



SINTX
Technologies

Corporate Overview

January 2022

SINTX Technologies, Inc.

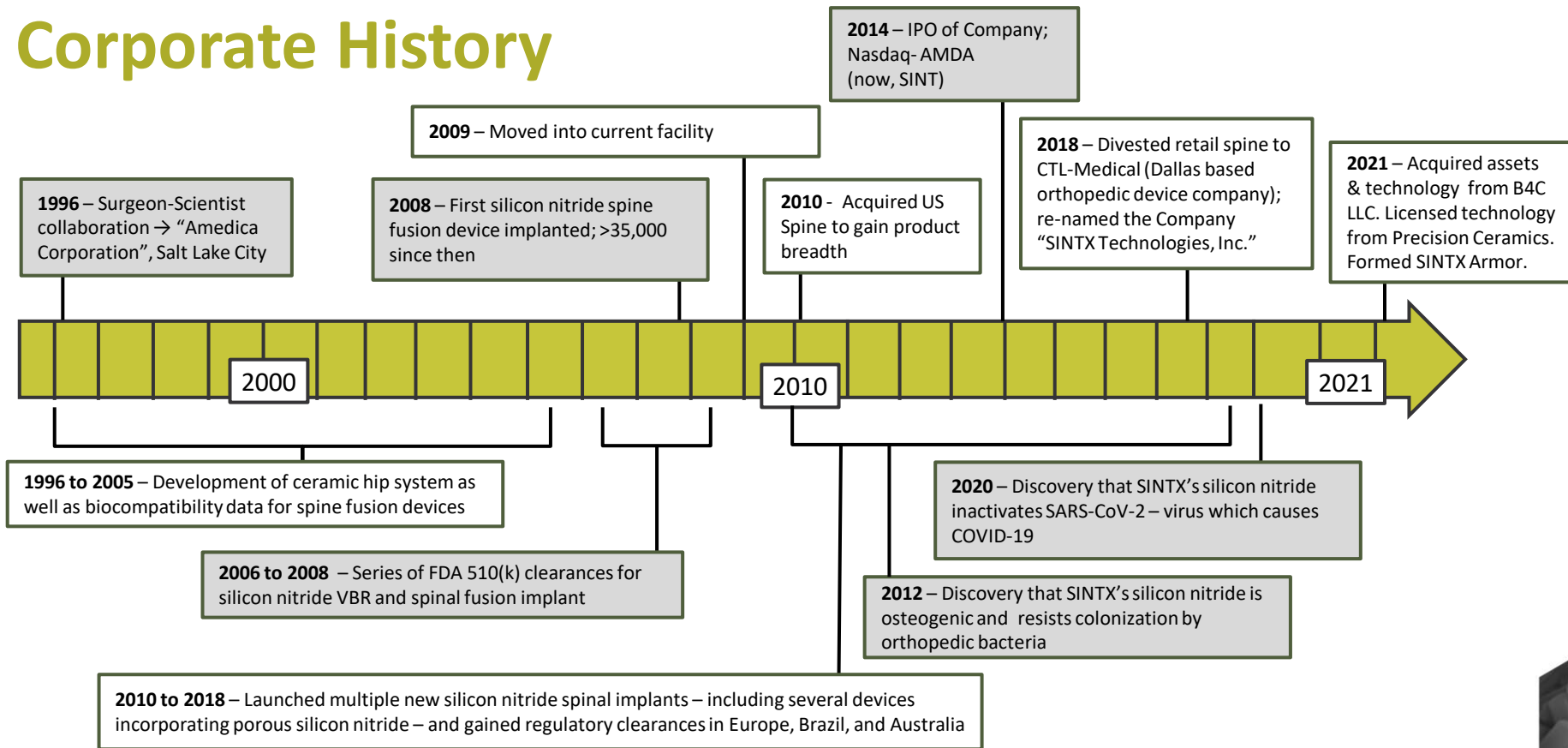
- We are an advanced materials company focused on technical ceramics.
 - Silicon Nitride
 - Boron Carbide
 - Composite of Boron Carbide and Silicon Carbide
- Our products are manufactured in the USA in an FDA and ANVISA registered facility under a quality management system that is ISO 13485:2016 and AS9100D certified.
- We are publicly traded on the NASDAQ (**SINT**)



Vision

We will continue to dedicate resources to the research and development of advanced ceramic materials – and specifically to our hallmark silicon nitride. We are leveraging discoveries of this unique material's properties to improve the quality of life for people all over the world—as well as expand into multiple industries.

Corporate History



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

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



Joseph Palomo

V.P. Business Development - Antipathogenic

- 40 years of product development and manufacturing experience in protective apparel and medical devices



Donald Bray

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

V.P. Business Development - Biomedical

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

SINTX Silicon Nitride

SINTX Technologies was founded on the development and production of silicon nitride for biomedical applications.

Silicon Nitride:

- Is favorable to human cells and promotes bone fusion.
- Discourages bacterial adhesion on its surface.
- Inactivates bacteria, fungi, and viruses – including the SARS-CoV-2 virus.
- Is versatile – amenable to development of composites and coatings

SINTX has conducted extensive research on silicon nitride with over 130 peer-reviewed scientific papers and presentations.



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

Focus Markets



Biomedical

- Used in over 40,000 human spine implantations
- Expanding with composites and coatings



Antipathogenic

- Antibacterial, antifungal, and antiviral applications
- Applications to PPE, filters, surfaces, coatings, wound care, catheters, wound drains, incontinence, and fem care



Industrial/Armor

- Able to withstand extreme conditions
- Used in aerospace, bearings, and drilling
- Personnel, aerospace, and vehicle protection

Advantages of Silicon Nitride as a Fusion Device

Faster Bone Healing

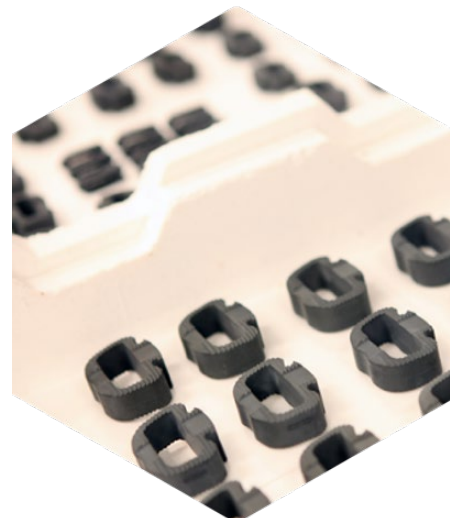
- Unique surface nanostructure and chemistry
- Enhances cell response for faster bone fusion

Antipathogenic Properties

- Resistant to bacteria, viruses, and fungi
- Confirmed independently

Superior Radiographic Imaging

- Easy to see on x-ray, CT, and MRI
- No image distortion



An **interbody fusion device** is used to preserve the space between two adjacent vertebrae following the removal of a diseased or damaged spinal disc. Over time, bone grows through the device such that the two vertebrae *fuse* together to form one stable construct.

Strong, Active IP Portfolio

14 Patents Issued

50 Patent Applications



Current focus is on patent applications for:

- Antibacterial and antipathogenic applications for silicon nitride
- Silicon nitride composites & coatings used in medical implants
- Silicon nitride manufacturing and formulation processes

SINTX sold numerous spine-specific patents and patent applications to CTL in 2018.

Deep Manufacturing Expertise

We have a state-of-the-art silicon nitride manufacturing facility in Salt Lake City:

- 30,000 sq. ft. FDA registered, ANVISA registered, and ISO certified facility
- Vertically integrated for rapid prototyping and development
- R&D and product development laboratories
- Rigorous quality control process

Silicon Nitride Manufacturing Process



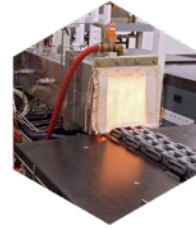
Powder



Press



Mill



Furnace



Finished Components

We are expanding into a new 10,000 sq. ft. facility in Salt Lake City to manufacture boron carbide and boron carbide/silicon carbide.


Leadership in R&D

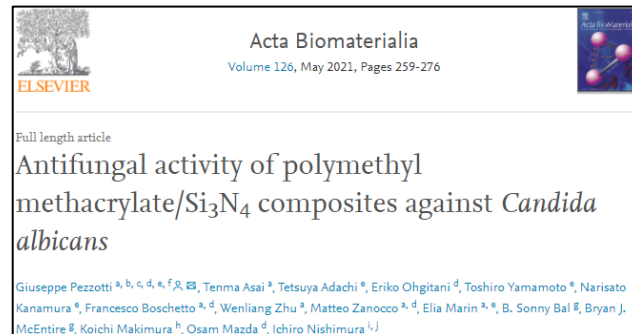
Unmatched Scientific Achievements

- Communicated over 130 peer-reviewed scientific publications and conference proceedings
- Shared more than 85 technical and scientific presentations

scientific reports

Silicon nitride: a potent solid-state bioceramic inactivator of ssRNA viruses

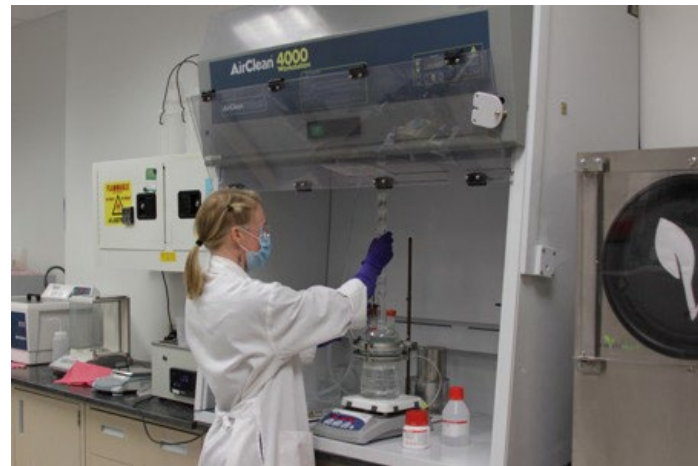
Giuseppe Pezzotti , Francesco Boschetto, Eriko Ohgitan, Yuki Fujita, Wenliang Zhu, Elia Marin, Bryan J. McEntire, B. Sonny Bal & Osam Mazda



Leadership in R&D

Innovating into the Future

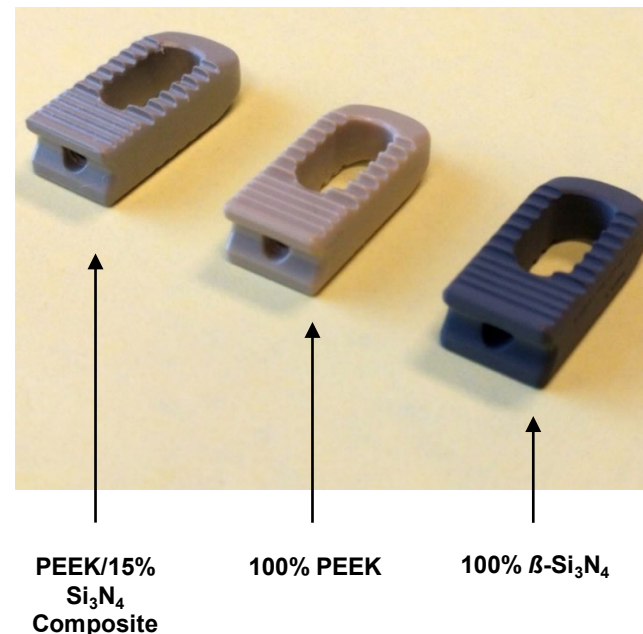
- Composites of silicon nitride and polymers
 - PEEK, PEKK, polyurethane, polycarbonate, etc.
- Coatings of silicon nitride on other materials
 - PEEK, titanium
- Enhanced formulations of silicon nitride
- Metal-Silicon nitride composites
- Infiltration of fabrics and wound dressings with silicon nitride
- New development in hard materials for armor



Key Technology Development

Silicon Nitride – Poly(ether ether ketone) (“PEEK”) Composite

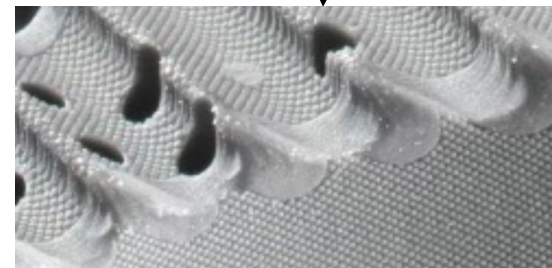
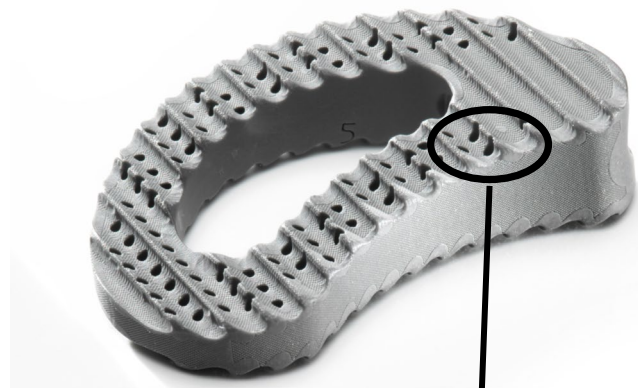
- Extruded compound of silicon nitride and PEEK which can be machined into implants
- Combines familiarity and machinability of PEEK with silicon nitride
- Antibacterial and osteogenic properties are in between pure PEEK and pure silicon nitride
- Covered under US Patent 10,806,831
- FDA Master File submitted in early 2021
- First sales in Q2 2021



Key Technology Development

Porous and laser textured implants for spine and foot & ankle

- New manufacturing technologies developed through investment in new equipment and training
- Pore size is ideal for bony in-growth
- Laser texturing is ideal for bony on-growth
- First sales to spine partner in Q3 2021
- Commercial discussions under way in foot & ankle market

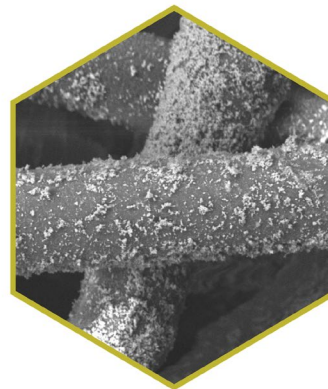


Ankle fusion is a **surgery to fuse two or more bones in the ankle.**

Key Technology Development

Non-woven fabric infiltrated with Silicon Nitride

- Developed additional antipathogenic grade of silicon nitride – first sale in Q2 2021
- New fabric infiltration process development capabilities realized via learnings from the last year and investments in new equipment and personnel
- Fabrics have demonstrated contact inactivation of multiple viral strains – including SARS-CoV-2
- Applications include masks, filters, wound care, etc.



SN Embedded in Fabric



Wound Dressing (Under Development)

SINTX Armor – New in 2021

SINTX has entered the ceramic armor market through the purchase of assets and technology from B4C, LLC and a technology partnership with Precision Ceramics USA. SINTX will develop and manufacture high-performance ceramic armor plates for personnel, aircraft, and armored vehicles.



- ***BoroShock***: A 100% Boron Carbide material for ultimate lightweight performance in ballistic applications.
- ***DuraShock***: A composite material made of Boron Carbide and Silicon Carbide – licensed from Precision Ceramics USA – for exceptional multi-hit performance against ballistic threats.

2022 Key Objectives

Execute on the launch of SINTX Armor

- Get the new facility fully operational in the 1st half of the year
- Generate revenue in the 3rd quarter

Develop new lines of revenue

- New markets – Antipathogenic, Industrial
- New non-spine products
- Pursue M&A opportunities

Expand silicon nitride's successes in spine

- New materials (SN-PEEK), new manufacturing technologies, new global markets

Continue robust R&D program

- Maintain leadership, monitor competitive landscape
- Co-develop new products with external partners

Biomedical Catalysts for Growth in 2022

Spine – Awarded a \$300k NIH grant for 3D printed composite implants; collaboration with Drexel University and Thomas Jefferson University

Foot and Ankle – Leveraging success in the spine market to attract interest from this market in existing and new manufacturing technologies

Arthroplasty – Agreement with global medical device manufacturer to develop orthopedic implant coatings

Wound Care – Prototype development ongoing with two global wound care companies

Craniomaxillofacial – \$300K grant application to NIH for 3D printed composite implants; collaboration with Drexel University, Thomas Jefferson University, and University of Pennsylvania



Antipathogenic Catalysts for Growth in 2022

Proven to inactivate wide range of bacteria, fungi, and viruses, including SARS-CoV-2

Antipathogenic properties of material can be leveraged through a wide range of products including masks, filters, and surfaces

Partnership Agreements

- (Confidential) - Antipathogenic face masks and mask filters
- Iwatani Corporation – Filters and coatings

Several additional prospective partnership agreements in process



Industrial Catalysts for Growth in 2022

Armor – Complete technology transfer, relocate assets to Salt Lake City, and begin production.



Aerospace – Preferred material due to mechanical robustness and ability to perform at high temperatures



Automotive – Extends contact fatigue life through material strength, toughness, and resistance to chemical & thermal factors

Energy – Corrosion resistance of material can help extend the life of solid oxide fuel cells



Cutting Tools – Enables high cutting speeds and feeds

Thank You

We are passionate about leveraging our expertise in the high-tech ceramics industry to create new, innovative opportunities in multiple sectors.

We are SINTX.

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 22, 2021, 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.

