



**UNIVERSITÀ
DI TRENTO**

**Dipartimento di
Ingegneria Industriale**

DII

Seminar

Antiviral glass obtained by magnetron sputtering technique

October 4 2024, h. 2.00 PM

Seminar room, Polo Ferrari 2 - Via Sommarive 9, Trento

Speaker: Przemysław Ząbek, DAGLASS (Poland)

SARS-CoV-2 pandemic has raised awareness among medical facility executives and patients themselves on the need for additional solutions to prevent the spread of viral infections. Still nowadays, worldwide surveys report that about 10% of patients undergo viral infections during hospitalization. The lack of commercial solutions on a global scale creates a huge gap and, at the same time, opportunities for the investigation and implementation of products with virostatic and virucidal properties. In the framework of the project "Development of a virucidal glass to combat the epidemiological threat" (POIR.01.01.01-00-1184/20), funded by the National Centre for Research and Development (Poland), D.A. Glass Sp. z o.o. has developed a technology to endow glasses with virostatic and virucidal properties. Preliminary results on coatings containing 70% or more copper in their composition indicated antiviral potential. Further research implemented reactive magnetron sputtering to develop multi-alloy copper-based targets doped with d- and p-block metals. A series of coatings were obtained, characterized and tested for virucidal activity against HHV-1, influenza, and coronavirus. Abrasion tests, performed according to ASTM D3450-15 confirmed the high mechanical and chemical resistance of the tested coatings. The obtained glass with virostatic/virucidal coating and with high mechanical resistance shows great applicative potential in increasing patient safety in healthcare facilities.

Info

Email: comunicazione.dii@unitn.it

Local contact: francesco.parrino@unitn.it

www.dii.unitn.it