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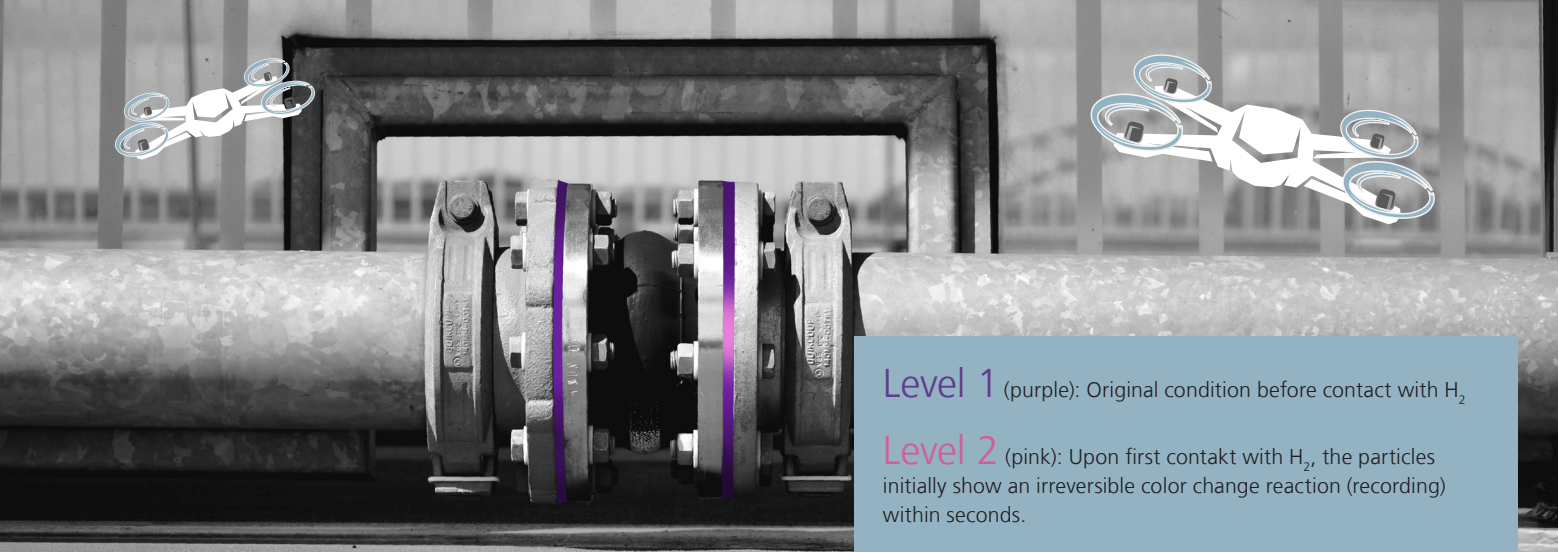
The Fraunhofer logo, consisting of a green square with four white horizontal lines, followed by the word "Fraunhofer" in a black sans-serif font.

Fraunhofer

A close-up photograph of a pair of white safety gloves. The word "SAFETY" is printed in large, bold, black capital letters across the back of the hand. Below it, the chemical formula "H2" is printed in large, bold, blue capital letters, with a pink number "2" next to it.

Smart additives for safe hydrogen economy

More safety in handling
hydrogen



Level 1 (purple): Original condition before contact with H_2

Level 2 (pink): Upon first contact with H_2 , the particles initially show an irreversible color change reaction (recording) within seconds.

Level 3 (colorless): Upon further exposure to H_2 , a reversible color change reaction takes place (monitoring). As soon as no more H_2 is present, the color switches back to stage 2 within seconds.

Supraparticles as technology basis



How it works?

Potential leakage points are coated with supraparticles



Color change occurs in contact with hydrogen



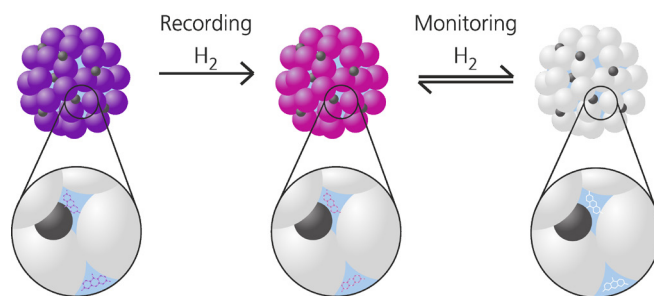
Automatic detection of the color change with optical measurement technology



SafeHydrogen equipment



Camera-based automatic classification at 1.20m distance



Our offer:

- Adaptation of the layers to the surface
- Development of application method
- Adaptation to other gases
- System development for monitoring
- Monochromatic camera-based monitoring of electrolyzer environment up to distance of 3.60 m