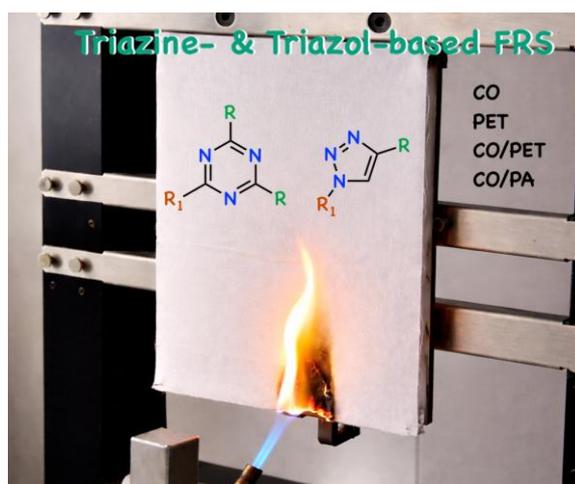# Triazole- and triazine-based flame retardants for textile finishing – TriAz-FRs

In many applications, flame retardancy is assessed not only by whether a material burns, but also by how much heat and smoke it releases. This is especially important in public buildings and in many mobility areas. In textile finishing, textiles are coated with different materials depending on the end use. These coatings can, for example, improve printability, provide water repellency, or change the surface feel. Common coating materials include acrylates, polyurethanes, latex, or ethylene-vinyl acetate. However, this combination of coating and synthetic or natural fibers is also a challenge for flame protection, because two materials with different burning behavior are combined. Triazine- and triazole-based flame retardants offer a promising way to make both the coating and the fiber flame resistant in a targeted manner.

The demand for new, effective, and halogen-free flame retardants is high, because established systems need to be replaced and, at the same time, fire-safety requirements for textiles and textile-based composites continue to increase.

In the planned research project, the patented flame retardants and their use on coated textiles will be validated. A key goal is to show that different fire-safety requirements can be met, for example for rail transport (DIN EN 45545-2) or for building materials (DIN EN 13501-1).

Project Information:

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