**Limited Tender Quotations are invited for the supply of Photoluminescence spectrophotometer on Two bid system (Technical & Financial Bid)**

Technical specifications of the required "***Photoluminescence spectrophotometer***" are given below. The vendor is required to indicate his compliance as per the format given. The compliance should be justified by giving reference to the corresponding section in the information brochure on the instrument, which should clearly spell out the details. The vendor has to provide a list of installations of the instrument conforming to the given specification, in/around Chennai. User certificates for satisfactory installation and service support should be given separately. Quotations should be provided as separate technical and financial bids.

Noncompliance to the above requirements will result in the disqualification of the vendor.

***Specifications:***

Research Spectrofluorometer with 150W ozone free Xe source and power supply, single Czerny Turner excitation spectrometer with 1200 g/mm grating blazed at 330 nm, single Czerny Turner emission spectrometer with 1200 g/mm grating blazed at 500 nm, continuously adjustable entrance and exit slits operated under computer control, all reflecting optics, photodiode reference detector, multi-alkali PMT emission detector, photon counting electronics and controlling software, including instrument computer.

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| *No.* | *Description* | *Technical specifications of the components in Spectrometer* | *Compliance (yes/no) along with reference to the corresponding information in the information brochure on the instrument* |
| 1. | Optical system | All reflective for focusing at all wavelengths and precise imaging for microsamples i.e the system should be mirror based system. |  |
| 2. | Excitation wavelength range | Should cover the range 200 – 950 nm, optimized in the UV |  |
| 3. | Emission wavelength range | Should cover the range 200 – 950 nm, optimized in the visible |  |
| 4. | Bandpass | 0-30 nm, must be adjustable from computer |  |
| 5. | Wavelength accuracy |  ± 0.5 nm, or better |  |
| 6. | Scan speed | 4800 nm/min |  |
| 7. | Signal-noise-ratio | 16000:1 (RMS method) and 6000:1 (FSD method) using water raman signal at excitation 350 nm, emission at 397 nm, Bandpass 5 nm and 1 sec integration time |  |
| 8. | Bandpass filters | Central wavelengths at 320 and 340 nm with necessary holder and adapters |  |
| 9. | Emission detector | R928 PMT photomultiplier tube detector, wavelength range 250-850 nm operating in photon counting electronics mode |  |
| 10. | Solid sample holder | Should be able to design for front-face fluorescence of thin films, powders, pellets, paper, fibers, microscopic slides or crystals and variable alignment angle |  |
| 11. | Thermostattable single cell holders | Range: -10 to 70 °C or better |  |
| 12. | Magnetic stirring | Must possess |  |
| 13. | Cell holders | For 1mm and 10 mm path length cells |  |
| 14. | Quartz Cuvette Cells | one pair each of 1mm (1 mL) and 10 mm (4 mL) path length cells |  |
| 15. | Integrating sphere attachment | 3.2 inch or 15 inch for quantum yield measurement (solution, solid, film, powder, crystals, paper, fibres, pellets, etc) unit with standard for calibration, 1931 CIE color coordinate calculation software |  |
| 16. | Control software | Must possess powerful software for data collection and system control. On start-up, the system automatically calibrates and presents itself for new experiments. |  |
| 17. | Measurement modes | Quantitative analysis, Wavelength scan, Time scan, fixed wavelength monitor, etc. |  |
| 18. | Data processing | Spectral manipulation, overlay peak picking, peak height, peak area, peak width, derivatives, smoothing, data truncation, arithmetic, baseline correction, subtraction, deconvolution, vertical axis conversion, horizontal axis conversion, etc.  |  |
| 19. | Computer | Should be supplied with windows based operating system loaded with system software. |  |
| 20. | Upgradation option | Should be upgradable to time resolved measurements with time-correlated single photon counting attachment, etc.  |  |

Quotations are invited on two bid system (Technical & Financial bid) in Sealed individual envelops in single cover for the above equipment addressed to

**Dr. P. Venkatakrishnan**

**ASSISTANT PROFESSOR**

**DEPT.OF CHEMISTRY**

**IITM, CHENNAI-600036**

**The Last date of submission of quotation on or before 18.10.16 at 3.30pm**