

## Research focus

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# Bio-based flame retardant coatings for sustainable construction

Our bio-based flame retardant coatings for wood and hybrid materials promote environmentally friendly construction, reduce petrochemical raw materials and utilise renewable materials. At the Fraunhofer WKI, we develop innovative, formaldehyde-free coatings that minimise harmful emissions.

These solutions fulfil strict environmental and fire protection regulations, open up new market opportunities for manufacturers and contribute to more sustainable construction that meets the needs of society.

### Flame protection for furniture

Together with AURO Pflanzenchemie AG (in the “InnFla” project), we are developing translucent, formaldehyde-free flame retardant lacquers that make wood products “flame retardant” without leaching. The varnishes, which contain at least 50% renewable raw materials, have been tested on solid wood and are ideal for interior fittings in schools and theatres, for example.

### Sustainable flame retardants

In the “ScaleAmP” project, we are researching ammonium phytates from plant phytic acid as cost-effective, flame-retardant active ingredients. In collaboration with the companies Cargill and Clariant Plastics & Coatings, we are developing an economical manufacturing process to promote bio-based flame retardants.

### Flame retardants for cross-laminated timber

The “FireSafe-CLT” project aims to develop bio-based flame retardants from agricultural residues for cross-laminated timber (CLT). This is intended to expand the possible uses of CLT in timber construction for medium- and high-rise buildings. In cooperation with our partners JOWAT SE and the Technical University of Braunschweig, we are working on optimising the market opportunities.

## Contact

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05/2025

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