

## Design and Construction of Torque Magnetometer for Magnetic Properties Investigation

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In this research, cantilever based torque magnetometer was designed and built for investigation of magnetic properties of materials. Torque on magnetic moment of the sample was detected by the torsion and flexion of the cantilever. The laser beam deflected from the sample platform was detected by a quadrant photodiode. The system can be used to measure anisotropy direction of a permanent magnet. By using these technique, external field and magnetic dipole moment of the sample does not affect its anisotropy direction.

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