

## NEW KITS UNDER DEVELOPMENT

### ED-RAMAN

### RAMAN AMPLIFIERS

#### Experiments include:

- Observation & measurement of Stimulated Brillouin Scattering in fibres
- Measurement of Raman gain with variation of pump power and fibre length
- Examination of forward & backward pumping configurations



### FIBRE OPTICS

### FIBRE SENSORS

#### Investigates:

- Optical connectors & care of optical fibres
- Coupling light into optical fibre
- Fibre bend and connector loss
- Fibre attenuation
- Fibre NA measurements
- Fibre modes

#### Examines:

- Fibre Bragg grating sensors:
  - spectral response, grating characteristics
  - temperature & strain sensing
- Fibre Mach Zehnder Interferometers:
  - path imbalance effects on sensor performance, polarisation & wavelength tuning, differential phase bias effects

### OPTICAL RECEIVERS

### BIOPHOTONICS & NANOPHOTONICS

#### Examines:

- Photoreceiver design and performance with resistive loads
- Transimpedance, photovoltaic & photoconductive operation
- Shot noise & Thermal noise
- Photodiode responsivity
- Lock-in amplifiers and their use in recovering signals

#### Investigates:

- Image acquisition and enhancement
- Fluorescence sensors
- Fluorescent molecular labelling
- Spectrometric sensors (absorption, Raman)
- Photonic crystals
- Band structure
- Plasmonics

### INTEGRATED TEACHING & TRAINING LABS FOR PHOTONICS

Combining OptoSci's extensive range of educator kits with third party instrumentation we can also design and supply fully integrated teaching and training labs covering areas from basic optics, fibre optics and optical communications, through to advanced optical communication applications, instruments and technology. Please contact OptoSci to discuss your requirements further.



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