

Robert Samuel Langer Jr

List of Publications by Citations

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355
papers

92,022
citations

125
h-index

303
g-index

377
ext. papers

104,617
ext. citations

18.2
avg, IF

8.6
L-index

#	Paper	IF	Citations
355	Tissue engineering. <i>Science</i> , 1993 , 260, 920-6	33.3	8387
354	Nanocarriers as an emerging platform for cancer therapy. <i>Nature Nanotechnology</i> , 2007 , 2, 751-60	28.7	6530
353	Hydrogels in Biology and Medicine: From Molecular Principles to Bionanotechnology. <i>Advanced Materials</i> , 2006 , 18, 1345-1360	24	3009
352	Designing materials for biology and medicine. <i>Nature</i> , 2004 , 428, 487-92	50.4	2634
351	Biodegradable long-circulating polymeric nanospheres. <i>Science</i> , 1994 , 263, 1600-3	33.3	2464
350	Impact of nanotechnology on drug delivery. <i>ACS Nano</i> , 2009 , 3, 16-20	16.7	2337
349	Knocking down barriers: advances in siRNA delivery. <i>Nature Reviews Drug Discovery</i> , 2009 , 8, 129-38	64.1	2281
348	Polymeric systems for controlled drug release. <i>Chemical Reviews</i> , 1999 , 99, 3181-98	68.1	2177
347	Transdermal drug delivery. <i>Nature Biotechnology</i> , 2008 , 26, 1261-8	44.5	1870
346	Biodegradable, elastic shape-memory polymers for potential biomedical applications. <i>Science</i> , 2002 , 296, 1673-6	33.3	1728
345	Light-induced shape-memory polymers. <i>Nature</i> , 2005 , 434, 879-82	50.4	1601
344	Drug delivery and targeting. <i>Nature</i> , 1998 , 392, 5-10	50.4	1468
343	New methods of drug delivery. <i>Science</i> , 1990 , 249, 1527-33	33.3	1444
342	Nanoparticle delivery of cancer drugs. <i>Annual Review of Medicine</i> , 2012 , 63, 185-98	17.4	1176
341	CRISPR-Cas9 knockin mice for genome editing and cancer modeling. <i>Cell</i> , 2014 , 159, 440-55	56.2	1089
340	Small-scale systems for in vivo drug delivery. <i>Nature Biotechnology</i> , 2003 , 21, 1184-91	44.5	1063
339	Formulation of functionalized PLGA-PEG nanoparticles for in vivo targeted drug delivery. <i>Biomaterials</i> , 2007 , 28, 869-76	15.6	1053

338	Overcoming the challenges in administering biopharmaceuticals: formulation and delivery strategies. <i>Nature Reviews Drug Discovery</i> , 2014 , 13, 655-72	64.1	1015
337	Supramolecular biomaterials. <i>Nature Materials</i> , 2016 , 15, 13-26	27	971
336	Large porous particles for pulmonary drug delivery. <i>Science</i> , 1997 , 276, 1868-71	33.3	962
335	Polymers for the sustained release of proteins and other macromolecules. <i>Nature</i> , 1976 , 263, 797-800	50.4	924
334	A combinatorial library of lipid-like materials for delivery of RNAi therapeutics. <i>Nature Biotechnology</i> , 2008 , 26, 561-9	44.5	908
333	Current status and future potential of transdermal drug delivery. <i>Nature Reviews Drug Discovery</i> , 2004 , 3, 115-24	64.1	906
332	New challenges in biomaterials. <i>Science</i> , 1994 , 263, 1715-20	33.3	893
331	Preclinical development and clinical translation of a PSMA-targeted docetaxel nanoparticle with a differentiated pharmacological profile. <i>Science Translational Medicine</i> , 2012 , 4, 128ra39	17.5	866
330	Molecularly self-assembled nucleic acid nanoparticles for targeted in vivo siRNA delivery. <i>Nature Nanotechnology</i> , 2012 , 7, 389-93	28.7	836
329	Bioresponsive materials. <i>Nature Reviews Materials</i> , 2017 , 2,	73.3	828
328	Delivery technologies for cancer immunotherapy. <i>Nature Reviews Drug Discovery</i> , 2019 , 18, 175-196	64.1	823
327	Engineering precision nanoparticles for drug delivery. <i>Nature Reviews Drug Discovery</i> , 2021 , 20, 101-124	64.1	822
326	Targeted delivery of cisplatin to prostate cancer cells by aptamer functionalized Pt(IV) prodrug-PLGA-PEG nanoparticles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 17356-61	11.5	805
325	Self-assembled lipid-polymer hybrid nanoparticles: a robust drug delivery platform. <i>ACS Nano</i> , 2008 , 2, 1696-702	16.7	721
324	A controlled-release microchip. <i>Nature</i> , 1999 , 397, 335-8	50.4	715
323	The controlled intravenous delivery of drugs using PEG-coated sterically stabilized nanospheres. <i>Advanced Drug Delivery Reviews</i> , 1995 , 16, 215-233	18.5	648
322	Ultrasound-mediated transdermal protein delivery. <i>Science</i> , 1995 , 269, 850-3	33.3	634
321	Lipid-like materials for low-dose, in vivo gene silencing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 1864-9	11.5	633

320	Emerging Frontiers in Drug Delivery. <i>Journal of the American Chemical Society</i> , 2016 , 138, 704-17	16.4	625
319	Microfluidic platform for controlled synthesis of polymeric nanoparticles. <i>Nano Letters</i> , 2008 , 8, 2906-12	11.5	616
318	Therapeutic genome editing by combined viral and non-viral delivery of CRISPR system components in vivo. <i>Nature Biotechnology</i> , 2016 , 34, 328-33	44.5	610
317	Precise engineering of targeted nanoparticles by using self-assembled biointegrated block copolymers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 2586-91	11.5	596
316	Therapeutic siRNA silencing in inflammatory monocytes in mice. <i>Nature Biotechnology</i> , 2011 , 29, 1005-10	44.5	594
315	Biomaterials in drug delivery and tissue engineering: one laboratory's experience. <i>Accounts of Chemical Research</i> , 2000 , 33, 94-101	24.3	591
314	PLGA-lecithin-PEG core-shell nanoparticles for controlled drug delivery. <i>Biomaterials</i> , 2009 , 30, 1627-34	15.6	563
313	Size- and shape-dependent foreign body immune response to materials implanted in rodents and non-human primates. <i>Nature Materials</i> , 2015 , 14, 643-51	27	534
312	Efficiency of siRNA delivery by lipid nanoparticles is limited by endocytic recycling. <i>Nature Biotechnology</i> , 2013 , 31, 653-8	44.5	514
311	Drug delivery. Drugs on target. <i>Science</i> , 2001 , 293, 58-9	33.3	498
310	In vitro and ex vivo strategies for intracellular delivery. <i>Nature</i> , 2016 , 538, 183-192	50.4	489
309	Present and future applications of biomaterials in controlled drug delivery systems. <i>Biomaterials</i> , 1981 , 2, 201-14	15.6	486
308	Long-term glycemic control using polymer-encapsulated human stem cell-derived beta cells in immune-competent mice. <i>Nature Medicine</i> , 2016 , 22, 306-11	50.5	430
307	Advances in oligonucleotide drug delivery. <i>Nature Reviews Drug Discovery</i> , 2020 , 19, 673-694	64.1	407
306	Semi-automated synthesis and screening of a large library of degradable cationic polymers for gene delivery. <i>Angewandte Chemie - International Edition</i> , 2003 , 42, 3153-8	16.4	394
305	A decade of progress in tissue engineering. <i>Nature Protocols</i> , 2016 , 11, 1775-81	18.8	387
304	In vivo endothelial siRNA delivery using polymeric nanoparticles with low molecular weight. <i>Nature Nanotechnology</i> , 2014 , 9, 648-655	28.7	385
303	A BioMEMS review: MEMS technology for physiologically integrated devices. <i>Proceedings of the IEEE</i> , 2004 , 92, 6-21	14.3	363

302	Mechanistic understanding of in vivo protein corona formation on polymeric nanoparticles and impact on pharmacokinetics. <i>Nature Communications</i> , 2017 , 8, 777	17.4	362
301	Managing diabetes with nanomedicine: challenges and opportunities. <i>Nature Reviews Drug Discovery</i> , 2015 , 14, 45-57	64.1	359
300	Photoswitchable nanoparticles for triggered tissue penetration and drug delivery. <i>Journal of the American Chemical Society</i> , 2012 , 134, 8848-55	16.4	359
299	Accelerated discovery of synthetic transfection vectors: parallel synthesis and screening of a degradable polymer library. <i>Journal of the American Chemical Society</i> , 2001 , 123, 8155-6	16.4	356
298	Multi-pulse drug delivery from a resorbable polymeric microchip device. <i>Nature Materials</i> , 2003 , 2, 767-727		355
297	Advances in Biomaterials for Drug Delivery. <i>Advanced Materials</i> , 2018 , 30, e1705328	24	352
296	Lipid-based nanotherapeutics for siRNA delivery. <i>Journal of Internal Medicine</i> , 2010 , 267, 9-21	10.8	342
295	Self-assembled hydrogels utilizing polymer-nanoparticle interactions. <i>Nature Communications</i> , 2015 , 6, 6295	17.4	341
294	Injectable Self-Healing Glucose-Responsive Hydrogels with pH-Regulated Mechanical Properties. <i>Advanced Materials</i> , 2016 , 28, 86-91	24	340
293	Injectable nano-network for glucose-mediated insulin delivery. <i>ACS Nano</i> , 2013 , 7, 4194-201	16.7	333
292	Niche-independent high-purity cultures of Lgr5+ intestinal stem cells and their progeny. <i>Nature Methods</i> , 2014 , 11, 106-12	21.6	332
291	Polyanhydrides: an overview. <i>Advanced Drug Delivery Reviews</i> , 2002 , 54, 889-910	18.5	322
290	Degradable lipid nanoparticles with predictable in vivo siRNA delivery activity. <i>Nature Communications</i> , 2014 , 5, 4277	17.4	320
289	A magnetically triggered composite membrane for on-demand drug delivery. <i>Nano Letters</i> , 2009 , 9, 3651-7.5	17.5	308
288	Combinatorial hydrogel library enables identification of materials that mitigate the foreign body response in primates. <i>Nature Biotechnology</i> , 2016 , 34, 345-52	44.5	302
287	Lipid Nanoparticle Assisted mRNA Delivery for Potent Cancer Immunotherapy. <i>Nano Letters</i> , 2017 , 17, 1326-1335	11.5	302
286	Polymeric synthetic nanoparticles for the induction of antigen-specific immunological tolerance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, E156-65	11.5	295
285	A vector-free microfluidic platform for intracellular delivery. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 2082-7	11.5	293

284	First-in-human testing of a wirelessly controlled drug delivery microchip. <i>Science Translational Medicine</i> , 2012 , 4, 122ra21	17.5	283
283	Intracellular Delivery by Membrane Disruption: Mechanisms, Strategies, and Concepts. <i>Chemical Reviews</i> , 2018 , 118, 7409-7531	68.1	280
282	Micromolding of shape-controlled, harvestable cell-laden hydrogels. <i>Biomaterials</i> , 2006 , 27, 5391-8	15.6	279
281	Lipopeptide nanoparticles for potent and selective siRNA delivery in rodents and nonhuman primates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 3955-60	11.5	275
280	Ultrasound-enhanced polymer degradation and release of incorporated substances. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1989 , 86, 7663-6	11.5	272
279	Development of lipidoid-siRNA formulations for systemic delivery to the liver. <i>Molecular Therapy</i> , 2009 , 17, 872-9	11.7	266
278	Advancing the field of drug delivery: taking aim at cancer. <i>Cancer Cell</i> , 2003 , 4, 337-41	24.3	264
277	Electrically Controlled Drug Delivery from Biotin-Doped Conductive Polypyrrole. <i>Advanced Materials</i> , 2006 , 18, 577-581	24	257
276	Enhancing tumor cell response to chemotherapy through nanoparticle-mediated codelivery of siRNA and cisplatin prodrug. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 18638-43	11.5	255
275	Structure-guided chemical modification of guide RNA enables potent non-viral in vivo genome editing. <i>Nature Biotechnology</i> , 2017 , 35, 1179-1187	44.5	255
274	Combinatorial discovery of polymers resistant to bacterial attachment. <i>Nature Biotechnology</i> , 2012 , 30, 868-875	44.5	254
273	Materials science. Smart biomaterials. <i>Science</i> , 2004 , 305, 1923-4	33.3	254
272	Controlled Structure and Properties of Thermoresponsive Nanoparticle-Hydrogel Composites. <i>Advanced Materials</i> , 2004 , 16, 1074-1079	24	253
271	INVITED REVIEW POLYMERIC DELIVERY SYSTEMS FOR CONTROLLED DRUG RELEASE. <i>Chemical Engineering Communications</i> , 1980 , 6, 1-48	2.2	248
270	mRNA vaccine delivery using lipid nanoparticles. <i>Therapeutic Delivery</i> , 2016 , 7, 319-34	3.8	241
269	Dendrimer-RNA nanoparticles generate protective immunity against lethal Ebola, H1N1 influenza, and <i>Toxoplasma gondii</i> challenges with a single dose. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, E4133-42	11.5	233
268	An ingestible bacterial-electronic system to monitor gastrointestinal health. <i>Science</i> , 2018 , 360, 915-918	33.3	232
267	Molecularly engineered poly(ortho ester) microspheres for enhanced delivery of DNA vaccines. <i>Nature Materials</i> , 2004 , 3, 190-6	27	228

266	Lipid nanoparticles for mRNA delivery. <i>Nature Reviews Materials</i> , 2021 , 1-17	73.3	228
265	Polymeric Materials for Gene Delivery and DNA Vaccination. <i>Advanced Materials</i> , 2009 , 21, 847-867	24	223
264	AB-polymer networks based on oligo(ϵ -caprolactone) segments showing shape-memory properties. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001 , 98, 842-847	11.5	221
263	A pH-responsive supramolecular polymer gel as an enteric elastomer for use in gastric devices. <i>Nature Materials</i> , 2015 , 14, 1065-71	27	218
262	Magnetically triggered nanocomposite membranes: a versatile platform for triggered drug release. <i>Nano Letters</i> , 2011 , 11, 1395-400	11.5	217
261	Immunocompatibility properties of lipid-polymer hybrid nanoparticles with heterogeneous surface functional groups. <i>Biomaterials</i> , 2009 , 30, 2231-40	15.6	211
260	Hyaluronic acid-based microgels and microgel networks for vocal fold regeneration. <i>Biomacromolecules</i> , 2006 , 7, 3336-44	6.9	205
259	Delivery of mRNA vaccines with heterocyclic lipids increases anti-tumor efficacy by STING-mediated immune cell activation. <i>Nature Biotechnology</i> , 2019 , 37, 1174-1185	44.5	200
258	Cytoskeletal filament assembly and the control of cell spreading and function by extracellular matrix. <i>Journal of Cell Science</i> , 1995 , 108, 2311-2320	5.3	181
257	Polyanhydrides. I. Preparation of high molecular weight polyanhydrides. <i>Journal of Polymer Science Part A</i> , 1987 , 25, 3373-3386	2.5	180
256	Small RNA combination therapy for lung cancer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, E3553-61	11.5	177
255	Evolution of macromolecular complexity in drug delivery systems. <i>Nature Reviews Chemistry</i> , 2017 , 1,	34.6	174
254	A novel mechanism is involved in cationic lipid-mediated functional siRNA delivery. <i>Molecular Pharmaceutics</i> , 2009 , 6, 763-71	5.6	168
253	Glucose-responsive insulin patch for the regulation of blood glucose in mice and minipigs. <i>Nature Biomedical Engineering</i> , 2020 , 4, 499-506	19	166
252	An ingestible self-orienting system for oral delivery of macromolecules. <i>Science</i> , 2019 , 363, 611-615	33.3	164
251	Sustained antigen availability during germinal center initiation enhances antibody responses to vaccination. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, E6639-E6648	11.5	164
250	Near-infrared-actuated devices for remotely controlled drug delivery. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 1349-54	11.5	157
249	Blocking CXCR4 alleviates desmoplasia, increases T-lymphocyte infiltration, and improves immunotherapy in metastatic breast cancer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 4558-4566	11.5	156

248	Biocompatible Semiconductor Quantum Dots as Cancer Imaging Agents. <i>Advanced Materials</i> , 2018 , 30, e1706356	24	154
247	Engineering and physical sciences in oncology: challenges and opportunities. <i>Nature Reviews Cancer</i> , 2017 , 17, 659-675	31.3	153
246	Colony stimulating factor-1 receptor is a central component of the foreign body response to biomaterial implants in rodents and non-human primates. <i>Nature Materials</i> , 2017 , 16, 671-680	27	150
245	Glucose-responsive insulin activity by covalent modification with aliphatic phenylboronic acid conjugates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 2401-6	11.5	150
244	Alginate encapsulation as long-term immune protection of allogeneic pancreatic islet cells transplanted into the omental bursa of macaques. <i>Nature Biomedical Engineering</i> , 2018 , 2, 810-821	19	145
243	Partial DNA-guided Cas9 enables genome editing with reduced off-target activity. <i>Nature Chemical Biology</i> , 2018 , 14, 311-316	11.7	140
242	Vascular catheters with a nonleaching poly-sulfobetaine surface modification reduce thrombus formation and microbial attachment. <i>Science Translational Medicine</i> , 2012 , 4, 153ra132	17.5	139
241	Probing nanoparticle translocation across the permeable endothelium in experimental atherosclerosis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 1078-83	11.5	138
240	Regulation of drug release from polymer matrices by oscillating magnetic fields. <i>Journal of Biomedical Materials Research Part B</i> , 1985 , 19, 67-83		138
239	Silencing or stimulation? siRNA delivery and the immune system. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2011 , 2, 77-96	8.9	137
238	Combinatorial Modification of Degradable Polymers Enables Transfection of Human Cells Comparable to Adenovirus. <i>Advanced Materials</i> , 2007 , 19, 2836-2842	24	137
237	Controlled delivery systems for proteins using polyanhydride microspheres. <i>Pharmaceutical Research</i> , 1993 , 10, 487-96	4.5	131
236	Magnetically enhanced insulin release in diabetic rats. <i>Journal of Biomedical Materials Research Part B</i> , 1987 , 21, 1367-73		130
235	Layer-by-Layer Encapsulation of Probiotics for Delivery to the Microbiome. <i>Advanced Materials</i> , 2016 , 28, 9486-9490	24	128
234	Restoration of tumour-growth suppression in vivo via systemic nanoparticle-mediated delivery of PTEN mRNA. <i>Nature Biomedical Engineering</i> , 2018 , 2, 850-864	19	127
233	Oral, ultra-long-lasting drug delivery: Application toward malaria elimination goals. <i>Science Translational Medicine</i> , 2016 , 8, 365ra157	17.5	125
232	Bioinspired Alkenyl Amino Alcohol Ionizable Lipid Materials for Highly Potent In Vivo mRNA Delivery. <i>Advanced Materials</i> , 2016 , 28, 2939-43	24	125
231	Adjuvant-carrying synthetic vaccine particles augment the immune response to encapsulated antigen and exhibit strong local immune activation without inducing systemic cytokine release. <i>Vaccine</i> , 2014 , 32, 2882-95	4.1	124

230	RNAi targeting multiple cell adhesion molecules reduces immune cell recruitment and vascular inflammation after myocardial infarction. <i>Science Translational Medicine</i> , 2016 , 8, 342ra80	17.5	123
229	A materials-science perspective on tackling COVID-19. <i>Nature Reviews Materials</i> , 2020 , 1-14	73.3	123
228	Development of an oral once-weekly drug delivery system for HIV antiretroviral therapy. <i>Nature Communications</i> , 2018 , 9, 2	17.4	120
227	Inhaled Nanoformulated mRNA Polyplexes for Protein Production in Lung Epithelium. <i>Advanced Materials</i> , 2019 , 31, e1805116	24	118
226	An implantable microdevice to perform high-throughput in vivo drug sensitivity testing in tumors. <i>Science Translational Medicine</i> , 2015 , 7, 284ra57	17.5	109
225	In vivo release from a drug delivery MEMS device. <i>Journal of Controlled Release</i> , 2004 , 100, 211-9	11.7	106
224	Direct Patterning of Protein- and Cell-Resistant Polymeric Monolayers and Microstructures. <i>Advanced Materials</i> , 2003 , 15, 1995-2000	24	106
223	High-throughput Nuclear Delivery and Rapid Expression of DNA via Mechanical and Electrical Cell-Membrane Disruption. <i>Nature Biomedical Engineering</i> , 2017 , 1,	19	105
222	Fabrication of fillable microparticles and other complex 3D microstructures. <i>Science</i> , 2017 , 357, 1138-1143	33.3	105
221	Synthesis and Biological Evaluation of Ionizable Lipid Materials for the In Vivo Delivery of Messenger RNA to B Lymphocytes. <i>Advanced Materials</i> , 2017 , 29, 1606944	24	105
220	Barcoded nanoparticles for high throughput in vivo discovery of targeted therapeutics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 2060-2065	11.5	101
219	Multiparametric approach for the evaluation of lipid nanoparticles for siRNA delivery. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 12881-6	11.5	101
218	Systemic RNAi-mediated Gene Silencing in Nonhuman Primate and Rodent Myeloid Cells. <i>Molecular Therapy - Nucleic Acids</i> , 2012 , 1, e4	10.7	100
217	Smart Biomaterials: Recent Advances and Future Directions. <i>ACS Biomaterials Science and Engineering</i> , 2018 , 4, 3809-3817	5.5	99
216	Prolonged energy harvesting for ingestible devices. <i>Nature Biomedical Engineering</i> , 2017 , 1,	19	98
215	Magnetic modulation of release of macromolecules from polymers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1981 , 78, 1863-7	11.5	98
214	Genetic and hypoxic alterations of the microRNA-210-ISCU1/2 axis promote iron-sulfur deficiency and pulmonary hypertension. <i>EMBO Molecular Medicine</i> , 2015 , 7, 695-713	12	96
213	Applications of ethylene vinyl acetate copolymers (EVA) in drug delivery systems. <i>Journal of Controlled Release</i> , 2017 , 262, 284-295	11.7	95

212	Size and temperature effects on poly(lactic-co-glycolic acid) degradation and microreservoir device performance. <i>Biomaterials</i> , 2005 , 26, 2137-45	15.6	95
211	Reduction of measurement noise in a continuous glucose monitor by coating the sensor with a zwitterionic polymer. <i>Nature Biomedical Engineering</i> , 2018 , 2, 894-906	19	94
210	Synthesis of polymer-lipid nanoparticles for image-guided delivery of dual modality therapy. <i>Bioconjugate Chemistry</i> , 2013 , 24, 1429-34	6.3	93
209	Stabilization of tetanus and diphtheria toxoids against moisture-induced aggregation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1995 , 92, 11234-8	11.5	92
208	Dendrimer-Inspired Nanomaterials for the in Vivo Delivery of siRNA to Lung Vasculature. <i>Nano Letters</i> , 2015 , 15, 3008-16	11.5	90
207	Microneedles for drug delivery via the gastrointestinal tract. <i>Journal of Pharmaceutical Sciences</i> , 2015 , 104, 362-7	3.9	90
206	Reprogramming the microenvironment with tumor-selective angiotensin blockers enhances cancer immunotherapy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 10674-10680	11.5	89
205	Characterization of Mechanically Matched Hydrogel Coatings to Improve the Biocompatibility of Neural Implants. <i>Scientific Reports</i> , 2017 , 7, 1952	4.9	88
204	A luminal unfolding microneedle injector for oral delivery of macromolecules. <i>Nature Medicine</i> , 2019 , 25, 1512-1518	50.5	88
203	Research agenda. Promoting convergence in biomedical science. <i>Science</i> , 2011 , 333, 527	33.3	87
202	Ly6Clo monocytes drive immunosuppression and confer resistance to anti-VEGFR2 cancer therapy. <i>Journal of Clinical Investigation</i> , 2017 , 127, 3039-3051	15.9	87
201	Progress in the tissue engineering and stem cell industry "are we there yet?". <i>Tissue Engineering - Part B: Reviews</i> , 2012 , 18, 155-66	7.9	86
200	Ingestible electronics for diagnostics and therapy. <i>Nature Reviews Materials</i> , 2019 , 4, 83-98	73.3	85
199	Coated alginate microspheres: Factors influencing the controlled delivery of macromolecules. <i>Journal of Applied Polymer Science</i> , 1991 , 43, 2123-2135	2.9	83
198	Combinatorial Material Mechanics: High-Throughput Polymer Synthesis and Nanomechanical Screening. <i>Advanced Materials</i> , 2005 , 17, 2599-2604	24	82
197	Nanoparticles for Immune Cytokine TRAIL-Based Cancer Therapy. <i>ACS Nano</i> , 2018 , 12, 912-931	16.7	81
196	Nanoparticles with photoinduced precipitation for the extraction of pollutants from water and soil. <i>Nature Communications</i> , 2015 , 6, 7765	17.4	79
195	Live-cell protein labelling with nanometre precision by cell squeezing. <i>Nature Communications</i> , 2016 , 7, 10372	17.4	77

194	Temporal study of the activity of matrix metalloproteinases and their endogenous inhibitors during wound healing 1996 , 60, 379-386		77
193	The development of bioresorbable composite polymeric implants with high mechanical strength. <i>Nature Materials</i> , 2018 , 17, 96-103	27	76
192	Multiplexed RNAi therapy against brain tumor-initiating cells via lipopolymeric nanoparticle infusion delays glioblastoma progression. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E6147-E6156	11.5	75
191	Triggerable tough hydrogels for gastric resident dosage forms. <i>Nature Communications</i> , 2017 , 8, 124	17.4	74
190	Repeatable and adjustable on-demand sciatic nerve block with phototriggerable liposomes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 15719-24	11.5	74
189	Design and Synthesis of Waterborne Polyurethanes. <i>Advanced Materials</i> , 2018 , 30, e1706237	24	73
188	Glucose-responsive insulin by molecular and physical design. <i>Nature Chemistry</i> , 2017 , 9, 937-943	17.6	72
187	Discovery of novel materials with broad resistance to bacterial attachment using combinatorial polymer microarrays. <i>Advanced Materials</i> , 2013 , 25, 2542-7	24	72
186	Soft Lithographic Patterning of Hyaluronic Acid on Hydrophilic Substrates Using Molding and Printing. <i>Advanced Materials</i> , 2004 , 16, 584-588	24	72
185	Photothermally targeted thermosensitive polymer-masked nanoparticles. <i>Nano Letters</i> , 2014 , 14, 3697-7015	11.5	71
184	Exhaled aerosol increases with COVID-19 infection, age, and obesity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	70
183	Exploiting Electrostatic Interactions in Polymer Nanoparticle Hydrogels. <i>ACS Macro Letters</i> , 2015 , 4, 848-852	6.6	68
182	High Throughput Surface Characterisation of a Combinatorial Material Library. <i>Advanced Materials</i> , 2007 , 19, 2486-2491	24	67
181	Implantable controlled release systems 1983 , 21, 35-51		67
180	Nonendocytic delivery of functional engineered nanoparticles into the cytoplasm of live cells using a novel, high-throughput microfluidic device. <i>Nano Letters</i> , 2012 , 12, 6322-7	11.5	66
179	Ultrasound-mediated gastrointestinal drug delivery. <i>Science Translational Medicine</i> , 2015 , 7, 310ra168	17.5	64
178	Mapping the Interactions among Biomaterials, Adsorbed Proteins, and Human Embryonic Stem Cells. <i>Advanced Materials</i> , 2009 , 21, 2781-2786	24	63
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