

Eric A Appel

List of Publications by Year in Descending Order

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Version: 2024-04-10

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

103 papers	6,891 citations	36 h-index	82 g-index
122 ext. papers	8,444 ext. citations	12.5 avg, IF	6.27 L-index

#	Paper	IF	Citations
103	Real-time monitoring of drug pharmacokinetics within tumor tissue in live animals.. <i>Science Advances</i> , 2022 , 8, eabk2901	14.3	6
102	PNP Hydrogel Prevents Formation of Symbplephara in Mice After Ocular Alkali Injury.. <i>Translational Vision Science and Technology</i> , 2022 , 11, 31	3.3	
101	The living interface between synthetic biology and biomaterial design.. <i>Nature Materials</i> , 2022 , 21, 390-397		4
100	Combinatorial Polyacrylamide Hydrogels for Preventing Biofouling on Implantable Biosensors.. <i>Advanced Materials</i> , 2022 , e2109764	24	5
99	Delivery of CAR-T cells in a transient injectable stimulatory hydrogel niche improves treatment of solid tumors.. <i>Science Advances</i> , 2022 , 8, eabn8264	14.3	4
98	Hydrogel-Based Slow Release of a Receptor-Binding Domain Subunit Vaccine Elicits Neutralizing Antibody Responses Against SARS-CoV-2. <i>Advanced Materials</i> , 2021 , e2104362	24	6
97	Gelation and yielding behavior of polymernanoparticle hydrogels. <i>Journal of Polymer Science</i> , 2021 , 59, 2854	2.4	6
96	Self-Assembled, Dilution-Responsive Hydrogels for Enhanced Thermal Stability of Insulin Biopharmaceuticals. <i>ACS Biomaterials Science and Engineering</i> , 2021 , 7, 4221-4229	5.5	11
95	miR-106a-363 cluster in extracellular vesicles promotes endogenous myocardial repair via Notch3 pathway in ischemic heart injury. <i>Basic Research in Cardiology</i> , 2021 , 116, 19	11.8	12
94	Hydrogel-based slow release of a receptor-binding domain subunit vaccine elicits neutralizing antibody responses against SARS-CoV-2 2021 ,		2
93	Full closed loop open-source algorithm performance comparison in pigs with diabetes. <i>Clinical and Translational Medicine</i> , 2021 , 11, e387	5.7	6
92	Modulation of injectable hydrogel properties for slow co-delivery of influenza subunit vaccine components enhance the potency of humoral immunity. <i>Journal of Biomedical Materials Research - Part A</i> , 2021 , 109, 2173-2186	5.4	5
91	Translational Applications of Hydrogels. <i>Chemical Reviews</i> , 2021 , 121, 11385-11457	68.1	87
90	Engineering Insulin Cold Chain Resilience to Improve Global Access. <i>Biomacromolecules</i> , 2021 , 22, 3386-3395		3
89	Highly Branched Polydimethylacrylamide Copolymers as Functional Biomaterials. <i>Biomacromolecules</i> , 2021 , 22, 86-94	6.9	5
88	A Quantitative Description for Designing the Extrudability of Shear-Thinning Physical Hydrogels. <i>Macromolecular Bioscience</i> , 2021 , 21, e2000295	5.5	25
87	A fluorescence sandwich immunoassay for the real-time continuous detection of glucose and insulin in live animals. <i>Nature Biomedical Engineering</i> , 2021 , 5, 53-63	19	15

86	Prolonged Codelivery of Hemagglutinin and a TLR7/8 Agonist in a Supramolecular Polymer-Nanoparticle Hydrogel Enhances Potency and Breadth of Influenza Vaccination. <i>ACS Biomaterials Science and Engineering</i> , 2021 , 7, 1889-1899	5.5	7
85	Engineering biopharmaceutical formulations to improve diabetes management. <i>Science Translational Medicine</i> , 2021 , 13,	17.5	4
84	More than a fertilizer: wastewater-derived struvite as a high value, sustainable fire retardant. <i>Green Chemistry</i> , 2021 , 23, 4510-4523	10	5
83	Seasonal Impact of Phosphate-Based Fire Retardants on Soil Chemistry Following the Prophylactic Treatment of Vegetation. <i>Environmental Science & Technology</i> , 2021 , 55, 2316-2323	10.3	2
82	Injectable Supramolecular Polymer-Nanoparticle Hydrogels for Cell and Drug Delivery Applications. <i>Journal of Visualized Experiments</i> , 2021 ,	1.6	5
81	Physical networks from entropy-driven non-covalent interactions. <i>Nature Communications</i> , 2021 , 12, 746	17.4	13
80	Enhanced Humoral Immune Response by High Density TLR Agonist Presentation on Hyperbranched Polymers. <i>Advanced Therapeutics</i> , 2021 , 4, 2000081	4.9	1
79	Affinity-Directed Dynamics of Host-Guest Motifs for Pharmacokinetic Modulation Supramolecular PEGylation. <i>Biomacromolecules</i> , 2021 , 22, 3565-3573	6.9	2
78	Consistent tumorigenesis with self-assembled hydrogels enables high-powered murine cancer studies. <i>Communications Biology</i> , 2021 , 4, 985	6.7	0
77	Ultra-Fast Insulin-Pramlintide Co-Formulation for Improved Glucose Management in Diabetic Rats. <i>Advanced Science</i> , 2021 , 8, e2101575	13.6	2
76	Designing spatial and temporal control of vaccine responses. <i>Nature Reviews Materials</i> , 2021 , 1-22	73.3	16
75	Isthmin-1 is an adipokine that promotes glucose uptake and improves glucose tolerance and hepatic steatosis. <i>Cell Metabolism</i> , 2021 , 33, 1836-1852.e11	24.6	5
74	Controlling properties of thermogels by tuning critical solution behaviour of ternary copolymers. <i>Polymer Chemistry</i> , 2021 , 12, 1918-1923	4.9	6
73	Dynamic Hydrogels for Prevention of Post-Operative Peritoneal Adhesions. <i>Advanced Therapeutics</i> , 2021 , 4, 2000242	4.9	4
72	MRBLES 2.0: High-throughput generation of chemically functionalized spectrally and magnetically encoded hydrogel beads using a simple single-layer microfluidic device. <i>Microsystems and Nanoengineering</i> , 2020 , 6, 109	7.7	6
71	Reply to Sant� et al.: Viscoelastic retardant fluids enable treatments to prevent wildfire on landscapes subject to routine ignitions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 5105-5106	11.5	
70	A co-formulation of supramolecularly stabilized insulin and pramlintide enhances mealtime glucagon suppression in diabetic pigs. <i>Nature Biomedical Engineering</i> , 2020 , 4, 507-517	19	28
69	Site-selective modification of proteins using cucurbit[7]uril as supramolecular protection for N-terminal aromatic amino acids. <i>Organic and Biomolecular Chemistry</i> , 2020 ,	3.9	4

68	An ultrafast insulin formulation enabled by high-throughput screening of engineered polymeric excipients. <i>Science Translational Medicine</i> , 2020 , 12,	17.5	18
67	Stable Monomeric Insulin Formulations Enabled by Supramolecular PEGylation of Insulin Analogues. <i>Advanced Therapeutics</i> , 2020 , 3, 1900094	4.9	14
66	Multi-phase catheter-injectable hydrogel enables dual-stage protein-engineered cytokine release to mitigate adverse left ventricular remodeling following myocardial infarction in a small animal model and a large animal model. <i>Cytokine</i> , 2020 , 127, 154974	4	18
65	A human mission to Mars: Predicting the bone mineral density loss of astronauts. <i>PLoS ONE</i> , 2020 , 15, e0226434	3.7	9
64	Structural considerations for physical hydrogels based on polymer-nanoparticle interactions. <i>Molecular Systems Design and Engineering</i> , 2020 , 5, 401-407	4.6	12
63	Injectable supramolecular polymer-nanoparticle hydrogels enhance human mesenchymal stem cell delivery. <i>Bioengineering and Translational Medicine</i> , 2020 , 5, e10147	14.8	31
62	A Nanoparticle Platform for Improved Potency, Stability, and Adjuvanticity of Poly(I:C). <i>Advanced Therapeutics</i> , 2020 , 3, 1900174	4.9	7
61	Engineered biomaterials for heart disease. <i>Current Opinion in Biotechnology</i> , 2020 , 66, 246-254	11.4	9
60	Towards brain-tissue-like biomaterials. <i>Nature Communications</i> , 2020 , 11, 3423	17.4	28
59	The COVID-19 lockdowns: a window into the Earth System. <i>Nature Reviews Earth & Environment</i> , 2020 , 1, 470-481	30.2	90
58	Lipid Nanodiscs via Ordered Copolymers. <i>Chem</i> , 2020 , 6, 2782-2795	16.2	15
57	Injectable Hydrogels for Sustained Codelivery of Subunit Vaccines Enhance Humoral Immunity. <i>ACS Central Science</i> , 2020 , 6, 1800-1812	16.8	38
56	Nanoparticles Presenting Potent TLR7/8 Agonists Enhance Anti-PD-L1 Immunotherapy in Cancer Treatment. <i>Biomacromolecules</i> , 2020 , 21, 3704-3712	6.9	21
55	A Multiscale Model for Solute Diffusion in Hydrogels. <i>Macromolecules</i> , 2019 , 52, 6889-6897	5.5	65
54	Wildfire prevention through prophylactic treatment of high-risk landscapes using viscoelastic retardant fluids. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 20820-20827	11.5	14
53	A Biocompatible Therapeutic Catheter-Deliverable Hydrogel for In Situ Tissue Engineering. <i>Advanced Healthcare Materials</i> , 2019 , 8, e1801147	10.1	28
52	Block copolymer composition drives function of self-assembled nanoparticles for delivery of small-molecule cargo. <i>Journal of Polymer Science Part A</i> , 2019 , 57, 1322-1332	2.5	13
51	Use of a supramolecular polymeric hydrogel as an effective post-operative pericardial adhesion barrier. <i>Nature Biomedical Engineering</i> , 2019 , 3, 611-620	19	81

50	Injectable Polymer-Nanoparticle Hydrogels for Local Immune Cell Recruitment. <i>Biomacromolecules</i> , 2019 , 20, 4430-4436	6.9	33
49	Universal Scaling Behavior during Network Formation in Controlled Radical Polymerizations. <i>Macromolecules</i> , 2019 , 52, 9456-9465	5.5	7
48	Non-Newtonian Polymer-Nanoparticle Hydrogels Enhance Cell Viability during Injection. <i>Macromolecular Bioscience</i> , 2019 , 19, e1800275	5.5	35
47	Self-assembled biomaterials using host-guest interactions 2018 , 205-231		3
46	Single-Chain Polymeric Nanocarriers: A Platform for Determining Structure-Function Correlations in the Delivery of Molecular Cargo. <i>Biomacromolecules</i> , 2017 , 18, 1434-1439	6.9	13
45	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
44	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
43	Engineering the Mechanical Properties of Polymer Networks with Precise Doping of Primary Defects. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 42217-42224	9.5	19
42	Decoupled Associative and Dissociative Processes in Strong yet Highly Dynamic Host-Guest Complexes. <i>Journal of the American Chemical Society</i> , 2017 , 139, 12985-12993	16.4	43
41	Distinguishing relaxation dynamics in transiently crosslinked polymeric networks. <i>Polymer Chemistry</i> , 2017 , 8, 5336-5343	4.9	35
40	Supramolecular polymeric biomaterials. <i>Biomaterials Science</i> , 2017 , 6, 10-37	7.4	97
39	Bioinspired Alkenyl Amino Alcohol Ionizable Lipid Materials for Highly Potent In Vivo mRNA Delivery. <i>Advanced Materials</i> , 2016 , 28, 2939-43	24	125
38	Supramolecular biomaterials. <i>Nature Materials</i> , 2016 , 15, 13-26	27	971
37	Injectable Self-Healing Glucose-Responsive Hydrogels with pH-Regulated Mechanical Properties. <i>Advanced Materials</i> , 2016 , 28, 86-91	24	340
36	Supramolecular PEGylation of biopharmaceuticals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 14189-14194	11.5	121
35	Scalable manufacturing of biomimetic moldable hydrogels for industrial applications. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 14255-14260	11.5	58
34	Injectable and Glucose-Responsive Hydrogels Based on Boronic Acid-Glucose Complexation. <i>Langmuir</i> , 2016 , 32, 8743-7	4	93
33	A facile method for the stain-free visualization of hierarchical structures with electron microscopy. <i>Journal of Polymer Science Part A</i> , 2015 , 53, 842-845	2.5	1

32	Exploiting Electrostatic Interactions in Polymer Nanoparticle Hydrogels. <i>ACS Macro Letters</i> , 2015 , 4, 848-852	6.6	68
31	Water soluble, biodegradable amphiphilic polymeric nanoparticles and the molecular environment of hydrophobic encapsulates: Consistency between simulation and experiment. <i>Polymer</i> , 2015 , 79, 255-261	3.9	10
30	Formation of Cucurbit[8]uril-Based Supramolecular Hydrogel Beads Using Droplet-Based Microfluidics. <i>Biomacromolecules</i> , 2015 , 16, 2743-9	6.9	29
29	Non-cell-adhesive substrates for printing of arrayed biomaterials. <i>Advanced Healthcare Materials</i> , 2015 , 4, 501-5	10.1	5
28	Synthesis of Conducting Polymer/Metal Nanoparticle Hybrids Exploiting RAFT Polymerization. <i>ACS Macro Letters</i> , 2015 , 4, 255-259	6.6	20
27	Self-assembled hydrogels utilizing polymer-nanoparticle interactions. <i>Nature Communications</i> , 2015 , 6, 6295	17.4	341
26	Gluing gels: A nanoparticle solution. <i>Nature Materials</i> , 2014 , 13, 231-2	27	11
25	Healable, Stable and Stiff Hydrogels: Combining Conflicting Properties Using Dynamic and Selective Three-Component Recognition with Reinforcing Cellulose Nanorods. <i>Advanced Functional Materials</i> , 2014 , 24, 2706-2713	15.6	197
24	Activation energies control the macroscopic properties of physically cross-linked materials. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 10038-43	16.4	84
23	The control of cargo release from physically crosslinked hydrogels by crosslink dynamics. <i>Biomaterials</i> , 2014 , 35, 9897-9903	15.6	68
22	Activation Energies Control the Macroscopic Properties of Physically Cross-Linked Materials. <i>Angewandte Chemie</i> , 2014 , 126, 10202-10207	3.6	13
21	Dynamically crosslinked materials via recognition of amino acids by cucurbit[8]uril. <i>Journal of Materials Chemistry B</i> , 2013 , 1, 2904-2910	7.3	48
20	Sustained release of proteins from high water content supramolecular polymer hydrogels. <i>Biomaterials</i> , 2012 , 33, 4646-52	15.6	128
19	Toward biodegradable nanogel star polymers via organocatalytic ROP. <i>Chemical Communications</i> , 2012 , 48, 6163-5	5.8	37
18	Supramolecular polymeric hydrogels. <i>Chemical Society Reviews</i> , 2012 , 41, 6195-214	58.5	836
17	Metastable single-chain polymer nanoparticles prepared by dynamic cross-linking with nor-seco-cucurbit[10]uril. <i>Chemical Science</i> , 2012 , 3, 2278	9.4	58
16	Triply triggered doxorubicin release from supramolecular nanocontainers. <i>Biomacromolecules</i> , 2012 , 13, 84-91	6.9	159
15	Enhanced stability and activity of temozolomide in primary glioblastoma multiforme cells with cucurbit[n]uril. <i>Chemical Communications</i> , 2012 , 48, 9843-5	5.8	71

14	Ultrahigh-water-content supramolecular hydrogels exhibiting multistimuli responsiveness. <i>Journal of the American Chemical Society</i> , 2012 , 134, 11767-73	16.4	371
13	Triggered insulin release studies of triply responsive supramolecular micelles. <i>Polymer Chemistry</i> , 2012 , 3, 3180	4.9	72
12	High molecular weight polyacrylamides by atom transfer radical polymerization: Enabling advancements in water-based applications. <i>Journal of Polymer Science Part A</i> , 2012 , 50, 181-186	2.5	44
11	Formation of Single-Chain Polymer Nanoparticles in Water through Host-Guest Interactions. <i>Angewandte Chemie</i> , 2012 , 124, 4261-4265	3.6	12
10	Formation of single-chain polymer nanoparticles in water through host-guest interactions. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 4185-9	16.4	133
9	Postpolymerization Modification of Hydroxyl-Functionalized Polymers with Isocyanates. <i>Macromolecules</i> , 2011 , 44, 4828-4835	5.5	60
8	Supramolecular gold nanoparticle-polymer composites formed in water with cucurbit[8]uril. <i>Chemical Communications</i> , 2011 , 47, 164-6	5.8	82
7	Supramolecular cross-linked networks via host-guest complexation with cucurbit[8]uril. <i>Journal of the American Chemical Society</i> , 2010 , 132, 14251-60	16.4	483
6	Hierarchical supermolecular structures for sustained drug release. <i>Small</i> , 2009 , 5, 1504-7	11	45
5	Simple approach to stabilized micelles employing miktoarm terpolymers and stereocomplexes with application in paclitaxel delivery. <i>Biomacromolecules</i> , 2009 , 10, 1460-8	6.9	104
4	Injectable hydrogels for sustained co-delivery of subunit vaccines enhance humoral immunity		1
3	Combinatorial Polyacrylamide Hydrogels for Preventing Biofouling on Implantable Biosensors		6
2	MRBLES 2.0: High-throughput generation of chemically functionalized spectrally and magnetically-encoded hydrogel beads using a simple single-layer microfluidic device		1
1	Consistent Tumorigenesis with Self-Assembled Hydrogels Enables High-powered Murine Cancer Studies		1