



SINTX
Technologies

CORPORATE OVERVIEW

January 2024

DISCLAIMER

Forward-Looking Statements

This presentation contains forward-looking statements about SINTX Technologies, Inc. (the “Company”). These forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements relate to the Company’s financial results, products, product candidates, the expected timing of the regulatory approval of our product candidates, regulatory processes and objectives, potential benefits of the Company’s product candidates, intellectual property and related matters, all of which involve known and unknown risks and uncertainties. Actual results may differ materially from the forward-looking statements discussed in this presentation.

Supporting documentation for all claims:

<https://sintx.com/resources/references/>

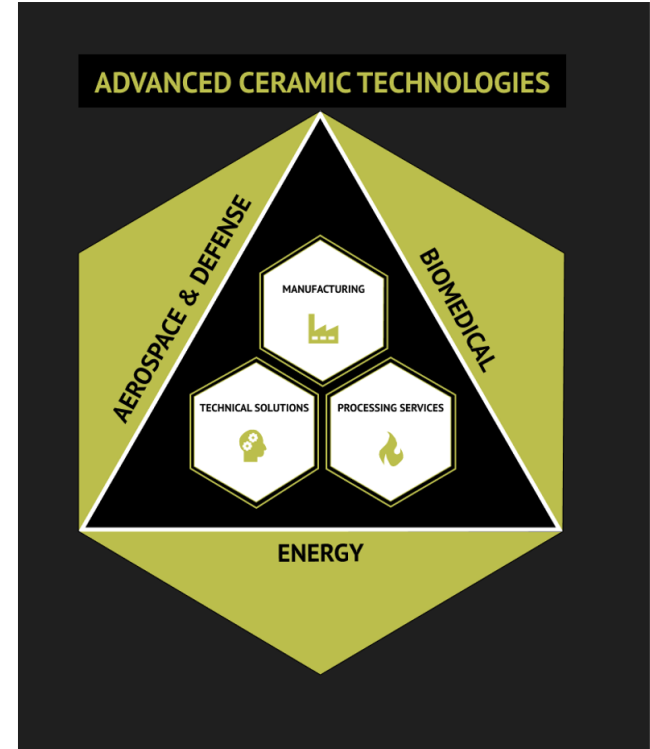
Accordingly, the Company cautions investors not to place undue reliance on the forward-looking statements contained in, or made in connection with, this presentation. The forward-looking statements contained in this presentation are further qualified by the detailed discussion of risks and uncertainties set forth in the Company’s Annual Report on form 10-K filed with the Securities and Exchange Commission (SEC) on March 29, 2023, and in the Company’s other filings with the SEC which can be obtained on the Company’s website at www.sintx.com or on the SEC website at www.sec.gov. The forward-looking statements contained in this document represent the Company’s estimates and assumptions only as of the date of this presentation and the Company undertakes no duty or obligation to update or revise publicly any forward-looking statements contained in this presentation as a result of new information, future events or changes in the Company’s expectations.

Our Active Businesses

Additive Manufacturing of Advanced Ceramics and Composites

Production of High-performance Silicon Nitride Biomedical and Aerospace Components

Development of Complex Thermal Barrier Coatings for Aerospace and Energy Applications



CORE STRENGTHS



Strong IP & Regulatory Portfolio

- 15 issued patents
- 144 patent applications in process
- FDA Master Files

Scientific achievements

- Over 140 peer-reviewed scientific publications
- More than 100 technical and scientific presentations
- Research independently corroborated
- Over 160 SBIR/STTR awards to fund technology development in defense, energy, and biomedical



DIVERSIFIED CERAMICS TECHNOLOGY SOLUTIONS

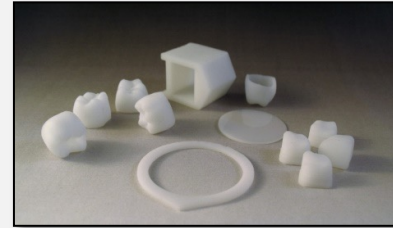
3D PRINTING TECHNOLOGIES

Dense Ceramics

A complete additive manufacturing workflow from resin development through sintering integrates 3D printing with unique SINTX materials to reduce development time and costs. Excellent results have been achieved in medical device components, heat exchangers for aerospace applications, ceramic cores for jet engine blades, and many other complex components that can reduce part count and enhance performance capabilities.

Ceramic-Polymer Composites

Use of our proprietary composite materials and our implant-grade 3D printer allows us to directly print complex features such as textures and interconnected porosity into biomedical devices. The composite materials contain silicon nitride as an active ingredient to improve device biocompatibility and bone healing while also reducing infection risk.



SILICON NITRIDE for AEROSPACE, ENERGY, etc.



Our STX-100 grade of silicon nitride combines mechanical, thermal, and electrical properties. Ideal for applications requiring extreme durability, thermal stability, exceptional strength, and resistance to wear.



ENERGY



AUTOMOTIVE &
AEROSPACE BRAKES



AEROSPACE
MATERIALS



AUTOMOTIVE
CERAMICS



WELDING

SILICON NITRIDE for BIOMEDICAL

Our FleX-SN medical-grade silicon nitride is ideal for biomedical implants. FleX-SN is biocompatible, bioactive, antimicrobial, and shows superb bone-affinity.



SPINE



CRANIOMAXILLOFACIAL



DENTAL
IMPLANTS



FOOT & ANKLE

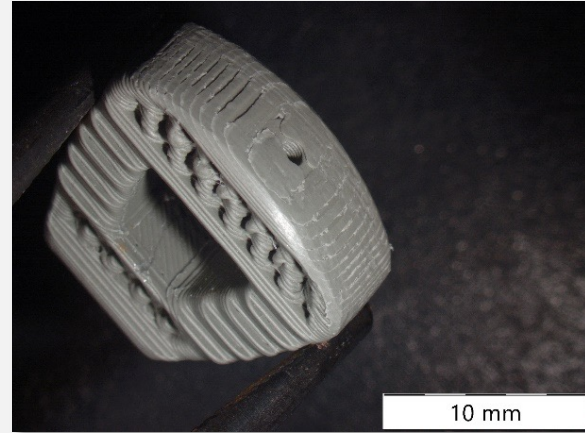


KNEE & HIP

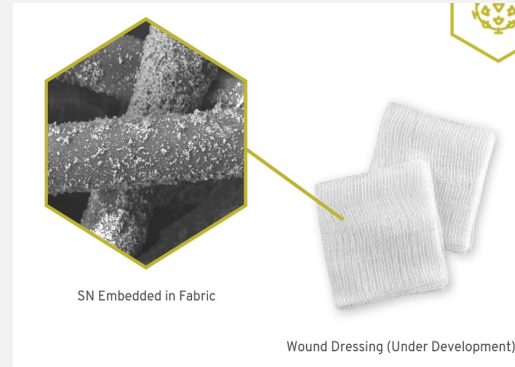
SN COMPOSITES

Composite materials combine advantages of different materials. SINTX manufactures composites of silicon nitride powder and PEEK or PEKK ready for 3D printing – both are polymer materials with stiffness similar to human bone.

FleX-SN AP Powder can be integrated into products and fabrics that inactivate bacteria, fungi, and viruses – including the SARS-CoV-2 virus.



3D Printed, SN-PEEK Cervical Interbody Spine Implant



CERAMIC MATRIX COMPOSITES & COATINGS



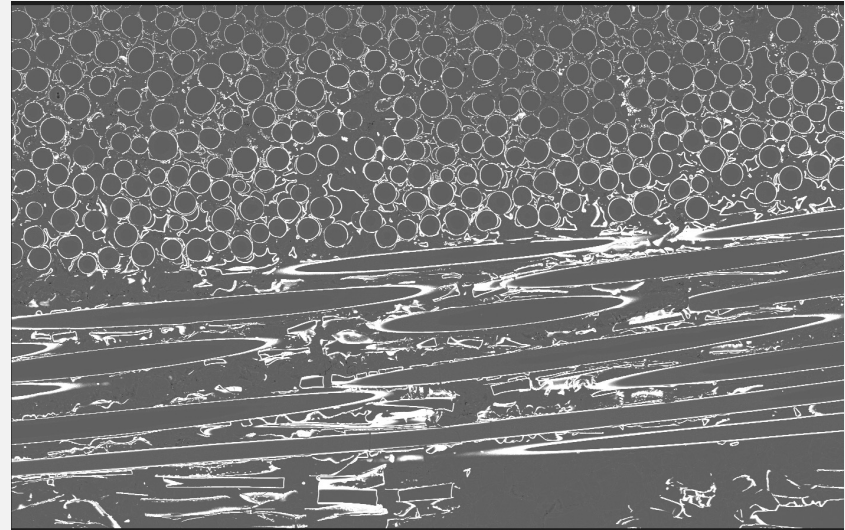
Ceramic Matrix Composites (CMCs)

CMCs are ceramic fibers embedded in a ceramic matrix. CMCs are low density and can withstand ultra-high temperatures, making them an ideal material for extreme conditions.

CMCs are in high demand from major OEMs for aerospace, heat exchangers, turbine engines, hypersonic-supersonic vehicles, and related applications.

CMC Coatings

Recently developed oxidation resistant coatings for CMCs that extend their useful application to extreme temperatures.



Carbon / Silicon Carbide Ceramic Matrix Composite

BORON CARBIDE AND SPINEL FOR ARMOR



Global demand is for lightweight, comfortable ceramic armor with superior protection against armor piercing rounds. SINTX's boron carbide ceramics meet these requirements.

Transparent ceramic ARMOR provides superior ballistic protection at less than half the weight and thickness over traditional glass laminates.



AEROSPACE
ARMOR



TRANSPARENT
CERAMICS



VEHICLE
ARMOR



BODY
ARMOR



CATALYSTS FOR FUTURE GROWTH

AEROSPACE AND DEFENSE

AIRCRAFT ENGINE IGNITORS (Silicon Nitride)

Working with two major companies on commercial jet ignition systems.

MULTI-YEAR CONTRACT WITH THE DEFENSE ADVANCED RESEARCH PROJECTS AGENCY (Ceramic Matrix Composites)

Combustor for high heat applications.

ARMOR (Boron Carbide)

The SLC ARMOR plant has strong interest from potential customers.

AIRCRAFT TURBINE BLADES (3DP - Silica)

Producing resins used to 3D print components used in manufacturing aircraft turbine blades.

THERMAL PROTECTION SYSTEMS FOR AIRCRAFT AND SPACE VEHICLES (Processing Services)

Developing opportunities to provide toll processing services for non-oxide ceramics.

ENERGY

MULTI-YEAR CONTRACT WITH THE DEPARTMENT OF ENERGY (3DP - Technical Solutions)

High efficiency heat exchangers developed for high performance military and commercial equipment.

CMCs FOR NEXT-GENERATION SYSTEMS (Ceramic Matrix Composites)

Accident tolerant fuel containment systems for nuclear reactors.

Receiver tubes for concentrated solar-thermal power systems.



BIOMEDICAL



NEW SOLID SILICON NITRIDE SPINAL IMPLANTS (Silicon Nitride)

Producing implant banks for CTL's newly launched "Nitro" product line.

NIH GRANTS (3DP/Technical Solutions)

Silicon nitride / polymer composites for use in spine, craniomaxillofacial, and trauma plates.

DENTAL (Silicon Nitride)

Working with dental implant companies to supply novel silicon nitride implants.

ANTIPATHOGENIC COATINGS (Silicon Nitride)

Completed year two of a successful collaboration with Oxford Performance Materials to develop a composite PEKK and silicon nitride coating for implanted devices.

3D PRINTED COMPONENTS (3DP - Alumina/Zirconia)

Leveraging SINTX sales team has brought in new opportunities for producing ablation tips, surgical robot components, and other small ceramic medical components.

ARTHROPLASTY (Silicon Nitride)

Renewed interest in silicon nitride's use as a femoral head and acetabular cup.

NEW OPPORTUNITIES/MARKETS/PRODUCTS

Several new collaborations in developing products for wound care, cancer treatment, and an antipathogenic coating for catheters.

2024 KEY OBJECTIVES

GROW AEROSPACE, DEFENSE, and 3DP REVENUE

Expand customer base in existing and new markets. Increase revenue through continued market development activities.

EXPAND SILICON NITRIDE'S SUCCESSES IN BIOMEDICAL

Execute on opportunities in composites and coatings.

Further develop new applications in arthroplasty and wound care.

MAINTAIN MATERIALS R&D PROGRAM

Strategically expand externally funded research.

Continue commercialization of new products from R&D.

DRIVE TOWARDS PROFITABILITY

Deploy Operational Excellence activities across the company.

Expand quality management system to Maryland.

SUMMARY

PORTFOLIO & EXPERTISE

SINTX has a diverse portfolio of advanced ceramics materials, with application across biomedical, aerospace and defense, and energy market sectors. SINTX has unmatched global expertise in the development and application of silicon nitride, based on our premium portfolio offering.

EVOLVING

SINTX has transformed since late 2018 from a specialty materials company into an OEM that can serve diverse markets with various products with a range of quality, value, and economics.

INVEST

Invest as SINTX continues our new trajectory in the wake of two acquisitions which set up the organization for sustained success.

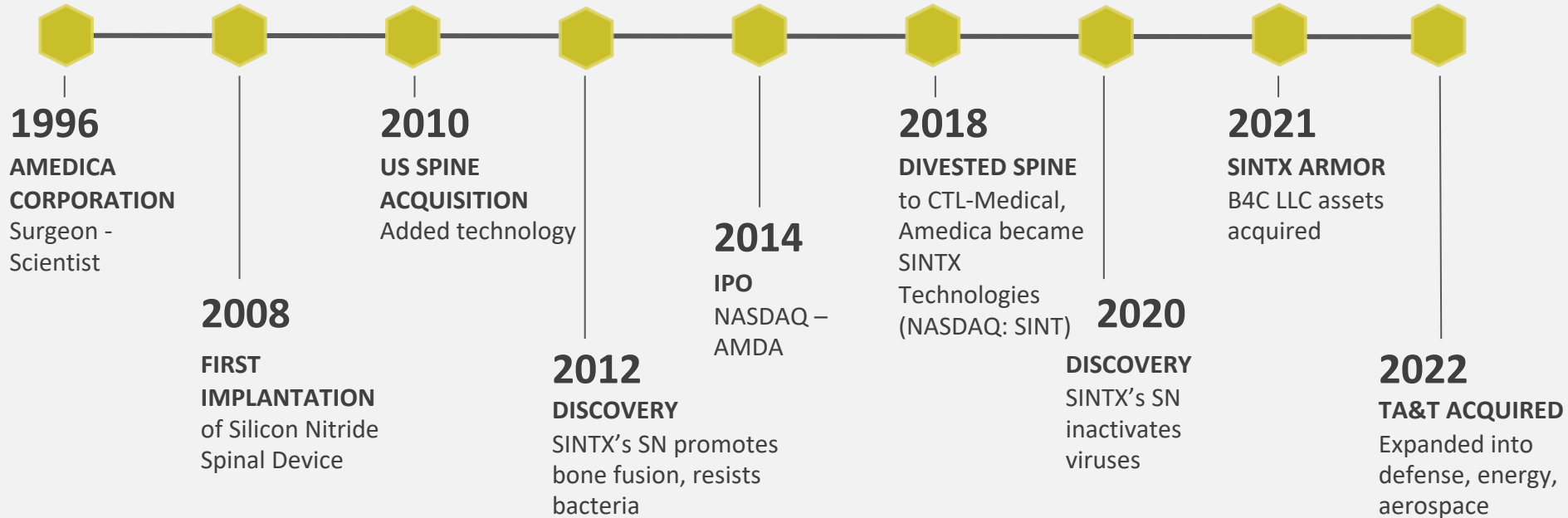


THANK YOU

SUMMARY CAP TABLE AS OF 9/30/23

Warrants Outstanding	1,244,754
Options Outstanding and Stock Units (as of September 30, 2023)	27,515
Total Potentially Dilutive Securities	1,272,269
Common Shares Outstanding (as of September 30, 2023)	4,208,151
Series B Outstanding (as converted)*	10,576
Series C Outstanding (as converted)**	338
Series D Outstanding (as converted)***	11,919
Total Shares	4,230,984
Total Shares & Potentially Dilutive Securities	5,503,253
Total Debt Outstanding (in thousands)	\$ 72
*26 Series B outstanding. Assuming conversion rate of 406.77:1.	
**50 Series C outstanding. Assuming conversion rate of 6.76:1.	
***180 Series D outstanding. Assuming conversion rate of 66.22:1.	

SINTX'S HISTORY AND TIMELINE



MANAGEMENT TEAM



B. Sonny Bal, MD, JD, MBA, Ph.D

*Chairman of the Board
Chief Executive Officer*

- Orthopedic Surgeon and Attorney
- Ceramic Scientist and Investigator
- CEO since 2014, Board since 2012



David O'Brien, MS

*Executive Vice President and Chief
Operating Officer*

- 35 years of operations, manufacturing, and engineering experience with medical devices and ceramics



Ryan Bock, Ph.D.

V.P. Research and Development

- 20 years research in advanced ceramics and medical device research and product development experience



Michael Marcroft, MBA

V.P. Sales and Marketing

- 20+ years of experience in medical technology business development & marketing
- Global corporations and startups