

## **Internal Webinar**

**Nonlinear magnetoelectric effect in atomic vapor**

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Magnetoelectric (ME) effect is defined as the induction of electric polarization by magnetic fields or magnetic polarization by electric fields. The studies on linear ME effect and the leading order nonlinear ME effect are mostly confined to multiferroics and chiral materials respectively. In this talk, I will discuss about the demonstration of the higher-order nonlinear ME effect achieved through the nonlinear wave mixing of the optical electric fields and radio-frequency (rf) magnetic fields in the atomic vapour. A semiclassical model of the atomic system interacting with the fields is used to explain the experimental results. This study can be explored for the possibility of precision rf-magnetometry.

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***2:30 PM***