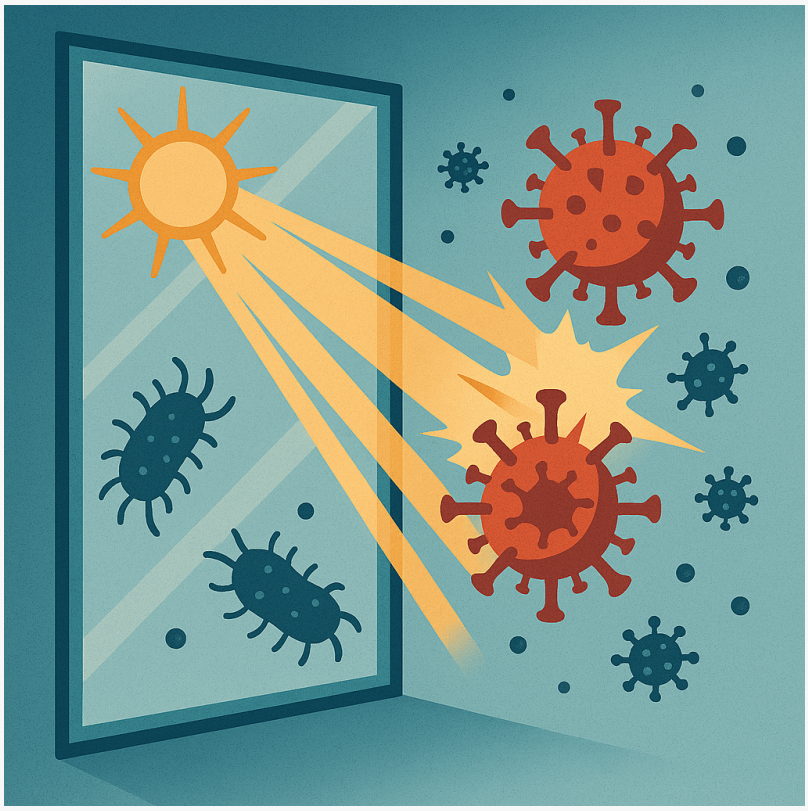
Antiviral Effect of Sunlight - Study Confirms Impact of Photobiologically Active Glazing

Study confirms Sunexx glazing selectively transmits antiviral UVB sunlight indoors—enhancing health, sustainability, and virus protection in buildings.

EMPFINGEN, BADEN-WüRTTEMBERG, GERMANY, July 25, 2025 /EINPresswire.com/ -- Sunlight Against Viruses:
Scientific Study Confirms Antiviral Efficacy of Sunexx Glazing



Antiviral active sun rays penetrate the room through Sunexx glazing, eliminating viruses and bacteria.

Healthy Light by:

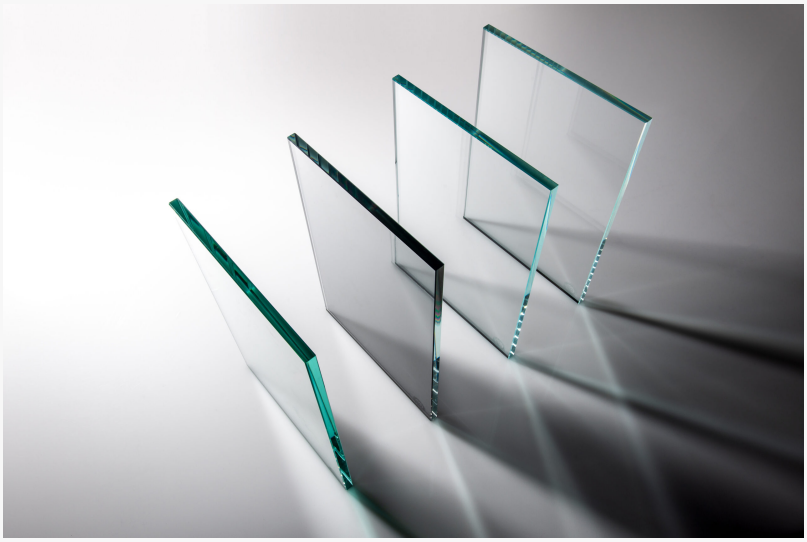
Sunexx
Sun Filter Technologies

Healthy Light by Sunexx Glazing

A recent study conducted by the University Hospital Regensburg (UKR) demonstrates scientifically, for the first time, the antiviral potential of natural sunlight selectively filtered through Sunexx special glazing. The innovative glazing transmits biologically significant UVB and near-infrared (NIR) wavelengths, typically blocked by conventional insulating glass.

Proven Antiviral Effects Through Selective UVB Transmission
Led by Prof. Dr med. Mark Berneburg and Dr York Kamenisch, the UKR study examined MS2 bacteriophages—RNA viruses structurally analogous to SARS-CoV-2—under UVB irradiation filtered through Sunexx glazing. Results showed a significant reduction in viral infectivity after a single UVB dose of 1000 mJ/cm², as demonstrated by modern plaque assays.

Sunexx glazing selectively permits biologically effective UVB wavelengths (290–320 nm) while blocking hazardous radiation, enabling controlled transmission of antiviral, photobiologically active light.


Sample of single pane Sunexx glazing

Why Sunexx Glazing is Uniquely Effective
High transmission of health-promoting UVB and NIR wavelengths

Significant reduction of harmful UV rays, protecting against skin ageing and cellular damage

Superior optical quality with exceptionally clear vision compared to traditional insulating glass

> The future of building is harnessing the full spectrum of healthy sunlight—nature's life-giving elixir—as intended by nature itself."
>
> *Klaus Lang, Founder & CEO, Sunexx GmbH*

Verified indoor antiviral protection without chemicals, electricity, or maintenance

Medical and Architectural Implications of Sunexx Technology
Earlier research by the University Hospital Regensburg and the University of Tübingen already demonstrated the protective and regenerative potential of selectively filtered sunlight, including:

Prevention of UVA1-induced DNA damage

Protection of mitochondrial DNA

Reduction of reactive oxygen species (ROS)

Prevention of sun-induced skin ageing

Inhibition of sunlight-induced matrix metalloproteinases (MMP1, MMP2, MMP3, MMP15), indicators of skin damage and tumour risks

These studies were published in reputable journals such as Photochemical & Photobiological Sciences (SpringerNature).

Sunexx glazing integrates these proven protective effects with targeted photobiological activation, enhancing immune modulation, psychological wellbeing, and cellular vitality through mitochondrial stimulation by NIR radiation (IR-A). Unlike traditional glazing solutions, Sunexx uniquely enables the natural regulation of human metabolism, including vitamin D synthesis and circadian rhythms, thereby fostering overall health and wellbeing.

Sunlight: A Natural, Preventive Health Resource
The findings underscore a paradigm shift in building design and technology. Natural sunlight, spectrally filtered by Sunexx glazing, can effectively reduce infection risks, unlike conventional hygiene methods reliant on chemical agents or energy-intensive air filtration systems. This represents a maintenance-free, sustainable strategy for health promotion in architectural design.

Transforming Buildings into Active Health Environments
Sunexx glazing's ability to enhance indoor environmental quality is particularly relevant to sectors where infection control, mental health, daylight quality, and energy efficiency are critical, such as:

Healthcare facilities and care homes

Educational institutions

Modern offices and workplaces

Residential developments prioritising healthy indoor climates

Increased public awareness around indoor air quality, infection prevention, and chronic vitamin D deficiency highlights the necessity of incorporating photobiologically effective UVB-transmitting glazing in modern construction.

Conclusion: Buildings as Proactive Health Solutions
Sunexx’s innovative glazing solutions deliver medically validated health benefits while meeting architectural and sustainability goals. This positions Sunexx technology as a vital component for creating buildings that actively contribute to human health and infection resilience.

Scientific References:

"Investigation of the antiviral qualities of UVB irradiation filtered with Sunexx filter foils or Sunexx filter glasses in a bacteriophage bacteria system," University Hospital Regensburg, Prof. Dr Mark Berneburg, Dr York Kamenisch, March 2025.

"Investigation of the HelioVital filter foil revealed protective effects against UVA1 irradiation-

induced DNA damage and against UVA1-induced expression of matrix metalloproteinases (MMP1, MMP2, MMP3 and MMP15)" (Photochemical & Photobiological Sciences, 2022).

About Sunexx®
Sunexx GmbH, based in Empfingen, Germany, is an industry pioneer in health-enhancing glazing and innovative sun protection technologies. Over two decades, Sunexx has developed specialised solutions making sunlight—the "elixir of life"—accessible, effective, and compatible with human health.

Sunexx collaborates closely with leading research institutions and university hospitals, continuously advancing its technologies based on validated studies.

Core Innovations:
Photobiologically effective glass solutions transmitting UVB, visible and infrared light in optimal balance

Sun protection systems maintaining biologically effective sunlight while reducing heat transmission

High-purity, low-iron glass offering superior clarity and selective spectral filtering

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