Grasonic: High Sensitive Wideband Graphene Ultrasonic Transducers

GraSonics is a project of three partners from three countries (Czech Republic, Germany and Poland) bringing together competences in the field of graphene, MEMS and ultrasonics. Graphene membranes, as the thinnest elastic membranes, can offer significantly better vibration, sound generation and reception performance than metal or silicon membranes. The main goal is to deliver an innovative solution answering to current demand for high precision and wideband ultrasonic devices applicable in many areas including collision detection and echolocation, robotic applications or medical imaging.
GraSonics utilize graphene layer(s) as vibrating membranes of electrostatically driven capacitive micromachined ultrasound transducers (CMUTs) especially for air ultrasound transducers with high frequencies (>300 kHz). The main project outcome (functional sample of the Graphene Ultrasound Transducer) will reach Technology Readiness Level 4 at the end of the project (technology validated in lab).

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