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Atomic Magnetic Sensors

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Message from the Guest Editors

The topic of atomic magnetic sensor technology offers two important benefits to the R&D community through technical and fundamental studies.

To those inclined towards the practical aspects of measurement, there are well-matured aspects of the technology that enable the exploration of real-life applications for atomic physics concepts. Attractive application areas such as magnetoencephalography (near-zero field) or geomagnetic surveys (earth's field) have been studied extensively. These activities are complemented by the development of sensor components, such as silicon wafer vapour cells and sophisticated magnetic coil designs, that allow the miniaturisation of the measurement unit.

However, this is also a fertile topic for those interested in the fundamental aspects of sensor operation. The development of concepts that improve sensor performance beyond the standard quantum limits, the validation of novel modes of operation, and the expansion of sensor functionalities prove that the field of the atomic magnetic sensors offers opportunities to demonstrate transformative ideas that extend beyond atomic, optical, and molecular physics.

For more details, please visit [here](#).



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Special Issue



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Message from the Editor-in-Chief

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