

Over 100 scientific papers have been published from research conducted using microArch 3D printers in the fields of microfluidics, mechanical metamaterials, biomimetics, biomedicine, MEMS, optics, and more! Here is the full list.

Journal	Paper Title
Acoustics	
Applied Physics Letters	Focus of Ultrasonic Underwater Sound with 3D Printed Phononic Crystal
Biomedicine	
Advanced Intelligent Systems	Millimeter-Scale Soft Continuum Robots for Large-Angle and High-Precision Manipulation by Hybrid Actuation
Chemical Engineering Journal	Flav7 + DOX Co-Loaded Separable Microneedle for Light-Triggered Chemo-Thermal Therapy of Superficial Tumors
Advanced Functional Materials	Multimicrochannel Microneedle Microporation Platform for Enhanced Intracellular Drug Delivery
Asian Journal of Pharmaceutical Sciences	Design and Fabrication of r-hirudin Loaded Dissolving Microneedle Patch for Minimally Invasive and Long-Term Treatment of Thromboembolic Disease
ACS Nano	Down-Regulating Scar Formation by Microneedles Directly via a Mechanical Communication Pathway
Advanced Healthcare Materials	3D-Printed Centrifugal Pump Driven by Magnetic Force in Applications for Microfluidics in Biological Analysis
Biofabrication	Smart Acoustic 3D Cell Construct Assembly with High-Resolution
Journal of Materials Chemistry B	A Naringin-Derived Bioink Enhances Shape Fidelity of 3D Bioprinting and Efficiency of Cartilage Defects Repair
Materials Today Physics	Ultra-Fast Programmable Human-Machine Interface Enabled by 3D Printed Degradable Conductive Hydrogel
Molecular pharmaceuticals	3D-Printed Integrated Ultrasonic Microneedle Array for Rapid Transdermal Drug Delivery
Biomimetics	
PNAS	Superrepellency of underwater hierarchical structures of <i>Salvinia</i> leaf
Chemical Engineering Journal	Programmable 3D Printed Wheat Awn-Like System for High-Performance Fogdrop Collection
Colloid and Interface Science Communications	Nature-Inspired Design of Conical Array for Continuous and Efficient Fog Collection Application

Science Advances	Tip-Induced Flipping of Droplets on Janus Pillars: From Local Reconfiguration to Global Transport
Advanced Materials	Micro-Nano Hierarchical Structure Enhances Strong Wet Friction Surface Inspired by Tree Frogs
ACS Applied Materials & Interfaces	3D-Printed Bioinspired Cassie-Baxter Wettability for Controllable Microdroplet Manipulation
Journal of Materials Chemical A	Fishbone-Inspired Liquid Splitter Enables Droplets Directional Transportation and Spontaneous Separation
Bioinspiration & Biomimetics	A Mobile Magnetic Pad with Fast Light-Switchable Adhesion Capabilities
Science	Three-Dimensional Capillary Ratchet-Induced Liquid Directional Steering
Smart Materials and Structures	Trumpet Shaped Controllable Adhesive Structure for Manipulation of Millimeter Sized Objects
ACS Applied Materials & Interfaces	Underwater Unidirectional Cellular Fluidics
Advanced Functional Materials	Directional and Adaptive Oil Self-Transport on a Multi-Bioinspired Grooved Conical Spine
Scientific Reports	Biomimetic On-Chip Filtration Enables by Direct Micro-3D Printing on Membrane
Materials & Design	3D-Printed Bionic Superhydrophobic Surface with Petal-Like Microstructures for Droplet Manipulation, Oil-Water Separation, and Drag Reduction
ACS Applied Materials & Interfaces	High-Efficient Fog Harvest for a Synergistic Effect of Coupling Hierarchical Structures
Bioinspiration & Biomimetics	Enhanced Self-Cleaning Performance of Bio-Inspired Micropillar Arrayed Surface by Shear
Journal of the Mechanical Behavior of Biomedical Materials	Towards biomimetic, lattice-based, tendon and ligament metamaterial designs
ACS Applied Materials & Interfaces	Flexibility-Patterned Liquid-Repelling Surfaces
ACS Applied Materials & Interfaces	Biomimetic Water-Repelling Surfaces with Robustly Flexible Structures
Langmuir	Self-Cleaning Performance of the Micropillar-Arrayed Surface and Its Micro-Scale Mechanical Mechanism
Food Hydrocolloids	Development of a Simulated Tongue Substrate for In Vitro Soft "Oral" Tribology Study

Cell Reports Physical Science	Oblique Pancake Bouncing
ACS Applied Materials & Interfaces	Locust-Inspired Direction-Dependent Transport Based on a Magnetic-Responsive Asymmetric-Microplate-Arrayed Surface
Fabrication	
International Journal of Extreme Manufacturing	Review-Projection Micro Stereolithography Based 3D Printing and Its Applications
ACS Omega	3D-Printed Complex Microstructures with a Self-Sacrificial Structure Enabled by Grayscale Polymerization and Ultrasonic Treatment
Heat Transfer / Mass Transfer	
International Communication in Heat and Mass Transfer	Investigations on Porous Media Customized by Triply Periodic Minimal Surface: Heat Transfer Correlations and Strength Performance
Mechanical Metamaterials	
Physica Status Solidi-Rapid Research Letters	Tunable Auxetic Mechanical Metamaterials with “Arch-Shaped” Units
Extreme Mechanics Letters	Novel 2D Metamaterials with Negative Poisson’s Ratio and Negative Thermal Expansion
Science China Technological Sciences	Micro and Nanolattice Fabrication Using Projection Micro Litho Stereo Exposure Additive Manufacturing Techniques and Synchrotron X-Ray 3D Imaging-Based Defect Characterization
Materials & Design	Synchrotron X-Ray Micro-Computed Tomography Imaging of 3D Re-Entrant Micro Lattice During In Situ Micro Compression Experimental Process
Thin-Walled Structures	Compressive Properties and Collapse Behavior of Additively-Manufactured Layered-Hybrid Lattice Structures Under Static and Dynamic Loadings
Small	Liquid Metal-Polymer Microlattice Metamaterials with High Fracture Toughness and Damage Recoverability
International Journal of Extreme Manufacturing	Optimizing Film Thickness to Delay Strut Fracture in High-Entropy Alloy Composite Microlattices
Composite Structures	In-situ Synchrotron X-Ray Tomography Investigation of the Imperfect Smooth-Shell Cylinder Structure
Materials & Design	3D printing of dual phase-strengthened microlattices for lightweight micro aerial vehicles
Mechanics	
Additive Manufacturing	Strain Rate Dependent Mechanical Properties of 3D Printed Polymer Materials Using the DLP Technique

Materials & Design	A Comparative Study on Cylindrical and Spherical Models in Fabrication of Bone Tissue Engineering Scaffolds: Finite Element Simulation and Experiments
Metamaterials	
Small	3D Printed Embedded Metamaterials
Advanced Materials Technologies	Lead-Free Piezoelectric Composite Based on a Metamaterial for Electromechanical Energy Conversion
International Journal of Mechanical Sciences	Superior Compressive Properties of 3D Printed Plate Lattice Mechanical Metamaterials
PNAS	Achieving the Theoretical Limit of Strength in Shell-Based Carbon Nanolattices
Cell Reports Physical Science	Transforming 3D-Printed Mesostructures into Multimodal Sensors with Nanoscale Conductive Metal Oxides
National Science Review	Achromatic Metasurfaces by Dispersion Customization for Ultra-Broadband Acoustic Beam Engineering
Nature Materials	Programmable Gear-based Mechanical Metamaterials
Microfluidics	
IEEE Access	A Valveless Piezoelectric Micropump Based on Projection Micro Litho Stereo Exposure Technology
IOP Conference Series: Earth and Environmental Science	3D Printed Pump Based on Vibrating Blade to Actively Manipulate Fluid
Soft Matter	Imaging and Characterizing Fluid Invasion in Micro-3D Printed Porous Devices with Variable Surface Wettability
Biomicrofluidics	On-chip Rotational Manipulation of Microbeads and Oocytes Using Acoustic Microstreaming Generated by Oscillating Asymmetrical Microstructures
Journal of Food Engineering	Microfluidic Droplet Formation in Co-Flow Devices Fabricated by Micro 3D Printing
Soft Matter	Empowering Microfluidics by Micro-3D Printing and Solution-Based Mineral Coating
Lab on a Chip	Postoperative Evaluation of Tumours Based on Label-Free Acoustic Separation of Circulating Tumour Cells by Microstreaming
Particuology	Alginate-Gelatin Emulsion Droplets for Encapsulation of Vitamin A by 3D Printed Microfluidics
Lab on a Chip	Versatile Acoustic Manipulation of Micro-Objects Using Mode-Switchable Oscillating Bubbles: Transportation, Trapping, Rotation, and Revolution

ACS Nano	Magnetic Nanorobots as Maneuverable Immunoassay Probes for Automated and Efficient Enzyme Linked Immunosorbent Assay
Bio-Design and Manufacturing	A 3D-Printed Microfluidic Gradient Concentration Chip for Rapid Antibiotic-Susceptibility Testing
Energy	3D Printing of Natural Sandstone at Pore Scale and Comparative Analysis on Micro-Structure and Single/Two-Phase Flow Properties
Micro-Mechanics	
Extreme Mechanics Letters	3D Printed Micro-Mechanical Device (MMD) for In Situ Tensile Testing of Micro/Nanowires
Soft Matter	Controllable Directional Deformation of Micro-Pillars Actuated by a Magnetic Field
Micromachines	Magnetically Driven Bionic Millirobots with a Low-Delay Automated Actuation System for Bioparticles Manipulation
Micromachines	Electrochemical Performance of Micropillar Array Electrodes in Microflows
RSC Advances	Development of Micropillar Array Electrodes for Highly Sensitive Detection of Biomarkers
ACS Applied Materials & Interfaces	Integrated Assembly and Flexible Movement of Microparts Using Multifunctional Bubble Microrobots
Research	3D Printed Ultrastretchable Hyper-Antifreezing Conductive Hydrogel for Sensitive Motion and Electrophysiological Signal Monitoring
Materials Today Physics	3D Printed Super-Anti-Freezing Self-Adhesive Human Machine Interface
Applied Physics Letters	Deformable Ferrofluid-Based Millirobot with High Motion Accuracy and High Output Force
ACS Applied Materials & Interfaces	Directional Transportation on Microplate-Arrayed Surfaces Driven via a Magnetic Field
Microsystems & Nanoengineering	Continuous Monitoring of Diabetes with an Integrated Microneedle Biosensing Device Through 3D Printing
Chemical Engineering Journal	A Mechanical Hand-Like Functional Surface Capable of Efficiently Grasping and Non-Destructively Releasing Droplets
ACS Nano	Real-Time Ultrasound Doppler Tracking and Autonomous Navigation of a Miniature Helical Robot for Accelerating Thrombolysis in Dynamic Blood Flow
ACS Nano	Graded Interlocks for Iontronic Pressure Sensors with High Sensitivity and High Linearity over a Broad Range
Soft Robotics	Artificial Whisker Sensor with Undulated Morphology and Self-Spread Piezoresistors for Diverse Flow Analyses

Advanced Materials	Twisting Linear to Orbital Angular Momentum in an Ultrasonic Motor
Advanced Materials	Decoupling and Reprogrammable the Wiggling Motion of Midge Larvae Using a Soft Robotic Platform
ACS Applied Materials & Interfaces	Magnetic Biohybrid Microrobot Multimers Based on <i>Chorella</i> Cells for Enhanced Targeted Drug Delivery
Nano Energy	3D Printed Piezoelectric BNNTs Nanocomposites with Tunable Interface and Microarchitectures for Self-Powered Conformal Sensor
Microsystems & Nanoengineering	Design and Implementation of a Jellyfish Otolith-Inspired MEMS Vector Hydrophone for Low-Frequency Detection
Advanced Engineering Materials	Synergistic Superiority of a Silver-Carbon Black-Filled Conductive Polymer Composite for Temperature-Pressure Sensing
New Energy	
Advanced Energy Materials	3D-Printed Multi-Channel Metal Lattices Enabling Localized Electric-Field Redistribution for Dendrite-Free Aqueous Zn Ion Batteries
EcoMat Functional Materials For Green Energy And Environment	Direct Solar Vapor Generation with Micro-3D Printed Hydrogel Device
Advanced Functional Materials	Dendrite Free Lithium Deposition and Stripping Regulated by Aligned Microchannels for Stable Lithium Metal Batteries
Solar RRL	3D Printed Bionic Solar Evaporator
New Materials	
Chemical Communications	The Molecular Design of Photo-Curable and High-Strength Benzoxazine for 3D Printing
ACS Applied Materials & Interfaces	Color-Changeable Four-Dimensional Printing Enabled with Ultraviolet-Curable and Thermochromic Shape Memory Polymers
Additive Manufacturing	Projection Printing of Scaffolds with Shape Recovery Capacity and Simultaneously Improved Stiffness and Toughness Using an Ultra fast curing Poly(propylene fumarate) Hyperbranched Additive Resin
International Journal of Extreme Manufacturing	3D Printed Ultra-Fast Photothermal Responsive Shape Memory Hydrogel for Microrobots
Advanced Functional Materials	3D Printed Template-Directed Assembly of Multiscale Graphene Structures
Biomedical Materials	Modified Mannan for 3D Bioprinting: A Potential Novel Bioink for Tissue Engineering
Journal of Materials Chemistry B	An Antibacterial E-poly-L-lysine-Derived Bioink for 3D Bioprinting Applications

Optics

Optics Express	Fabrication of Uniform-Aperture Multi-Focus Microlens Array by Curving Microfluid in the Microholes with Inclines Walls
Nature Communications	Biomimetic Apposition Compound Eye Fabricated Using Microfluidic-Assisted 3D Printing
Additive Manufacturing	Self-Moisturizing Contact Lens Employing Capillary Flow

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Journal of Applied Physics	3D-Printed Terahertz Metamaterial Absorber Based on Vertical Split-Ring Resonator
Physical Review Applied	Three-Dimensional Printed Ultrabroadband Terahertz Metamaterial Absorbers
Results in Physics	Design of Negative Curvature Fiber Carrying Multi-orbital Angular Momentum Modes for Terahertz Wave Transmission