

PRESS RELEASE

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Fire protection for buildings

Development of “Smart Materials” for the construction sector

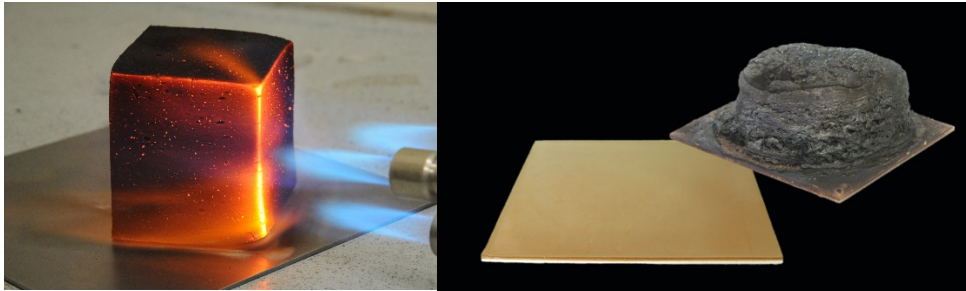
Depending on the size, condition and intended use of a building, the authorities and insurance companies have different requirements. Large-scale and fatal fires in recent years show that the measures taken so far are not sufficient. There are numerous possibilities to increase safety through fire protection, both in the construction of new buildings and the energetic refurbishment of older ones.

Researchers at Fraunhofer ICT offer expertise in the development of smart materials for special applications in fire protection, according to customer specifications, in the following areas:

- Intumescent coatings for wood that provide improved fire protection, scratch and abrasion resistance and better moisture resistance than commercial products.
- Modular intumescent protective systems, including powder coatings for steel fire protection, which offer an economical alternative to the liquid fire protection coatings that currently dominate the market.
- During production, fire protection windows and doors made of aluminum or steel can be filled with a dimensionally stable fire protection foam, which replaces time-consuming and error-prone cutting of the slide-in sheets according to the profile.
- Flame retardancy tests on a laboratory scale in a special high-temperature laboratory furnace, based on the scenario of a full fire according to ISO 834, and on a laboratory flammability test stand, enable cost-effective screening on a small scale.

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Left: Dimensionally stable flame-retardant foam
Right: Transparent intumescent wood coatings

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