

CITATION REPORT

List of articles citing

Nanoparticle delivery of Cas9 ribonucleoprotein and donor DNA induces homology-directed DNA repair

DOI: 10.1038/s41551-017-0137-2

Nature Biomedical Engineering, 2017, 1, 889-901.

Source: <https://exaly.com/paper-pdf/66818399/citation-report.pdf>

Version: 2024-04-26

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

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

#	Paper	IF	Citations
494	Nanoparticles for CRISPR-Cas9 delivery. <i>Nature Biomedical Engineering</i> , 2017 , 1, 854-855	19	39
493	Gene therapy for children with AADC deficiency. 2017 , 1, 250-251		1
492	Recent developments in intracellular protein delivery. 2018 , 52, 25-31		44
491	Nanoparticle-Mediated Delivery towards Advancing Plant Genetic Engineering. 2018 , 36, 882-897		194
490	Non-viral delivery systems for CRISPR/Cas9-based genome editing: Challenges and opportunities. 2018 , 171, 207-218		180
489	Receptor-Mediated Delivery of CRISPR-Cas9 Endonuclease for Cell-Type-Specific Gene Editing. 2018 , 140, 6596-6603		89
488	Innovations in CRISPR technology. 2018 , 52, 95-101		14
487	Multifunctional nanoparticles for cancer immunotherapy: A groundbreaking approach for reprogramming malfunctioned tumor environment. <i>Journal of Controlled Release</i> , 2018 , 274, 24-34	11.7	89
486	Personalised genome editing - The future for corneal dystrophies. 2018 , 65, 147-165		28
485	Engineering the Delivery System for CRISPR-Based Genome Editing. 2018 , 36, 173-185		170
484	Combinatorial library of chalcogen-containing lipidoids for intracellular delivery of genome-editing proteins. 2018 , 178, 652-662		45
483	The Promise and Challenge of In Vivo Delivery for Genome Therapeutics. 2018 , 13, 376-382		40
482	ReGene: Blockchain backup of genome data and restoration of pre-engineered expressed phenotype. 2018 ,		4
481	Applications of CRISPR/Cas9 for the Treatment of Duchenne Muscular Dystrophy. 2018 , 8,		32
480	CRISPR/Cas9 for Cancer Therapy: Hopes and Challenges. 2018 , 6,		50
479	A plug and play approach for the decoration of nanoparticles with recombinant proteins. 2018 , 13, 2547-2550		2
478	Delivery of CRISPR/Cas9 by Novel Strategies for Gene Therapy. 2019 , 20, 634-643		29

477	Engineering CRISPR-Cas9 RNA-Protein Complexes for Improved Function and Delivery. 2018 , 1, 367-378		6
476	Double-Stranded Biotinylated Donor Enhances Homology-Directed Repair in Combination with Cas9 Monoavidin in Mammalian Cells. 2018 , 1, 414-430		8
475	High-throughput in vivo screen of functional mRNA delivery identifies nanoparticles for endothelial cell gene editing. 2018 , 115, E9944-E9952		103
474	Targeting of NLRP3 inflammasome with gene editing for the amelioration of inflammatory diseases. 2018 , 9, 4092		80
473	Nanoparticle-Based Delivery of CRISPR/Cas9 Genome-Editing Therapeutics. 2018 , 20, 108		48
472	A peptide delivery system sneaks CRISPR into cells. 2018 , 293, 17306-17307		8
471	Tumor targeted genome editing mediated by a multi-functional gene vector for regulating cell behaviors. <i>Journal of Controlled Release</i> , 2018 , 291, 90-98	11.7	20
470	CRISPR-delivery particles targeting nuclear receptor-interacting protein 1 () in adipose cells to enhance energy expenditure. 2018 , 293, 17291-17305		24
469	Versatile Redox-Responsive Polyplexes for the Delivery of Plasmid DNA, Messenger RNA, and CRISPR-Cas9 Genome-Editing Machinery. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 31915-31927 ^{9.5}		33
468	All-in-one adeno-associated virus delivery and genome editing by <i>Neisseria meningitidis</i> Cas9 in vivo. 2018 , 19, 137		58
467	Delivery approaches for CRISPR/Cas9 therapeutics in vivo: advances and challenges. 2018 , 15, 905-913		54
466	CRISPR-Induced Deletion with SaCas9 Restores Dystrophin Expression in Dystrophic Models In Vitro and In Vivo. <i>Molecular Therapy</i> , 2018 , 26, 2604-2616	11.7	39
465	Unraveling of Central Nervous System Disease Mechanisms Using CRISPR Genome Manipulation. 2018 , 10, 1179573518787469		6
464	Debugging the genetic code: non-viral delivery of therapeutic genome editing technologies. 2018 , 7, 24-32		6
463	Manufacturing and Delivering Genome-Editing Proteins. 2018 , 1867, 253-273		2
462	CRISPR-Cas guides the future of genetic engineering. 2018 , 361, 866-869		606
461	Delivering CRISPR: a review of the challenges and approaches. 2018 , 25, 1234-1257		452
460	Enhanced Genome Editing with Cas9 Ribonucleoprotein in Diverse Cells and Organisms. 2018 ,		22

459	Modular Protein Engineering Approach to the Functionalization of Gold Nanoparticles for Use in Clinical Diagnostics. 2018 , 1, 3590-3599		6
458	Enhanced Cytosolic Delivery and Release of CRISPR/Cas9 by Black Phosphorus Nanosheets for Genome Editing. 2018 , 130, 10425-10429		26
457	Block Copolymer Micelles in Nanomedicine Applications. 2018 , 118, 6844-6892		608
456	Enhanced Cytosolic Delivery and Release of CRISPR/Cas9 by Black Phosphorus Nanosheets for Genome Editing. 2018 , 57, 10268-10272		106
455	Nanoparticle delivery of CRISPR into the brain rescues a mouse model of fragile X syndrome from exaggerated repetitive behaviours. <i>Nature Biomedical Engineering</i> , 2018 , 2, 497-507	19	180
454	CRISPR-Cas9 therapies in experimental mouse models of cancer. 2018 , 14, 2083-2095		4
453	Personalized gene and cell therapy for Duchenne Muscular Dystrophy. 2018 , 28, 803-824		27
452	65 YEARS OF THE DOUBLE HELIX: The advancements of gene editing and potential application to hereditary cancer. 2018 , 25, T141-T158		1
451	Chitosan in Non-Viral Gene Delivery: Role of Structure, Characterization Methods, and Insights in Cancer and Rare Diseases Therapies. 2018 , 10,		55
450	Covalent linkage of the DNA repair template to the CRISPR-Cas9 nuclease enhances homology-directed repair. 2018 , 7,		88
449	Rescued from the fate of neurological disorder. <i>Nature Biomedical Engineering</i> , 2018 , 2, 469-470	19	3
448	Extension of the crRNA enhances Cpf1 gene editing in vitro and in vivo. 2018 , 9, 3313		51
447	Emerging Strategies for Genome Editing in the Brain. 2018 , 24, 822-824		1
446	Transgenic Mouse Models in Cancer Research. 2018 , 8, 268		87
445	Modular cell-internalizing aptamer nanostructure enables targeted delivery of large functional RNAs in cancer cell lines. 2018 , 9, 2283		32
444	Applications of CRISPR-Cas Enzymes in Cancer Therapeutics and Detection. 2018 , 4, 499-512		55
443	Gene Editing on Center Stage. 2018 , 34, 600-611		65
442	Genome editing by natural and engineered CRISPR-associated nucleases. 2018 , 14, 642-651		71

441 Realizing the Dream. **2018**, 1, 217-218

440 Straightforward Delivery of Linearized Double-Stranded DNA Encoding sgRNA and Donor DNA for the Generation of Single Nucleotide Variants Based on the CRISPR/Cas9 System. **2018**, 7, 1651-1659

1

439 Nanotechnology approaches to eradicating HIV reservoirs. **2019**, 138, 48-63

21

438 Intracellular delivery and biodistribution study of CRISPR/Cas9 ribonucleoprotein loaded bio-reducible lipidoid nanoparticles. *Biomaterials Science*, **2019**, 7, 596-606

7.4 49

437 CRISPR for Neuromuscular Disorders: Gene Editing and Beyond. **2019**, 34, 341-353

9

436 Application and Development of CRISPR/Cas9 Technology in Pig Research. **2019**,

3

435 Triple-Targeting Delivery of CRISPR/Cas9 To Reduce the Risk of Cardiovascular Diseases. **2019**, 131, 12534-12538

434 In situ biosynthesized gold nanoclusters inhibiting cancer development via the PI3K-AKT signaling pathway. **2019**, 7, 5336-5344

9

433 Triple-Targeting Delivery of CRISPR/Cas9 To Reduce the Risk of Cardiovascular Diseases. **2019**, 58, 12404-12408

432 Genetic reprogramming for NK cell cancer immunotherapy with CRISPR/Cas9. **2019**, 158, 63-69

26

431 Cell and Gene Therapies for Mucopolysaccharidoses: Base Editing and Therapeutic Delivery to the CNS. **2019**, 7,

5

430 CRISPR-Cas9 system: A new-fangled dawn in gene editing. **2019**, 232, 116636

62

429 Nanotechnology based CRISPR/Cas9 system delivery for genome editing: Progress and prospect. **2019**, 12, 2437-2450

24

428 Nonviral Nanoparticles for CRISPR-Based Genome Editing: Is It Just a Simple Adaption of What Have Been Developed for Nucleic Acid Delivery?. **2019**, 20, 3333-3339

12

427 A Self-Assembled Platform Based on Branched DNA for sgRNA/Cas9/Antisense Delivery. **2019**, 141, 19032-19037

426 An anionic, endosome-escaping polymer to potentiate intracellular delivery of cationic peptides, biomacromolecules, and nanoparticles. **2019**, 10, 5012

30

425 Rational Design of Nanocarriers for Intracellular Protein Delivery. **2019**, 31, e1902791

80

424 Engineered amphiphilic peptides enable delivery of proteins and CRISPR-associated nucleases to airway epithelia. **2019**, 10, 4906

44

423	Lipopeptide-Based Nanosome-Mediated Delivery of Hyperaccurate CRISPR/Cas9 Ribonucleoprotein for Gene Editing. 2019 , 15, e1903172	4
422	Gold Nanocluster-Mediated Efficient Delivery of Cas9 Protein through pH-Induced Assembly-Disassembly for Inactivation of Virus Oncogenes. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 34717-34724	9.5 41
421	In Vivo Editing of Macrophages through Systemic Delivery of CRISPR-Cas9-Ribonucleoprotein-Nanoparticle Nanoassemblies. 2019 , 2, 1900041	16
420	Gold nanoparticles in chemo-, immuno-, and combined therapy: review [Invited]. 2019 , 10, 3152-3182	30
419	Engineered materials for in vivo delivery of genome-editing machinery. 2019 , 4, 726-737	73
418	Ultrasensitive Multi-Species Detection of CRISPR-Cas9 by a Portable Centrifugal Microfluidic Platform. 2019 , 11, 559-565	15
417	Targeted homology-directed repair in blood stem and progenitor cells with CRISPR nanoformulations. 2019 , 18, 1124-1132	67
416	Fast and Efficient CRISPR/Cas9 Genome Editing In Vivo Enabled by Bioreducible Lipid and Messenger RNA Nanoparticles. 2019 , 31, e1902575	140
415	RNA delivery biomaterials for the treatment of genetic and rare diseases. 2019 , 217, 119291	23
414	Delivery of CRISPR/Cas9 for therapeutic genome editing. 2019 , 21, e3107	62
413	Tumour suppression by targeted intravenous non-viral CRISPRa using dendritic polymers. 2019 , 10, 7718-7727	25
412	Cas9 Ribonucleoprotein Complex Delivery: Methods and Applications for Neuroinflammation. 2019 , 14, 565-577	4
411	Protein Delivery into the Cell Cytosol using Non-Viral Nanocarriers. 2019 , 9, 3280-3292	55
410	Use of anti-CRISPR protein AcrIIA4 as a capture ligand for CRISPR/Cas9 detection. 2019 , 141, 111361	14
409	Polyrotaxane Nanocarriers Can Deliver CRISPR/Cas9 Plasmid to Dystrophic Muscle Cells to Successfully Edit the DMD Gene. 2019 , 2, 1900061	8
408	A boronic acid-rich dendrimer with robust and unprecedented efficiency for cytosolic protein delivery and CRISPR-Cas9 gene editing. 2019 , 5, eaaw8922	176
407	Therapeutic potential of CRISPR/Cas9 gene editing in engineered T-cell therapy. 2019 , 8, 4254-4264	41
406	Genome editing for blood disorders: state of the art and recent advances. 2019 , 3, 289-299	4

405	Therapeutic application of the CRISPR system: current issues and new prospects. 2019 , 138, 563-590		13
404	Recent trends in CRISPR-Cas system: genome, epigenome, and transcriptome editing and CRISPR delivery systems. 2019 , 41, 871-877		9
403	CRISPR/Cas System for Genome Editing: Progress and Prospects as a Therapeutic Tool. 2019 , 370, 725-735		16
402	Nanotechnology in Plant Science: To Make a Long Story Short. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019 , 7, 120	5.8	133
401	B cells engineered to express pathogen-specific antibodies protect against infection. 2019 , 4,		42
400	Delivery Aspects of CRISPR/Cas for in Vivo Genome Editing. 2019 , 52, 1555-1564		112
399	Recent advances in neuroepigenetic editing. 2019 , 59, 26-33		11
398	CRISPR/Cas9 Delivery Mediated with Hydroxyl-Rich Nanosystems for Gene Editing in Aorta. 2019 , 6, 1900386		14
397	Concepts of nanoparticle cellular uptake, intracellular trafficking, and kinetics in nanomedicine. 2019 , 143, 68-96		244
396	Genome Editing for Duchenne Muscular Dystrophy. 2019 , 383-403		1
395	Evaluating and Enhancing Target Specificity of Gene-Editing Nucleases and Deaminases. 2019 , 88, 191-220		69
394	Chitosan for gene delivery: Methods for improvement and applications. 2019 , 268, 25-38		72
393	Advances in CRISPR/Cas9 Technology for in Vivo Translation. 2019 , 42, 304-311		3
392	CRISPR-Cas: Converting A Bacterial Defence Mechanism into A State-of-the-Art Genetic Manipulation Tool. 2019 , 8,		20
391	Detection of unamplified target genes via CRISPR-Cas9 immobilized on a graphene field-effect transistor. <i>Nature Biomedical Engineering</i> , 2019 , 3, 427-437	19	236
390	Cytosolic delivery of CRISPR/Cas9 ribonucleoproteins for genome editing using chitosan-coated red fluorescent protein. 2019 , 55, 4707-4710		35
389	Natural Polyphenols Augment Cytosolic Protein Delivery by a Functional Polymer. <i>Chemistry of Materials</i> , 2019 , 31, 1956-1965	9.6	56
388	Delivering the Messenger: Advances in Technologies for Therapeutic mRNA Delivery. <i>Molecular Therapy</i> , 2019 , 27, 710-728	11.7	354

387	Nonviral Gene Therapy: Design and Application of Inorganic Nanoplexes. 2019 , 365-390			1
386	CRISPR-mediated gene editing for the surgeon scientist. 2019 , 166, 129-137			4
385	Targeted Therapeutic Genome Engineering: Opportunities and Bottlenecks in Medical Translation. 2019 , 1-34			
384	Tunable nonenzymatic degradability of α -substituted polyaspartamide main chain by amine protonation and alkyl spacer length in side chains for enhanced messenger RNA transfection efficiency. 2019 , 20, 105-115			9
383	CRISPR-cas gene-editing as plausible treatment of neuromuscular and nucleotide-repeat-expansion diseases: A systematic review. 2019 , 14, e0212198			19
382	Biomaterials as vectors for the delivery of CRISPR-Cas9. <i>Biomaterials Science</i> , 2019 , 7, 1240-1261	7.4		52
381	Generation of CRISPR-Cas9 Complexes with Covalently Bound Repair Templates for Genome Editing in Mammalian Cells. 2019 , 9,			8
380	Application of nanoparticle-based siRNA and CRISPR/Cas9 delivery systems in gene-targeted therapy. 2019 , 14, 511-514			10
379	Synthetic Vehicles for Encapsulation and Delivery of CRISPR/Cas9 Gene Editing Machinery. 2019 , 2, 1800085			15
378	Systems of Delivery of CRISPR/Cas9 Ribonucleoprotein Complexes for Genome Editing. 2019 , 45, 431-437			7
377	Delivery of gene therapy to resting immune cells for an HIV cure. 2019 , 14, 129-136			4
376	Carboxylated branched poly(L-amino ester) nanoparticles enable robust cytosolic protein delivery and CRISPR-Cas9 gene editing. 2019 , 5, eaay3255			68
375	Non-viral delivery of CRISPR/Cas9 complex using CRISPR-GPS nanocomplexes. 2019 , 11, 21317-21323			24
374	Synthetic switch to minimize CRISPR off-target effects by self-restricting Cas9 transcription and translation. 2019 , 47, e13			39
373	The Endosomal Escape of Nanoparticles: Toward More Efficient Cellular Delivery. <i>Bioconjugate Chemistry</i> , 2019 , 30, 263-272	6.3		205
372	Material solutions for delivery of CRISPR/Cas-based genome editing tools: Current status and future outlook. 2019 , 26, 40-66			58
371	Multistage Delivery Nanoparticle Facilitates Efficient CRISPR/dCas9 Activation and Tumor Growth Suppression In Vivo. 2019 , 6, 1801423			78
370	CRISPR Correction of Duchenne Muscular Dystrophy. 2019 , 70, 239-255			78

369	New Technologies To Enhance In Vivo Reprogramming for Regenerative Medicine. 2019 , 37, 604-617	15
368	Nanotechnology-Based Approaches for Combating Tuberculosis: A Review. 2019 , 3, 130-139	1
367	Non-Viral Delivery To Enable Genome Editing. 2019 , 37, 281-293	62
366	CRISPR/Cas9 for cancer research and therapy. 2019 , 55, 106-119	112
365	Cationic Polymer-Mediated CRISPR/Cas9 Plasmid Delivery for Genome Editing. 2019 , 40, e1800068	46
364	Genome editing in animals: an overview. 2020 , 75-104	1
363	Applying switchable Cas9 variants to in vivo gene editing for therapeutic applications. 2020 , 36, 17-29	6
362	Overcoming multidrug resistance in cancer: Recent progress in nanotechnology and new horizons. 2020 , 72, 855-871	42
361	Applications of genome editing technology in the targeted therapy of human diseases: mechanisms, advances and prospects. 2020 , 5, 1	579
360	Sharpening the Molecular Scissors: Advances in Gene-Editing Technology. 2020 , 23, 100789	58
359	Lipofection-mediated genome editing using DNA-free delivery of the Cas9/gRNA ribonucleoprotein into plant cells. 2020 , 39, 245-257	35
358	In situ self-assembling Au-DNA complexes for targeted cancer bioimaging and inhibition. 2020 , 117, 308-316	29
357	A neuroscientist's guide to transgenic mice and other genetic tools. 2020 , 108, 732-748	29
356	Strategies for the CRISPR-Based Therapeutics. 2020 , 41, 55-65	28
355	Epigenome editing by CRISPR/Cas9 in clinical settings: possibilities and challenges. 2020 , 19, 215-228	3
354	Strategies for nonviral nanoparticle-based delivery of CRISPR/Cas9 therapeutics. 2020 , 12, e1609	47
353	Base editing: advances and therapeutic opportunities. 2020 , 19, 839-859	60
352	Polymeric micelles for the delivery of poorly soluble drugs: From nanoformulation to clinical approval. 2020 , 156, 80-118	81

351	Accessing Intracellular Targets through Nanocarrier-Mediated Cytosolic Protein Delivery. 2020 , 41, 743-754	10
350	InVivo Cancer-Based Functional Genomics. 2020 , 6, 1002-1017	3
349	Key considerations in designing CRISPR/Cas9-carrying nanoparticles for therapeutic genome editing. 2020 , 12, 21001-21014	10
348	A Versatile Nonviral Delivery System for Multiplex Gene-Editing in the Liver. 2020 , 32, e2003537	23
347	Henceforth CRISPR. <i>Nature Biomedical Engineering</i> , 2020 , 4, 1023	19 1
346	Delivery of Tissue-Targeted Scalpels: Opportunities and Challenges for CRISPR/Cas-Based Genome Editing. 2020 , 14, 9243-9262	27
345	Innovative Therapeutic and Delivery Approaches Using Nanotechnology to Correct Splicing Defects Underlying Disease. 2020 , 11, 731	6
344	Unexpected Mutations by CRISPR-Cas9 CTG Repeat Excision in Myotonic Dystrophy and Use of CRISPR Interference as an Alternative Approach. 2020 , 18, 131-144	6
343	Utilization of CRISPR/Cas9 gene editing in cellular therapies for lymphoid malignancies. 2020 , 226, 71-82	3
342	Codelivery of CRISPR-Cas9 and chlorin e6 for spatially controlled tumor-specific gene editing with synergistic drug effects. 2020 , 6, eabb4005	45
341	Genome Editing for CNS Disorders. <i>Frontiers in Neuroscience</i> , 2020 , 14, 579062	5.1 5
340	Advances of Nanoparticles for Leukemia Treatment. 2020 , 6, 6478-6489	4
339	Nanomaterials for Therapeutic RNA Delivery. 2020 , 3, 1948-1975	26
338	Efficient Polymer-Mediated Delivery of Gene-Editing Ribonucleoprotein Payloads through Combinatorial Design, Parallelized Experimentation, and Machine Learning. 2020 ,	22
337	Application of CRISPR-Cas9-Mediated Genome Editing for the Treatment of Myotonic Dystrophy Type 1. <i>Molecular Therapy</i> , 2020 , 28, 2527-2539	11.7 6
336	Modeling Non-Alcoholic Fatty Liver Disease (NAFLD) Using "Good-Fit" Genome-Editing Tools. <i>Cells</i> , 2020 , 9,	7.9 1
335	Spatial and Temporal Control of CRISPR-Cas9-Mediated Gene Editing Delivered via a Light-Triggered Liposome System. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 52433-52444	9.5 12
334	Overcoming the delivery problem for therapeutic genome editing: Current status and perspective of non-viral methods. 2020 , 258, 120282	33

333	Gold Nanoparticles for Vectorization of Nucleic Acids for Cancer Therapeutics. 2020 , 25,	8
332	Advances in oligonucleotide drug delivery. 2020 , 19, 673-694	407
331	Therapeutic Strategies for Duchenne Muscular Dystrophy: An Update. 2020 , 11,	32
330	Sequential Self-Assembly Using Tannic Acid and Phenylboronic Acid-Modified Copolymers for Potential Protein Delivery. 2020 , 21, 3826-3835	6
329	Gene Editing of Muscle Stem Cells with Adeno-Associated Viral Vectors in a Mouse Model of Duchenne Muscular Dystrophy. 2020 , 19, 320-329	17
328	Supramolecular nanosubstrate-mediated delivery system enables CRISPR-Cas9 knockin of hemoglobin beta gene for hemoglobinopathies. 2020 , 6,	14
327	Tissue-Specific Delivery of CRISPR Therapeutics: Strategies and Mechanisms of Non-Viral Vectors. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3 10
326	CRISPR-Cas, a robust gene-editing technology in the era of modern cancer immunotherapy. 2020 , 20, 456	2
325	Non-viral Gene Disruption by CRISPR/Cas9 Delivery Using Cell-permeable and Protein-stabilizing 30Kc19 Protein. 2020 , 25, 724-733	2
324	Translating CRISPR-Cas Therapeutics: Approaches and Challenges. 2020 , 3, 253-275	8
323	II Endonuclease-Mediated Plant Genome Editing by Protein Transport through a Bacterial Type III Secretion System. 2020 , 9,	1
322	Noncovalent Stabilization of Vesicular Polyion Complexes with Chemically Modified/Single-Stranded Oligonucleotides and PEG--guanidinylated Polypeptides for Intracavity Encapsulation of Effector Enzymes Aimed at Cooperative Gene Knockdown. 2020 , 21, 4365-4376	9
321	How can nanotechnology help to combat COVID-19? Opportunities and urgent need. 2020 , 18, 125	91
320	Treating Cystic Fibrosis with mRNA and CRISPR. 2020 , 31, 940-955	11
319	Delivery of Cas13a/crRNA by self-degradable black phosphorus nanosheets to specifically inhibit Mcl-1 for breast cancer therapy. 2020 , 8, 11096-11106	8
318	CRISPR-Cas Tools and Their Application in Genetic Engineering of Human Stem Cells and Organoids. 2020 , 27, 705-731	29
317	Mutation-Directed Therapeutics for Neurofibromatosis Type I. 2020 , 20, 739-753	8
316	Protein and mRNA Delivery Enabled by Cholesteryl-Based Biodegradable Lipidoid Nanoparticles. 2020 , 59, 14957-14964	23

315	A review of emerging physical transfection methods for CRISPR/Cas9-mediated gene editing. 2020 , 10, 5532-5549		45
314	CRISPR-Cas12a delivery by DNA-mediated bioresponsive editing for cholesterol regulation. 2020 , 6, eaba2983	46	
313	Protein and mRNA Delivery Enabled by Cholesteryl-Based Biodegradable Lipidoid Nanoparticles. 2020 , 132, 15067-15074		5
312	Nanomaterials for gene delivery and editing in plants: Challenges and future perspective. 2020 , 135-153		1
311	Harnessing nanoparticles for the efficient delivery of the CRISPR/Cas9 system. <i>Nano Today</i> , 2020 , 34, 100895	17.9	22
310	PH-Responsive, Cell-Penetrating, Core/Shell Magnetite/Silver Nanoparticles for the Delivery of Plasmids: Preparation, Characterization, and Preliminary Evaluation. <i>Pharmaceutics</i> , 2020 , 12,	6.4	11
309	Recent Advances in CRISPR/Cas9 Delivery Strategies. 2020 , 10,		53
308	Mapping Fluorescence Enhancement of Plasmonic Nanorod Coupled Dye Molecules. 2020 , 10,		4
307	In Vivo Genome Engineering for the Treatment of Muscular Dystrophies. 2020 , 6, 52-66		
306	Biomaterials for gene editing therapeutics. 2020 , 187-231		
305	Genome editing of mutant KRAS through supramolecular polymer-mediated delivery of Cas9 ribonucleoprotein for colorectal cancer therapy. <i>Journal of Controlled Release</i> , 2020 , 322, 236-247	11.7	45
304	Mitigating off-target effects in CRISPR/Cas9-mediated in vivo gene editing. 2020 , 98, 615-632		31
303	MicroRNA-125a-Loaded Polymeric Nanoparticles Alleviate Systemic Lupus Erythematosus by Restoring Effector/Regulatory T Cells Balance. 2020 , 14, 4414-4429		25
302	Polyethylenimine based magnetic nanoparticles mediated non-viral CRISPR/Cas9 system for genome editing. 2020 , 10, 4619		33
301	Gene editing and central nervous system regeneration. 2020 , 399-433		
300	Delivery of drugs, proteins, and nucleic acids using inorganic nanoparticles. 2020 , 156, 188-213		62
299	Sweat gland regeneration: Current strategies and future opportunities. 2020 , 255, 120201		4
298	The delivery challenge: fulfilling the promise of therapeutic genome editing. 2020 , 38, 845-855		69

297	Systemic nanoparticle delivery of CRISPR-Cas9 ribonucleoproteins for effective tissue specific genome editing. 2020 , 11, 3232		132
296	Poly(Beta-Amino Ester) Nanoparticles Enable Nonviral Delivery of CRISPR-Cas9 Plasmids for Gene Knockout and Gene Deletion. 2020 , 20, 661-672		17
295	Engineered biomaterials for in situ tissue regeneration. 2020 , 5, 686-705		157
294	Genome editing methods in animal models. 2020 , 24, 8-16		15
293	Nanotechnology Promotes Genetic and Functional Modifications of Therapeutic T Cells Against Cancer. 2020 , 7, 1903164		12
292	Lipid-Modified Aminoglycosides for mRNA Delivery to the Liver. <i>Advanced Healthcare Materials</i> , 2020 , 9, e1901487	10.1	12
291	Direct Cytosolic Delivery of Proteins through Coengineering of Proteins and Polymeric Delivery Vehicles. 2020 , 142, 4349-4355		53
290	The promise and challenge of therapeutic genome editing. 2020 , 578, 229-236		252
289	Delivery of Cas9/sgRNA Ribonucleoprotein Complexes via Hydroxystearyl Oligoamino Amides. <i>Bioconjugate Chemistry</i> , 2020 , 31, 729-742	6.3	11
288	Fabrication and characterization of PLGA nanoparticles encapsulating large CRISPR-Cas9 plasmid. 2020 , 18, 16		24
287	Genome Editing for the Understanding and Treatment of Inherited Cardiomyopathies. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	9
286	Enabling Technologies for Personalized and Precision Medicine. 2020 , 38, 497-518		71
285	Challenges associated with homologous directed repair using CRISPR-Cas9 and TALEN to edit the DMD[genetic mutation in canine Duchenne muscular dystrophy. 2020 , 15, e0228072		12
284	Cell-Type-Specific CRISPR/Cas9 Delivery by Biomimetic Metal Organic Frameworks. 2020 , 142, 1715-1720		79
283	Combining Nanomaterials and Developmental Pathways to Design New Treatments for Cardiac Regeneration: The Pulsing Heart of Advanced Therapies. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020 , 8, 323	5.8	9
282	[CRISPR-Cas9 for muscle dystrophies]. 2020 , 36, 358-366		
281	Gene delivery into cells and tissues. 2020 , 519-554		2
280	Innovative Precision Gene-Editing Tools in Personalized Cancer Medicine. 2020 , 7, 1902552		5

279	Genome Editing in a Wide Area of the Brain Using Dendrimer-Based Ternary Polyplexes of Cas9 Ribonucleoprotein. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 21386-21397	9.5	12
278	Dual Supramolecular Nanoparticle Vectors Enable CRISPR/Cas9-Mediated Knockin of Retinoschisin 1 Gene-A Potential Nonviral Therapeutic Solution for X-Linked Juvenile Retinoschisis. 2020 , 7, 1903432		17
277	Genome and base editing for genetic hearing loss. 2020 , 394, 107958		10
276	Engineered Interactions with Mesoporous Silica Facilitate Intracellular Delivery of Proteins and Gene Editing. 2020 , 20, 4014-4021		26
275	Synthetic multi-layer nanoparticles for CRISPR-Cas9 genome editing. 2021 , 168, 55-78		20
274	Harnessing the type I CRISPR-Cas systems for genome editing in prokaryotes. 2021 , 23, 542-558		12
273	Promising therapeutic approaches using CRISPR/Cas9 genome editing technology in the treatment of Duchenne muscular dystrophy. 2021 , 8, 146-156		10
272	Nanoplatfoms for mRNA Therapeutics. 2021 , 4, 2000099		22
271	Opportunities and challenges for the clinical translation of structured DNA assemblies as gene therapeutic delivery and vaccine vectors. 2021 , 13, e1657		12
270	Non-viral strategies for delivering genome editing enzymes. 2021 , 168, 99-117		20
269	Next-Generation CRISPR Technologies and Their Applications in Gene and Cell Therapy. 2021 , 39, 692-705		19
268	Revisiting gene delivery to the brain: silencing and editing. <i>Biomaterials Science</i> , 2021 , 9, 1065-1087	7.4	5
267	Delivery technologies for in utero gene therapy. 2021 , 169, 51-62		7
266	Strategies in the delivery of Cas9 ribonucleoprotein for CRISPR/Cas9 genome editing. 2021 , 11, 614-648		66
265	Lipid nanoparticles loaded with ribonucleoprotein-oligonucleotide complexes synthesized using a microfluidic device exhibit robust genome editing and hepatitis B virus inhibition. <i>Journal of Controlled Release</i> , 2021 , 330, 61-71	11.7	21
264	Binding-Mediated Formation of Ribonucleoprotein Corona for Efficient Delivery and Control of CRISPR/Cas9. 2021 , 60, 11104-11109		8
263	Recent advances in chemical modifications of guide RNA, mRNA and donor template for CRISPR-mediated genome editing. 2021 , 168, 246-258		12
262	Rational designs of in vivo CRISPR-Cas delivery systems. 2021 , 168, 3-29		58

261	Using Synthetically Engineered Guide RNAs to Enhance CRISPR Genome Editing Systems in Mammalian Cells. <i>Frontiers in Genome Editing</i> , 2020 , 2, 617910	2.5	4
260	CRISPR-Cas systems: Challenges and future prospects. 2021 , 180, 141-151		7
259	CRISPR-Cas9 based genome editing for defective gene correction in humans and other mammals. 2021 , 181, 185-229		2
258	CRISPR genome engineering for retinal diseases. 2021 , 182, 29-79		5
257	CRISPR-Cas9 in cancer therapeutics. 2021 , 181, 129-163		1
256	Approach for in vivo delivery of CRISPR/Cas system: a recent update and future prospect. 2021 , 78, 2683-2708	14	
255	Lentiviral delivery of co-packaged Cas9 mRNA and a Vegfa-targeting guide RNA prevents wet age-related macular degeneration in mice. <i>Nature Biomedical Engineering</i> , 2021 , 5, 144-156	19	26
254	Inorganic smart nanoparticles: a new tool to deliver CRISPR systems into plant cells. 2021 , 661-686		
253	Restoration of dystrophin expression and correction of Duchenne muscular dystrophy by genome editing. 2021 , 21, 1049-1061		2
252	Harnessing lipid nanoparticles for efficient CRISPR delivery. <i>Biomaterials Science</i> , 2021 , 9, 6001-6011	7.4	10
251	Selecting a Cell Engineering Methodology During Cell Therapy Product Development. 2021 , 30, 9636897211003022		
250	Challenges and Future Perspective of CRISPR/Cas Technology for Crop Improvement. 2021 , 289-306		1
249	Hematopoietic-Stem-Cell-Targeted Gene-Addition and Gene-Editing Strategies for Hemoglobinopathies. 2021 , 28, 191-208		4
248	Evolving AAV-delivered therapeutics towards ultimate cures. 2021 , 99, 593-617		9
247	CRISPR Takes the Front Seat in CART-Cell Development. 2021 , 35, 113-124		6
246	Nanomedicine for Gene Delivery and Drug Repurposing in the Treatment of Muscular Dystrophies. <i>Pharmaceutics</i> , 2021 , 13,	6.4	6
245	CRISPR/Cas technology as a promising weapon to combat viral infections. 2021 , 43, e2000315		9
244	Expanding the Potential of Mammalian Genome Engineering Targeted DNA Integration. 2021 , 10, 429-446		1

243	CRISPR-Cas9: A Preclinical and Clinical Perspective for the Treatment of Human Diseases. <i>Molecular Therapy</i> , 2021 , 29, 571-586	11.7	37
242	The CRISPR revolution and its potential impact on global health security. 2021 , 115, 80-92		4
241	Evaluating the potential of novel genetic approaches for the treatment of Duchenne muscular dystrophy. 2021 , 29, 1369-1376		11
240	Artificial Bioaugmentation of Biomacromolecules and Living Organisms for Biomedical Applications. 2021 , 15, 3900-3926		6
239	CRISPR/Cas: Advances, Limitations, and Applications for Precision Cancer Research. 2021 , 8, 649896		14
238	Binding-Mediated Formation of Ribonucleoprotein Corona for Efficient Delivery and Control of CRISPR/Cas9. 2021 , 133, 11204-11209		
237	Magnetically Navigated Protein Transduction In Vivo using Iron Oxide-Nanogel Chaperone Hybrid. <i>Advanced Healthcare Materials</i> , 2021 , 10, e2001988	10.1	1
236	CRISPR/Cas-Dependent and Nuclease-Free Therapeutic Gene Editing. 2021 , 32, 275-293		8
235	CRISPR ribonucleoprotein-mediated genetic engineering in plants. 2021 , 2, 100168		19
234	Regulation of Proteins to the Cytosol Using Delivery Systems with Engineered Polymer Architecture. 2021 , 143, 4758-4765		11
233	Nanotechnology to advance CRISPR-Cas genetic engineering of plants. 2021 , 16, 243-250		36
232	Genome Editing in iPSC-Based Neural Systems: From Disease Models to Future Therapeutic Strategies. <i>Frontiers in Genome Editing</i> , 2021 , 3, 630600	2.5	4
231	Co-encapsulation of Cas9 mRNA and guide RNA in polyplex micelles enables genome editing in mouse brain. <i>Journal of Controlled Release</i> , 2021 , 332, 260-268	11.7	22
230	New insights on CRISPR/Cas9-based therapy for breast Cancer. 2021 , 43, 15		0
229	Frontiers of CRISPR-Cas9 for Cancer Research and Therapy. 2021 , 000, 000-000		1
228	gEL DNA: A Cloning- and Polymerase Chain Reaction-Free Method for CRISPR-Based Multiplexed Genome Editing. 2021 ,		1
227	CRISPR/Cas System: A Potential Technology for the Prevention and Control of COVID-19 and Emerging Infectious Diseases. 2021 , 11, 639108		2
226	Toward the correction of muscular dystrophy by gene editing. 2021 , 118,		6

225	Nanotechnologies for Intracellular Protein Delivery: Recent Progress in Inorganic and Organic Nanocarriers. 2021 , 4, 2100009		5
224	Integrating Biomaterials and Genome Editing Approaches to Advance Biomedical Science. 2021 , 23, 493-516		3
223	Endophytic Nanotechnology: An Approach to Study Scope and Potential Applications. 2021 , 9, 613343		17
222	Delivery technologies for T cell gene editing: Applications in cancer immunotherapy. 2021 , 67, 103354		6
221	Reversible switching of primary cells between normal and malignant state by oncogenic virus KSHV and CRISPR/Cas9-mediated targeting of a major viral latent protein. 2021 , 93, 5065-5075		2
220	Nanoparticle Delivery of CRISPR/Cas9 for Genome Editing. 2021 , 12, 673286		27
219	Systemic delivery of CRISPR/Cas9 to hepatic tumors for cancer treatment using altered tropism of lentiviral vector. 2021 , 272, 120793		5
218	Phenylboronic acid modified carbon dots for improved protein delivery. 2021 , 237, 116586		1
217	All-In-One Dendrimer-Based Lipid Nanoparticles Enable Precise HDR-Mediated Gene Editing In Vivo. 2021 , 33, e2006619		16
216	Supramolecular Nanosubstrate-Mediated Delivery for CRISPR/Cas9 Gene Disruption and Deletion. 2021 , 17, e2100546		1
215	Therapeutic Genome Editing and In Vivo Delivery. 2021 , 23, 80		
214	New approaches to moderate CRISPR-Cas9 activity: Addressing issues of cellular uptake and endosomal escape. <i>Molecular Therapy</i> , 2021 ,	11.7	3
213	CRISPR/Cas9: Principle, Applications, and Delivery through Extracellular Vesicles. <i>International Journal of Molecular Sciences</i> , 2021 , 22,	6.3	14
212	Current trends and challenges in the synthesis and applications of chitosan-based nanocomposites for plants: A review. 2021 , 261, 117904		33
211	CRISPR/Cas9 in cancer: An attempt to the present trends and future prospects. 2021 ,		
210	Anti-inflammatory nanoparticles significantly improve muscle function in a murine model of advanced muscular dystrophy. 2021 , 7,		5
209	Epigenetic Editing in Prostate Cancer: Challenges and Opportunities. 2021 , 1-25		
208	Novel reporter mouse models useful for evaluating gene editing and for optimization of methods of delivering genome editing tools. 2021 , 24, 325-336		2

207	Plasmonic nanoparticles and nucleic acids hybrids for targeted gene delivery, bioimaging, and molecular recognition. 2021 , 14, 2130003		3
206	Multicomponent Gold-Linked Glycoconjugate Vaccine Elicits Antigen-Specific Humoral and Mixed T1-T17 Immunity, Correlated with Increased Protection against <i>Burkholderia pseudomallei</i> . 2021 , 12, e0122721		3
205	Challenges in delivery systems for CRISPR-based genome editing and opportunities of nanomedicine. 2021 , 11, 217-233		3
204	Efficient Protein Transfection by Swarms of Chemically Powered Plasmonic Virus-Sized Nanorobots. 2021 ,		4
203	Controlled CRISPR-Cas9 Ribonucleoprotein Delivery for Sensitized Photothermal Therapy. 2021 , 17, e2101155		11
202	Exosome/Liposome-like Nanoparticles: New Carriers for CRISPR Genome Editing in Plants. <i>International Journal of Molecular Sciences</i> , 2021 , 22,	6.3	12
201	Harnessing the CRISPR-Cas Systems to Combat Antimicrobial Resistance. 2021 , 12, 716064		5
200	delivery of CRISPR-Cas9 therapeutics: Progress and challenges. 2021 , 11, 2150-2171		17
199	Non-viral delivery of CRISPR-Cas9 complexes for targeted gene editing via a polymer delivery system. 2021 ,		5
198	Multimic Approaches to Uncover the Complexities of Dystrophin-Associated Cardiomyopathy. <i>International Journal of Molecular Sciences</i> , 2021 , 22,	6.3	2
197	In vivo targeted delivery of nucleic acids and CRISPR genome editors enabled by GSH-responsive silica nanoparticles. <i>Journal of Controlled Release</i> , 2021 , 336, 296-309	11.7	6
196	Simultaneous Stabilization and Functionalization of Gold Nanoparticles via Biomolecule Conjugation: Progress and Perspectives. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 42311-42328	9.5	8
195	Simple, fast and efficient iTOP-mediated delivery of CRISPR/Cas9 RNP in difficult-to-transduce human cells including primary T cells. 2021 , 338, 71-80		5
194	Theranostic biomaterials for tissue engineering.. 2021 , 19,		0
193	Hearing impairment: new frontiers of regenerative medicine. 2021 , 71,		
192	Targeting of Uropathogenic <i>Escherichia coli</i> papG gene using CRISPR-dot nanocomplex reduced virulence of UPEC. 2021 , 11, 17801		2
191	Modulation of Immune Reaction in Hydrodynamic Gene Therapy for Hemophilia A. 2021 ,		0
190	Comparison of the Feasibility, Efficiency, and Safety of Genome Editing Technologies. <i>International Journal of Molecular Sciences</i> , 2021 , 22,	6.3	1

189	In vivo somatic cell base editing and prime editing. <i>Molecular Therapy</i> , 2021 , 29, 3107-3124	11.7	20
188	Chimeric Antigen Receptor-Engineered Natural Killer (CAR NK) Cells in Cancer Treatment; Recent Advances and Future Prospects. 2021 , 17, 2081-2106		12
187	Versatile modification of the CRISPR/Cas9 ribonucleoprotein system to facilitate in vivo application. <i>Journal of Controlled Release</i> , 2021 , 337, 698-717	11.7	2
186	Programming cell entry of molecules via reversible synthetic DNA circuits on cell membrane. 2021 ,		1
185	Cas9 conjugate complex delivering donor DNA for efficient gene editing by homology-directed repair. 2021 , 102, 241-250		2
184	Latest progress in the study of nanoparticle-based delivery of the CRISPR/Cas9 system. 2021 , 194, 48-55		0
183	Toward the Treatment of Inherited Diseases of the Retina Using CRISPR-Based Gene Editing. 2021 , 8, 698521		1
182	Genetical engineering for NK and T cell immunotherapy with CRISPR/Cas9 technology: Implications and challenges. 2021 , 369, 104436		1
181	The evolution and history of gene editing technologies. 2021 , 178, 1-62		2
180	Molecular correction of Duchenne muscular dystrophy by splice modulation and gene editing. 2021 , 18, 1048-1062		6
179	Polymer-Functionalized NIR-Emitting Nanoparticles: Applications in Cancer Theranostics and Treatment of Bacterial Infections. 2020 , 231-277		2
178	Engineering Functional DNA-Protein Conjugates for Biosensing, Biomedical, and Nanoassembly Applications. 2020 , 378, 41		17
177	Therapeutic Gene Editing with CRISPR: A Laboratory Medicine Perspective. 2020 , 40, 205-219		3
176	Advanced hybrid nanomaterials for biomedical applications. 2020 , 114, 100686		54
175	Gene therapy in wound healing using nanotechnology. 2021 , 29, 225-239		3
174	Correction of muscular dystrophies by CRISPR gene editing. 2020 , 130, 2766-2776		25
173	Therapeutic applications of CRISPR/Cas9 in breast cancer and delivery potential of gold nanomaterials. 2020 , 7, 1849543520983196		6
172	Making gene editing a therapeutic reality. 2018 , 7,		13

171	Preparation of carbon dot as a potential CRISPR/Cas9 plasmid delivery system for lung cancer cells. 2020 , 32,		5
170	On-Target CRISPR/Cas9 Activity Can Cause Undesigned Large Deletion in Mouse Zygotes. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	13
169	Nanomaterial Strategies for Delivery of Therapeutic Cargoes. 2107174		0
168	CRISPR/Cas9 Delivery System Engineering for Genome Editing in Therapeutic Applications. <i>Pharmaceutics</i> , 2021 , 13,	6.4	9
167	Genome engineering in rodents - status quo and perspectives. 2021 , 236772211051842		2
166	All-in-One Adeno-associated Virus Delivery and Genome Editing by <i>Neisseria meningitidis</i> Cas9 in vivo.		
165	CRISPR delivery particles for developing therapeutic strategies in metabolic disease.		
164	CRISPR-induced deletion with SaCas9 restores dystrophin expression in dystrophic models in vitro and in vivo.		
163	Direct purification of CRISPR/Cas ribonucleoprotein from <i>E. coli</i> in a single step.		
162	Introduction. 2019 , 3-12		
161	CHAPTER 17:CRISPR-based Technologies for Genome Engineering: Properties, Current Improvements and Applications in Medicine. 2019 , 400-433		1
160	Single-Cell Technologies for Cancer Therapy. 2019 , 1-84		
159	Spatial and temporal control of CRISPR/Cas9-mediated gene editing delivered via a light-triggered liposome system.		
158	The Synergy between CRISPR and Chemical Engineering. 2019 , 19, 147-171		2
157	gEL DNA, a cloning- and PCR-free method for CRISPR-based multiplexed genome editing.		
156	Targeting the Inside of Cells with Biologicals: Chemicals as a Delivery Strategy. 2021 , 35, 643-671		1
155	Synergistic photothermal cancer immunotherapy by Cas9 ribonucleoprotein-based copper sulfide nanotherapeutic platform targeting PTPN2. 2021 , 279, 121233		9
154	Single-Cell Technologies for Cancer Therapy. 2022 , 767-850		

153	Nanoscale delivery of phytochemicals targeting CRISPR/Cas9 for cancer therapy. 2022 , 94, 153830		0
152	Self-inactivating, all-in-one AAV vectors for precision Cas9 genome editing via homology-directed repair in vivo. 2021 , 12, 6267		5
151	Gene modification strategies using AO-mediated exon skipping and CRISPR/Cas9 as potential therapies for Duchenne muscular dystrophy patients. 2020 , 4, 37-42		
150	Duchenne Muscular Dystrophy (DMD) Treatment: Past and Present Perspectives.		
149	Delivery of CRISPR/Cas9 Plasmids by Cationic Gold Nanorods: Impact of the Aspect Ratio on Genome Editing and Treatment of Hepatic Fibrosis. <i>Chemistry of Materials</i> , 2021 , 33, 81-91	9.6	5
148	Precision Cas9 Genome Editing in vivo with All-in-one, Self-targeting AAV Vectors.		
147	Recent highlights and advances in cardiac gene therapy. 2019 , 28, 229-235		1
146	Nanoparticle technologies: Recent state of the art and emerging opportunities. 2022 , 3-46		2
145	Delivery of CRISPR-Cas9 system for screening and editing RNA binding proteins in cancer. 2021 , 180, 114042		5
144	Protocol for assessment of the efficiency of CRISPR/Cas RNP delivery to different types of target cells. 2021 , 16, e0259812		1
143	A Duplex CRISPR-Cas9 Ribonucleoprotein Nanomedicine for Colorectal Cancer Gene Therapy. 2021 , 21, 9761-9771		5
142	CRISPR-Cas Technology: Emerging Applications in Clinical Microbiology and Infectious Diseases. 2021 , 14,		2
141	Gene Therapy and Its Application in Cardiac Diseases. 2022 , 131-148		
140	CRISPR-Cas9-Mediated Gene Therapy in Neurological Disorders. 2021 , 1		4
139	Time-controlled and muscle-specific CRISPR/Cas9-mediated deletion of CTG-repeat expansion in the gene.. 2022 , 27, 184-199		1
138	Current Advances Toward the Encapsulation of Cas9.. 2021 , 10, 1576-1589		1
137	An Episomal CRISPR/Cas12a System for Mediating Efficient Gene Editing. 2021 , 11,		0
136	Brain Pathogenesis and Potential Therapeutic Strategies in Myotonic Dystrophy Type 1. 2021 , 13, 755392		0

135	Delivery Methods for CRISPR/Cas Reagents. 2022 , 113-148		
134	Effective Genome Editing Using CRISPR-Cas9 Nanoflowers.. <i>Advanced Healthcare Materials</i> , 2022 , e2102365		0
133	A Proton-Activatable DNA-Based Nanosystem Enables Co-Delivery of CRISPR/Cas9 and DNase for Combined Gene Therapy.. 2022 ,		2
132	Nanoparticle-based non-viral CRISPR delivery for enhanced immunotherapy.. 2022 ,		0
131	Reengineering of the CRISPR/Cas System. 2022 , 149-186		
130	CRISPR/Cas9 delivery by NIR-responsive biomimetic nanoparticles for targeted HBV therapy.. 2022 , 20, 27		3
129	A Proton-Activatable DNA-Based Nanosystem Enables Co-Delivery of CRISPR/Cas9 and DNase for Combined Gene Therapy. e202116569		0
128	Delivery of CRISPR-Cas tools for in vivo genome editing therapy: Trends and challenges.. <i>Journal of Controlled Release</i> , 2022 , 342, 345-361	11.7	7
127	CRISPR/Cas9 Ribonucleoprotein-Mediated Genome and Epigenome Editing in Mammalian Cells.. 2021 , 114087		1
126	Gene Therapy Using Nanocarriers for Pancreatic Ductal Adenocarcinoma: Applications and Challenges in Cancer Therapeutics.. <i>Pharmaceutics</i> , 2022 , 14,	6.4	1
125	Nanomedicine, a valuable tool for skeletal muscle disorders: Challenges, promises, and limitations.. 2022 , e1777		1
124	Drug delivery systems for RNA therapeutics.. 2022 ,		30
123	Neurofibromin and suppression of tumorigenesis: beyond the GAP.. 2022 ,		0
122	Advances in Delivery Mechanisms of CRISPR Gene-Editing Reagents in Plants.. <i>Frontiers in Genome Editing</i> , 2022 , 4, 830178	2.5	3
121	Non-viral delivery of the CRISPR/Cas system: DNA RNA RNP.. <i>Biomaterials Science</i> , 2022 ,	7.4	2
120	Therapeutic approaches to preserve the musculature in Duchenne Muscular Dystrophy: The importance of the secondary therapies. 2021 , 410, 112968		4
119	Nanocarriers for Delivery of Oligonucleotides to the CNS.. <i>International Journal of Molecular Sciences</i> , 2022 , 23,	6.3	0
118	MOF Effectively Deliver CRISPR and Enhance Gene-Editing Efficiency via MOF Hydrolytic Activity of Phosphate Ester Bonds. 2022 , 134992		0

117	pH-Responsive Polymer Nanoparticles for Efficient Delivery of Cas9 Ribonucleoprotein With or Without Donor DNA.. 2022 , e2110618		4
116	Combinatorial Polycation Synthesis and Causal Machine Learning Reveal Divergent Polymer Design Rules for Effective pDNA and Ribonucleoprotein Delivery.. 2022 , 2, 428-442		3
115	CRISPR Therapeutics for Duchenne Muscular Dystrophy.. <i>International Journal of Molecular Sciences</i> , 2022 , 23,	6.3	2
114	Non-viral nanocarriers for CRISPR-Cas9 gene editing system delivery. 2022 , 435, 135116		2
113	Low immunogenicity of LNP allows repeated administrations of CRISPR-Cas9 mRNA into skeletal muscle in mice. 2021 , 12, 7101		6
112	CRISPR/Cas System and Stem Cell Editing: Prospects and Possibilities in Veterinary Sciences. 2021 , 323-354		0
111	Current applications and future perspective of CRISPR/Cas9 gene editing in cancer.. 2022 , 21, 57		7
110	Augmented lipid-nanoparticle-mediated in vivo genome editing in the lungs and spleen by disrupting Cas9 activity in the liver.. <i>Nature Biomedical Engineering</i> , 2022 ,	19	5
109	The Protein Interactome of a Nanoparticle Population in Whole Cytoplasm under Near-Native Conditions: A Pilot Study. 2100283		0
108	Biomaterials for Recruiting and Activating Endogenous Stem Cells in situ Tissue Regeneration.. 2022 ,		1
107	Methods for CRISPR-Cas as Ribonucleoprotein Complex Delivery In Vivo.. 2022 , 1		0
106	Cardiovascular Disease in Duchenne Muscular Dystrophy. 2022 ,		3
105	Transiently expressed CRISPR/Cas9 induces wild-type dystrophin in vitro in DMD patient myoblasts carrying duplications.. 2022 , 12, 3756		0
104	New Advances of CRISPR/Cas9 Technique and Its Application in Disease Treatment and Medicinal Plants Research.. 2022 ,		
103	Nanomaterial for Skeletal Muscle Regeneration.. 2022 , 19, 253-261		0
102	Biosafety materials: ushering in a new era of infectious disease diagnosis and treatment with the CRISPR/Cas system.. 2022 ,		1
101	Nanoscale delivery platforms for RNA therapeutics: Challenges and the current state of the art.. 2022 , 3, 167-187		1
100	Dual role of the nasal microbiota in neurological diseases-An unignorable risk factor or a potential therapy carrier.. 2022 , 106189		0

99	Utilizing CRISPR/Cas9 Technologies for in vivo Disease Modeling and Therapy. 2022 , 93-110		
98	Nanoparticles-mediated CRISPR/Cas gene editing delivery system.. 2022 ,		1
97	Current developments in gene therapy for epidermolysis bullosa.. 2022 ,		1
96	Carrier strategies boost the application of CRISPR/Cas system in gene therapy. 20210081		3
95	Chitin A Natural Bio-feedstock and Its Derivatives. 2022 , 207-233		
94	Rationally designed nanoparticle delivery of Cas9 ribonucleoprotein for effective gene editing.. <i>Journal of Controlled Release</i> , 2022 ,	11.7	1
93	Nano-assembly of a Chemically Tailored Cas9 Ribonucleoprotein for In Vivo Gene Editing and Cancer Immunotherapy. <i>Chemistry of Materials</i> , 2022 , 34, 547-561	9.6	2
92	Non-GM Genome Editing Approaches in Crops.. <i>Frontiers in Genome Editing</i> , 2021 , 3, 817279	2.5	2
91	The Coiled-Coil Forming Peptide (KVSALKE) is A Cell Penetrating Peptide that Enhances the Intracellular Delivery of Proteins. <i>Advanced Healthcare Materials</i> , 2021 , e2102118	10.1	0
90	Self-Assembled Oligo-Urethane Nanoparticles: Their Characterization and Use for the Delivery of Active Biomolecules into Mammalian Cells. <i>ACS Applied Materials & Interfaces</i> , 2021 ,	9.5	1
89	CRISPR/Cas9-Mediated Allele-Specific Disruption of a Dominant Pathogenic Variant Improves Collagen VI Network in Patient Fibroblasts.. <i>International Journal of Molecular Sciences</i> , 2022 , 23,	6.3	0
88	CRISPR-Click Enables Dual-Gene Editing with Modular Synthetic sgRNAs.. <i>Bioconjugate Chemistry</i> , 2022 ,	6.3	0
87	CRISPR-Cas Technology a New Era in Genomic Engineering. <i>Biotechnology Reports (Amsterdam, Netherlands)</i> , 2022 , e00731	5.3	0
86	Nano-vectors for CRISPR/Cas9-mediated genome editing. <i>Nano Today</i> , 2022 , 44, 101482	17.9	2
85	Table_1.XLSX. 2020 ,		
84	Table_2.XLSX. 2020 ,		
83	A Decade of Progress in Gene Targeted Therapeutic Strategies in Duchenne Muscular Dystrophy: A Systematic Review.. <i>Frontiers in Bioengineering and Biotechnology</i> , 2022 , 10, 833833	5.8	0
82	?????[12]aneN<sub>3</sub>?????????????????. <i>Chinese Science Bulletin</i> , 2022 ,	2.9	0

81	Optimizing rAAV6 transduction of primary T cells for the generation of anti-CD19 AAV-CAR-T cells. <i>Biomedicine and Pharmacotherapy</i> , 2022 , 150, 113027	7.5	
80	Polyrotaxane-based multi-step transformable materials for the delivery of Cas9 ribonucleoprotein. <i>Applied Materials Today</i> , 2022 , 27, 101488	6.6	1
79	Intramuscular delivery of neural crest stem cell spheroids enhances neuromuscular regeneration after denervation injury.. <i>Stem Cell Research and Therapy</i> , 2022 , 13, 205	8.3	1
78	Pre-clinical non-viral vectors exploited for in vivo CRISPR/Cas9 gene editing: an overview. <i>Biomaterials Science</i> ,	7.4	0
77	Inner Ear Drug Delivery for Sensorineural Hearing Loss: Current Challenges and Opportunities. <i>Frontiers in Neuroscience</i> , 2022 , 16,	5.1	1
76	Targeted Therapeutics for Rare Disorders. 2022 ,		
75	CRISPR-Cas-Based Gene Therapy to Target Viral Infections. 2022 , 85-125		0
74	Serum extracellular vesicles for delivery of CRISPR-CAS9 ribonucleoproteins to modify the dystrophin gene. <i>Molecular Therapy</i> , 2022 ,	11.7	3
73	Opportunity and challenges for nanotechnology application for genome editing in plants. 2022 , 1, 100001		1
72	Hematopoietic Stem Cell Gene-Addition/Editing Therapy in Sickle Cell Disease. <i>Cells</i> , 2022 , 11, 1843	7.9	2
71	Transient, DNA-free in vivo CRISPR/Cas9 genome edition for flexible modelling of endometrial carcinogenesis.		
70	CRISPR Modeling and Correction of Cardiovascular Disease. <i>Circulation Research</i> , 2022 , 130, 1827-1850	15.7	4
69	CRISPR-Cas9-Based Technology and Its Relevance to Gene Editing in Parkinson's Disease. <i>Pharmaceutics</i> , 2022 , 14, 1252	6.4	2
68	Cas-Based Systems for RNA Editing in Gene Therapy of Monogenic Diseases: In Vitro and in Vivo Application and Translational Potential. <i>Frontiers in Cell and Developmental Biology</i> , 10,	5.7	1
67	Novel Nanotechnology-Based Vector Delivery in CRISPR System for Transgene-Free Editing. 2022 , 279-294		
66	Multiorgans-on-a-Chip for Personalized Medicine. 2022 , 289-324		
65	CAR NK cell therapy in hematologic malignancies and solid tumors; obstacles and strategies to overcome the challenges. <i>International Immunopharmacology</i> , 2022 , 110, 109041	5.8	1
64	Advance trends in targeting homology-directed repair for accurate gene editing: An inclusive review of small molecules and modified CRISPR-Cas9 systems. 2022 , 12, 371-391		1

63	The Promising Nanovectors for Gene Delivery in Plant Genome Engineering. 2022 , 23, 8501	1
62	CRISPR applications for Duchenne muscular dystrophy: From animal models to potential therapies.	0
61	Chitosan-Based Nanocomposites for Biological Applications.	0
60	Stimuli-responsive nanoformulations for CRISPR-Cas9 genome editing. 2022 , 20,	3
59	Rational Molecular Engineering of Organic Semiconducting Nanoplatfoms for Advancing NIR-II Fluorescence Theranostics. 2201067	1
58	Treatment strategies for HIV infection with emphasis on role of CRISPR/Cas9 gene: Success so far and road ahead. 2022 , 931, 175173	0
57	CRISPR-Cas9 based non-viral approaches in nanoparticle elicited therapeutic delivery. 2022 , 76, 103737	0
56	Genome editing in cancer: Challenges and potential opportunities. 2023 , 21, 394-402	0
55	Genome Editing in Crops Via Homology-Directed Repair Using a Geminivirus-Based CRISPR/Cas9 System. 2022 , 119-137	0
54	Cationic lipopolymeric nanoplexes containing the CRISPR/Cas9 ribonucleoprotein for genome surgery. 2022 , 10, 7634-7649	0
53	Applications of Nanotechnology in Preservation and Development of the Plants: A Look Back. 2022 , 121-140	0
52	CRISPR/Cas9 system: a reliable and facile genome editing tool in modern biology.	0
51	The horizon of pediatric cardiac critical care. 10,	0
50	Delivering the CRISPR/Cas9 system for engineering gene therapies: Recent cargo and delivery approaches for clinical translation. 10,	0
49	CRISPR-Based Therapeutic Gene Editing for Duchenne Muscular Dystrophy: Advances, Challenges and Perspectives. 2022 , 11, 2964	0
48	Integrating Micro and Nano Technologies for Cell Engineering and Analysis: Toward the Next Generation of Cell Therapy Workflows.	0
47	Non-Viral Delivery of CRISPR/Cas Cargo to the Retina Using Nanoparticles: Current Possibilities, Challenges, and Limitations. 2022 , 14, 1842	0
46	Polymer-Mediated Delivery of CRISPR-Cas9 Genome-Editing Therapeutics for CNS Disease. 2022 , 229-258	0

- 45 Genome Editing advances in Soybean Improvement against Biotic and Abiotic Stresses. **2022**, 241-274 0
- 44 CRISPR/Cas9 Nano-delivery Approaches for Targeted Gene Therapy. **2022**, 27-64 0
- 43 Current updates of CRISPR/Cas9-mediated genome editing and targeting within tumor cells: an innovative strategy of cancer management. 1
- 42 Nanomedicine for Treating Muscle Dystrophies: Opportunities, Challenges, and Future Perspectives. **2022**, 23, 12039 0
- 41 Advances in the modulation of ROS and transdermal administration for anti-psoriatic nanotherapies. **2022**, 20, 0
- 40 CRISPR/Cas systems usher in a new era of disease treatment and diagnosis. **2022**, 3, 1
- 39 Gold Nanoparticle-Mediated Gene Therapy. **2022**, 14, 5366 0
- 38 Nanoparticles targeting hematopoietic stem and progenitor cells: Multimodal carriers for the treatment of hematological diseases. 4, 0
- 37 In vivo delivery of CRISPR-Cas9 genome editing components for therapeutic applications. **2022**, 291, 121876 1
- 36 Homology-Directed Repair of an MYBPC3 gene mutation in a rat model of hypertrophic cardiomyopathy. 0
- 35 Gene editing strategies to treat lysosomal disorders: The example of mucopolysaccharidoses. **2022**, 191, 114616 0
- 34 Advanced theragnostics for the central nervous system (CNS) and neurological disorders using functional inorganic nanomaterials. **2023**, 192, 114636 0
- 33 CRISPR/Cas systems: Delivery and application in gene therapy. 10, 0
- 32 Recent advances in the delivery and applications of nonviral CRISPR/Cas9 gene editing. 0
- 31 CRISPR-Based Tools for Fighting Rare Diseases. **2022**, 12, 1968 0
- 30 Enabling Precision Medicine with CRISPR-Cas Genome Editing Technology: A Translational Perspective. **2023**, 315-339 0
- 29 Massively Parallel CRISPR-Based Genetic Perturbation Screening at Single-Cell Resolution. 2204484 0
- 28 Intelligent nanotherapeutic strategies for the delivery of CRISPR system. **2022**, 0

27	Genome Editing and Pathological Cardiac Hypertrophy. 2023 , 87-101	0
26	Nanoparticles-mediated CRISPR-Cas9 gene therapy in inherited retinal diseases: applications, challenges, and emerging opportunities. 2022 , 20,	3
25	Genome Editing in Dyslipidemia and Atherosclerosis. 2023 , 139-156	0
24	Endosomal Escapable and Nuclear Localizing Cationic Polyaspartate-Based CRISPR Activation System for Preventing Respiratory Virus Infection by Specifically Inducing Interferon- γ 2022 , 14, 55376-55391	0
23	Biological and genetic therapies for the treatment of Duchenne muscular dystrophy. 1-11	0
22	Synergy of nanocarriers with CRISPR-Cas9 in an emerging technology platform for biomedical appliances: Current insights and perspectives. 2022 , 224, 111415	0
21	Assessing and advancing the safety of CRISPR-Cas tools: from DNA to RNA editing. 2023 , 14,	2
20	A CRISPR-Cas Cure for HIV/AIDS. 2023 , 24, 1563	0
19	Integration of DNA barcoding and nanotechnology in drug delivery. 2023 , 123262	0
18	Metal Nanoparticles: Synthesis, Characterization, and Biomedical Applications. 2023 , 85-102	0
17	Nucleic acid nanostructure for delivery of CRISPR/Cas9-based gene editing system.	0
16	Clinical progress in genome-editing technology and in vivo delivery techniques. 2023 ,	0
15	CRISPR technology: A decade of genome editing is only the beginning. 2023 , 379,	4
14	Targeting the Inside of Cells with Biologicals: Toxin Routes in a Therapeutic Context. 2023 , 37, 181-203	1
13	Stimuli-Responsive Gene Delivery Nanocarriers for Cancer Therapy. 2023 , 15,	0
12	Homology-directed repair of an MYBPC3 gene mutation in a rat model of hypertrophic cardiomyopathy.	0
11	Guanidinium-Rich Lipopeptide-Based Nanoparticle Enables Efficient Gene Editing in Skeletal Muscles. 2023 , 15, 10464-10476	0
10	Delivery challenges for CRISPR-Cas9 genome editing for Duchenne muscular dystrophy. 2023 , 4, 011307	0

- 9 Silk-Gel Powered Adenoviral Vector Enables Robust Genome Editing of PD-L1 to Augment Immunotherapy across Multiple Tumor Models. 2206399
- 8 New CRISPR Technology for Creating Cell Models of Lipoprotein Assembly and Secretion.
- 7 The CRISPR/Cas9 System Delivered by Extracellular Vesicles. **2023**, 15, 984
- 6 Recent advances in the delivery and applications of nonviral CRISPR/Cas9 gene editing. **2023**, 13, 1500-1519
- 5 Nanoarchitectures to Deliver Nucleic Acid Drugs to Disease Sites.
- 4 Nanotechnology-enabled gene delivery for cancer and other genetic diseases. 1-18
- 3 Vector enabled CRISPR gene editing [A revolutionary strategy for targeting the diversity of brain pathologies. **2023**, 487, 215172
- 2 Mechanisms of the Specificity of the CRISPR/Cas9 System in Genome Editing. **2023**, 57, 258-271
- 1 Reversal of hepatic fibrosis by the co-delivery of drug and ribonucleoprotein-based genome editor. **2023**, 298, 122133