Satoshi Uchida

List of Publications by Year
in descending order

77	2,983	117625	175258
papers	citations	34 h-index	52 g-index

80	80	80	3151
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Glycaemic control boosts glucosylated nanocarrier crossing the BBB into the brain. Nature Communications, 2017, 8, 1001.	12.8	191
2	Targeted gene delivery by polyplex micelles with crowded PEG palisade and cRGD moiety for systemic treatment of pancreatic tumors. Biomaterials, 2014, 35, 3416-3426.	11.4	121
3	Systemic delivery of messenger RNA for the treatment of pancreatic cancer using polyplex nanomicelles with a cholesterol moiety. Biomaterials, 2016, 82, 221-228.	11.4	121
4	In Vivo Messenger RNA Introduction into the Central Nervous System Using Polyplex Nanomicelle. PLoS ONE, 2013, 8, e56220.	2.5	107
5	Acidic pHâ€Responsive siRNA Conjugate for Reversible Carrier Stability and Accelerated Endosomal Escape with Reduced IFNÎ±â€Associated Immune Response. Angewandte Chemie - International Edition, 2013, 52, 6218-6221.	13.8	103
6	Messenger RNA delivery of a cartilage-anabolic transcription factor as a disease-modifying strategy for osteoarthritis treatment. Scientific Reports, 2016, 6, 18743.	3.3	99
7	Tethered PEG Crowdedness Determining Shape and Blood Circulation Profile of Polyplex Micelle Gene Carriers. Macromolecules, 2013, 46, 6585-6592.	4.8	97
8	Nanomedicine-Based Approaches for mRNA Delivery. Molecular Pharmaceutics, 2020, 17, 3654-3684.	4.6	88
9	Messenger RNA-based therapeutics for brain diseases: An animal study for augmenting clearance of beta-amyloid by intracerebral administration of neprilysin mRNA loaded in polyplex nanomicelles. Journal of Controlled Release, 2016, 235, 268-275.	9.9	82
10	Messenger RNA-based therapeutics for the treatment of apoptosis-associated diseases. Scientific Reports, 2015, 5, 15810.	3.3	80
11	Screening of mRNA Chemical Modification to Maximize Protein Expression with Reduced Immunogenicity. Pharmaceutics, 2015, 7, 137-151.	4.5	76
12	Enhanced stability and gene silencing ability of siRNA-loaded polyion complexes formulated from polyaspartamide derivatives with a repetitive array of amino groups in the side chain. Biomaterials, 2012, 33, 2770-2779.	11.4	73
13	Design concepts of polyplex micelles for <scp>in vivo</scp> therapeutic delivery of plasmid DNA and messenger RNA. Journal of Biomedical Materials Research - Part A, 2019, 107, 978-990.	4.0	72
14	Polyplex Micelles with Phenylboronate/Gluconamide Cross-Linking in the Core Exerting Promoted Gene Transfection through Spatiotemporal Responsivity to Intracellular pH and ATP Concentration. Journal of the American Chemical Society, 2017, 139, 18567-18575.	13.7	71
15	PEGylated Polyplex With Optimized PEG Shielding Enhances Gene Introduction in Lungs by Minimizing Inflammatory Responses. Molecular Therapy, 2012, 20, 1196-1203.	8.2	62
16	Optimized rod length of polyplex micelles for maximizing transfection efficiency and their performance in systemic gene therapy against stroma-rich pancreatic tumors. Biomaterials, 2014, 35, 5359-5368.	11.4	62
17	Homo-catiomer integration into PEGylated polyplex micelle from block-catiomer for systemic anti-angiogenic gene therapy for fibrotic pancreatic tumors. Biomaterials, 2012, 33, 4722-4730.	11.4	61
18	Co-encapsulation of Cas9 mRNA and guide RNA in polyplex micelles enables genome editing in mouse brain. Journal of Controlled Release, 2021, 332, 260-268.	9.9	56

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19	Polyplex micelle installing intracellular self-processing functionalities without free catiomers for safe and efficient systemic gene therapy through tumor vasculature targeting. Biomaterials, 2017, 113, 253-265.	11.4	55
20	In vivo rendezvous of small nucleic acid drugs with charge-matched block catiomers to target cancers. Nature Communications, 2019, 10, 1894.	12.8	53
21	Enhancement of Motor Function Recovery after Spinal Cord Injury in Mice by Delivery of Brain-Derived Neurotrophic Factor mRNA. Molecular Therapy - Nucleic Acids, 2019, 17, 465-476.	5.1	52
22	Precise tuning of disulphide crosslinking in mRNA polyplex micelles for optimising extracellular and intracellular nuclease tolerability. Journal of Drug Targeting, 2019, 27, 670-680.	4.4	52
23	Treatment of spinal cord injury by an advanced cell transplantation technology using brain-derived neurotrophic factor-transfected mesenchymal stem cell spheroids. Biomaterials, 2016, 109, 1-11.	11.4	50
24	Induced packaging of mRNA into polyplex micelles by regulated hybridization with a small number of cholesteryl RNA oligonucleotides directed enhanced in vivo transfection. Biomaterials, 2019, 197, 255-267.	11.4	50
25	Cell-Penetrating Peptides: Emerging Tools for mRNA Delivery. Pharmaceutics, 2022, 14, 78.	4.5	49
26	Transient stealth coating of liver sinusoidal wall by anchoring two-armed PEG for retargeting nanomedicines. Science Advances, 2020, 6, eabb8133.	10.3	44
27	Development of Biodegradable Polycation-Based Inhalable Dry Gene Powders by Spray Freeze Drying. Pharmaceutics, 2015, 7, 233-254.	4.5	43
28	Systemic Delivery of Folate-PEG siRNA Lipopolyplexes with Enhanced Intracellular Stability for In Vivo Gene Silencing in Leukemia. Bioconjugate Chemistry, 2017, 28, 2393-2409.	3.6	42
29	Combination of chondroitin sulfate and polyplex micelles from Poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 347 Td (gly gene transfection with reduced toxicity. Journal of Controlled Release, 2011, 155, 296-302.	9.9	41
30	Designing immunostimulatory double stranded messenger RNA with maintained translational activity through hybridization with poly A sequences for effective vaccination. Biomaterials, 2018, 150, 162-170.	11.4	41
31	Bundling mRNA Strands to Prepare Nanoâ€Assemblies with Enhanced Stability Towards RNase for Inâ€...Vivo Delivery. Angewandte Chemie - International Edition, 2019, 58, 11360-11363.	13.8	40
32	Enzymatically Transformable Polymersomeâ€Based Nanotherapeutics to Eliminate Minimal Relapsable Cancer. Advanced Materials, 2021, 33, e2105254.	21.0	39
33	A chemically unmodified agonistic DNA with growth factor functionality for in vivo therapeutic application. Science Advances, 2020, 6, eaay2801.	10.3	38
34	Treatment of ischemic neuronal death by introducing brain-derived neurotrophic factor mRNA using polyplex nanomicelle. Biomaterials, 2021, 270, 120681.	11.4	38
35	mRNA loading into ATP-responsive polyplex micelles with optimal density of phenylboronate ester crosslinking to balance robustness in the biological milieu and intracellular translational efficiency. Journal of Controlled Release, 2021, 330, 317-328.	9.9	37
36	An injectable spheroid system with genetic modification for cell transplantation therapy. Biomaterials, 2014, 35, 2499-2506.	11.4	36

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37	Bundling of mRNA strands inside polyion complexes improves mRNA delivery efficiency in vitro and in vivo. Biomaterials, 2020, 261, 120332.	11.4	35
38	Single-Stranded DNA-Packaged Polyplex Micelle as Adeno-Associated-Virus-Inspired Compact Vector to Systemically Target Stroma-Rich Pancreatic Cancer. ACS Nano, 2019, 13, 12732-12742.	14.6	34
39	Synthetic Polyamines to Regulate mRNA Translation through the Preservative Binding of Eukaryotic Initiation Factor 4E to the Cap Structure. Journal of the American Chemical Society, 2016, 138, 1478-1481.	13.7	33
40	Polymeric Nanocarriers with Controlled Chain Flexibility Boost mRNA Delivery In Vivo through Enhanced Structural Fastening. Advanced Healthcare Materials, 2020, 9, e2000538.	7.6	33
41	Investigation of the role of anions in hydrotalcite for quasi-solid state dye-sensitized solar cells application. Journal of Materials Chemistry A, 2013, 1, 4345.	10.3	29
42	Treatment of Bone Defects by Transplantation of Genetically Modified Mesenchymal Stem Cell Spheroids. Molecular Therapy - Methods and Clinical Development, 2018, 9, 358-366.	4.1	28
43	Treatment of Intervertebral Disk Disease by the Administration of mRNA Encoding a Cartilage-Anabolic Transcription Factor. Molecular Therapy - Nucleic Acids, 2019, 16, 162-171.	5.1	27
44	Effective mRNA Protection by Poly(<scp>l</scp>â€ornithine) Synergizes with Endosomal Escape Functionality of a Chargeâ€Conversion Polymer toward Maximizing mRNA Introduction Efficiency. Macromolecular Rapid Communications, 2022, 43, e2100754.	3.9	27
45	Intrathecal injection of a therapeutic gene-containing polyplex to treat spinal cord injury. Journal of Controlled Release, 2015, 197, 1-9.	9.9	24
46	Improved brain expression of anti-amyloid Î² scFv by complexation of mRNA including a secretion sequence with PEG-based block catiomer. Current Alzheimer Research, 2016, 13, 1-1.	1.4	24
47	Muscle-targeted hydrodynamic gene introduction of insulin-like growth factor-1 using polyplex nanomicelle to treat peripheral nerve injury. Journal of Controlled Release, 2014, 183, 27-34.	9.9	22
48	Toroidal Packaging of pDNA into Block Ionomer Micelles Exerting Promoted in Vivo Gene Expression. Biomacromolecules, 2015, 16, 2664-2671.	5.4	21
49	Guanidine-phosphate interactions stabilize polyion complex micelles based on flexible catiomers to improve mRNA delivery. European Polymer Journal, 2020, 140, 110028.	5.4	18
50	PEG-OligoRNA Hybridization of mRNA for Developing Sterically Stable Lipid Nanoparticles toward In Vivo Administration. Molecules, 2019, 24, 1303.	3.8	17
51	Multifunctional Immunoadjuvants for Use in Minimalist Nucleic Acid Vaccines. Pharmaceutics, 2021, 13, 644.	4.5	17
52	Bridging mRNA and Polycation Using RNA Oligonucleotide Derivatives Improves the Robustness of Polyplex Micelles for Efficient mRNA Delivery. Advanced Healthcare Materials, 2022, 11, e2102016.	7.6	17
53	Regulation of synaptic vesicle accumulation and axon terminal remodeling during synapse formation by distinct Ca²⁺ signaling. Journal of Neurochemistry, 2009, 111, 160-170.	3.9	14
54	Tunable nonenzymatic degradability of N-substituted polyaspartamide main chain by amine protonation and alkyl spacer length in side chains for enhanced messenger RNA transfection efficiency. Science and Technology of Advanced Materials, 2019, 20, 105-115.	6.1	13

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55	Gene transfection to spheroid culture system on micropatterned culture plate by polyplex nanomicelle: a novel platform of genetically-modified cell transplantation. Drug Delivery and Translational Research, 2012, 2, 398-405.	5.8	12
56	Prolonged engraftment of transplanted hepatocytes in the liver by transient pro-survival factor supplementation using ex vivo mRNA transfection. Journal of Controlled Release, 2018, 285, 1-11.	9.9	12
57	PEGylation of mRNA by Hybridization of Complementary PEG-RNA Oligonucleotides Stabilizes mRNA without Using Cationic Materials. Pharmaceutics, 2021, 13, 800.	4.5	11
58	A helix foldamer oligopeptide improves intracellular stability and prolongs protein expression of the delivered mRNA. Nanoscale, 2021, 13, 18941-18946.	5.6	10
59	Complete Chemical Synthesis of Minimal Messenger RNA by Efficient Chemical Capping Reaction. ACS Chemical Biology, 2022, 17, 1308-1314.	3.4	10
60	mRNA as a Tool for Gene Transfection in 3D Cell Culture for Future Regenerative Therapy. Micromachines, 2020, 11, 426.	2.9	7
61	A proton/macromolecule-sensing approach distinguishes changes in biological membrane permeability during polymer/lipid-based nucleic acid delivery. Journal of Materials Chemistry B, 2021, 9, 4298-4302.	5.8	7
62	Bioinspired Silicification of mRNA-Loaded Polyion Complexes for Macrophage-Targeted mRNA Delivery. ACS Applied Bio Materials, 2021, 4, 7790-7799.	4.6	7
63	A tadpole-shaped gene carrier with distinct phase segregation in a ternary polymeric micelle. Soft Matter, 2015, 11, 2718-2722.	2.7	5
64	Bundling mRNA Strands to Prepare Nanoâ€Assemblies with Enhanced Stability Towards RNase for Inâ€...Vivo Delivery. Angewandte Chemie, 2019, 131, 11482-11485.	2.0	5
65	A 50â€nmâ€Sized Micellar Assembly of Thermoresponsive Polymerâ€Antisense Oligonucleotide Conjugates for Enhanced Gene Knockdown in Lung Cancer by Intratracheal Administration. Advanced Therapeutics, 2020, 3, 1900123.	3.2	5
66	Microglial Immunoregulation by Apoptotic Cellular Membrane Mimetic Polymeric Particles. ACS Macro Letters, 2022, 11, 270-275.	4.8	4
67	Delivery Systems of Plasmid DNA and Messenger RNA for Advanced Therapies. Pharmaceutics, 2022, 14, 810.	4.5	4
68	Gene Transfection toward Spheroid Cells on Micropatterned Culture Plates for Genetically-modified Cell Transplantation. Journal of Visualized Experiments, 2015, , e52384.	0.3	3
69	mRNA Delivery: Polymeric Nanocarriers with Controlled Chain Flexibility Boost mRNA Delivery In Vivo through Enhanced Structural Fastening (Adv. Healthcare Mater. 16/2020). Advanced Healthcare Materials, 2020, 9, 2070054.	7.6	3
70	Development of Flexible Polycation-Based mRNA Delivery Systems for In Vivo Applications. Materials Proceedings, 2020, 4, .	0.2	2
71	491. Messenger RNA (mRNA)-Based Gene Therapy for Introducing Anti-Apoptotic Factor. Molecular Therapy, 2015, 23, S195.	8.2	1
72	593. Anti-Angiogenic Therapy for Pancreatic Cancer by Systemic Delivery of Messenger RNA Using Polyplex Nano Micelle. Molecular Therapy, 2016, 24, S234-S235.	8.2	1

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73	mRNA Structuring for Stabilizing mRNA Nanocarriers and Improving Their Delivery Efficiency. Materials Proceedings, 2020, 4, .	0.2	1
74	Intravenous injection into the lateral tail vein of a mouse. Drug Delivery System, 2019, 34, 309-311.	0.0	0
75	Mechanistic Analyses of Polymer/Lipid-Based Gene Transfection Processes through Membrane Integrity Assay Using Proton Sensing Transistor. Materials Proceedings, 2020, 4, .	0.2	0
76	Platform Technologies for Improving <i>in vivo</i> Functionalities of mRNA Therapeutics. Journal of the Society of Powder Technology, Japan, 2021, 58, 627-632.	0.1	0
77	Answering to social issues â€“ Delivery of mRNA vaccines and therapeutics. Drug Delivery System, 2022, 37, 25-34.	0.0	0