

# Silvis Materials and ORNL Collaborate to Revolutionize Sustainable Building Materials with Bio-Based Adhesives

*Oak Ridge National Lab and Silvis Materials win a DOE-sponsored Research Agreement to Create Green Building Products to Reduce the Carbon Footprint*



BOULDER, CO, UNITED STATES, January 13, 2025 /EINPresswire.com/ -- [Silvis](#)

Materials, a pioneer in sustainable material innovation, has entered into a collaborative research agreement with Oak Ridge National Laboratory (ORNL) to develop and commercialize formaldehyde-free, bio-based adhesives for the building materials industry. This groundbreaking partnership aims to tackle the urgent need for healthier, more sustainable building solutions.

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This Partnership will Accelerate the Adoption of Sustainable Building Materials and Address Critical Environmental and Health Challenges.”

*Patty Ferreira*

## BUILDING A GREENER FUTURE WITH BIO-BASED ADHESIVES

The \$73 billion adhesives market has long relied on formaldehyde-based products to manufacture common building materials like particleboard and medium-density fiberboard (MDF). Formaldehyde adhesives are present in nearly every American home, with recent EPA studies showing formaldehyde emissions can persist for over five years after installation. The World Health Organization

classifies formaldehyde as a known carcinogen, with exposure linked to respiratory issues, eye irritation, and increased cancer risk.

Silvis Materials' innovative bio-based adhesives offer a game-changing alternative. By replacing formaldehyde-based binders with renewable, plant-derived solutions, Silvis is advancing the building materials industry toward reduced carbon emissions, improved indoor air quality, and enhanced sustainability.

## A POWERFUL PARTNERSHIP

The collaboration between Silvis Materials and ORNL combines cutting-edge research and development expertise. ORNL's world-class capabilities in materials science will support the rapid

development and commercialization of Silvis' patented bio-based adhesives.

"This partnership with ORNL is a significant milestone for Silvis Materials," said Patty Ferreira, CEO of Silvis Materials. "By merging our innovative technology with ORNL's exceptional research capabilities, we aim to accelerate the adoption of sustainable building materials and address critical environmental and health challenges."

#### A BRIGHTER, MORE SUSTAINABLE FUTURE

Silvis Materials' bio-based adhesives offer numerous advantages, including:

- **Reduced Carbon Footprint:** Cutting carbon emissions by up to 80% in select building material applications.
- **Improved Indoor Air Quality:** Eliminating harmful formaldehyde exposure.
- **Sustainability and Circularity:** Supporting a shift to renewable resources.
- **Performance Benefits:** Enhancing durability and usability in building materials.

With backing from the Department of Energy (DOE) and key industry stakeholders, Silvis Materials is poised to transform the adhesives and binders market with its sustainable alternatives.

#### About Silvis Materials

Founded in August 2020, Silvis Materials is dedicated to reducing reliance on fossil-based materials with its 100% bio-based, patented binders. Headquartered at its private lab on the University of Colorado Boulder campus, Silvis has received funding and support from NSF SBIR Phase I and II awards, a Colorado Advanced Industries grant, Fellowships with the MIT e14 Fund, and LaunchTN, Techstars (Knoxville, TN), GFI Partners of Boston, Plug and Play, Suzano Cycle Momentum, and CU Boulder.

To explore partnership opportunities or learn more about Silvis Materials' innovative solutions, contact us today, visit [www.silvismaterials.com](http://www.silvismaterials.com), connect with us on LinkedIn, or contact Kim Hedberg, Chief Sustainability Officer, at [kim@silvismaterials.com](mailto:kim@silvismaterials.com).

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