INFRARED PHYSICS & TECHNOLOGY

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Aims and Scope

The Journal covers the entire field of infrared physics and technology: theory, experiment, devices and instrumentation.

Its core topics can be summarized as the generation, propagation and detection of infrared radiation; the associated optics, materials and devices; and its use in all fields of science, industry and medicine.

Infrared techniques occur in many different fields, notably spectroscopy and interferometry; material characterization and processing; atmospheric physics, astronomy and space research. Scientific aspects include quantum optics, quantum electronics and semiconductor physics. Some important applications are medical diagnostics and treatment, industrial inspection and environmental monitoring.

A fuller though not exhaustive list of topics would include:

- Astronomy, astrophysics and space research
- Atmospheric transmission, turbulence and scattering
- Environmental applications: pollution and combustion monitoring
- Detectors: quantum and thermal
- Industrial applications
- Infrared lasers including free electron lasers
- Infrared signatures
- Material properties, processing and characterization
- Medical applications
- Nondestructive testing, active and passive
- Optical elements: lenses, polarisers, filters, mirrors, fibres, etc.
- Radiometry: techniques, calibration, standards and instrumentation
- Remote sensing and range-finding
- Solid-state physics
- Synchrotron radiation in the infrared
- Thermal imaging: device design, testing and applications
- Tera hertz generation, instrumentation and application