

# Low cost polymer based multimodal wideband MEMS photonic sensing platform

At the Photonics Laboratory in IIT Bombay, we are developing various photonic devices based on different spectroscopic techniques. They are tailored for various opto-electronic and sensing applications in the agricultural, healthcare and environmental sector. One such device is the low cost polymer based multi-modal / multi-spectral wide band MEMS photonic sensing platform

## Multispectral

- Photoresponsivity / photoconductivity of single device ranges from UV-visible to mid-infrared

## Multimodal

- Can be used as photo-detector or photonic sensor

## Salient features

- Low dark current
- Room temperature operation
- Fabrication process CMOS / MEMS compatible
- Low cost pristine polymer; No doping

## Applications

- On-chip general platform: Ready to incorporate in any spectroscopic detection such as:
  - Absorption spectroscopy
  - Reflectance spectroscopy
  - Transmission spectroscopy

