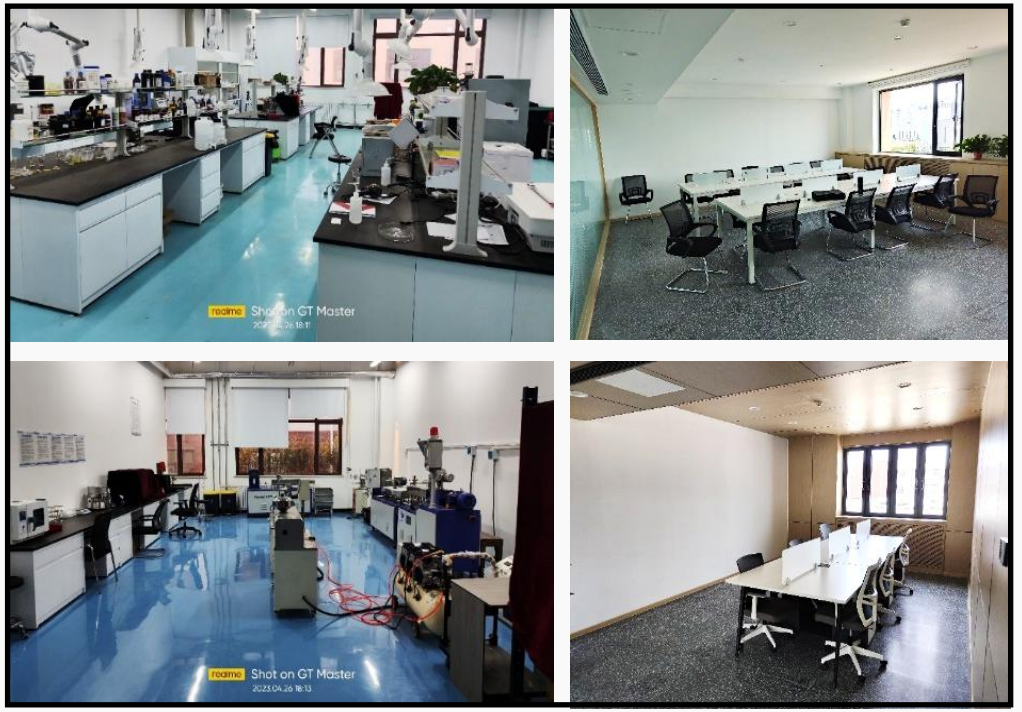
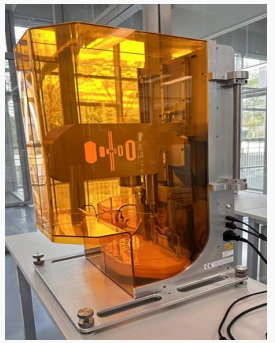
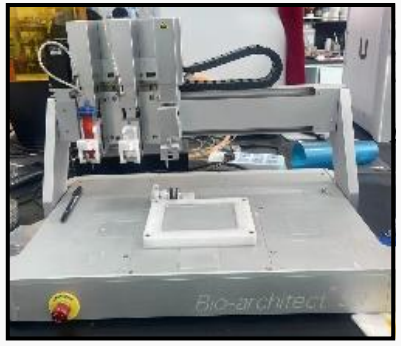
Company Profile

- The company is mainly committed to high-performance 3D printing engineering materials, high-precision molding equipment, research and development and sales and high-precision parts processing services and other businesses.
- The developed technology products have been in aerospace, aviation, microelectronics manufacturing and medical and other fields for demonstration applications and sales.
- The company has built a high-performance 3D printing engineering plastics production and precision parts machining services plant, and has a variety of manufacturing services advanced equipment.







Product performance index parameters

Light-curing 3D printing polyimide/polyetheretherketone resin performance parameters

Name of material	Polyimide composite resin RCPP01	Low viscosity polyimide resins RCPI02	High viscosity polyimide resins RCTHT03	Polyetheretherketone photosensitive resins RCPEEK01
Viscosity（CP.s）	8000-15000	200-300	1500-3000	1500~2500
Durometer（D）	>90	>90	>90	>90
Tensile Strength （MPa）	90-120	50-70	80-100	＞90
Elongation at break（%）	10-15	5-8	5-6	＞6
Accurate（μm）	50	30	50	优于50
Molding method	DLP、SLA、LCD	DLP、SLA、LCD	DLP、SLA、LCD	DLP、SLA、LCD
Curing wavelength（nm）	355-405	355-405	355-405	355-405
modulus（MPa）	2500-3500	1500-2000	2000-2500	＞2000
temperature resistance（℃）	200-300	150-200	250-300	大于200
heat distortion temperature（℃）	180-200	150-180	200-230	大于180
dielectric constant	＜3.2	＜3.2	＜3.2	＜3.2
Application Recommendations	Industrial prototypes, High-temperature resistant structural parts, Automotive, Electronics, molds, Scientific research, etc.	Microelectronics, Aerospace, chemical industry, Nuclear industry, Precision manufacturing, Scientific research, etc.	Microelectronics, Satellite antenna, High-temperature resistant parts, Space equipment, Precision manufacturing, Chemical industry, Scientific research, etc.	Dental guides, Medical devices, Precision lubricated gears, Insulated wiring harnesses, Connectors, etc.

Product performance index parameters

General Light Curing 3D Printing High Performance Resin Parameters

Makings	High temperature CE resin RCCE2406	Silicone Rubber Resin RCSi2401	High-precision general-purpose resin RCU402	High-precision general-purpose resin RCU503
Viscosity（CP.s）	3000~3500	~500	60~100	60~100
Color	Brownish	Red	Red	Deep yellow
Durometer（D）	>90	20~30A	~80	~80
Tensile strength（MPa）	90-120	~5	＞50	＞50
Elongation at break（%）	~5	~200	~8	~8
Accurate（μm）	50	50	10~50	10~50
Molding method	DLP、SLA、LCD	DLP、SLA、LCD	DLP、SLA、LCD	DLP、SLA、LCD
Curing wavelength（nm）	355-405	355-405	355-405	355-405
Modulus（MPa）	2500-3500	~500	~1500	~1500
Temperature resistance（℃）	＞200	150-200	25~100	25~100
Dielectric constant（~20GHz）	＜3.2	＜2.7	＜3.3	＜3.3
Dielectric loss（~20GHz）	＜0.18	＜0.1	＜0.2	＜0.2
Heat distortion temperature（℃）	180-200	---	~80	~80
Application Recommendations	Microelectronics, Satellite antenna, high-temperature Resistant parts, Space equipment, Precision manufacturing, Chemical industry, Scientific research, etc.	Microelectronic seals, Biomedical, Medical devices, etc.	High-precision models, Micro-precision parts, Microfluidics; Microelectronics, Automotive and other components	High-precision models, Micro-precision parts, Microfluidics; Microelectronics, Automotive and other components

Photosensitive polyimide oligomers and their light-curing 3D printing resins

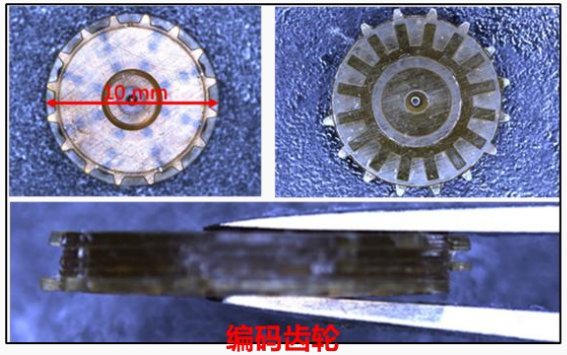
■ Basic Performance Parameters

- Viscosity: 2000~3500 cps (with a small amount of solvent)
- Dimensional shrinkage: line shrinkage 1~3% (controllable)
- Elongation: 5~8%
- Heat resistance: long term: ~200℃; short term: ~250℃
- Glass transition temperature ~250℃
- Molded parts need to be heat treated to ~200℃.

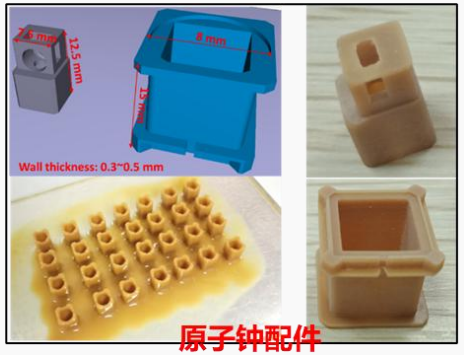
■ Areas of application

Nanoimprinting, Micro-precision Manufacturing, Microelectronics, Aerospace, Automotive Manufacturing

Application Case Show

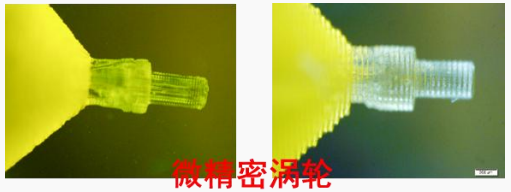


编码齿轮



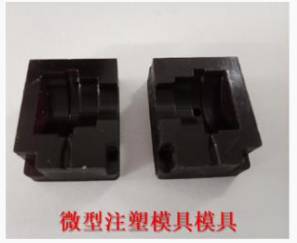
原子钟配件

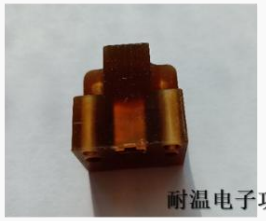

Antenna components

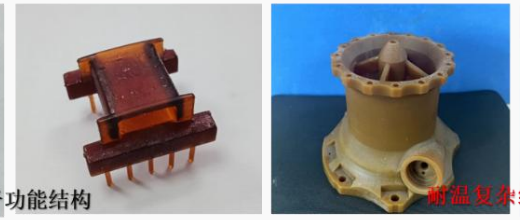

微精密涡轮


高温连接器


耐温轻量化引流结构


微型注塑模具模具


耐温电子功能结构


耐温复杂结构部件

Dual-curing 3D printed polyimide resins for small molecule systems

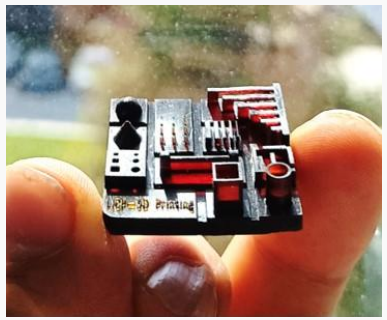
■ Basic Performance Parameters

- Viscosity: less than 1000 cps (with a small amount of solvent)
- Dimensional shrinkage: line shrinkage 5~8% (controllable)
- Elongation: less than 5%
- Heat resistance: long term 180~220℃; short term 300℃
- Glass transition temperature: ~230℃
- Molded parts to be heat-treated to ~300℃
- Precision: better than 50 microns

■ Areas of application

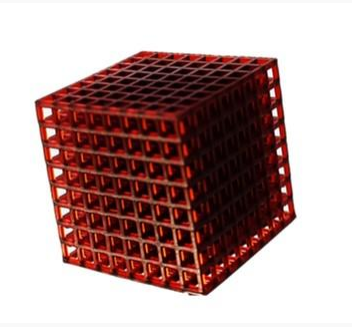
Nanoimprinting, Insulating and Temperature-resistant Parts, Support Structure Parts, Microelectronic Photosensitive Adhesive

Application Case Show

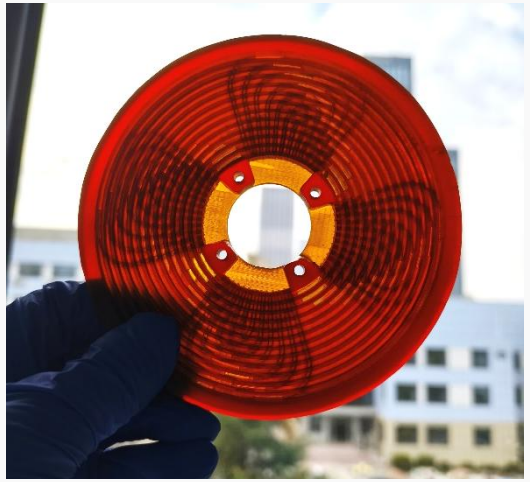


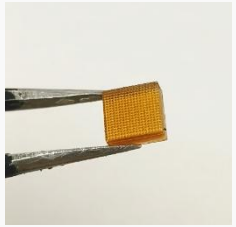
PI Molding Accuracy Demonstration

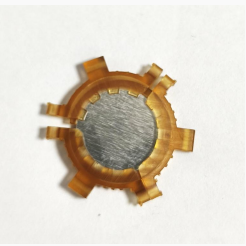
PI Grid Ball

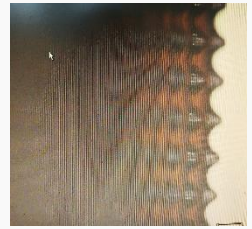


PI Topology









Aerospace precision parts

Light-curing 3D printing polyetheretherketone photosensitive resin

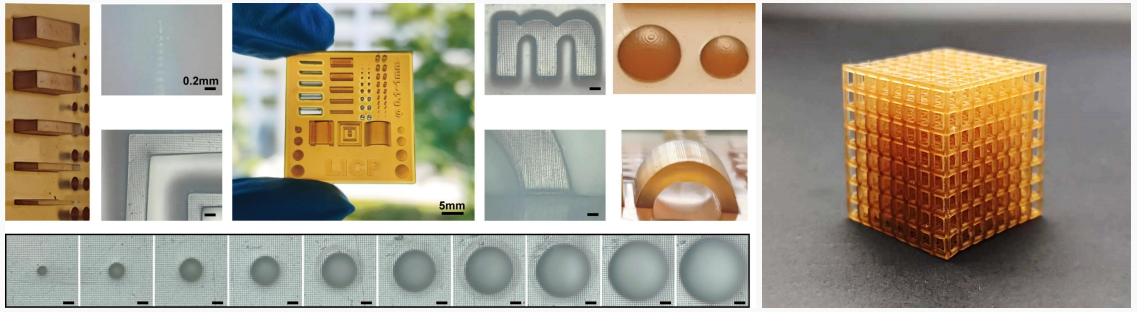
■ Basic Performance Parameters

- Viscosity: above 2000 cps
- Dimensional shrinkage: line shrinkage less than 3% (controllable)
- Elongation: 5~8%
- Heat resistance: long-term 150~200℃; short-term 250~300℃
- Glass transition temperature: ~180℃
- Molded parts need to be heat-treated to ~200℃
- Accuracy: better than 50 microns

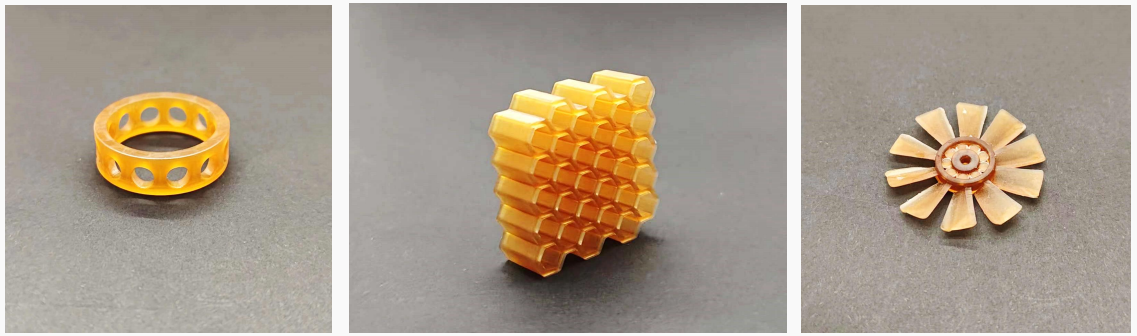
■ Areas of application

Microelectronics, Connectors, Aerospace, Precision Manufacturing, Medical Devices

Application Case Show



Demonstration of molding accuracy



Precision components

Dental guide applications

Light-curing 3D printing high performance cyanate ester photosensitive resin

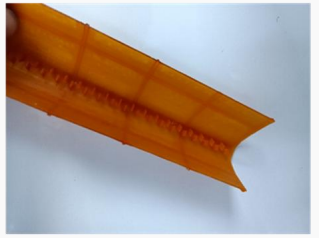
■ Basic Performance Parameters

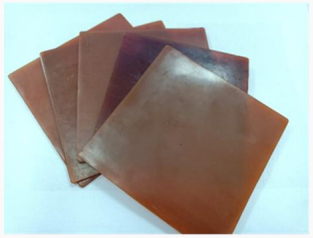
- Viscosity: 50~300 cps
- Dimensional Shrinkage: Less than 2% line shrinkage
- Elongation: Less than 5%
- Heat Resistance: Long-term 120~180℃; Short-term 220℃
- Glass Transition Temperature: ~180~200℃
- Molded parts need to be heat-treated to ~220℃
- Precision: Better than 50 microns

■ Areas of application

- Microelectronics, Aerospace, Precision manufacturing, Automotive Manufacturing, Nuclear Energy

Application Case Show

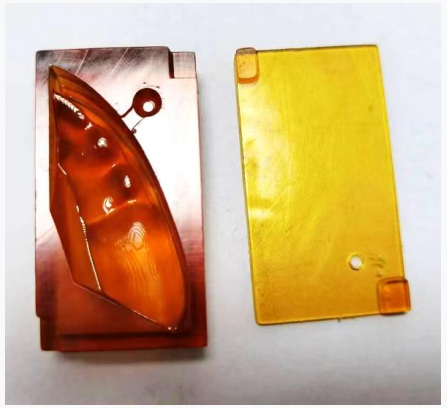




Product Model	MGPI01	WLCE01
Tensile strength（MPa）	85	90
Modulus (GPa)	2.5	2.3
Dielectric Constant (18GHz)	3.2	3.4
Dielectric Loss	0.008	0.015
Glass Transition Temperature (℃)	243	195
Heat Distortion Temperature (℃)	215	170

Shaped thin-walled complex antenna substrates

Heat-resistant reaction runners



Non-toxic silicone casting mold

Light-curing 3D printing of high-performance silicone rubber resins

■ Basic Performance Parameters

- Viscosity: ~3000 cps
- Dimensional Shrinkage: Less than 2% line shrinkage
- Elongation at break: 400-500%
- Fracture Strength: 2.5-3.5 Mpa
- Modulus of Elasticity: 0.3-0.5 Mpa
- Shore Hardness: 15-25 A
- Precision: Better than 50 microns

■ Areas of application

- Microelectronic Packaging,
- Aerospace Sealing,
- Precision Manufacturing
- Medical Devices

Application Case Show

Light-cured 3D printing of high-performance hydrogels

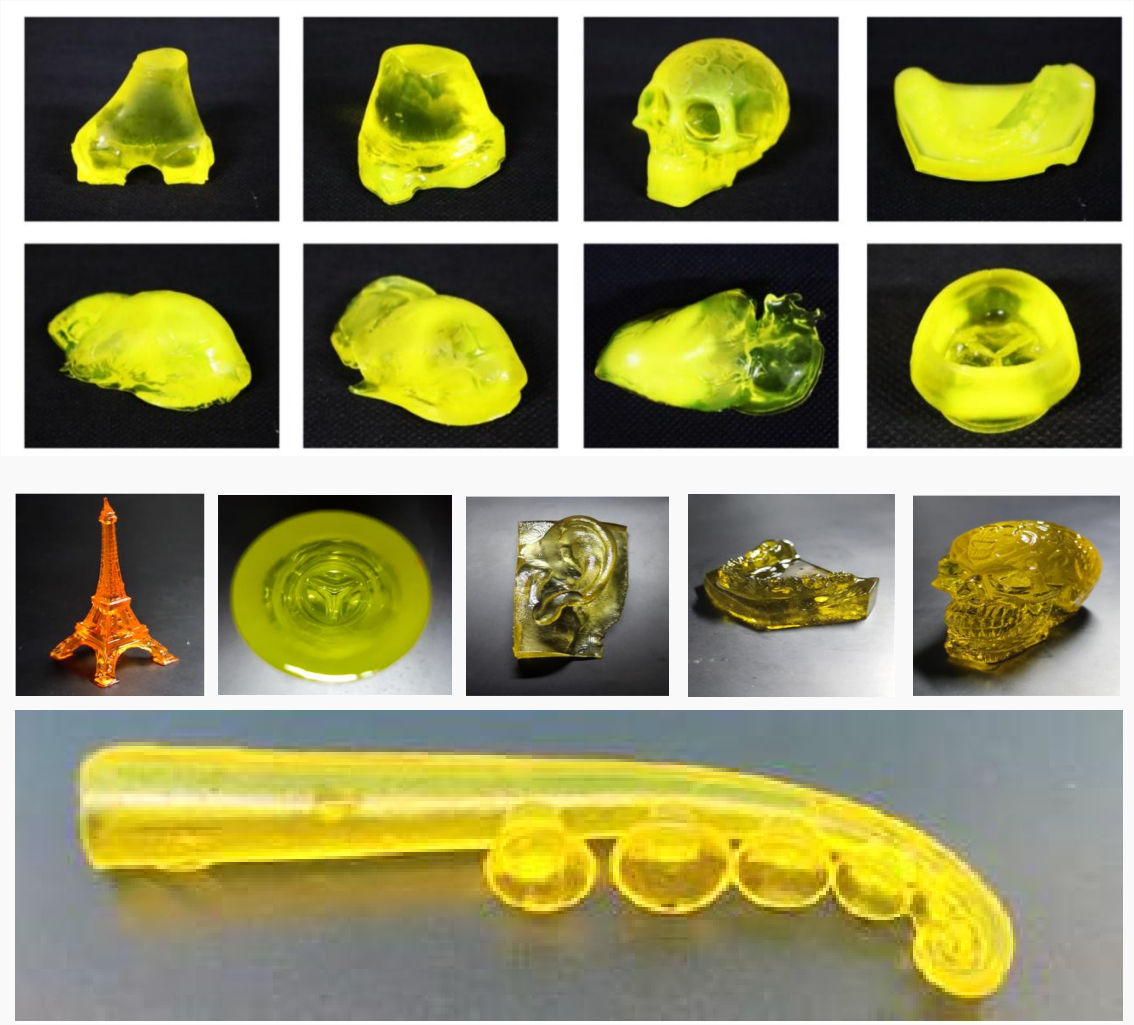
■ Basic Performance Parameters

- Mechanical strength: 0.5~2.0MPa
- Elongation at break: 300~800%
- Resilience: >90%
- Modulus of elasticity: 100~500kPa
- Precision of print body: 50μm
- Printing ink viscosity: 10~30Pa·s
- Printing time: 5s~20s

■ Areas of application

- Medical tissue and organ models.
- Highly adhesive hydrogel devices.
- Hydrogel sensors, tactile simulation of cartilage, brain and other in vivo tissues.

Application Case Show



Light-curing 3D printing of tissue and organ models with hydrogel

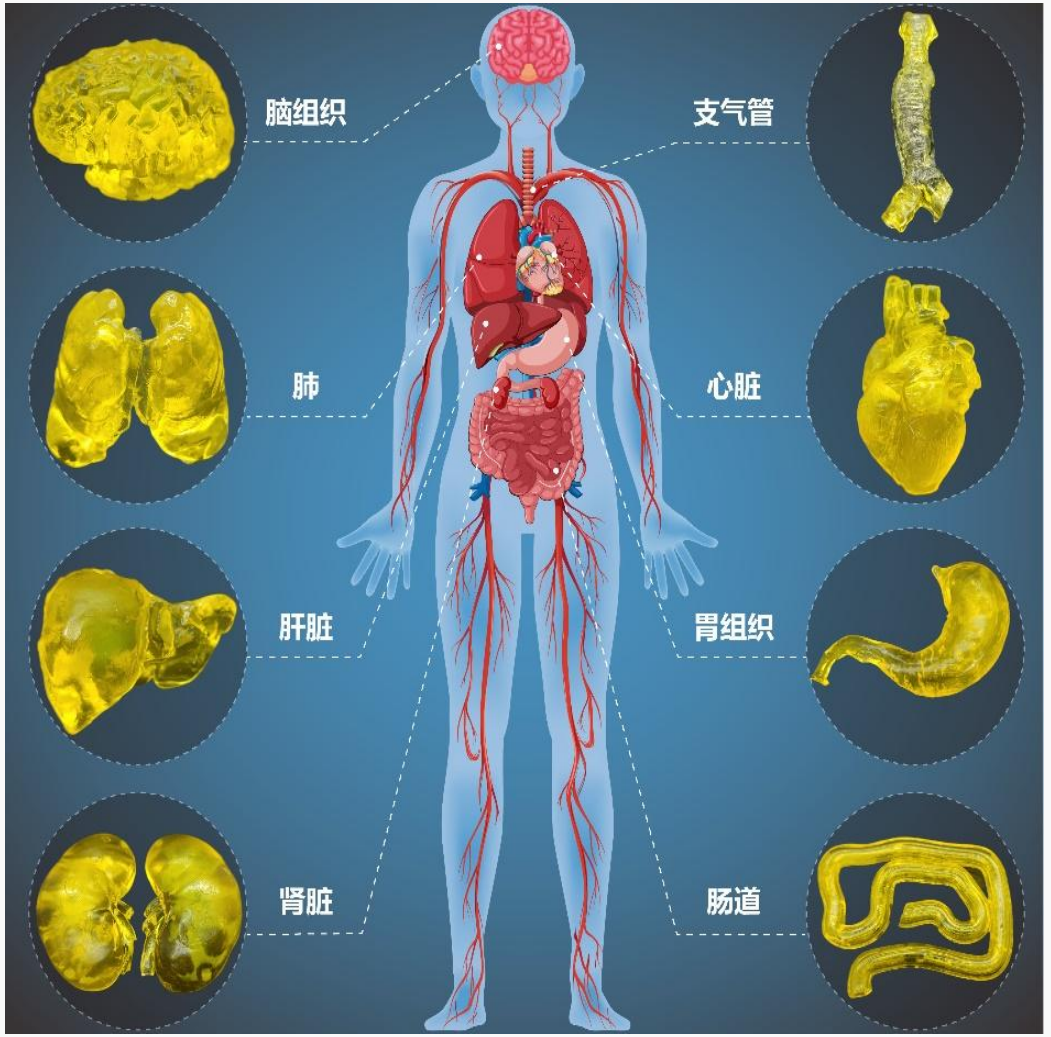
■ Basic Performance Parameters

- Mechanical strength: 0.5~3.0MPa
- Elongation at break: 500~1000%
- Resilience: >80%
- Modulus of elasticity: 30~500kPa
- Precision of print body: 100~200μm
- Printing ink viscosity: 10~50Pa·s
- Printing time: 10s~25s

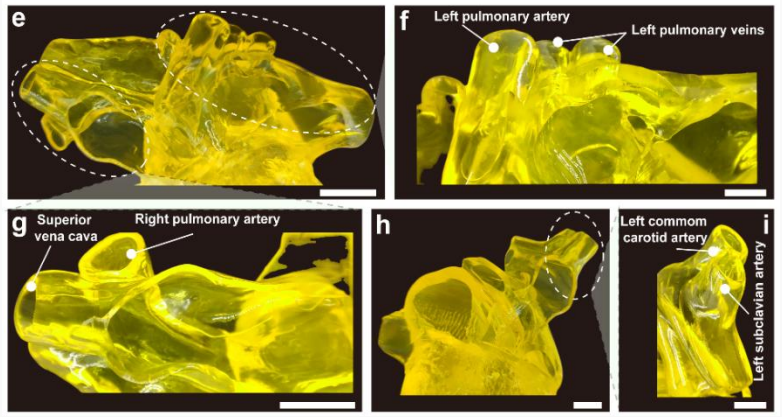
■ Areas of application

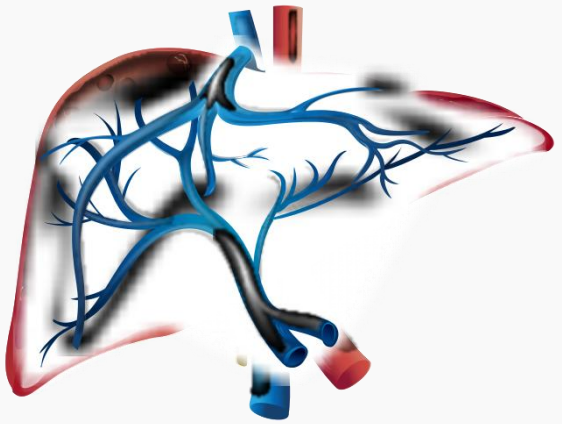
- Soft tissue organ models for surgical training;
- multi-scale microfluidic channels and organ chips;
- construction of vascular networks and surgical medical planning

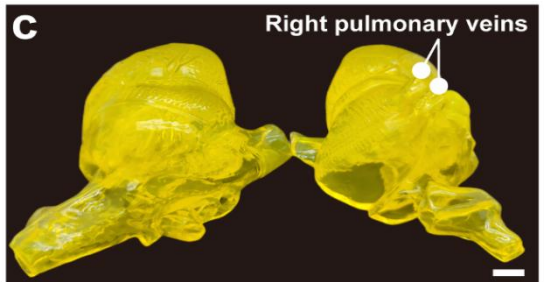
Application Case Show

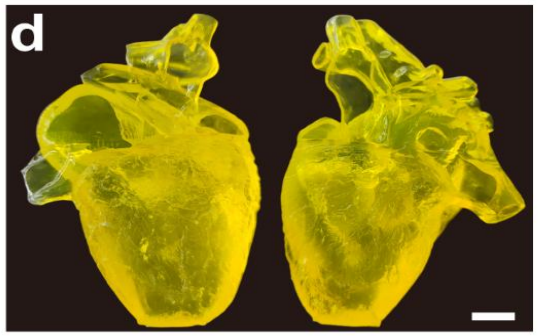


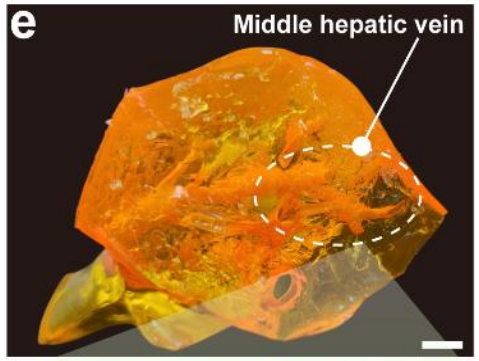
Introduction and demonstration of high-performance 3D printing materials

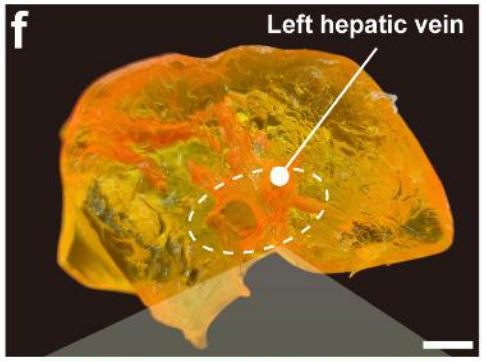


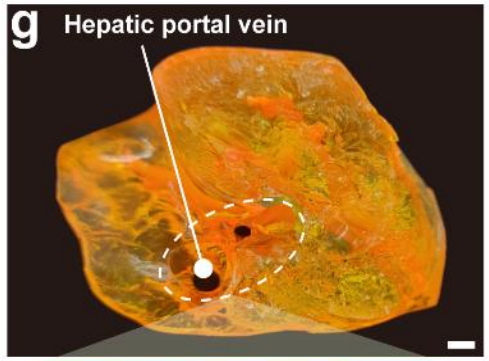


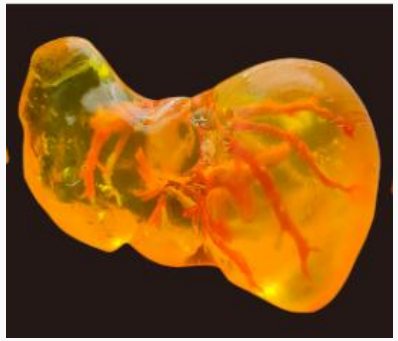












Light-curing 3D printing hydrogel simulation organ model product demonstration