# Gang Bao

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/239776/publications.pdf

Version: 2024-02-01

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|---|---|---|---|
| 112 papers | 17,921 citations | 24978 57 h-index | 22102 113 g-index |
| 123 all docs | 123 docs citations | 123 times ranked | 27692 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Targeted replacement of full-length CFTR in human airway stem cells by CRISPR-Cas9 for pan-mutation correction in the endogenous locus. Molecular Therapy, 2022, 30, 223-237. | 3.7 | 24 |
| 2 | Synthesis and Application of Magnetic Nanocrystal Clusters. Industrial & Engineering Chemistry Research, 2022, 61, 7613-7625. | 1.8 | 9 |
| 3 | Multichannel power electronics and magnetic nanoparticles for selective thermal magnetogenetics. Journal of Neural Engineering, 2022, 19, 026015. | 1.8 | 12 |
| 4 | Identification and Validation of CRISPR/Cas9 Off-Target Activity in Hematopoietic Stem and Progenitor Cells. Methods in Molecular Biology, 2022, 2429, 281-306. | 0.4 | 1 |
| 5 | Genome editing of donor-derived T-cells to generate allogenic chimeric antigen receptor-modified T cells: Optimizing Î±Î² T cell-depleted haploidentical hematopoietic stem cell transplantation. Haematologica, 2021, 106, 847-858. | 1.7 | 46 |
| 6 | Tools for experimental and computational analyses of off-target editing by programmable nucleases. Nature Protocols, 2021, 16, 10-26. | 5.5 | 52 |
| 7 | Magnetic Forces Enable Control of Biological Processes In Vivo. Journal of Applied Mechanics, Transactions ASME, 2021, 88, 030801. | 1.1 | 2 |
| 8 | CRISPR/Cas9 gene editing for curing sickle cell disease. Transfusion and Apheresis Science, 2021, 60, 103060. | 0.5 | 32 |
| 9 | The NIH Somatic Cell Genome Editing program. Nature, 2021, 592, 195-204. | 13.7 | 84 |
| 10 | Targeting the Apoa1 locus for liver-directed gene therapy. Molecular Therapy - Methods and Clinical Development, 2021, 21, 656-669. | 1.8 | 9 |
| 11 | Development of Î²-globin gene correction in human hematopoietic stem cells as a potential durable treatment for sickle cell disease. Science Translational Medicine, 2021, 13, . | 5.8 | 82 |
| 12 | Human tumor microenvironment chip evaluates the consequences of platelet extravasation and combinatorial antitumor-antiplatelet therapy in ovarian cancer. Science Advances, 2021, 7, . | 4.7 | 43 |
| 13 | Controlled oxidation and surface modification increase heating capacity of magnetic iron oxide nanoparticles. Applied Physics Reviews, 2021, 8, . | 5.5 | 7 |
| 14 | Magnetic iron oxide nanoparticles for biomedical applications. Current Opinion in Biomedical Engineering, 2021, 20, 100330. | 1.8 | 17 |
| 15 | The TRACE-Seq method tracks recombination alleles and identifies clonal reconstitution dynamics of gene targeted human hematopoietic stem cells. Nature Communications, 2021, 12, 472. | 5.8 | 23 |
| 16 | InÂvivo genome editing at the albumin locus to treat methylmalonic acidemia. Molecular Therapy - Methods and Clinical Development, 2021, 23, 619-632. | 1.8 | 10 |
| 17 | An Integrated Microheater Array with Closed-Loop Temperature Regulation Based on Ferromagnetic Resonance of Magnetic Nanoparticles. IEEE Transactions on Biomedical Circuits and Systems, 2021, PP, 1-1. | 2.7 | 2 |
| 18 | Click functionalized, tissueâ€specific hydrogels for osteochondral tissue engineering. Journal of Biomedical Materials Research - Part A, 2020, 108, 684-693. | 2.1 | 20 |

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|---|---|---|---|
| 19 | High-Efficiency, Selection-free Gene Repair in Airway Stem Cells from Cystic Fibrosis Patients Rescues CFTR Function in Differentiated Epithelia. Cell Stem Cell, 2020, 26, 161-171.e4. | 5.2 | 97 |
| 20 | Development of a Novel Class of Self-Assembling dsRNA Cancer Therapeutics: A Proof-of-Concept Investigation. Molecular Therapy - Oncolytics, 2020, 18, 419-431. | 2.0 | 1 |
| 21 | Metabolic engineering generates a transgene-free safety switch for cell therapy. Nature Biotechnology, 2020, 38, 1441-1450. | 9.4 | 39 |
| 22 | Programmable Assembly of Iron Oxide Nanoparticles Using DNA Origami. Nano Letters, 2020, 20, 2799-2805. | 4.5 | 37 |
| 23 | Lipid-Encapsulated Fe<sub>3</sub>O<sub>4</sub> Nanoparticles for Multimodal Magnetic Resonance/Fluorescence Imaging. ACS Applied Nano Materials, 2020, 3, 6785-6797. | 2.4 | 31 |
| 24 | Site-Specific Post-translational Surface Modification of Adeno-Associated Virus Vectors Using Leucine Zippers. ACS Synthetic Biology, 2020, 9, 461-467. | 1.9 | 6 |
| 25 | High bone microarchitecture, strength, and resistance to bone loss in MRL/MpJ mice correlates with activation of different signaling pathways and systemic factors. FASEB Journal, 2020, 34, 789-806. | 0.2 | 5 |
| 26 | AAV-CRISPR Gene Editing Is Negated by Pre-existing Immunity to Cas9. Molecular Therapy, 2020, 28, 1432-1441. | 3.7 | 140 |
| 27 | Therapeutically relevant engraftment of a CRISPR-Cas9â€“edited HSC-enriched population with HbF reactivation in nonhuman primates. Science Translational Medicine, 2019, 11, . | 5.8 | 88 |
| 28 | Human genome-edited hematopoietic stem cells phenotypically correct Mucopolysaccharidosis type I. Nature Communications, 2019, 10, 4045. | 5.8 | 88 |
| 29 | Engineered materials for in vivo delivery of genome-editing machinery. Nature Reviews Materials, 2019, 4, 726-737. | 23.3 | 139 |
| 30 | Indirect magnetic force microscopy. Nanoscale Advances, 2019, 1, 2348-2355. | 2.2 | 11 |
| 31 | Magnetic iron oxide nanoparticles for disease detection and therapy. Materials Today, 2019, 31, 86-99. | 8.3 | 114 |
| 32 | Highly efficient editing of theÂÎ²-globin gene in patient-derived hematopoietic stem and progenitor cells to treat sickle cell disease. Nucleic Acids Research, 2019, 47, 7955-7972. | 6.5 | 110 |
| 33 | Collagen-rich airway smooth muscle cells are a metastatic niche for tumor colonization in the lung. Nature Communications, 2019, 10, 2131. | 5.8 | 27 |
| 34 | Gene correction for SCID-X1 in long-term hematopoietic stem cells. Nature Communications, 2019, 10, 1634. | 5.8 | 140 |
| 35 | Spatial control of in vivo CRISPRâ€“Cas9 genome editing via nanomagnets. Nature Biomedical Engineering, 2019, 3, 126-136. | 11.6 | 107 |
| 36 | Optimization of CRISPR/Cas9 Delivery to Human Hematopoietic Stem and Progenitor Cells for Therapeutic Genomic Rearrangements. Molecular Therapy, 2019, 27, 137-150. | 3.7 | 97 |

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|---|---|---|---|
| 37 | A Self-Deleting AAV-CRISPR System for InÂVivo Genome Editing. Molecular Therapy - Methods and Clinical Development, 2019, 12, 111-122. | 1.8 | 93 |
| 38 | Molecular mechanisms of mechanosensing and mechanotransduction in living cells. Extreme Mechanics Letters, 2018, 20, 91-98. | 2.0 | 14 |
| 39 | Examination of CRISPR/Cas9 design tools and the effect of target site accessibility on Cas9 activity. Experimental Physiology, 2018, 103, 456-460. | 0.9 | 20 |
| 40 | Rho-Associated Coiled-Coil Kinase (ROCK) in Molecular Regulation of Angiogenesis. Theranostics, 2018, 8, 6053-6069. | 4.6 | 65 |
| 41 | In Vivo Ryr 2 Editing Corrects Catecholaminergic Polymorphic Ventricular Tachycardia. Circulation Research, 2018, 123, 953-963. | 2.0 | 63 |
| 42 | Somatic Editing of Ldlr With Adeno-Associated Viral-CRISPR Is an Efficient Tool for Atherosclerosis Research. Arteriosclerosis, Thrombosis, and Vascular Biology, 2018, 38, 1997-2006. | 1.1 | 63 |
| 43 | A high-fidelity Cas9 mutant delivered as a ribonucleoprotein complex enables efficient gene editing in human hematopoietic stem and progenitor cells. Nature Medicine, 2018, 24, 1216-1224. | 15.2 | 573 |
| 44 | Loading Lovastatin into Camptothecinâ€“Floxuridine Conjugate Nanocapsules for Enhancing Anti-metastatic Efficacy of Cocktail Chemotherapy on Triple-negative Breast Cancer. ACS Applied Materials & Interfaces, 2018, 10, 29385-29397. | 4.0 | 21 |
| 45 | Advanced Cell and Tissue Biomanufacturing. ACS Biomaterials Science and Engineering, 2018, 4, 2292-2307. | 2.6 | 14 |
| 46 | Genome editing for inborn errors of metabolism: advancing towards the clinic. BMC Medicine, 2017, 15, 43. | 2.3 | 42 |
| 47 | Size-Dependent Heating of Magnetic Iron Oxide Nanoparticles. ACS Nano, 2017, 11, 6808-6816. | 7.3 | 299 |
| 48 | CRISPR/Cas9-Based Genome Editing for Disease Modeling and Therapy: Challenges and Opportunities for Nonviral Delivery. Chemical Reviews, 2017, 117, 9874-9906. | 23.0 | 418 |
| 49 | Magnetic forces enable controlled drug delivery by disrupting endothelial cell-cell junctions. Nature Communications, 2017, 8, 15594. | 5.8 | 132 |
| 50 | CD7-edited T cells expressing a CD7-specific CAR for the therapy of T-cell malignancies. Blood, 2017, 130, 285-296. | 0.6 | 326 |
| 51 | Somatic genome editing with CRISPR/Cas9 generates and corrects a metabolic disease. Scientific Reports, 2017, 7, 44624. | 1.6 | 76 |
| 52 | Tumour-on-a-chip: microfluidic models of tumour morphology, growth and microenvironment. Journal of the Royal Society Interface, 2017, 14, 20170137. | 1.5 | 155 |
| 53 | Design and Validation of CRISPR/Cas9 Systems for Targeted Gene Modification in Induced Pluripotent Stem Cells. Methods in Molecular Biology, 2017, 1498, 3-21. | 0.4 | 10 |
| 54 | Efficient CRISPR/Cas9-Mediated Genome Editing Using a Chimeric Single-Guide RNA Molecule. Frontiers in Plant Science, 2017, 8, 1441. | 1.7 | 107 |

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|---|---|---|---|
| 55 | MicroRNA Detection Using a Double Molecular Beacon Approach: Distinguishing Between miRNA and Pre-miRNA. Theranostics, 2017, 7, 634-646. | 4.6 | 30 |
| 56 | Accurate Quantification of Disease Markers in Human Serum Using Iron Oxide Nanoparticle-linked Immunosorbent Assay. Theranostics, 2016, 6, 1353-1361. | 4.6 | 16 |
| 57 | Treating hemoglobinopathies using gene-correction approaches: promises and challenges. Human Genetics, 2016, 135, 993-1010. | 1.8 | 13 |
| 58 | The Neisseria meningitidis CRISPR-Cas9 System Enables Specific Genome Editing in Mammalian Cells. Molecular Therapy, 2016, 24, 645-654. | 3.7 | 190 |
| 59 | Streptococcus thermophilus CRISPR-Cas9 Systems Enable Specific Editing of the Human Genome. Molecular Therapy, 2016, 24, 636-644. | 3.7 | 204 |
| 60 | The effect of nanoparticle size on in vivo pharmacokinetics and cellular interaction. Nanomedicine, 2016, 11, 673-692. | 1.7 | 1,197 |
| 61 | A Burden of Rare Variants Associated with Extremes of Gene Expression in Human Peripheral Blood. American Journal of Human Genetics, 2016, 98, 299-309. | 2.6 | 84 |
| 62 | Nuclease Target Site Selection for Maximizing On-target Activity and Minimizing Off-target Effects in Genome Editing. Molecular Therapy, 2016, 24, 475-487. | 3.7 | 100 |
| 63 | Control of Iron Oxide Nanoparticle Clustering Using Dual Solvent Exchange. IEEE Magnetics Letters, 2016, 7, 1-4. | 0.6 | 10 |
| 64 | TALENs Facilitate Single-step Seamless SDF Correction of F508del CFTR in Airway Epithelial Submucosal Gland Cell-derived CF-iPSCs. Molecular Therapy - Nucleic Acids, 2016, 5, e273. | 2.3 | 38 |
| 65 | Controlled delivery of Î²-globin-targeting TALENs and CRISPR/Cas9 into mammalian cells for genome editing using microinjection. Scientific Reports, 2015, 5, 16031. | 1.6 | 20 |
| 66 | Non-genetic Purification of Ventricular Cardiomyocytes from Differentiating Embryonic Stem Cells through Molecular Beacons Targeting IRX-4. Stem Cell Reports, 2015, 5, 1239-1249. | 2.3 | 21 |
| 67 | CYLD Regulates Noscapine Activity in Acute Lymphoblastic Leukemia via a Microtubule-Dependent Mechanism. Theranostics, 2015, 5, 656-666. | 4.6 | 17 |
| 68 | Molecular beacon-based detection and isolation of working-type cardiomyocytes derived from human pluripotent stem cells. Biomaterials, 2015, 50, 176-185. | 5.7 | 30 |
| 69 | Singleâ€Cell Detection of mRNA Expression Using Nanofountainâ€Probe Electroporated Molecular Beacons. Small, 2015, 11, 2386-2391. | 5.2 | 32 |
| 70 | Quantifying on- and off-target genome editing. Trends in Biotechnology, 2015, 33, 132-140. | 4.9 | 127 |
| 71 | Physical Principles of Nanoparticle Cellular Endocytosis. ACS Nano, 2015, 9, 8655-8671. | 7.3 | 852 |
| 72 | Trans-spliced Cas9 allows cleavage of HBB and CCR5 genes in human cells using compact expression cassettes. Scientific Reports, 2015, 5, 10777. | 1.6 | 34 |

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| 73 | Multifunctional superparamagnetic iron oxide nanoparticles for combined chemotherapy and hyperthermia cancer treatment. Nanoscale, 2015, 7, 12728-12736. | 2.8 | 195 |
| 74 | Efficient fdCas9 Synthetic Endonuclease with Improved Specificity for Precise Genome Engineering. PLoS ONE, 2015, 10, e0133373. | 1.1 | 46 |
| 75 | Microtubule-Associated Protein Mdp3 Promotes Breast Cancer Growth and Metastasis. Theranostics, 2014, 4, 1052-1061. | 4.6 | 27 |
| 76 | COSMID: A Web-based Tool for Identifying and Validating CRISPR/Cas Off-target Sites. Molecular Therapy - Nucleic Acids, 2014, 3, e214. | 2.3 | 315 |
| 77 | CRISPR/Cas9 systems have off-target activity with insertions or deletions between target DNA and guide RNA sequences. Nucleic Acids Research, 2014, 42, 7473-7485. | 6.5 | 548 |
| 78 | SAPTA: a new design tool for improving TALE nuclease activity. Nucleic Acids Research, 2014, 42, e47-e47. | 6.5 | 49 |
| 79 | An online bioinformatics tool predicts zinc finger and TALE nuclease off-target cleavage. Nucleic Acids Research, 2014, 42, e42-e42. | 6.5 | 109 |
| 80 | TALENs facilitate targeted genome editing in human cells with high specificity and low cytotoxicity. Nucleic Acids Research, 2014, 42, 6762-6773. | 6.5 | 165 |
| 81 | Frontiers in Bioengineering Research. Annals of Biomedical Engineering, 2014, 42, 241-242. | 1.3 | 0 |
| 82 | Structural responses of cells to intracellular magnetic force induced by superparamagnetic iron oxide nanoparticles. Physical Chemistry Chemical Physics, 2014, 16, 1914-1920. | 1.3 | 17 |
| 83 | Molecular beaconâ€“enabled purification of living cells by targeting cell typeâ€“specific mRNAs. Nature Protocols, 2014, 9, 2411-2424. | 5.5 | 41 |
| 84 | Platelet mechanosensing of substrate stiffness during clot formation mediates adhesion, spreading, and activation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 14430-14435. | 3.3 | 166 |
| 85 | Quantifying Genome-Editing Outcomes at Endogenous Loci with SMRT Sequencing. Cell Reports, 2014, 7, 293-305. | 2.9 | 115 |
| 86 | Seamless modification of wild-type induced pluripotent stem cells to the natural CCR5Î”32 mutation confers resistance to HIV infection. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 9591-9596. | 3.3 | 296 |
| 87 | USNCTAM perspectives on mechanics in medicine. Journal of the Royal Society Interface, 2014, 11, 20140301. | 1.5 | 35 |
| 88 | Gold Nanoshelled Liquid Perfluorocarbon Magnetic Nanocapsules: a Nanotheranostic Platform for Bimodal Ultrasound/Magnetic Resonance Imaging Guided Photothermal Tumor Ablation. Theranostics, 2014, 4, 12-23. | 4.6 | 129 |
| 89 | Abstract 17986: Molecular Beacon-based Purification of Ventricular Cardiomyocytes From Differentiating Embryonic Stem Cells by Targeting Intracellular Mrna. Circulation, 2014, 130, . | 1.6 | 0 |
| 90 | DNA targeting specificity of RNA-guided Cas9 nucleases. Nature Biotechnology, 2013, 31, 827-832. | 9.4 | 3,953 |

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|---|---|---|---|
| 91 | Purification of Cardiomyocytes From Differentiating Pluripotent Stem Cells Using Molecular Beacons That Target Cardiomyocyte-Specific mRNA. Circulation, 2013, 128, 1897-1909. | 1.6 | 52 |
| 92 | Magnetic Targeting of Human Mesenchymal Stem Cells with Internalized Superparamagnetic Iron Oxide Nanoparticles. Small, 2013, 9, 4017-4026. | 5.2 | 90 |
| 93 | Multifunctional Nanoparticles for Drug Delivery and Molecular Imaging. Annual Review of Biomedical Engineering, 2013, 15, 253-282. | 5.7 | 437 |
| 94 | Gold Nanoshell Nanomicelles for Potential Magnetic Resonance Imaging, Lightâ€Triggered Drug Release, and Photothermal Therapy. Advanced Functional Materials, 2013, 23, 815-822. | 7.8 | 210 |
| 95 | CRISPR/Cas9 systems targeting Î²-globin and CCR5 genes have substantial off-target activity. Nucleic Acids Research, 2013, 41, 9584-9592. | 6.5 | 544 |
| 96 | Self-Assembly of Phospholipidâ€“PEG Coating on Nanoparticles through Dual Solvent Exchange. Nano Letters, 2011, 11, 3720-3726. | 4.5 | 135 |
| 97 | Coating Optimization of Superparamagnetic Iron Oxide Nanoparticles for High T<sub>2</sub> Relaxivity. Nano Letters, 2010, 10, 4607-4613. | 4.5 | 386 |
| 98 | Molecular Biomechanics: The Molecular Basis of How Forces Regulate Cellular Function. Cellular and Molecular Bioengineering, 2010, 3, 91-105. | 1.0 | 37 |
| 99 | HuR regulates the expression of stress-sensitive genes and mediates inflammatory response in human umbilical vein endothelial cells. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 6858-6863. | 3.3 | 80 |
| 100 | Sizeâ€Dependent Endocytosis of Nanoparticles. Advanced Materials, 2009, 21, 419-424. | 11.1 | 895 |
| 101 | Simultaneous detection of mRNA and protein stem cell markers in live cells. BMC Biotechnology, 2009, 9, 30. | 1.7 | 51 |
| 102 | Fluorescent Probes for Live-Cell RNA Detection. Annual Review of Biomedical Engineering, 2009, 11, 25-47. | 5.7 | 217 |
| 103 | Target accessibility and signal specificity in live-cell detection of BMP-4 mRNA using molecular beacons. Nucleic Acids Research, 2008, 36, e30-e30. | 6.5 | 74 |
| 104 | ZnS/Silica Nanocable Field Effect Transistors as Biological and Chemical Nanosensors. Journal of Physical Chemistry C, 2007, 111, 12152-12156. | 1.5 | 72 |
| 105 | Coating thickness of magnetic iron oxide nanoparticles affects R<sub>2</sub> relaxivity. Journal of Magnetic Resonance Imaging, 2007, 26, 1634-1641. | 1.9 | 214 |
| 106 | Nanostructured Probes for RNA Detection in Living Cells. Annals of Biomedical Engineering, 2006, 34, 39-50. | 1.3 | 127 |
| 107 | Shedding light on the dynamics of endocytosis and viral budding. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 9997-9998. | 3.3 | 91 |
| 108 | Engineering nanostructured probes for sensitive intracellular gene detection. Mcb Mechanics and Chemistry of Biosystems, 2004, 1, 23-36. | 0.3 | 5 |

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|---|---|---|---|
| 109 | Structure-function relationships of shared-stem and conventional molecular beacons. Nucleic Acids Research, 2002, 30, 4208-4215. | 6.5 | 127 |
| 110 | Mechanics of biomolecules. Journal of the Mechanics and Physics of Solids, 2002, 50, 2237-2274. | 2.3 | 101 |
| 111 | Cell Mechanics: Mechanical Response, Cell Adhesion, and Molecular Deformation. Annual Review of Biomedical Engineering, 2000, 2, 189-226. | 5.7 | 365 |
| 112 | Effect of Inclusions on Densification: II, Numerical Model. Journal of the American Ceramic Society, 1992, 75, 525-531. | 1.9 | 83 |