled Drug Release. Chemical Reviews, 1999, 99, 3181-3198.	51.5	2,415
7	Light-induced shape-memory polymers. Nature, 2005, 434, 879-882.	36.3	1,847
8	Delivery technologies for cancer immunotherapy. Nature Reviews Drug Discovery, 2019, 18, 175-196.	56.6	1,745
9	Nanomechanical analysis of cells from cancer patients. Nature Nanotechnology, 2007, 2, 780-783.	30.5	1,684
10	CRISPR-Cas9 Knockin Mice for Genome Editing and Cancer Modeling. Cell, 2014, 159, 440-455.	28.1	1,643
11	Lipid nanoparticles for mRNA delivery. Nature Reviews Materials, 2021, 6, 1078-1094.	40.0	1,563
12	Nanoparticle Delivery of Cancer Drugs. Annual Review of Medicine, 2012, 63, 185-198.	12.5	1,381
13	Overcoming the challenges in administering biopharmaceuticals: formulation and delivery strategies. Nature Reviews Drug Discovery, 2014, 13, 655-672.	56.6	1,307
14	Supramolecular biomaterials. Nature Materials, 2016, 15, 13-26.	26.7	1,288
15	Small-scale systems for in vivo drug delivery. Nature Biotechnology, 2003, 21, 1184-1191.	21.0	1,238
16	Artificial Photosynthesis: Molecular Systems for Catalytic Water Oxidation. Chemical Reviews, 2014, 114, 11863-12001.	51.5	1,196
17	Advances in oligonucleotide drug delivery. Nature Reviews Drug Discovery, 2020, 19, 673-694.	56.6	1,183
18	Bioresponsive materials. Nature Reviews Materials, 2017, 2, .	40.0	1,175

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19	Formulation of functionalized PLGAâ€“PEG nanoparticles for in vivo targeted drug delivery. Biomaterials, 2007, 28, 869-876.	11.8	1,174
20	Current status and future potential of transdermal drug delivery. Nature Reviews Drug Discovery, 2004, 3, 115-124.	56.6	1,144
21	Polymers for the sustained release of proteins and other macromolecules. Nature, 1976, 263, 797-800.	36.3	1,120
22	A combinatorial library of lipid-like materials for delivery of RNAi therapeutics. Nature Biotechnology, 2008, 26, 561-569.	21.0	1,106
23	Large Porous Particles for Pulmonary Drug Delivery. Science, 1997, 276, 1868-1872.	13.9	1,096
24	Molecularly self-assembled nucleic acid nanoparticles for targeted in vivo siRNA delivery. Nature Nanotechnology, 2012, 7, 389-393.	30.5	1,050
25	Preclinical Development and Clinical Translation of a PSMA-Targeted Docetaxel Nanoparticle with a Differentiated Pharmacological Profile. Science Translational Medicine, 2012, 4, 128ra39.	13.4	1,003
26	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.	7.6	912
27	Self-Assembled Lipidâˆ’Polymer Hybrid Nanoparticles: A Robust Drug Delivery Platform. ACS Nano, 2008, 2, 1696-1702.	15.2	871
28	A controlled-release microchip. Nature, 1999, 397, 335-338.	36.3	843
29	Emerging Frontiers in Drug Delivery. Journal of the American Chemical Society, 2016, 138, 704-717.	14.6	813
30	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.	7.6	807
31	Advances in biomaterials, drug delivery, and bionanotechnology. AICHE Journal, 2003, 49, 2990-3006.	3.6	794
32	Bioplastics for a circular economy. Nature Reviews Materials, 2022, 7, 117-137.	40.0	778
33	Microfluidic Platform for Controlled Synthesis of Polymeric Nanoparticles. Nano Letters, 2008, 8, 2906-2912.	9.5	755
34	Therapeutic genome editing by combined viral and non-viral delivery of CRISPR system components in vivo. Nature Biotechnology, 2016, 34, 328-333.	21.0	754
35	Size- and shape-dependent foreign body immune response to materials implanted in rodents and non-human primates. Nature Materials, 2015, 14, 643-651.	26.7	730
36	The controlled intravenous delivery of drugs using PEG-coated sterically stabilized nanospheres. Advanced Drug Delivery Reviews, 1995, 16, 215-233.	14.3	727

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37	Therapeutic siRNA silencing in inflammatory monocytes in mice. Nature Biotechnology, 2011, 29, 1005-1010.	21.0	723
38	In vitro and ex vivo strategies for intracellular delivery. Nature, 2016, 538, 183-192.	36.3	705
39	Efficiency of siRNA delivery by lipid nanoparticles is limited by endocytic recycling. Nature Biotechnology, 2013, 31, 653-658.	21.0	698
40	Biomaterials in Drug Delivery and Tissue Engineering:â€‰ One Laboratory's Experience. Accounts of Chemical Research, 2000, 33, 94-101.	16.6	674
41	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.	7.6	656
42	PLGAâ€“lecithinâ€“PEG coreâ€“shell nanoparticles for controlled drug delivery. Biomaterials, 2009, 30, 1627-1634.	11.8	633
43	Advances in Biomaterials for Drug Delivery. Advanced Materials, 2018, 30, e1705328.	24.1	608
44	Present and future applications of biomaterials in controlled drug delivery systems. Biomaterials, 1981, 2, 201-214.	11.8	582
45	Long-term glycemic control using polymer-encapsulated human stem cellâ€“derived beta cells in immune-competent mice. Nature Medicine, 2016, 22, 306-311.	30.5	580
46	Lipid Nanoparticle Assisted mRNA Delivery for Potent Cancer Immunotherapy. Nano Letters, 2017, 17, 1326-1335.	9.5	540
47	Intracellular Delivery by Membrane Disruption: Mechanisms, Strategies, and Concepts. Chemical Reviews, 2018, 118, 7409-7531.	51.5	537
48	Mechanistic understanding of in vivo protein corona formation on polymeric nanoparticles and impact on pharmacokinetics. Nature Communications, 2017, 8, 777.	13.2	528
49	Injectable Selfâ€Healing Glucoseâ€Responsive Hydrogels with pHâ€Regulated Mechanical Properties. Advanced Materials, 2016, 28, 86-91.	24.1	496
50	High-mobility ultrathin semiconducting films prepared by spin coating. Nature, 2004, 428, 299-303.	36.3	492
51	Niche-independent high-purity cultures of Lgr5+ intestinal stem cells and their progeny. Nature Methods, 2014, 11, 106-112.	19.6	488
52	In vivo endothelial siRNA delivery using polymeric nanoparticles with low molecular weight. Nature Nanotechnology, 2014, 9, 648-655.	30.5	484
53	Degradable lipid nanoparticles with predictable in vivo siRNA delivery activity. Nature Communications, 2014, 5, 4277.	13.2	461
54	Self-assembled hydrogels utilizing polymerâ€“nanoparticle interactions. Nature Communications, 2015, 6, 6295.	13.2	461

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55	Delivery of mRNA vaccines with heterocyclic lipids increases anti-tumor efficacy by STING-mediated immune cell activation. Nature Biotechnology, 2019, 37, 1174-1185.	21.0	456
56	Semi-Automated Synthesis and Screening of a Large Library of Degradable Cationic Polymers for Gene Delivery. Angewandte Chemie - International Edition, 2003, 42, 3153-3158.	14.7	453
57	mRNA Vaccine Delivery Using Lipid Nanoparticles. Therapeutic Delivery, 2016, 7, 319-334.	2.4	453
58	Metalâ€“Organicâ€Frameworkâ€Based Catalysts for Photoreduction of CO₂. Advanced Materials, 2018, 30, e1705512.	24.1	448
59	A BioMEMS Review: MEMS Technology for Physiologically Integrated Devices. Proceedings of the IEEE, 2004, 92, 6-21.	27.0	446
60	Combinatorial hydrogel library enables identification of materials that mitigate the foreign body response in primates. Nature Biotechnology, 2016, 34, 345-352.	21.0	437
61	Photoswitchable Nanoparticles for Triggered Tissue Penetration and Drug Delivery. Journal of the American Chemical Society, 2012, 134, 8848-8855.	14.6	423
62	Multi-pulse drug delivery from a resorbable polymeric microchip device. Nature Materials, 2003, 2, 767-772.	26.7	414
63	Injectable Nano-Network for Glucose-Mediated Insulin Delivery. ACS Nano, 2013, 7, 4194-4201.	15.2	405
64	Lipidâ€based nanotherapeutics for siRNA delivery. Journal of Internal Medicine, 2010, 267, 9-21.	6.2	403
65	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.	7.6	403
66	Structure-guided chemical modification of guide RNA enables potent non-viral in vivo genome editing. Nature Biotechnology, 2017, 35, 1179-1187.	21.0	400
67	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.	14.6	394
68	Glucose-responsive insulin patch for the regulation of blood glucose in mice and minipigs. Nature Biomedical Engineering, 2020, 4, 499-506.	22.5	394
69	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.	7.6	385
70	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.	7.6	377
71	Polyanhydrides: an overview. Advanced Drug Delivery Reviews, 2002, 54, 889-910.	14.3	374
72	First-in-Human Testing of a Wirelessly Controlled Drug Delivery Microchip. Science Translational Medicine, 2012, 4, 122ra21.	13.4	366

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73	A Magnetically Triggered Composite Membrane for On-Demand Drug Delivery. Nano Letters, 2009, 9, 3651-3657.	9.5	341
74	Combinatorial discovery of polymers resistant to bacterial attachment. Nature Biotechnology, 2012, 30, 868-875.	21.0	334
75	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.	7.6	330
76	Micromolding of shape-controlled, harvestable cell-laden hydrogels. Biomaterials, 2006, 27, 5391-5398.	11.8	323
77	Development of Lipidoidâ€“siRNA Formulations for Systemic Delivery to the Liver. Molecular Therapy, 2009, 17, 872-879.	8.1	319
78	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.	7.6	314
79	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.	7.6	312
80	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.	7.6	310
81	Advancing the field of drug delivery. Cancer Cell, 2003, 4, 337-341.	16.9	309
82	Synthesis of Size-Controlled Faceted Pentagonal Silver Nanorods with Tunable Plasmonic Properties and Self-Assembly of These Nanorods. ACS Nano, 2009, 3, 21-26.	15.2	301
83	Electrically Controlled Drug Delivery from Biotin-Doped Conductive Polypyrrole. Advanced Materials, 2006, 18, 577-581.	24.1	292
84	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.	7.6	288
85	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.	7.6	284
86	Controlled Structure and Properties of Thermoresponsive Nanoparticleâ€“Hydrogel Composites. Advanced Materials, 2004, 16, 1074-1079.	24.1	284
87	Smart Biomaterials. Science, 2004, 305, 1923-1924.	13.9	284
88	INVITED REVIEW POLYMERIC DELIVERY SYSTEMS FOR CONTROLLED DRUG RELEASE. Chemical Engineering Communications, 1980, 6, 1-48.	2.7	282
89	Layerâ€byâ€Layer Encapsulation of Probiotics for Delivery to the Microbiome. Advanced Materials, 2016, 28, 9486-9490.	24.1	275
90	A pH-responsive supramolecular polymer gel as an enteric elastomer for use in gastric devices. Nature Materials, 2015, 14, 1065-1071.	26.7	274

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91	Nanotechnology approaches for global infectious diseases. Nature Nanotechnology, 2021, 16, 369-384.	30.5	271
92	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.	22.5	264
93	Molecularly engineered poly(ortho ester) microspheres for enhanced delivery of DNA vaccines. Nature Materials, 2004, 3, 190-196.	26.7	262
94	Malignant extracellular vesicles carrying MMP1 mRNA facilitate peritoneal dissemination in ovarian cancer. Nature Communications, 2017, 8, 14470.	13.2	251
95	Polymeric Materials for Gene Delivery and DNA Vaccination. Advanced Materials, 2009, 21, 847-867.	24.1	247
96	Evolution of macromolecular complexity in drug delivery systems. Nature Reviews Chemistry, 2017, 1, .	22.6	245
97	Magnetically Triggered Nanocomposite Membranes: A Versatile Platform for Triggered Drug Release. Nano Letters, 2011, 11, 1395-1400.	9.5	244
98	Immunocompatibility properties of lipidâ€“polymer hybrid nanoparticles with heterogeneous surface functional groups. Biomaterials, 2009, 30, 2231-2240.	11.8	243
99	A materials-science perspective on tackling COVID-19. Nature Reviews Materials, 2020, 5, 847-860.	40.0	242
100	Biocompatible Semiconductor Quantum Dots as Cancer Imaging Agents. Advanced Materials, 2018, 30, e1706356.	24.1	238
101	Inhaled Nanoformulated mRNA Polyplexes for Protein Production in Lung Epithelium. Advanced Materials, 2019, 31, e1805116.	24.1	234
102	Restoration of tumour-growth suppression in vivo via systemic nanoparticle-mediated delivery of PTEN mRNA. Nature Biomedical Engineering, 2018, 2, 850-864.	22.5	232
103	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.	26.7	223
104	Hyaluronic Acid-Based Microgels and Microgel Networks for Vocal Fold Regeneration. Biomacromolecules, 2006, 7, 3336-3344.	5.6	222
105	Rapid, deep and precise profiling of the plasma proteome with multi-nanoparticle protein corona. Nature Communications, 2020, 11, 3662.	13.2	214
106	Cytoskeletal filament assembly and the control of cell spreading and function by extracellular matrix. Journal of Cell Science, 1995, 108, 2311-2320.	2.1	212
107	Polyanhydrides. I. Preparation of high molecular weight polyanhydrides. Journal of Polymer Science Part A, 1987, 25, 3373-3386.	2.4	211
108	Small RNA combination therapy for lung cancer. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E3553-61.	7.6	211

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109	The landscape of mRNA nanomedicine. Nature Medicine, 2022, 28, 2273-2287.	30.5	204
110	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.	7.6	202
111	A Novel Mechanism Is Involved in Cationic Lipid-Mediated Functional siRNA Delivery. Molecular Pharmaceutics, 2009, 6, 763-771.	4.7	201
112	Partial DNA-guided Cas9 enables genome editing with reduced off-target activity. Nature Chemical Biology, 2018, 14, 311-316.	8.1	197
113	Synthesis and Biological Evaluation of Ionizable Lipid Materials for the In Vivo Delivery of Messenger RNA to B Lymphocytes. Advanced Materials, 2017, 29, 1606944.	24.1	195
114	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.	7.6	194
115	Oral, ultraâ€“long-lasting drug delivery: Application toward malaria elimination goals. Science Translational Medicine, 2016, 8, 365ra157.	13.4	191
116	Vascular Catheters with a Nonleaching Poly-Sulfobetaine Surface Modification Reduce Thrombus Formation and Microbial Attachment. Science Translational Medicine, 2012, 4, 153ra132.	13.4	190
117	Development of an oral once-weekly drug delivery system for HIV antiretroviral therapy. Nature Communications, 2018, 9, 2.	13.2	186
118	A luminal unfolding microneedle injector for oral delivery of macromolecules. Nature Medicine, 2019, 25, 1512-1518.	30.5	184
119	Bioinspired Alkenyl Amino Alcohol Ionizable Lipid Materials for Highly Potent In Vivo mRNA Delivery. Advanced Materials, 2016, 28, 2939-2943.	24.1	182
120	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.	7.6	181
121	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.	7.6	179
122	Current treatment landscape for relapsed and/or refractory multiple myeloma. Nature Reviews Clinical Oncology, 2015, 12, 42-54.	27.9	178
123	RNAi targeting multiple cell adhesion molecules reduces immune cell recruitment and vascular inflammation after myocardial infarction. Science Translational Medicine, 2016, 8, 342ra80.	13.4	177
124	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, .	7.6	169
125	High-throughput nuclear delivery and rapid expression of DNA via mechanical and electrical cell-membrane disruption. Nature Biomedical Engineering, 2017, 1, .	22.5	165
126	Ingestible electronics for diagnostics and therapy. Nature Reviews Materials, 2019, 4, 83-98.	40.0	164

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127	Silencing or Stimulation? siRNA Delivery and the Immune System. Annual Review of Chemical and Biomolecular Engineering, 2011, 2, 77-96.	7.2	162
128	Prolonged energy harvesting for ingestible devices. Nature Biomedical Engineering, 2017, 1, .	22.5	159
129	Reduction of measurement noise in a continuous glucose monitor by coating the sensor with a zwitterionic polymer. Nature Biomedical Engineering, 2018, 2, 894-906.	22.5	158
130	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.	7.6	158
131	Combinatorial Modification of Degradable Polymers Enables Transfection of Human Cells Comparable to Adenovirus. Advanced Materials, 2007, 19, 2836-2842.	24.1	155
132	Stimuli-responsive transdermal microneedle patches. Materials Today, 2021, 47, 206-222.	18.1	155
133	Regulation of drug release from polymer matrices by oscillating magnetic fields. Journal of Biomedical Materials Research Part B, 1985, 19, 67-83.	0.5	152
134	Magnetically enhanced insulin release in diabetic rats. Journal of Biomedical Materials Research Part B, 1987, 21, 1367-1373.	0.5	151
135	Controlled delivery systems for proteins using polyanhydride microspheres. Pharmaceutical Research, 1993, 10, 487-496.	3.6	149
136	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.	4.0	149
137	The surface topography of silicone breast implants mediates the foreign body response in mice, rabbits and humans. Nature Biomedical Engineering, 2021, 5, 1115-1130.	22.5	147
138	Design and Synthesis of Waterborne Polyurethanes. Advanced Materials, 2018, 30, e1706237.	24.1	143
139	Applications of ethylene vinyl acetate copolymers (EVA) in drug delivery systems. Journal of Controlled Release, 2017, 262, 284-295.	10.3	142
140	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.	7.6	141
141	Microneedles for Drug Delivery via the Gastrointestinal Tract. Journal of Pharmaceutical Sciences, 2015, 104, 362-367.	3.4	139
142	Smart Biomaterials: Recent Advances and Future Directions. ACS Biomaterials Science and Engineering, 2018, 4, 3809-3817.	5.4	138
143	Characterization of Mechanically Matched Hydrogel Coatings to Improve the Biocompatibility of Neural Implants. Scientific Reports, 2017, 7, 1952.	3.5	136
144	The power of multiplexed functional analysis of genetic variants. Nature Protocols, 2016, 11, 1782-1787.	12.6	131

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145	Ly6Clo monocytes drive immunosuppression and confer resistance to anti-VEGFR2 cancer therapy. Journal of Clinical Investigation, 2017, 127, 3039-3051.	6.7	130
146	Engineered PLGA microparticles for long-term, pulsatile release of STING agonist for cancer immunotherapy. Science Translational Medicine, 2020, 12, .	13.4	128
147	Chiral Supraparticles for Controllable Nanomedicine. Advanced Materials, 2020, 32, e1903878.	24.1	127
148	Long-term implant fibrosis prevention in rodents and non-human primates using crystallized drug formulations. Nature Materials, 2019, 18, 892-904.	26.7	125
149	In vivo release from a drug delivery MEMS device. Journal of Controlled Release, 2004, 100, 211-219.	10.3	124
150	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.	6.9	124
151	The development of bioresorbable composite polymeric implants with high mechanical strength. Nature Materials, 2018, 17, 96-103.	26.7	122
152	Glucose-Responsive Nanoparticles for Rapid and Extended Self-Regulated Insulin Delivery. ACS Nano, 2020, 14, 488-497.	15.2	121
153	Direct Patterning of Protein- and Cell-Resistant Polymeric Monolayers and Microstructures. Advanced Materials, 2003, 15, 1995-2000.	24.1	120
154	Nanoparticles for Immune Cytokine TRAIL-Based Cancer Therapy. ACS Nano, 2018, 12, 912-931.	15.2	118
155	Dendrimer-Inspired Nanomaterials for the in Vivo Delivery of siRNA to Lung Vasculature. Nano Letters, 2015, 15, 3008-3016.	9.5	116
156	Actuation of untethered pneumatic artificial muscles and soft robots using magnetically induced liquid-to-gas phase transitions. Science Robotics, 2020, 5, .	18.0	115
157	Temporal study of the activity of matrix metalloproteinases and their endogenous inhibitors during wound healing. Journal of Cellular Biochemistry, 1996, 60, 379-386.	2.6	114
158	Systemic RNAi-mediated Gene Silencing in Nonhuman Primate and Rodent Myeloid Cells. Molecular Therapy - Nucleic Acids, 2012, 1, e4.	5.2	114
159	Triggerable tough hydrogels for gastric resident dosage forms. Nature Communications, 2017, 8, 124.	13.2	114
160	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.	7.6	110
161	A retrievable implant for the long-term encapsulation and survival of therapeutic xenogeneic cells. Nature Biomedical Engineering, 2020, 4, 814-826.	22.5	110
162	Wireless on-demand drug delivery. Nature Electronics, 2021, 4, 464-477.	18.9	109

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163	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.	7.6	108
164	Progress in the Tissue Engineering and Stem Cell Industry â€œAre we there yet?â€• Tissue Engineering - Part B: Reviews, 2012, 18, 155-166.	5.1	108
165	Glucose-responsive insulin by molecular and physical design. Nature Chemistry, 2017, 9, 937-944.	14.3	108
166	Size and temperature effects on poly(lactic-co-glycolic acid) degradation and microreservoir device performance. Biomaterials, 2005, 26, 2137-2145.	11.8	107
167	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.	7.6	107
168	Biocompatible near-infrared quantum dots delivered to the skin by microneedle patches record vaccination. Science Translational Medicine, 2019, 11, .	13.4	106
169	Synthesis of Polymerâ€“Lipid Nanoparticles for Image-Guided Delivery of Dual Modality Therapy. Bioconjugate Chemistry, 2013, 24, 1429-1434.	3.8	104
170	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.	7.6	103
171	Exploiting Electrostatic Interactions in Polymerâ€“Nanoparticle Hydrogels. ACS Macro Letters, 2015, 4, 848-852.	4.9	101
172	Biofilmâ€Inspired Encapsulation of Probiotics for the Treatment of Complex Infections. Advanced Materials, 2018, 30, e1803925.	24.1	101
173	Ionizable Aminoâ€Polyesters Synthesized via Ring Opening Polymerization of Tertiary Aminoâ€Alcohols for Tissue Selective mRNA Delivery. Advanced Materials, 2018, 30, e1801151.	24.1	100
174	Ultrasound-mediated gastrointestinal drug delivery. Science Translational Medicine, 2015, 7, 310ra168.	13.4	97
175	Live-cell protein labelling with nanometre precision by cell squeezing. Nature Communications, 2016, 7, 10372.	13.2	97
176	Nanoparticles with photoinduced precipitation for the extraction of pollutants from water and soil. Nature Communications, 2015, 6, 7765.	13.2	96
177	Discovery of Novel Materials with Broad Resistance to Bacterial Attachment Using Combinatorial Polymer Microarrays. Advanced Materials, 2013, 25, 2542-2547.	24.1	95
178	Unidirectional spin-Hall and Rashbaâ^'Edelstein magnetoresistance in topological insulator-ferromagnet layer heterostructures. Nature Communications, 2018, 9, 111.	13.2	95
179	Coated alginate microspheres: Factors influencing the controlled delivery of macromolecules. Journal of Applied Polymer Science, 1991, 43, 2123-2135.	2.7	94
180	Combinatorial Material Mechanics: High-Throughput Polymer Synthesis and Nanomechanical Screening. Advanced Materials, 2005, 17, 2599-2604.	24.1	94

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181	Hydrogels for RNA delivery. Nature Materials, 2023, 22, 818-831.	26.7	90
182	Microfluidic squeezing for intracellular antigen loading in polyclonal B-cells as cellular vaccines. Scientific Reports, 2015, 5, 10276.	3.5	89
183	Combinatorial design of nanoparticles for pulmonary mRNA delivery and genome editing. Nature Biotechnology, 2023, 41, 1410-1415.	21.0	87
184	Endothelial siRNA delivery in nonhuman primates using ionizable lowâ€“molecular weight polymeric nanoparticles. Science Advances, 2018, 4, eaar8409.	10.9	86
185	Computationally guided high-throughput design of self-assembling drug nanoparticles. Nature Nanotechnology, 2021, 16, 725-733.	30.5	85
186	Experimental Identification of Ultrafast Reverse Hole Transfer at the Interface of the Photoexcited Methanol/Graphitic Carbon Nitride System. Angewandte Chemie - International Edition, 2018, 57, 5320-5324.	14.7	84
187	BBB pathophysiologyâ€“independent delivery of siRNA in traumatic brain injury. Science Advances, 2021, 7, .	10.9	84
188	Single-injection vaccines: Progress, challenges, and opportunities. Journal of Controlled Release, 2015, 219, 596-609.	10.3	83
189	Long-term dopamine neurochemical monitoring in primates. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13260-13265.	7.6	83
190	Nanoparticle-encapsulated siRNAs for gene silencing in the haematopoietic stem-cell niche. Nature Biomedical Engineering, 2020, 4, 1076-1089.	22.5	83
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