Abstract for an Invited Paper for the DAMOP06 Meeting of The American Physical Society

## All-optical atomic magnetometry<sup>1</sup>

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The talk will address recent advances in measuring magnetic fields using nonlinear magneto-optical effects in alkali-atom vapors. We will discuss several applications, including measuring magnetic properties of nominally non-magnetic materials, robust detection of magnetic microparticles at ultra- low concentrations, and using atomic magnetometers for remote detection of nuclear magnetic resonance and magnetic-resonance imaging.

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