

## **Thermal diffusivity measurement of Cadmium Sulphide nanoparticles prepared by gamma-irradiation technique.**

### **Abstract**

In this study we applied thermal lens (TL) technique to study the effect of size on thermal diffusivity of cadmium sulphide (CdS) nanofluid prepared by using  $\gamma$ -radiation method containing particles with different sizes. In TL experimental set up a diode laser of wavelength 514 nm and intensity stabilized He-Ne laser were used as the excitation source and the probe beam respectively, respectively. The experimental results showed that the thermal diffusivity value of CdS nanofluid increases when the of particle size increased.

**Keyword:** Thermal diffusivity; Nanofluids; Thermal lens.