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# European countries adopt indoor Photocatalytic nano-coating to fight COVID-19

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**Self-disinfecting nanocoating that reduces the number of viruses and bacteria on surfaces and improves indoor air quality**



Finland's nanotechnology company Nanoksi Finland has introduced a self-disinfecting nanocoating that reduces the number of viruses and bacteria on surfaces and improves indoor air quality. The company's internationally acclaimed innovation has quickly gained popularity: it is already used in the fight against COVID-19 in thousands of locations acrossEurope.

The photocatalytic coating innovated by a Finnish company uses nanotechnology. It has been of significant benefit in combating the coronavirus epidemic, as studies show that coronavirus is transmitted not only as droplet infection but also from surfaces.

The photocatalytic coating, together with normal indoor light, destroys viruses, bacteria, mold spores, and other volatile organic compounds. The coating disinfects the surface when exposed to light. The phenomenon is called photocatalysis.

"In photocatalysis, light is used to initiate a chemical reaction in which the released reactive oxygen species react with and destroy the microbes on the surface. The reaction requires a catalyst, titanium dioxide. The method is also commonly used to purify water and air of various contaminants" says Pasi Keinänen, CEO of Nanoksi, Ph.D. of Engineering.

Nanoksi operates in Finland, Sweden, Estonia, the United Kingdom, Sweden, Portugal, France, and Ukraine. Nanoksi Finland's innovation was recently chosen as the winner of the international Aviation X Lab Accelerate competition. The Aviation X Lab Accelerate is an annual project undertaken by the five global aviation giants Airbus, GE Aviation, Emirates, Thales, and Collins Aerospace, to bring new innovations to the aviation industry.

The virus-killing coating works within a day from installation. The photocatalytic coating can be installed quickly and, when dry, forms an invisible, flexible, and breathable protection on the surface. The coating is activated within a day from starting of the coating work. The photocatalytic coating is suitable for any type of surface material and can be applied to new applications or

installed afterward. Titanium dioxide used in photocatalytic coatings is non-toxic and safe.

"Studies show that the COVID-19 virus survives on different surfaces up to several days. Photocatalysis is very well suited for the continuous disinfection of surfaces without chemicals. In addition to the coating, all that is needed is light," Keinänen continues.