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Fundamental questions
Elemental answers





Showcasing research from the team of
**Dr Sumanta Kumar Karan, Prof. Bed Poudel and
 Prof. Shashank Priya at the Department of Materials
 Science and Engineering, Pennsylvania State University,
 University Park, PA, USA.**

Magnetic field and ultrasound induced simultaneous
 wireless energy harvesting

A novel dual energy harvesting technology using magnetic
 field and ultrasound-driven wireless energy transfer has
 been demonstrated to convert magnetic/acoustic energy
 into electricity using magnetoelectric (ME) devices. The
 millimeter scale ME device is capable of producing high
 power (>50 mW) in water/porcine tissue operating under
 safety limits, making it suitable for powering several IoT
 devices including implantable and embedded devices.

Cover artwork by Kai Wang.

As featured in:



See Sumanta Kumar Karan,
 Mehdi Kiani, Shashank Priya *et al.*,
Energy Environ. Sci., 2024, **17**, 2129.