

# **IQS Group will present unique nano elements against counterfeiting of securities, banknotes or a miniature of the Great Mosque!**



Nanotechnology trends

Mar 3

IQS Group is a proud partner of EXPO 2020 Dubai. At the same time, it is now launching its exhibition in the Czech pavilion. Interested professionals and the general public have a unique chance to learn about innovations from the fascinating world of nanotechnology in practice.

The Expo, postponed for a year, will dazzle the world with technological wonders, thanks mainly to nanotechnology, in which the Czechs are world leaders, and the Czech Pavilion has been named one of the ten most interesting. The participation of the Czech company IQS Group contributes to this to a large extent.

It is exhibiting the latest optical security features for the security of banknotes, documents and valuables to prevent their counterfeiting. These include planar micro and nano optical elements that enable precise light distribution as well as microstructured elements for bioengineering applications

"These include tissue engineering or controlled drug delivery, for example. Especially for EXPO 2020, IQS Group has created a miniature model of the Great Mosque of Al-Mastjid al-Haram in Mecca, the size of a grain of sand ( $\approx 0.5\text{mm}^2$ )," said representatives of the Czech company.

IQS Group's presentation at the Expo will begin in the Czech pavilion on 18 November 2021 with a conference called Czech Glass Class & Czech Design, which includes a Hi-tech section. Tomáš Těthal, CEO of IQS Group, will present "Optical elements at the nanohologram level, lower power consumption and higher luminosity".

The permanent exhibition also includes a presentation by IQ Structures, a division that develops and manufactures high-end security features for the protection of banknotes, documents and valuables against counterfeiting. Visitors to the stand will see demonstrations of specific security solutions such as holograms for banknotes,

ID cards, passports, as well as coins and phonograph records with holographic elements.

The security features created by IQ Structures have won the 2018 and 2019 International Hologram Manufacturers Association (IHMA) awards for Best Optical Security Features of the Year. The association thus confirmed that Czech hologram developers are currently the absolute world leaders.

IQ Structures used the same technologies to create a special EXPO 2020 hologram with themes of the Czech participation in the World Expo, including special nanographic images of Prague and Dubai. This hologram will be available for purchase in the Czech pavilion in the form of a sticker, a magnet and a postage stamp issued by the Czech Post.

"IQ Structures' nanostructures are produced at a resolution of tens of nanometres - to give you an idea: a model of a car produced using this method has very precise shapes, but you can park it on a human hair," says Jiří F. Potužník. "However, we are not so much interested in another Czech, and in this case rather world "best", but in a demonstration of functional innovative technology and original design, which is the original purpose of the EXPO."

In addition, visitors can see the IQS Group's state-of-the-art products using nanotechnology at two rotating exhibitions in the Czech pavilion. The first, entitled "Czech Treasures", will take place from 15 to 30 December 2021 and, in cooperation with the Czech Mint, will showcase unique optical security features for the protection of banknotes, documents, valuables, precious metals and medals.

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## Comments



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