

TEXTURED PIEZOCERAMICS

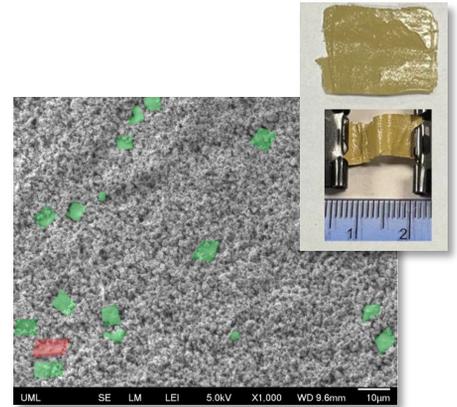
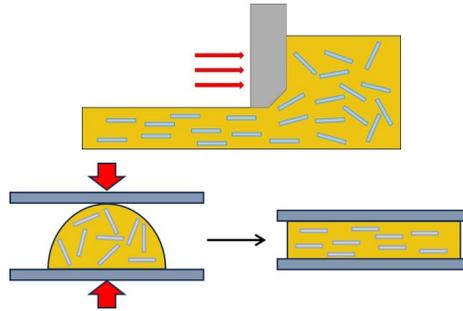
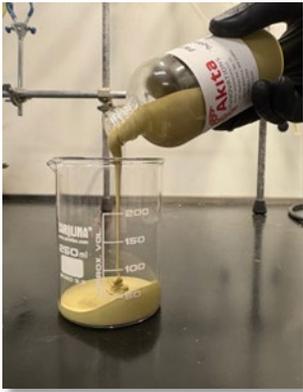
AM-ENABLED CUSTOM CONFIGURATION



TECHNOLOGY SUMMARY

Textured piezoceramic elements deliver near single-crystal performance with simpler, more scalable processing. Combined with additive manufacturing, they enable compact, high-output sonar transducers and arrays while strengthening domestic supply for defense and industrial customers.

Final Product: Textured piezoceramic elements for high-performance sonar arrays.



FUNDING AND OPPORTUNITY

Currently at approximately TRL 3 with Navy SBIR funding and lab-scale prototypes. Seeking sonar primes, Navy labs, and sensor OEMs to evaluate elements in relevant fixtures, co-design transducer concepts, and collaborate on transition to pilot-scale manufacturing.

This collaboration offers a chance to be involved in pioneering research and inform future federal investment.

Company Profile

- Founded 2012
- Billerica, MA
- 9 Employees

CAPABILITIES

- Near single-crystal electromechanical performance
- Additively manufactured complex transducer geometries
- Tunable properties by composition and texture
- Compatible with Navy-relevant drive conditions

APPLICATIONS/INDUSTRIES

- Naval sonar systems
- Underwater robotics
- Industrial ultrasonics
- Autonomous sensing

Akita Innovations LLC

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ABOUT AKITA INNOVATIONS LLC

Akita develops chemicals and materials for demanding applications in optics, coatings, sensors, additive manufacturing, and biomedical diagnostics. We solve problems with existing materials or design and produce new materials and chemicals.

DIFFERENTIATORS

- Leadership of industry, university, and government teams
- Capable of ITAR/classified work
- DCAA-approved accounting system
- DFARS 252.204-7012/NIST 800-171 cybersecurity
- Member of OTA consortia: NAC, AMTC, CWMD, NSTIC, NEST, MSTIC, UTIC, MATAAC
- Portfolio of current and past SBIR contracts allows Phase III sole-source contracts

CORE COMPETENCIES

- Chemical design & synthesis
- Advanced materials
- Coatings development
- Contract R&D
- Absorbing & fluorescent dyes
- Optical materials
- Polymer design & synthesis
- Adhesives, sealants, elastomers
- Micro- & nanoparticle synthesis

NAVY EXPERIENCE



3D-Printed Textured Piezoelectrics

SBIR Phase I/II 2024-2028

AN/SPY-1 Transmissive Radar Array Covers

SBIR Phase I/II, 2023-2027

High Sensitivity Piezo-Ceramic Materials for Hydrophone Devices

SBIR Phase I 2026

Corporate Data

CAGE: 6SUQ6

UEI:

UXNVMEZDFNF7

NAICS: 541715

Small Business



*Logos are property of the US Navy and do not represent endorsement

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