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Christian Doppler Laboratory Researches Novel Sensors

In the Christian Doppler Laboratory for Structured Matter Based Sensing, a team led by Alexander Bergmann and Peter Banzer is researching the fundamentals of structured materials and light fields as well as their applications. The facility is funded by the Federal Ministry of Labour and Economy.

Falko Schoklitsch

The University of Graz and TU Graz set another milestone for technologies of the future: Alexander Bergmann, head of the Institute of Electrical Measurement and Sensor Systems at TU Graz, and Peter Banzer, head of the research group Optics of Nano and Quantum Materials – Structured Light, Sound and Matter at the University of Graz, operate the Christian Doppler Laboratory for Structured Matter Based Sensing. With their teams, the two are researching basic principles and further areas of application for so-called structured materials and light fields. The facility is funded by the Federal Ministry of Labour and Economy.

“In a sense, we have a Lego box at our disposal with a great many building blocks that all have certain properties. In simple terms, this allows us to assemble structures that fulfill the desired functions,” describes Peter Banzer. For example, the scientists want to develop microphones that are much smaller, distort less



Peter Banzer (left) and Alexander Bergmann.

Lunghammer – TU Graz

and wear out less easily than conventional microphones. “The sound waves press the ‘Lego bricks’ together on the sensor material. As a result, these in turn reflect the light differently than before,” elucidates Alexander Bergmann. ■

University Further Education for Business and Industry

Two executive MBAs and further education courses in the fields of green and digital transformation and construction management will be launched at TU Graz in spring. Registration is still open.

Digital Leadership

- ▶ The two executive MBAs in **Digital Leadership** and **Green and Digital Transition** will start on 1st March 2024. The closing date for applications is 15th February.

**Green and
Digital Transition**

- ▶ Part of the MBA in Digital Leadership is the “**Applied leadership behaviour in digital transformation**” course, which is offered jointly with the Theresian Military Academy from April and can also be attended separately.

- ▶ The “**Moisture and leakage monitoring**” course, which starts on 5th April and is divided into four modules, is aimed specifically at participants from the construction industry. Registrations are open until 8th March.