Tata Institute of Fundamental Research
Survey No. 36/P, Gopanpally Village, Serilingampally, Ranga Reddy Dist., Hyderabad – 500 046

Internal Seminar

Hyperbolic Metamaterial for Enhanced Scintillation

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TIFR, Hyderabad

Scintillators are essential in diverse fields, including medical imaging, nuclear radiation detection, and high-energy physics, where they convert high-energy radiation into visible light for applications such as diagnostics, monitoring, and fundamental research. Recent advancements focus on enhancing their emission rate and light yield, improving their efficiency and broadening their applicability in cutting-edge technologies. By employing a grating coupled hyperbolic metamaterial design, we numerically show that photon yields are increased through the enhancement of both the photon density of states as well as enhanced optical outcoupling via the hyperbolic resonance cone.

Thursday, Sep 4th 2025

16:00 Hrs

Seminar Hall, TIFRH