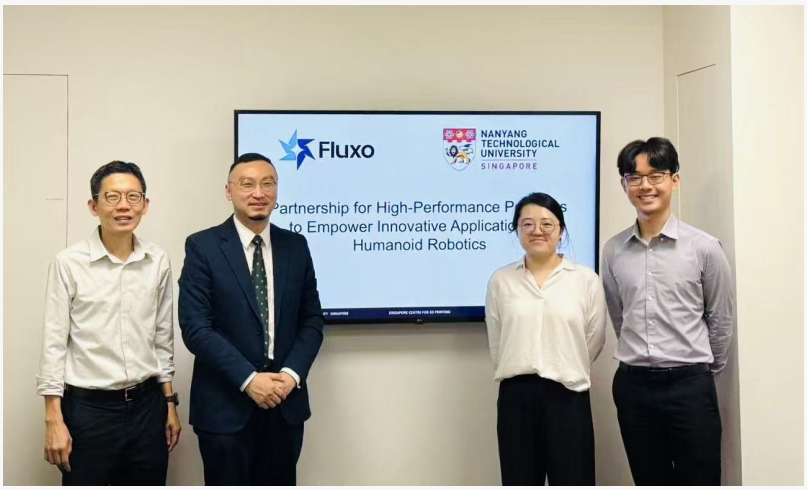
Supported by NAMIC, Fluxo and NTU Launch a Partnership for Industrial 3D Printing Applications

SINGAPORE, February 14, 2026 /EINPresswire.com/ -- Fluxo Technologies' collaborative project with Nanyang Technological University ("NTU") has secured funding from Singapore's National Additive Manufacturing Innovation Cluster (NAMIC). The project aims to develop composite materials for humanoid robot joints and transmission systems. These materials are based on a 'carbon fibre + polyphenylene sulfide (PPS)' system and are suitable for selective laser sintering (SLS) additive manufacturing technology.



Partnership Established Between Fluxo and NTU

A carbon fibre–reinforced polyphenylene sulfide (PPS) composite offers a high-performance, lightweight solution for advanced robotics. The material delivers excellent strength, heat resistance, wear resistance, and corrosion resistance. Compared with polyetheretherketone (PEEK), commonly used in robotics today, it provides superior cost-effectiveness and is directly compatible with Selective Laser Sintering (SLS), enabling tooling-free manufacturing. This reduces component count, lowers development and production costs, and accelerates product iteration—unlocking significant potential for humanoid robotics applications.

> Free to Make · Bold to Change"
>
> *Yuanbin Bai, Founder & CEO, Fluxo Technologies*

"Elon Musk's adoption of PEEK to replace metal enhances motion efficiency and endurance in humanoid robots through lightweight design—an essential factor for product practicality," said Bai Yuanbin, Founder and CEO of Fluxo. "We align with this technical direction, but believe more cost-effective materials are needed for mass-market adoption. While PEEK offers high performance, its cost limits scalability for household applications. Therefore, we chose Rytexint™

PPS as our strategic entry point. By combining this material platform with Nanyang Technological University's applied research expertise, we aim to accelerate the industrialisation of humanoid robotics."

The collaborative partner for this project is Professor Zhou Kun's research group at Nanyang Technological University. Based at the HP-NTU Digital Manufacturing Joint Laboratory and the Singapore 3D Printing Centre, the group is dedicated to advancing research and industrialization of advanced manufacturing technologies. The team's research encompasses: the development and engineering applications of high-performance polymers and metallic materials; and advanced structural design alongside multiscale modeling and simulation analysis. Guided by the core philosophy of "integrated innovation in materials-structures-processes," the group actively explores cutting-edge solutions for aerospace, automotive, medical, and smart manufacturing sectors, striving to establish an internationally leading digital manufacturing research and application platform.

Dr. Meixin Zhou, Research Fellow at the Singapore Centre for 3D Printing, Nanyang Technological University, serves as the project's executive lead. Dr. Zhou specializes in polymer powder bed fusion additive manufacturing, possessing extensive research and industrialization experience. She has led multiple collaborative projects with Arkema (France) and A*STAR's Singapore Institute of Manufacturing Technology (SIMTech), focusing on the preparation and performance optimization of functional polymers and composites for 3D printing. Her research spans polymer powder design, SLS process optimization, and machine learning-assisted material development, driving integrated smart manufacturing solutions that bridge materials, processes, and performance.

About NAMIC:
NAMIC (National Additive Manufacturing Innovation Cluster) is a national-level organization established by Singapore to spearhead the digital transformation of manufacturing. Led by the Agency for Science, Technology and Research (A*STAR), its core mission is to drive innovation, application, and commercialization of additive manufacturing technologies. By uniting industry, academia, and research institutions, NAMIC builds a collaborative innovation ecosystem that provides enterprises with comprehensive support—from technology development and feasibility validation to scaled production. Its goal is to accelerate the adoption of advanced manufacturing technologies across Singapore's industrial sectors, enhance the global competitiveness of local enterprises, and establish Singapore as a global innovation hub in the era of digital manufacturing.

About Fluxo:
Fluxo Technologies is a tech company offering advanced materials and manufacturing solutions. Our innovations are designed for smart manufacturing and responsible production in partnership with industry pioneers and visionaries. Driven by a shared commitment to positive change, Fluxo is dedicated to making a lasting impact to shape a better, more sustainable

future.
Discover more at fluxomade.com.

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