



SINTX
Technologies

CORPORATE OVERVIEW

May 2023

DISCLAIMER

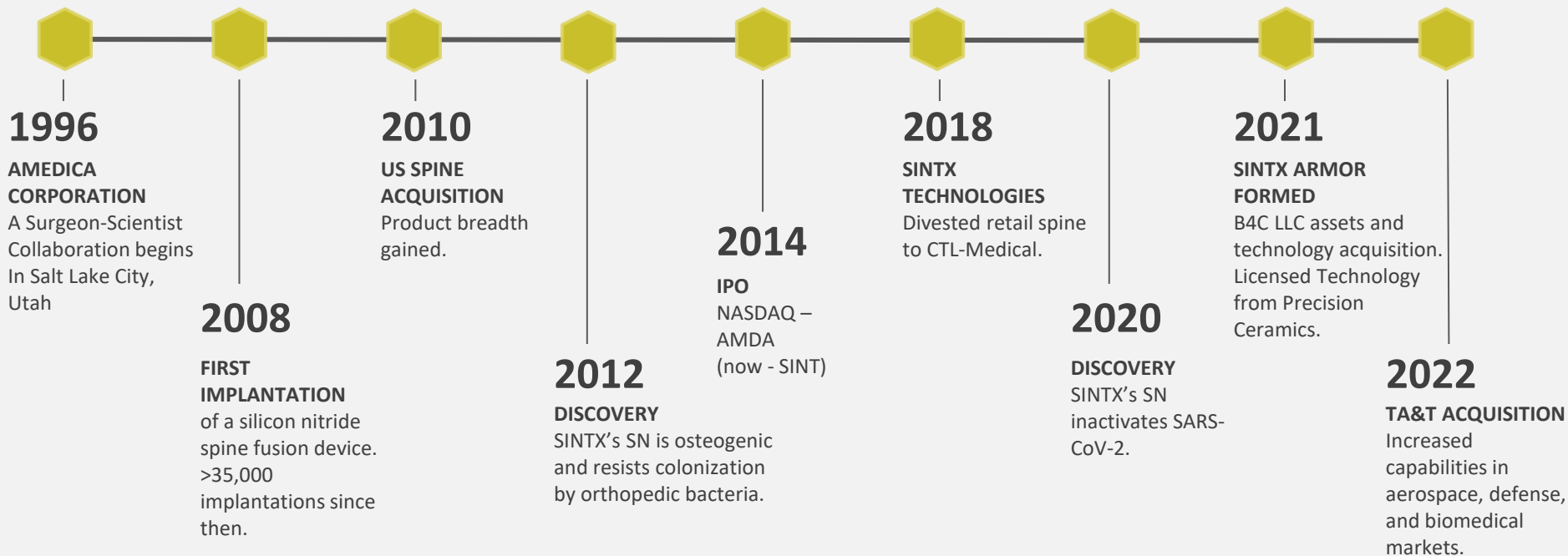
Forward-Looking Statements

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.

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 25, 2022, 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.

Supporting documentation for all claims in this presentation can be found at <https://sintx.com/resources/references/>

HISTORY



SINTX TECHNOLOGIES

We are dedicated to the manufacturing, research, and development of advanced materials science-based solutions to improve quality of life.

Technical Ceramics



Biomedical



Antipathogenic



CORE STRENGTHS

Manufacturing Expertise

- FDA and ANVISA registered facility
- Quality Management System certified to ISO 13485:2016 and AS9100D
- Vertically integrated for rapid prototyping and development
- Over 40,000 implantations in humans with strong record of safety and efficacy

R&D Innovations

- Composites and Coatings
- 3D printing of ceramics and polymer composites
- Fabric Infiltration
- Test Protocols developments



CORE STRENGTHS



Strong IP & Regulatory Portfolio

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

Scientific achievements

- Over 130 peer-reviewed scientific publications
- More than 85 technical and scientific presentations
- Research independently corroborated
- SBIR awards to fund technology development



MATERIALS PORTFOLIO

STX-100

STX-100 silicon nitride has the best combination of mechanical, thermal, and electrical properties of any technical ceramic. Utilized when durability, thermal stability, exceptional strength, and wear resistance are required.



ENERGY



AUTOMOTIVE &
AEROSPACE BRAKES



AEROSPACE
MATERIALS



AUTOMOTIVE
CERAMICS



WELDING

ARMOR

There is an ever-increasing demand for lightweight, comfortable ceramic armor with advanced protection against armor piercing rounds. SINTX's ARMOR ceramics offer advanced hardness and extreme light weight.

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

FleX-SN - BIOMEDICAL

FleX-SN medical-grade silicon nitride products are biocompatible, bioactive, antipathogenic, and have shown superb bone-affinity. The ideal biomaterial for replacement and implant surgeries.



SPINE



CRANIOMAXILLOFACIAL



DENTAL
IMPLANTS



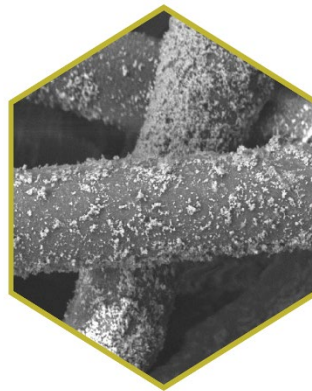
FOOT & ANKLE



KNEE & HIP

FleX-SN - ANTIPATHOGENIC

FleX-SN AP Powder can be incorporated into products and fabrics to manufacture surfaces that inactivate bacteria, fungi, and viruses – including the SARS-CoV-2 virus - thereby limiting the spread of diseases.



SN Embedded in Fabric



Wound Dressing (Under Development)



MEDICAL
TUBING



MASKS



HEALTHCARE



PUBLIC
TRANSPORTATION



WOUND CARE
& DRESSINGS



AIR FILTERS

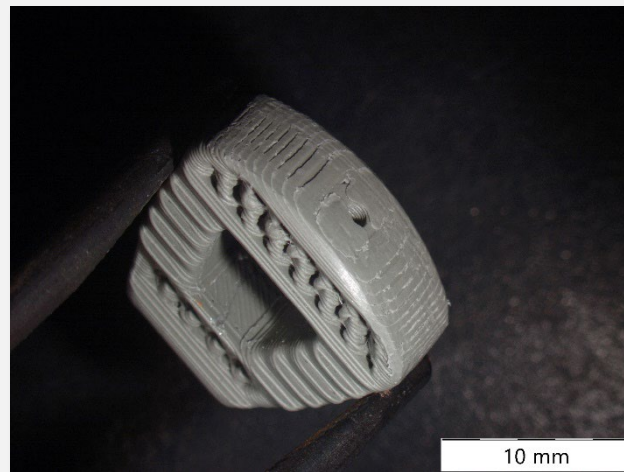


TECHNOLOGY PORTFOLIO

SN COMPOSITES

Composite materials leverage complementary properties of different materials by combining the materials. The composites manufactured at SINTX consist of our silicon nitride powder in a matrix of PEEK or PEKK – both polymer materials with elasticity similar to human bone.

We are also adding our FleX-SN AP powder to a variety of textiles in order to create an antimicrobial fabric composite.



3D Printed, SN-PEEK Cervical
Interbody Spine Implant



CERAMIC MATRIX COMPOSITES & COATINGS



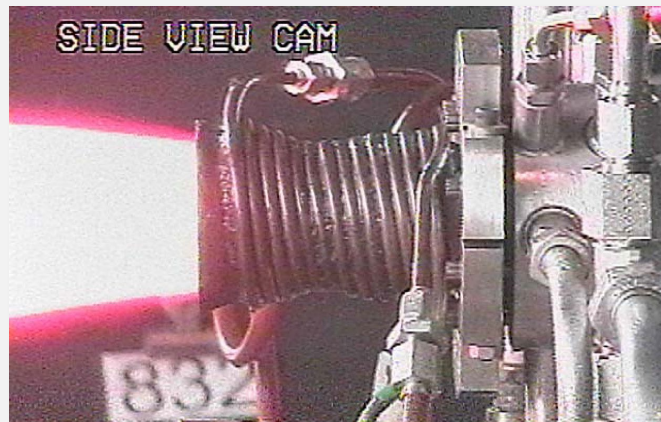
Ceramic Matrix Composites (CMCs)

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.

These advanced materials are in high demand from major OEMs looking to apply this technology in aerospace, heat exchangers, turbine engines, hypersonic-supersonic vehicles, and similar applications.

CMC Coatings

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



NASA actively cooled thrust cell at 5000°F

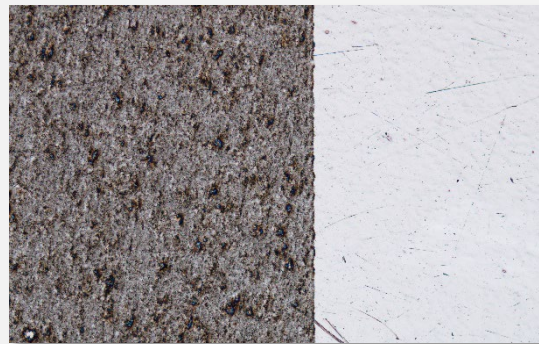
COATINGS

Silicon Nitride Coatings

FleX-SN AP silicon nitride coatings are under development for metal implant materials, such as titanium. These coating aim to overcome the clinical limitations of metallic implants.

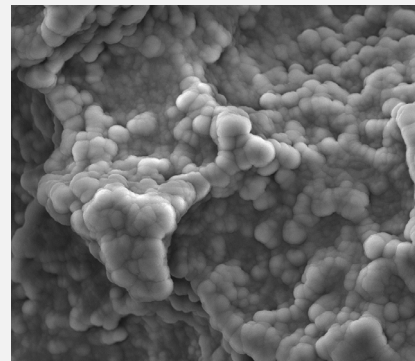
Advanced Ceramic and Metal Coatings

Array of magnetron sputtered and CVD coating materials for a broad spectrum of custom applications.



LEFT: Titanium surface laser clad with silicon nitride.

RIGHT: untreated titanium surface.



PVD coating of silicon nitride.



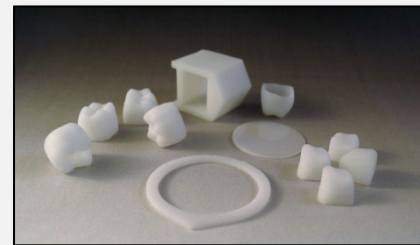
3D PRINTING

Monolithic 3D Printing

Our proprietary 3D printing method reduces time to market and lowers developmental costs. Excellent results have been achieved in a wide range of applications, including 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.

Composite 3D printing

Our medical-grade 3D printer allows us to fabricate parts with textures and porosities, features that cannot be produced by any other manufacturing methods. We produce medical implants that lower infection risk and improve biocompatibility, while retaining favorable mechanical properties, and the ability to heal quickly to host bone.





CATALYSTS FOR GROWTH

TECHNICAL CERAMICS



COMMERCIAL JETS

Working with two major companies on commercial jet ignition systems – silicon nitride is enabling.

WELDING COMPONENTS

In production: components for high-speed welding with an international OEM for automotive applications.

RF ANTENNAS

Working with several companies on RF antennas applications due to the excellent dielectric properties of silicon nitride.

CRITICAL APPLICATIONS

Engaged with many companies in evaluations of our materials in critical applications such as energy and defense.

ARMOR

The SLC ARMOR plant will start up in the 1st quarter 2023 with strong interest from potential customers.

GOVERNMENT CONTRACTS & GRANTS

NAVAL RESEARCH LABORATORY

Ultra hard materials for armor applications that supports power protection and war fighter protection in military generators and vehicles.

HIGH EFFICIENCY HEAT EXCHANGERS

Developed for high performance military equipment by the Office of Naval Research and Commercial HVAC systems for the Department of Energy.

MISSILE DEFENSE AGENCY

Extended life coatings for electrochemical machining tools.

DEFENSE ADVANCED RESEARCH PROJECTS AGENCY

CMC combustor for high heat temps.

FUTURE GOVERNMENT CONTRACTS

Leverage 40 years and \$40+M in contracts and technical experience for future opportunities and innovations that can address market needs.

GRANTS

In the last year, awarded three phase 1 grants from NIH totaling \$900K for 3D printed composite devices: spine implants, craniomaxillofacial implants, and trauma plates.



BIOMEDICAL



METAL COATINGS

Ceramic coatings for metal orthopedic and dental surgical implants and replacements. These coatings are targeted at overcoming the clinical limitations of metallic implants.

REGULATORY CLEARANCES FOR SPINAL IMPLANTS

Pursuing FDA clearance for SN-PEEK spinal fusion devices in the U.S. and similar clearances in OUS markets.

DENTAL

Working with dental implant companies to potentially supply novel silicon nitride and zirconia-based dental implants.

ABLATION TIPS

Quoting two global medical device companies for a significant volume of 3D printed bioceramic surgical ablation tips.

FOOT AND ANKLE

Leveraging success in spine market to attract interest from global leaders in this specialty area.

ANTIPATHOGENIC



AP FACE MASKS AND MASK FILTERS

Developing civil use antipathogenic face protection.

WOUND CARE

Evaluating antipathogenic wound dressings (bandages, surgical care) for reduced bacteria growth.

AUTOMOTIVE CABIN AIR FILTERS

Working with an automotive company on cabin air filters to reduce bacteria and virus.

MEDICAL TUBING COATINGS

Developing coatings for catheters and medical tubing aimed at reducing infections.

2023 KEY OBJECTIVES

EXECUTE ON ARMOR AND TA&T INVESTMENTS

Get the new armor facility fully operational and generate revenue in the 1st quarter

Leverage SINTX marketing and operational capabilities to grow TA&T revenue

DEVELOP NEW LINES OF REVENUE

New markets: Biomedical & Technical

New government contracts and grants

Open to M&A opportunities

EXPAND SILICON NITRIDE'S SUCCESSES IN SPINE

New materials (SN-PEEK), new manufacturing technologies, new global markets, expiring non-compete with CTL

MAINTAIN MATERIALS R&D PROGRAM

New products with external partners

Expand with 3D printing, CMC, and coating applications

SUMMARY

PORTFOLIO & EXPERTISE

SINTX holds a broad portfolio of advanced ceramics materials, with application across technical, antipathogenic, and medical market sectors. SINTX has unmatched global expertise in the development and application of silicon nitride, the premium portfolio offering.

EVOLVING

SINTX has fundamentally transformed over the past two years from a specialty materials company into an OEM that can serve many different markets with various product offerings that span significant ranges of quality, value, and economics.

INVEST

Invest at the inflection point as SINTX begins a new trajectory immediately post two acquisitions which set up the organization for long-term success



THANK YOU

SUMMARY CAP TABLE AS OF 3/31/23

| | |
|--|-----------|
| Warrants Outstanding | 1,452,908 |
| Options Outstanding and Stock Units (as of March 31, 202 | 26,512 |
| Total Potentially Dilutive Securities | 1,479,420 |

| | |
|--|-----------|
| Common Shares Outstanding (as of March 31, 2023) | 4,050,236 |
| Series B Outstanding (as converted)* | 10,576 |
| Series C Outstanding (as converted)** | 338 |
| Series D Outstanding (as converted)*** | 13,641 |
| Total Shares | 4,074,791 |

| | |
|--|-----------|
| Total Shares & Potentially Dilutive Securities | 5,554,211 |
|--|-----------|

| | | |
|---------------------------------------|----|-----|
| Total Debt Outstanding (in thousands) | \$ | 150 |
|---------------------------------------|----|-----|

*26 Series B outstanding. Assuming conversion rate of 406.77:1.

**50 Series C outstanding. Assuming conversion rate of 6.76:1.

***206 Series D outstanding. Assuming conversion rate of 66.22:1.

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

Chief Operating Officer

- 30 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



Donald Bray, MS, MBA

V.P. Business Development

Industrial & Armor

- 35 years background and experience in technical ceramics and business development
- Proven track record of securing federal, state, and local funds in support of technology development



Michael Marcroft, MBA

V.P. Business Development

Biomedical

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