SINTX Technologies Advances SiN/PEEK 3D Printing Platform Toward Personalized Orthopedic Implant Commercialization

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Company completes additive manufacturing facility buildout, advances proprietary silicon nitride–PEEK technology, expands leadership and targets initial product availability in 2027

SALT LAKE CITY, Utah, Nov. 11, 2026 (GLOBE NEWSWIRE) -- SINTX Technologies, Inc. (NASDAQ: SINT) ("SINTX" or the "Company"), an advanced ceramics and biomaterials technology company focused on silicon nitride-based solutions, today provided a strategic business update on the continued product development and planned commercialization of its proprietary silicon nitride–polyetheretherketone (SiN/PEEK) composite technology through its SiNERGY™ additive manufacturing platform.

SINTX has completed the buildout of its advanced 3D printing facility, received its EXT-220 MED medical-grade additive manufacturing systems, expanded its technical leadership, and advanced discussions with potential engineering and international commercialization partners. These developments support the Company's strategy to develop an integrated platform combining proprietary biomaterials, AI-assisted surgical planning, patient-specific implant design, and advanced manufacturing.

The Company anticipates receiving its proprietary SiN/PEEK compounded filament from Evonik before year-end 2026 and is pursuing FDA 510(k) clearance for a defined design envelope of patient-specific extremity implants. The Company is evaluating limited opportunities for qualifying custom devices in the first quarter of 2027. Broader commercial distribution of patient-specific implants will require applicable regulatory clearances and manufacturing validation. The Company anticipates expansion into craniomaxillofacial (CMF) and spinal applications later in 2027, subject to regulatory review and other factors.

"We believe our SiN/PEEK technology represents a potentially significant commercial growth opportunity for SINTX," said Eric K. Olson, Chairman and Chief Executive Officer of SINTX Technologies. "We are bringing together years of proprietary biomaterials research, differentiated intellectual property, advanced additive manufacturing, and personalized surgical technologies to establish an integrated commercial platform. Our objective is to deliver patient-specific solutions that combine the design flexibility of 3D printing with the unique biological and mechanical properties of silicon nitride."

Advancing a Differentiated Biomaterials Platform
At the core of SINTX's strategy is its proprietary SiN/PEEK composite, which combines the established structural and imaging characteristics of medical-grade PEEK with silicon nitride, a bioactive ceramic that has exhibited antibacterial and osteogenic properties in laboratory studies.

Silicon nitride has been extensively studied for its surface chemistry, resistance to bacterial adhesion and biofilm formation, hydrophilicity, and ability to support osteoblast activity and bone-related mineralization. Incorporating silicon nitride into PEEK is intended to potentially provide beneficial biological characteristics while retaining the design flexibility, radiolucency, and structural characteristics that have made PEEK an established material for orthopedic implants.

SINTX's published in vitro research with SiN/PEEK composites reported reduced bacterial adhesion, supported enhanced osteogenic cellular activity, and maintained mechanical properties relevant to orthopedic implant applications under the conditions tested. In one published investigation involving 3D-printed SiN/PEEK spinal cage designs, researchers reported a 93.9% reduction in bacterial adhesion compared with conventional PEEK under the laboratory conditions tested, together with enhanced cell proliferation.

These findings build upon years of SINTX research and support the Company's intellectual property portfolio, including patents covering SiN/PEEK compositions and related methods. The Company believes this combination of proprietary material science and additive manufacturing capabilities may provide meaningful differentiation in the growing market for personalized orthopedic devices.While these laboratory findings are encouraging, their clinical significance for individual implant applications will require appropriate product-specific evaluation and validation.

Establishing Advanced Manufacturing and Technical Leadership
To support commercialization, the Company has also appointed James A. Smith, Ph.D., as Director of 3D Additive-Manufacturing, strengthening its expertise in high-performance personalized orthopedic implant development.

Dr. Smith brings specialized experience in PEEK additive manufacturing, polymer composites, mechanical characterization, and patient-specific medical device development. His academic and research experience includes work associated with Drexel University, as well as published investigations into additively manufactured PEEK cranial implants, orthopedic structural composites, and silicon nitride-related biomaterials. He earned his Ph.D. in additive manufacturing and mechanical engineering

from Loughborough University.

Dr. Smith will lead the Company's additive manufacturing initiatives, including process development, material optimization, manufacturing validation, and the advancement of its custom and patient-specific implant portfolio.

SINTX is also in discussions with a specialized engineering services firm to support AI-assisted medical image segmentation, anatomical modeling, and patient-specific implant design. If developed and successfully integrated, these capabilities are intended to create a streamlined digital workflow connecting patient imaging and surgical planning with individualized implant design and manufacturing.

Outlook

Over the coming quarters, SINTX expects to focus on completing manufacturing process development and validation, receiving its proprietary SiN/PEEK filament, integrating digital engineering capabilities, and advancing its initial custom implant and surgical guide portfolio toward commercial distribution.

The Company's longer-term strategy includes obtaining FDA 510(k) clearance for defined families of patient-specific extremity implants, expanding into CMF and spinal applications, and developing additional manufacturing, distribution, and technology partnerships.

Management considers the SiNERGY™ SiN/PEEK platform a central component of SINTX's long-term strategy to build a diversified medical technology business leveraging its proprietary biomaterials and advanced manufacturing capabilities.

About SINTX Technologies, Inc.

Headquartered in Salt Lake City, Utah, SINTX Technologies, Inc. (NASDAQ: SINT) is an advanced ceramics and biomaterials company that develops, manufactures, and commercializes silicon nitride biomaterials, composites, devices, and related technologies for medical and other high-value applications. SINTX's technologies are supported by peer-reviewed research, a patent portfolio, U.S.-based manufacturing capabilities, and strategic industry relationships. The Company's business includes proprietary biomaterials and medical device technologies, as well as contract manufacturing and other advanced ceramics opportunities. SINTX's product portfolio includes the FDA-cleared SiNAPTIC® Foot & Ankle Osteotomy Wedge System for reconstructive surgery. For more information, visit www.sintx.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. Forward-looking statements can be identified by words such as "believes," "expects," "anticipates," "estimates," "intends," "plans," "targets," "may," "will" and similar expressions, or the negative of these words. Such forward-looking statements are based on facts and conditions as they exist at the time such statements are made and on predictions as to future facts and conditions. Forward-looking statements in this release include, without limitation, statements regarding the development, regulatory clearance, and commercialization of the Company's SiN/PEEK composite technology and SiNERGY™ additive manufacturing platform; the anticipated receipt of the Company's SiN/PEEK filament from Evonik before year-end 2026; the targeted initiation of commercial distribution of custom extremity implants and surgical cutting guides in the first quarter of 2027; the Company's pursuit of FDA 510(k) clearance for a defined design envelope of patient-specific extremity implants and its planned expansion into craniomaxillofacial and spinal applications later in 2027; the Company's plans to supply certain products under the FDA custom device exemption; the status and potential of discussions regarding AI-assisted implant-design, engineering, and international manufacturing and distribution partnerships; the expected benefits and differentiation of the Company's integrated platform; and the potential for recurring product revenue and strategic collaborations. These statements are based on management's current expectations, estimates, and assumptions and are subject to inherent risks, uncertainties, and changes in circumstances that could cause actual results to differ materially from those contemplated or implied by such statements. These risks and uncertainties include, among others: the Company's ability to obtain FDA 510(k) clearance or other required regulatory clearances or approvals on the anticipated timeline, in the anticipated scope, or at all, and the fact that the Company may not market any product requiring 510(k) clearance until FDA issues a substantial-equivalence determination; the limits and conditions of the FDA custom device exemption; the Company's dependence on Evonik and other third parties for the timely supply of SiN/PEEK filament, components, and equipment; the Company's ability to complete manufacturing process development and validation and to manufacture products at commercial scale; the risk that laboratory, in vitro, or preclinical findings do not translate into clinical or commercial performance; the risk that preliminary partnership discussions do not result in definitive agreements; the Company's ability to secure and execute licensing and commercialization partnerships; the Company's ability to protect and enforce its intellectual property; the Company's ability to obtain sufficient funding and to continue as a going concern; competition, reimbursement availability, surgeon adoption, commercial pricing, manufacturing costs, distribution capabilities,and the degree of market acceptance of personalized orthopedic devices; and general economic and market conditions. Additional risks and uncertainties are described in the Company's filings with the U.S. Securities and Exchange Commission, including under "Risk Factors" in its most recent Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q. Forward-looking statements speak only as of the date of this press release. The Company undertakes no obligation to update or revise any forward-looking statement as a result of new information, future events, or otherwise, except as required by applicable law, and readers are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date of this release.

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