# **B9Creations**

Education & Research Additive Manufacturing Solutions



### **B9CREATIONS**

B9Creations' differentiated approach to solving problems with Additive Manufacturing has developed a base of raving fans in high-value industries such as medical, aerospace, and high-precision manufacturing.

Our track record of exceeding the most demanding customer requirements has positioned us to enable customers to progress from prototyping to fully-scaled production leveraging additive manufacturing.

### Technology FAST 500™

2019 North American Recipient Awarded by Deloitte LLP



N°2318

Fastest-Growing Co. in USA

Financial Times The Americas' Fastest Growing Companies

2021 | Ranked No. 319



### **B9Creations Global Network**

Experts spanning nearly 70 countries across the globe.

B9Creations Dealer
B9Creations Customer
B9Creations Headquarters



# We're the Innovation Team

that leading researchers in the toughest industries depend on.



# We power your research so you can change our world

#### Some of the institutions using our technology include:

#### Canada

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McGill University University Western Ontario

#### China

The Chinese University of Hong Kong Discovery College Zhejiang University

#### Germany

University of Freiburg

#### Japan

Kyoto University

#### New Zealand

University of Canterbury

#### South Korea

Pohang University of Science & Technology Seoul National University of Science and Technology

#### Singapore

National University of Singapore

#### United Kingdom

University of Edinburgh University of Dundee University of Kent

#### United States

Baylor University Brigham Young University Brown University City University of New York Columbia University Georgia Tech Iowa State University Kansas State University New York University North Carolina State University Ohio State University South Dakota School of Mines and Technology

#### United States

South Orange County Community College District Stanford University University at Buffalo University of Arizona University of California University of Maryland University of Michigan University of Nebraska Lincoln University of Rochester University of Utah University of Texas at Arlington

#### For research such as:

#### Microfluidics

Stem Cell Research Biomedical Modeling & Research Drone Development Nanoparticle Micro-circuitry Mechanical Engineering Materials Science & Development Geology Physics Advanced Manufacturing Art & Design Faculty Research Student Projects And more!

### **Research Partnerships**

#### **Osteoarthritis Cure**

CellField Technology & SD School of Mines & Tech

Security Printing & Anti-Counterfeiting Tech SD School of Mines & Tech

#### **International Space Station**

Made in Space

#### Self-Detecting Structural Damage

Rey Juan Carlos University

**Optical Structures** University of Freiburg

Wildlife Research Game, Fish & Parks Grow 3D cultures of cartilage cells that cause osteoarthritis, degenerative joint disease, that allow cells to maintain their physiological nature 4 times as long as other tech

3D printing QR codes, only visible under infrared light, that store digital information on authenticity & origin for pharmaceutical packaging, currency & passports, historical artifacts & more

3D printing in microgravity for use on the International Space Station to expand extraterrestrial AM capabilities to respond to unforeseeable demands of on orbit manufacturing

3D printed self-sensing composite parts with electrically conductive, carbon nanotube reinforced resin to monitor structural health

3D printing technology to fabricate optical structures by testing different material compositions which affect optical quality and mechanical flexibility

3D printed tracking collars to pioneer data collection for population growth rate, survival estimates, & harvest models for wildlife

Plus research on microfluidics, stem cells, drones, nanoparticles, biomedicine, microcircuitry, materials science, geology, physicals & manufacturing at Columbia, Stanford, Sandia & Argonne National Labs & more.



### **Biomedical Research**

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#### CHALLENGE:

Biomedical research company CellField needed to find cure for osteoarthritis. But there was no effective way to study the cells that caused it.

#### **SOLUTION:**

Grow 3D cultures of cartilage cells that cause osteoarthritis, or degenerative joint disease, with a 3D printed structure that allows cells to maintain their physiological nature 4 times as long as other technology

### Game, Fish & Parks

#### **CHALLENGE:**

Game, Fish & Parks needed to track population growth rate for bobcats to help with our harvest, models, and population viability. To do that, they needed the bobcat kitten survival rate which has never been published before.

#### **SOLUTION:**

Instead of implanted trackers, 3D print collars to hold tracking devices that expand as the juvenile bobcat grows – and can be applied to other species as well



See full story here.



"Before these 3D printed expandable collars, the only solution for kittens and growing animals are implants, but those have a small range, risk of adverse heath effects, and transmitter will always be with the animal. These 3D printed collars made a huge difference – and could be used on a lot of other species as well."

### **Anti-Counterfeiting**

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#### **CHALLENGE:**

Counterfeiting is precited to drain \$4.2T from the US global economy by 2022 – from currency to pharmaceuticals, art, and beyond.

#### **SOLUTION:**

3D print invisible QR codes onto objects. QR codes can hold information on authentication, manufacturer, and more from pharmaceutical packaging to art & currency to protect against counterfeit copies. Only visible under infrared light, the QR codes won't damage the product but delivers an arsenal of safety hidden on it in plain sight. Optus 4G 3:56 pm
✓ Set Up
QR Code



This QR code is used to give another device the ability to scan for this event. The QR code should only be given to people who you want to be able to scan. They require the scanning app but do not need a login. You can disable extra scanners from your setup page. High-precision, fast additive manufacturing platform with push-button technology

B9Create 2.0 CAM software & B9Captivate custom material development toolkit

> Get prototypes, end-use parts & molds in engineering resins in < 1 hr

## **B9Creations**

### **Additive Manufacturing Solutions**

Production-grade parts with automated post-processing to match using the B9Clean

950

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Cure models in minutes with memory settings for repeatable results

898

### **B9Creations Materials**

Bring your ideas to life with our materials.



### **B9Creations Next Steps**

Discover how high-resolution 3D printing can work for you.



### Want to find out more?

- Request a sample
- Get more product information
- Schedule a product demo
- Talk to a solutions expert

#### Take the next step

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(605) 787-0652

b9c.com