

Press Release



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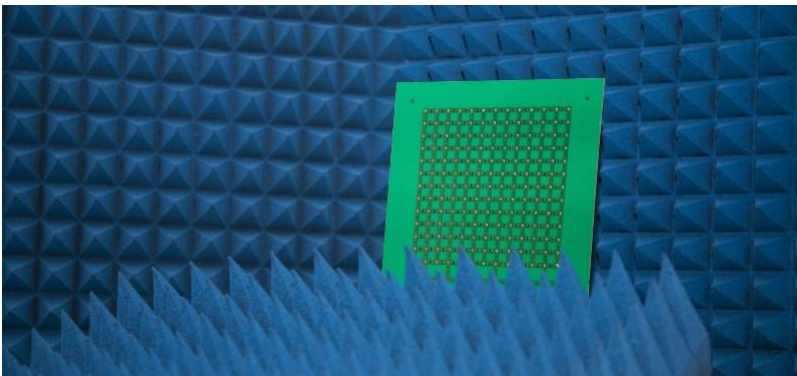
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Photonic Metasurfaces for 5G – “Photometasurf”



The research project “Photometasurf” is a two-year collaborative project of a total funding of €250.000 between the EMPHASIS Research Centre, University of Cyprus, the National Institute of Information and Communications Technology (NICT) of Japan, and Waseda University in Tokyo, Japan. The coordinator of the project is Professor Stavros Iezekiel of the University

of Cyprus. The project is concerned with novel antenna technology (metasurfaces) for application to 5G networks, and is funded by the Cyprus Foundation for Research and Innovation, via the “Excellence Hubs” calls of the RESTART 2016-2020 programme.

The metasurface, to be designed and manufactured in the Microwave Photonics Research Laboratory of the EMPHASIS Research Centre (UCY), will be reconfigured optically through light. This will be important in 5G applications, such as communication for high-speed trains. The design will have potential applications in 5G mm-wave communications and will be evaluated at the facilities of the National Institute of Information and Communications Technology of Japan.

Metasurfaces are fabricated using artificial materials with properties that do not exist in nature, extending their capabilities beyond conventional materials. Due to their unique properties of manipulating and controlling electromagnetic waves, metasurfaces are being considered as potential candidates for numerous applications within 5G communications. The optical control of metasurfaces will promote a potentially cost-effective approach. Recognising the significance of this emerging technology, the Cyprus Foundation for Research and Innovation has funded this project through the RESTART 2016-2020 programme.

End of announcement