



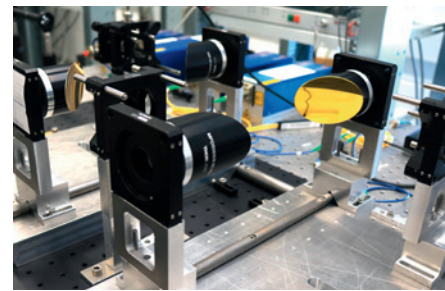
TeraSpect for Multispectral Measurements

Together with the industrial partner TOPTICA Photonics AG, Fraunhofer ITWM and Goethe University, Frankfurt am Main, have combined two successful technologies of terahertz measurement technology into a new measurement principle: the terahertz spectroscopy system TeraSpect.

Transistors from standard processes in the semiconductor industry can be used as highly sensitive terahertz detectors over a wide frequency range. If a series of these detectors is specifi-

cally optimized for several individual frequencies, which are then referred to as resonant detectors, these individual frequencies can be effectively filtered out from a broadband terahertz radiation source. So-called "spectral fingerprints" can then be measured. These are characteristic absorption lines that can be used to uniquely identify materials.

The system can be used, among other things, for authenticity testing in goods inspection.



The TeraSpect system enables fast multispectral terahertz measurements.



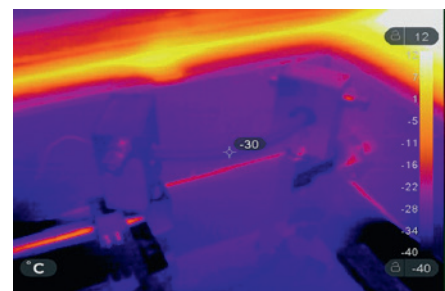
More informations at www.itwm.fraunhofer.de/teraspect-pm

New Features for MeSOMICS®

It looks simple, but it has what it takes: the highly automated MeSOMICS® measuring machine, designed and constructed in the division Mathematics for Vehicle Engineering. MeSOMICS® stands for "Measurement System for the Opticaly Monitored Identification of Cable Stiffnesses" and supports the IPS Cable Simulation product family. This software simulates and optimizes the routing of cables and hoses, especially in the confined installation spaces of modern vehicles. To ensure that the simulation is as realistic as possible, the mechanical properties of the individual cables must be determined. Especially important here are bending and torsional stiffnesses. With MeSOMICS® even the users of the IPS software

can quickly and easily determine the required parameters themselves: The desired data sets are available in just three hours and are used for the numerical simulation in IPS Cable Simulation.

But MeSOMICS® can do even more: namely measure test specimens under pressure (up to 1000 bar) and ambient temperatures between -30°C and 130°C. "These options have been increasingly requested by our customers. Now we can offer them as a service in our Technical Center," says its head Dr.-Ing. Michael Kleer with great satisfaction.



A thermal imaging camera checks the temperature of the test specimen in the MeSOMICS climate chamber.



Further information at www.mesomics.eu