

Daniel J Siegwart

List of Publications by Year in descending order

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Version: 2024-02-01

62
papers

8,406
citations

81900

39
h-index

128289

60
g-index

65
all docs

65
docs citations

65
times ranked

9500
citing authors

#	ARTICLE	IF	CITATIONS
1	The development of microgels/nanogels for drug delivery applications. <i>Progress in Polymer Science</i> , 2008, 33, 448-477.	24.7	1,419
2	Selective organ targeting (SORT) nanoparticles for tissue-specific mRNA delivery and CRISPR-Cas gene editing. <i>Nature Nanotechnology</i> , 2020, 15, 313-320.	31.5	932
3	ATRP in the design of functional materials for biomedical applications. <i>Progress in Polymer Science</i> , 2012, 37, 18-37.	24.7	506
4	Biodegradable Nanogels Prepared by Atom Transfer Radical Polymerization as Potential Drug Delivery Carriers: Synthesis, Biodegradation, in Vitro Release, and Bioconjugation. <i>Journal of the American Chemical Society</i> , 2007, 129, 5939-5945.	13.7	449
5	Nonviral CRISPR/Cas Gene Editing In Vitro and In Vivo Enabled by Synthetic Nanoparticle Co-delivery of Cas9 mRNA and sgRNA. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 1059-1063.	13.8	411
6	Lipo-peptide 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, 3955-3960.	7.1	366
7	Strategies, design, and chemistry in siRNA delivery systems. <i>Advanced Drug Delivery Reviews</i> , 2019, 144, 133-147.	13.7	330
8	Systemic nanoparticle delivery of CRISPR-Cas9 ribonucleoproteins for effective tissue specific genome editing. <i>Nature Communications</i> , 2020, 11, 3232.	12.8	328
9	Gpr132 sensing of lactate mediates tumor-macrophage interplay to promote breast cancer metastasis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 580-585.	7.1	296
10	On the mechanism of tissue-specific mRNA delivery by selective organ targeting nanoparticles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	285
11	Membrane-destabilizing ionizable phospholipids for organ-selective mRNA delivery and CRISPR-Cas gene editing. <i>Nature Materials</i> , 2021, 20, 701-710.	27.5	281
12	Combinatorial synthesis of chemically diverse core-shell nanoparticles for intracellular delivery. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 12996-13001.	7.1	178
13	Synthesis and Biodegradation of Nanogels as Delivery Carriers for Carbohydrate Drugs. <i>Biomacromolecules</i> , 2007, 8, 3326-3331.	5.4	156
14	Polystyrene with Designed Molecular Weight Distribution by Atom Transfer Radical Coupling. <i>Macromolecules</i> , 2004, 37, 3120-3127.	4.8	152
15	Dendrimer-Based Lipid Nanoparticles Deliver Therapeutic FAH mRNA to Normalize Liver Function and Extend Survival in a Mouse Model of Hepatorenal Tyrosinemia Type I. <i>Advanced Materials</i> , 2018, 30, e1805308.	21.0	136
16	Modular degradable dendrimers enable small RNAs to extend survival in an aggressive liver cancer model. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 520-525.	7.1	125
17	The Polyploid State Plays a Tumor-Suppressive Role in the Liver. <i>Developmental Cell</i> , 2018, 44, 447-459.e5.	7.0	125
18	Cellular Uptake of Functional Nanogels Prepared by Inverse Miniemulsion ATRP with Encapsulated Proteins, Carbohydrates, and Gold Nanoparticles. <i>Biomacromolecules</i> , 2009, 10, 2300-2309.	5.4	92

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19	Rapid Synthesis of a Lipocationic Polyester Library via Ring-Opening Polymerization of Functional Valerolactones for Efficacious siRNA Delivery. <i>Journal of the American Chemical Society</i> , 2015, 137, 9206-9209.	13.7	88
20	Knockdown of Anillin Actin Binding Protein Blocks Cytokinesis in Hepatocytes and Reduces Liver Tumor Development in Mice Without Affecting Regeneration. <i>Gastroenterology</i> , 2018, 154, 1421-1434.	1.3	88
21	Tumor-Activated Water-Soluble Photosensitizers for Near-Infrared Photodynamic Cancer Therapy. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 16335-16343.	8.0	85
22	Systemic mRNA Delivery to the Lungs by Functional Polyester-based Carriers. <i>Biomacromolecules</i> , 2017, 18, 4307-4315.	5.4	80
23	Enhancing CRISPR/Cas gene editing through modulating cellular mechanical properties for cancer therapy. <i>Nature Nanotechnology</i> , 2022, 17, 777-787.	31.5	80
24	Adjuvant effect of the novel TLR1/TLR2 agonist Diprovocim synergizes with anti-PD-L1 to eliminate melanoma in mice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E8698-E8706.	7.1	77
25	Delivery of Tissue-Targeted Scalpels: Opportunities and Challenges for <i>In Vivo</i> CRISPR/Cas-Based Genome Editing. <i>ACS Nano</i> , 2020, 14, 9243-9262.	14.6	69
26	Functional polyesters enable selective siRNA delivery to lung cancer over matched normal cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, E5702-E5710.	7.1	67
27	Zwitterionic Phospholipidation of Cationic Polymers Facilitates Systemic mRNA Delivery to Spleen and Lymph Nodes. <i>Journal of the American Chemical Society</i> , 2021, 143, 21321-21330.	13.7	66
28	High-Contrast Fluorescence Detection of Metastatic Breast Cancer Including Bone and Liver Micrometastases via Size-Controlled pH-Activatable Water-Soluble Probes. <i>Advanced Materials</i> , 2017, 29, 1700131.	21.0	65
29	Synthesis, characterization, and <i>in vitro</i> cell culture viability of degradable poly(<i>N</i> -isopropylacrylamide-co- <i>N</i> -ethylmaleimide)- <i>N</i> -methyl-2,3-dioxepane)-based polymers and crosslinked gels. <i>Journal of Biomedical Materials Research - Part A</i> , 2008, 87A, 345-358.	4.5	62
30	Biotin-, Pyrene-, and GRGDS-Functionalized Polymers and Nanogels via ATRP and End Group Modification. <i>Macromolecular Chemistry and Physics</i> , 2008, 209, 2179-2193.	2.2	60
31	Aerosol delivery of stabilized polyester-siRNA nanoparticles to silence gene expression in orthotopic lung tumors. <i>Biomaterials</i> , 2017, 118, 84-93.	11.4	60
32	A Systematic Study of Unsaturation in Lipid Nanoparticles Leads to Improved mRNA Transfection <i>In Vivo</i> . <i>Angewandte Chemie - International Edition</i> , 2021, 60, 5848-5853.	13.8	60
33	Theranostic dendrimer-based lipid nanoparticles containing PEGylated BODIPY dyes for tumor imaging and systemic mRNA delivery <i>in vivo</i> . <i>Journal of Controlled Release</i> , 2020, 325, 198-205.	9.9	59
34	Optimization of phospholipid chemistry for improved lipid nanoparticle (LNP) delivery of messenger RNA (mRNA). <i>Biomaterials Science</i> , 2022, 10, 549-559.	5.4	56
35	Activatable Water-Soluble Probes Enhance Tumor Imaging by Responding to Dysregulated pH and Exhibiting High Tumor-to-Liver Fluorescence Emission Contrast. <i>Bioconjugate Chemistry</i> , 2016, 27, 1737-1744.	3.6	53
36	Precise let-7 expression levels balance organ regeneration against tumor suppression. <i>ELife</i> , 2015, 4, e09431.	6.0	53

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37	All- <i>in-ovo</i> One Dendrimer-Based Lipid Nanoparticles Enable Precise HDR-Mediated Gene Editing <i>In Vivo</i> . <i>Advanced Materials</i> , 2021, 33, e2006619.	21.0	52
38	PEI fluorination reduces toxicity and promotes liver-targeted siRNA delivery. <i>Drug Delivery and Translational Research</i> , 2021, 11, 255-260.	5.8	46
39	Automated ARGET ATRP Accelerates Catalyst Optimization for the Synthesis of Thiol-Functionalized Polymers. <i>Macromolecules</i> , 2012, 45, 1254-1261.	4.8	42
40	Non-viral CRISPR/Cas Gene Editing <i>In Vitro</i> and <i>In Vivo</i> Enabled by Synthetic Nanoparticle Co-delivery of Cas9 mRNA and sgRNA. <i>Angewandte Chemie</i> , 2017, 129, 1079-1083.	2.0	41
41	Degradable redox-responsive disulfide-based nanogel drug carriers via dithiol oxidation polymerization. <i>Biomaterials Science</i> , 2019, 7, 607-617.	5.4	41
42	TRIM7 inhibits enterovirus replication and promotes emergence of a viral variant with increased pathogenicity. <i>Cell</i> , 2021, 184, 3410-3425.e17.	28.9	35
43	Synthesis and Characterization of Styrene/Butyl Acrylate Linear and Star Block Copolymers via Atom Transfer Radical Polymerization. <i>Macromolecular Chemistry and Physics</i> , 2006, 207, 801-811.	2.2	33
44	Tumor Imaging Based on Photon Upconversion of Pt(II) Porphyrin Rhodamine Co-modified NIR Excitable Cellulose Enhanced by Aggregation. <i>ACS Biomaterials Science and Engineering</i> , 2015, 1, 1206-1210.	5.2	32
45	Development of Cationic Quaternary Ammonium Sulfonamide Amino Lipids for Nucleic Acid Delivery. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 2302-2311.	8.0	32
46	Design of synthetic materials for intracellular delivery of RNAs: From siRNA-mediated gene silencing to CRISPR/Cas gene editing. <i>Nano Research</i> , 2018, 11, 5310-5337.	10.4	31
47	Scalable synthesis and derivation of functional polyesters bearing ene and epoxide side chains. <i>Polymer Chemistry</i> , 2014, 5, 1362-1371.	3.9	29
48	Lipid nanoparticle chemistry determines how nucleoside base modifications alter mRNA delivery. <i>Journal of Controlled Release</i> , 2022, 341, 206-214.	9.9	27
49	Lipid-Modified Aminoglycosides for mRNA Delivery to the Liver. <i>Advanced Healthcare Materials</i> , 2020, 9, e1901487.	7.6	25
50	HDAC inhibitor conjugated polymeric prodrug micelles for doxorubicin delivery. <i>Journal of Materials Chemistry B</i> , 2017, 5, 2106-2114.	5.8	18
51	Translational research to enable personalized treatment of cystic fibrosis. <i>Journal of Cystic Fibrosis</i> , 2018, 17, S46-S51.	0.7	18
52	<i>In vivo</i> CRISPR screening identifies BAZ2 chromatin remodelers as druggable regulators of mammalian liver regeneration. <i>Cell Stem Cell</i> , 2022, 29, 372-385.e8.	11.1	18
53	Hydrophobic Domain Structure of Linear-Dendritic Poly(ethylene glycol) Lipids Affects RNA Delivery of Lipid Nanoparticles. <i>Molecular Pharmaceutics</i> , 2020, 17, 1575-1585.	4.6	17
54	Biocompatible organic charge transfer complex nanoparticles based on a semi-crystalline cellulose template. <i>Chemical Communications</i> , 2015, 51, 11868-11871.	4.1	15

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55	One-pot synthesis of functional poly(amino ester sulfide)s and utility in delivering pDNA and siRNA. <i>Polymer</i> , 2015, 72, 271-280.	3.8	14
56	Intercalation-mediated nucleic acid nanoparticles for siRNA delivery. <i>Chemical Communications</i> , 2016, 52, 12155-12158.	4.1	11
57	A Systematic Study of Unsaturation in Lipid Nanoparticles Leads to Improved mRNA Transfection In Vivo. <i>Angewandte Chemie</i> , 2021, 133, 5912-5917.	2.0	11
58	Progress towards the Synthesis of Amino Polyesters via Ring-Opening Polymerization (ROP) of Functional Lactones. <i>Synlett</i> , 2016, 27, 2285-2292.	1.8	10
59	Recent advances in the targeted fluorescent probes for the detection of metastatic bone cancer. <i>Science China Chemistry</i> , 2021, 64, 1283-1296.	8.2	7
60	Disrupting off-target Cas9 activity in the liver. <i>Nature Biomedical Engineering</i> , 2022, 6, 106-107.	22.5	4
61	Next-Generation Diprovocims with Potent Human and Murine TLR1/TLR2 Agonist Activity That Activate the Innate and Adaptive Immune Response. <i>Journal of Medicinal Chemistry</i> , 2022, 65, 9230-9252.	6.4	2
62	Regulating Foreign-Body Responses: Development of Cationic Polymer Coatings to Regulate Foreign-Body Responses (<i>Adv. Mater.</i> 24/2011). <i>Advanced Materials</i> , 2011, 23, H129-H129.	21.0	0