



**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY**  
**MATERIALS MANAGEMENT DIVISION**  
**Powai, Mumbai 400076.**

(PR: 1000030089)

RFx. No.6100001290

## Technical Specifications

### Spectrofluorometer as add-on to the existing TCSPC system

Spectrofluorometer that can be attached to the existing TCSPC system and it should have all-reflective-optics with 10,000:1 water Raman specification and should include standard, continuous 150W ozone-free xenon source delivering excitation light from 230nm to the NIR. Should include two single Czerny Turner spectrometers with 1200g/mm ruled gratings, blazed at 330 nm at the excitation for the optimization of the excitation intensity in the UV-VIS range, and blazed at 500 nm at the emission channel for the optimization of the fluorescence signal in the VIS-NIR range. Both monochromators should have continuously adjustable entrance and exit slits operated under computer control for the selection of the bandpasses in the range 0-30nm. Spectrofluorometer should come with a photodiode reference detector and with multialkali PMT emission detector, 200-870nm spectral range, working in photon counting mode. A second emission port should be delivered in standard for future upgrade with optional emission detectors. Spectrofluorometer should be delivered with filter holder and a quartz cell and with software for the control of the instrument and data analyses. Solid Sample Holder is needed for viewing front-face fluorescence of thin films, powders, pellets, paper, fibers, or microscopic slides with variable alignment angle. Integrating sphere is also needed for direct PLQY sample measurements with 121 mm internal diameter and reflectivity from 250-2500nm. Internal slide-in tray mounted integrating sphere with two excitation and two emission ports with sphere matching curvature ports for when openings are not in use. It should also include bottom loading sample tray for solids or powders and center mounted 10 mm cuvette sample holder. No fiber optics required. It should also include 5 cups, with 5 coverslips, 4 side plugs, one bottom plug and electroluminescence connectivity for ELQY. Powder/solid samples should be easily loaded with bottom mounting retractable mechanism to prevent sphere contamination, and center mounted cuvette is lowered into position with a simple top mount. **Warranty of 3 years is required.**