

Applied Optics Devices Laboratory

Research Areas

Sensors

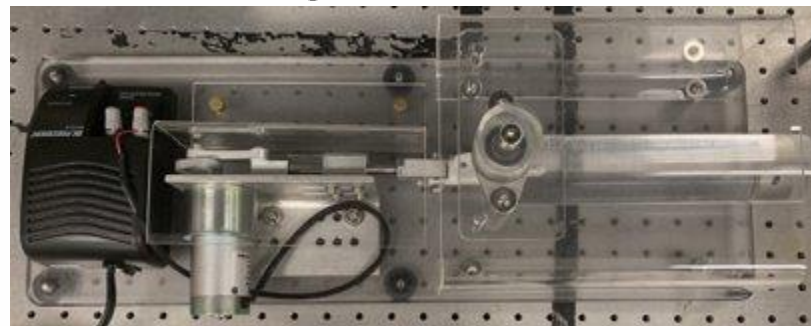
- Multiplexed fiber optic biosensors
- MR-compatible motion detection for radiative surgeries
- Integrated fiber optic devices for biomedical imaging
- Ultrafast phenomena and single-shot measurement
- Photoacoustic imaging

Spatial Division Multiplexing

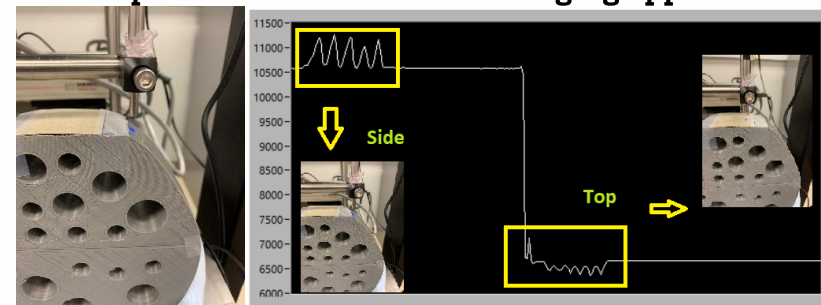
- Spatial division multiplexing
- Nonlinear fiber optics
- Multi-mode and multi-core fiber devices

Radiation Detection

- Radiation detection for positron emission tomography imaging



Motion phantom for biomedical imaging applications



Head phantom motion detection with fiber optic sensors

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Collaborative Interests

Biomedical devices, biosensors, biomedical fiber optics, FBG and distributed fiber sensors, Photoacoustic imaging, cancer biomarker detection and analysis, microfluidic devices

Recent Funding

- Ozark Biomedical Initiative
- NIOSH