# Yingrui Deng

## List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/834652/publications.pdf

Version: 2024-02-01

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|---|---|---|---|
| 89 papers | 6,393 citations | 57758 44 h-index | 69250 77 g-index |
| 92 all docs | 92 docs citations | 92 times ranked | 7719 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Hydrogels that mimic developmentally relevant matrix and N-cadherin interactions enhance MSC chondrogenesis. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 10117-10122. | 7.1 | 344 |
| 2 | Enhanced MSC chondrogenesis following delivery of TGF-Î²3 from alginate microspheres within hyaluronic acid hydrogels in vitro and in vivo. Biomaterials, 2011, 32, 6425-6434. | 11.4 | 327 |
| 3 | The influence of hyaluronic acid hydrogel crosslinking density and macromolecular diffusivity on human MSC chondrogenesis and hypertrophy. Biomaterials, 2013, 34, 413-421. | 11.4 | 265 |
| 4 | Mechanically resilient, injectable, and bioadhesive supramolecular gelatin hydrogels crosslinked by weak host-guest interactions assist cell infiltration and in situ tissue regeneration. Biomaterials, 2016, 101, 217-228. | 11.4 | 249 |
| 5 | Coculture of Human Mesenchymal Stem Cells and Articular Chondrocytes Reduces Hypertrophy and Enhances Functional Properties of Engineered Cartilage. Tissue Engineering - Part A, 2011, 17, 1137-1145. | 3.1 | 235 |
| 6 | Magnetite Nanostructured Porous Hollow Helical Microswimmers for Targeted Delivery. Advanced Functional Materials, 2015, 25, 5333-5342. | 14.9 | 210 |
| 7 | A Gold@Polydopamine Coreâ€“Shell Nanoprobe for Long-Term Intracellular Detection of MicroRNAs in Differentiating Stem Cells. Journal of the American Chemical Society, 2015, 137, 7337-7346. | 13.7 | 202 |
| 8 | Injectable stem cell-laden supramolecular hydrogels enhance in situ osteochondral regeneration via the sustained co-delivery of hydrophilic and hydrophobic chondrogenic molecules. Biomaterials, 2019, 210, 51-61. | 11.4 | 179 |
| 9 | Dynamic and Cell-Infiltratable Hydrogels as Injectable Carrier of Therapeutic Cells and Drugs for Treating Challenging Bone Defects. ACS Central Science, 2019, 5, 440-450. | 11.3 | 166 |
| 10 | Structurally Dynamic Hydrogels for Biomedical Applications: Pursuing a Fine Balance between Macroscopic Stability and Microscopic Dynamics. Chemical Reviews, 2021, 121, 11149-11193. | 47.7 | 161 |
| 11 | Bioadhesive hydrogels demonstrating pH-independent and ultrafast gelation promote gastric ulcer healing in pigs. Science Translational Medicine, 2020, 12, . | 12.4 | 147 |
| 12 | Ultrafast Selfâ€Gelling and Wet Adhesive Powder for Acute Hemostasis and Wound Healing. Advanced Functional Materials, 2021, 31, 2102583. | 14.9 | 146 |
| 13 | Sulfated hyaluronic acid hydrogels with retarded degradation and enhanced growth factor retention promote hMSC chondrogenesis and articular cartilage integrity with reduced hypertrophy. Acta Biomaterialia, 2017, 53, 329-342. | 8.3 | 136 |
| 14 | Organic Semiconducting Polymer Nanoparticles for Photoacoustic Labeling and Tracking of Stem Cells in the Second Near-Infrared Window. ACS Nano, 2018, 12, 12201-12211. | 14.6 | 127 |
| 15 | Dynamic Compressive Loading Enhances Cartilage Matrix Synthesis and Distribution and Suppresses Hypertrophy in hMSC-Laden Hyaluronic Acid Hydrogels. Tissue Engineering - Part A, 2012, 18, 715-724. | 3.1 | 121 |
| 16 | Ultrafast self-gelling powder mediates robust wet adhesion to promote healing of gastrointestinal perforations. Science Advances, 2021, 7, . | 10.3 | 118 |
| 17 | Nanocomposite hydrogels stabilized by self-assembled multivalent bisphosphonate-magnesium nanoparticles mediate sustained release of magnesium ion and promote in-situ bone regeneration. Acta Biomaterialia, 2017, 64, 389-400. | 8.3 | 117 |
| 18 | Selfâ€Assembled Injectable Nanocomposite Hydrogels Stabilized by Bisphosphonateâ€Magnesium (Mg<sup>2+</sup>) Coordination Regulates the Differentiation of Encapsulated Stem Cells via Dual Crosslinking. Advanced Functional Materials, 2017, 27, 1701642. | 14.9 | 110 |

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|---|---|---|---|
| 19 | Self-assembled N-cadherin mimetic peptide hydrogels promote the chondrogenesis of mesenchymal stem cells through inhibition of canonical Wnt/Î²-catenin signaling. Biomaterials, 2017, 145, 33-43. | 11.4 | 100 |
| 20 | Effective Phototheranostics of Brain Tumor Assisted by Near-Infrared-II Light-Responsive Semiconducting Polymer Nanoparticles. ACS Applied Materials & Interfaces, 2020, 12, 33492-33499. | 8.0 | 100 |
| 21 | Organic semiconducting polymer amphiphile for near-infrared-II light-triggered phototheranostics. Biomaterials, 2020, 232, 119684. | 11.4 | 96 |
| 22 | Enhanced mechanosensing of cells in synthetic 3D matrix with controlled biophysical dynamics. Nature Communications, 2021, 12, 3514. | 12.8 | 92 |
| 23 | Immunoregulation of macrophages by dynamic ligand presentation via ligandâ€“cation coordination. Nature Communications, 2019, 10, 1696. | 12.8 | 84 |
| 24 | Desuccinylation-Triggered Peptide Self-Assembly: Live Cell Imaging of SIRT5 Activity and Mitochondrial Activity Modulation. Journal of the American Chemical Society, 2020, 142, 18150-18159. | 13.7 | 84 |
| 25 | Nanomedicineâ€Boosting Tumor Immunogenicity for Enhanced Immunotherapy. Advanced Functional Materials, 2021, 31, 2011171. | 14.9 | 84 |
| 26 | Near-infrared light-triggered release of small molecules for controlled differentiation and long-term tracking of stem cells inÂvivo using upconversion nanoparticles. Biomaterials, 2016, 110, 1-10. | 11.4 | 77 |
| 27 | Hydrogels functionalized with N-cadherin mimetic peptide enhance osteogenesis of hMSCs by emulating the osteogenic niche. Biomaterials, 2016, 77, 44-52. | 11.4 | 77 |
| 28 | Hierarchical Porous Poly(<scp>l</scp>-lactic acid) Nanofibrous Membrane for Ultrafine Particulate Aerosol Filtration. ACS Applied Materials & Interfaces, 2019, 11, 46261-46268. | 8.0 | 77 |
| 29 | Near-infrared light-controlled regulation of intracellular calcium to modulate macrophage polarization. Biomaterials, 2018, 178, 681-696. | 11.4 | 71 |
| 30 | Nanoparticle-assembled bioadhesive coacervate coating with prolonged gastrointestinal retention for inflammatory bowel disease therapy. Nature Communications, 2021, 12, 7162. | 12.8 | 70 |
| 31 | Remote Control of Heterodimeric Magnetic Nanoswitch Regulates the Adhesion and Differentiation of Stem Cells. Journal of the American Chemical Society, 2018, 140, 5909-5913. | 13.7 | 67 |
| 32 | Magnetic Manipulation of Reversible Nanocaging Controls <i>In Vivo</i> Adhesion and Polarization of Macrophages. ACS Nano, 2018, 12, 5978-5994. | 14.6 | 67 |
| 33 | Synthetic presentation of noncanonical Wnt5a motif promotes mechanosensing-dependent differentiation of stem cells and regeneration. Science Advances, 2019, 5, eaaw3896. | 10.3 | 64 |
| 34 | Conformational manipulation of scale-up prepared single-chain polymeric nanogels for multiscale regulation of cells. Nature Communications, 2019, 10, 2705. | 12.8 | 60 |
| 35 | One-pot solvent exchange preparation of non-swellable, thermoplastic, stretchable and adhesive supramolecular hydrogels based on dual synergistic physical crosslinking. NPG Asia Materials, 2018, 10, e455-e455. | 7.9 | 59 |
| 36 | Remote Control of Intracellular Calcium Using Upconversion Nanotransducers Regulates Stem Cell Differentiation In Vivo. Advanced Functional Materials, 2018, 28, 1802642. | 14.9 | 58 |

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|---|---|---|---|
| 37 | Cell-Mediated Degradation Regulates Human Mesenchymal Stem Cell Chondrogenesis and Hypertrophy in MMP-Sensitive Hyaluronic Acid Hydrogels. PLoS ONE, 2014, 9, e99587. | 2.5 | 57 |
| 38 | Bisphosphonate-based nanocomposite hydrogels for biomedical applications. Bioactive Materials, 2020, 5, 819-831. | 15.6 | 55 |
| 39 | Rationally designed protein cross-linked hydrogel for bone regeneration via synergistic release of magnesium and zinc ions. Biomaterials, 2021, 274, 120895. | 11.4 | 55 |
| 40 | Cell-adaptable dynamic hydrogel reinforced with stem cells improves the functional repair of spinal cord injury by alleviating neuroinflammation. Biomaterials, 2021, 279, 121190. | 11.4 | 53 |
| 41 | Synergistic effects on mesenchymal stem cell-based cartilage regeneration by chondrogenic preconditioning and mechanical stimulation. Stem Cell Research and Therapy, 2017, 8, 221. | 5.5 | 52 |
| 42 | Molecular cargo delivery using multicellular magnetic microswimmers. Applied Materials Today, 2019, 15, 242-251. | 4.3 | 52 |
| 43 | Multifunctional Quantum Dot Nanoparticles for Effective Differentiation and Longâ€Term Tracking of Human Mesenchymal Stem Cells In Vitro and In Vivo. Advanced Healthcare Materials, 2016, 5, 1049-1057. | 7.6 | 50 |
| 44 | Supramolecular hydrogels cross-linked by preassembled hostâ€“guest PEG cross-linkers resist excessive, ultrafast, and non-resting cyclic compression. NPG Asia Materials, 2018, 10, 788-799. | 7.9 | 50 |
| 45 | Adhesive Hemostatic Hydrogel with Ultrafast Gelation Arrests Acute Upper Gastrointestinal Hemorrhage in Pigs. Advanced Functional Materials, 2022, 32, . | 14.9 | 48 |
| 46 | Anisotropic Ligand Nanogeometry Modulates the Adhesion and Polarization State of Macrophages. Nano Letters, 2019, 19, 1963-1975. | 9.1 | 47 |
| 47 | Highly Dynamic Nanocomposite Hydrogels Selfâ€Assembled by Metal Ionâ€Ligand Coordination. Small, 2019, 15, e1900242. | 10.0 | 45 |
| 48 | Magnesiumâ€Encapsulated Injectable Hydrogel and 3Dâ€Engineered Polycaprolactone Conduit Facilitate Peripheral Nerve Regeneration. Advanced Science, 2022, 9, . | 11.2 | 45 |
| 49 | An In Situ Reversible Heterodimeric Nanoswitch Controlled by Metalâ€Ionâ€“Ligand Coordination Regulates the Mechanosensing and Differentiation of Stem Cells. Advanced Materials, 2018, 30, e1803591. | 21.0 | 44 |
| 50 | Substrate Coupling Strength of Integrin-Binding Ligands Modulates Adhesion, Spreading, and Differentiation of Human Mesenchymal Stem Cells. Nano Letters, 2015, 15, 6592-6600. | 9.1 | 43 |
| 51 | Functionalization of SF/HAP Scaffold with GO-PEI-miRNA inhibitor Complexes to Enhance Bone Regeneration through Activating Transcription Factor 4. Theranostics, 2019, 9, 4525-4541. | 10.0 | 43 |
| 52 | Photocontrolled SiRNA Delivery and Biomarker-Triggered Luminogens of Aggregation-Induced Emission by Up-Conversion NaYF<sub>4</sub>:Yb<sup>3+</sup>Tm<sup>3+</sup>@SiO<sub>2</sub> Nanoparticles for Inducing and Monitoring Stem-Cell Differentiation. ACS Applied Materials & Interfaces, 2019, 11, 22074-22084. | 8.0 | 43 |
| 53 | Nanocarrierâ€Mediated Codelivery of Small Molecular Drugs and siRNA to Enhance Chondrogenic Differentiation and Suppress Hypertrophy of Human Mesenchymal Stem Cells. Advanced Functional Materials, 2016, 26, 2463-2472. | 14.9 | 42 |
| 54 | Bioadhesive Polymersome for Localized and Sustained Drug Delivery at Pathological Sites with Harsh Enzymatic and Fluidic Environment via Supramolecular Hostâ€“Guest Complexation. Small, 2018, 14, 1702288. | 10.0 | 40 |

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|---|---|---|---|
| 55 | Anisotropic Nanoscale Presentation of Cell Adhesion Ligand Enhances the Recruitment of Diverse Integrins in Adhesion Structures and Mechanosensingâ€Dependent Differentiation of Stem Cells. Advanced Functional Materials, 2019, 29, 1806822. | 14.9 | 38 |
| 56 | Nanolayered hybrid mediates synergistic co-delivery of ligand and ligation activator for inducing stem cell differentiation and tissue healing. Biomaterials, 2017, 149, 12-28. | 11.4 | 36 |
| 57 | Effect of cartilaginous matrix components on the chondrogenesis and hypertrophy of mesenchymal stem cells in hyaluronic acid hydrogels. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2017, 105, 2292-2300. | 3.4 | 36 |
| 58 | Efficient catechol functionalization of biopolymeric hydrogels for effective multiscale bioadhesion. Materials Science and Engineering C, 2019, 103, 109835. | 7.3 | 34 |
| 59 | Biocompatible cellulose-based supramolecular nanoparticles driven by hostâ€“guest interactions for drug delivery. Carbohydrate Polymers, 2020, 237, 116114. | 10.2 | 34 |
| 60 | Soft Polymeric Matrix as a Macroscopic Cage for Magnetically Modulating Reversible Nanoscale Ligand Presentation. Nano Letters, 2020, 20, 3207-3216. | 9.1 | 34 |
| 61 | Preserving the adhesion of catechol-conjugated hydrogels by thioureaâ€“quinone coupling. Biomaterials Science, 2016, 4, 1726-1730. | 5.4 | 33 |
| 62 | Magnetic Enhancement of Chondrogenic Differentiation of Mesenchymal Stem Cells. ACS Biomaterials Science and Engineering, 2019, 5, 2200-2207. | 5.2 | 33 |
| 63 | Targeted Covalent Inhibition of Grb2â€“Sos1 Interaction through Proximity-Induced Conjugation in Breast Cancer Cells. Molecular Pharmaceutics, 2017, 14, 1548-1557. | 4.6 | 32 |
| 64 | Injectable chitin hydrogels with self-healing property and biodegradability as stem cell carriers. Carbohydrate Polymers, 2021, 256, 117574. | 10.2 | 32 |
| 65 | Effect of inorganic/organic ratio and chemical coupling on the performance of porous silica/chitosan hybrid scaffolds. Materials Science and Engineering C, 2017, 70, 969-975. | 7.3 | 30 |
| 66 | Differential effect of hypoxia on human mesenchymal stem cell chondrogenesis and hypertrophy in hyaluronic acid hydrogels. Acta Biomaterialia, 2014, 10, 1333-1340. | 8.3 | 29 |
| 67 | Bioactive Nanocomposite Poly (Ethylene Glycol) Hydrogels Crosslinked by Multifunctional Layered Double Hydroxides Nanocrosslinkers. Macromolecular Bioscience, 2016, 16, 1019-1026. | 4.1 | 28 |
| 68 | Manipulation of the Nanoscale Presentation of Integrin Ligand Produces Cancer Cells with Enhanced Stemness and Robust Tumorigenicity. Nano Letters, 2021, 21, 3225-3236. | 9.1 | 28 |
| 69 | Functional hydrogel bioink, a key challenge of 3D cellular bioprinting. APL Bioengineering, 2020, 4, 030401. | 6.2 | 27 |
| 70 | Bisphosphonate-based hydrogel mediates biomimetic negative feedback regulation of osteoclastic activity to promote bone regeneration. Bioactive Materials, 2022, 13, 9-22. | 15.6 | 26 |
| 71 | Stretchable and Bioadhesive Supramolecular Hydrogels Activated by a One-Stoneâ€“Two-Bird Postgelation Functionalization Method. ACS Applied Materials & Interfaces, 2019, 11, 16328-16335. | 8.0 | 25 |
| 72 | Optical Âµ-Printing of Cellular-Scale Microscaffold Arrays for 3D Cell Culture. Scientific Reports, 2017, 7, 8880. | 3.3 | 22 |

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|---|---|---|---|
| 73 | Mussel cuticle-mimetic ultra-tough, self-healing elastomers with double-locked nanodomains exhibit fast stimuli-responsive shape transformation. Journal of Materials Chemistry A, 2020, 8, 12463-12471. | 10.3 | 22 |
| 74 | Biomimetic Presentation of Cryptic Ligands via Single-Chain Nanogels for Synergistic Regulation of Stem Cells. ACS Nano, 2020, 14, 4027-4035. | 14.6 | 22 |
| 75 | Phage-Derived Depolymerase as an Antibiotic Adjuvant Against Multidrug-Resistant Acinetobacter baumannii. Frontiers in Microbiology, 2022, 13, 845500. | 3.5 | 21 |
| 76 | Immunoregulation of Macrophages by Controlling Winding and Unwinding of Nanohelical Ligands. Advanced Functional Materials, 2021, 31, 2103409. | 14.9 | 19 |
| 77 | The Effect of the Nanoparticle Shape on T Cell Activation. Small, 2022, 18, e2107373. | 10.0 | 15 |
| 78 | Multiscale reconstruction of a synthetic biomimetic micro-niche for enhancing and monitoring the differentiation of stem cells. Biomaterials, 2018, 173, 87-99. | 11.4 | 14 |
| 79 | Multifunctional Nanoprobe for the Delivery of Therapeutic siRNA and Real-Time Molecular Imaging of Parkinsonâ€™s Disease Biomarkers. ACS Applied Materials & Interfaces, 2021, 13, 11609-11620. | 8.0 | 14 |
| 80 | Biomaterial-Mediated Presentation of Jagged-1 Mimetic Ligand Enhances Cellular Activation of Notch Signaling and Bone Regeneration. ACS Nano, 2022, 16, 1051-1062. | 14.6 | 14 |
| 81 | Long-Term Detection of Oncogenic MicroRNA in Living Human Cancer Cells by Gold@ Polydopamineâ€“Shell Nanoprobe. ACS Biomaterials Science and Engineering, 2020, 6, 3778-3783. | 5.2 | 13 |
| 82 | Detection of Matrix Metallopeptidase 13 for Monitoring Stem Cell Differentiation and Early Diagnosis of Osteoarthritis by Fluorescent Lightâ€Up Probes with Aggregationâ€Induced Emission Characteristics. Advanced Biology, 2018, 2, 1800010. | 3.0 | 12 |
| 83 | Change in viability of C2C12 myoblasts under compression, shear and oxidative challenges. Journal of Biomechanics, 2016, 49, 1305-1310. | 2.1 | 11 |
| 84 | Surface decoration of development-inspired synthetic N-cadherin motif via Ac-BP promotes osseointegration of metal implants. Bioactive Materials, 2021, 6, 1353-1364. | 15.6 | 10 |
| 85 | Nanoparticleâ€Assembled Vacuolated Coacervates Control Macromolecule Spatiotemporal Distribution to Provide a Stable Segregated Cell Microenvironment. Advanced Materials, 2021, 33, 2007209. | 21.0 | 9 |
| 86 | Biomaterial-mediated presentation of wnt5a mimetic ligands enhances chondrogenesis and metabolism of stem cells by activating non-canonical Wnt signaling. Biomaterials, 2022, 281, 121316. | 11.4 | 8 |
| 87 | A Gold@Polydopamine Coreâ€“Shell Nanoprobe for Long-Term Intracellular Detection of MicroRNAs in Differentiating Stem Cells. Methods in Molecular Biology, 2017, 1570, 155-164. | 0.9 | 5 |
| 88 | Patterning Perfluorinated Surface with Graphene Oxide and the Microarray Applications. Micromachines, 2019, 10, 173. | 2.9 | 2 |
| 89 | Rapid and room temperature detection of single nucleotide variation with enhanced discrimination by crowding assisted allele specific extension. Chemical Communications, 2019, 55, 12052-12055. | 4.1 | 1 |