CENTRE FOR NANO AND SOFT MATTER SCIENCES

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CORRIGENDUM

Kindly note the following modifications in the tender documents for Time-Correlated Single Photon Counting (TCSPC) Spectrometer System as detailed below.

Sl. No.	Name of the service	Corrigendum
1.	Extension of Due Date	Due date has been extended till 17 Nov 2023
2.	Specifications	New specifications given below

Sd/-

Administration and Finance Officer

Time-Correlated Single Photon Counting (TCSPC) Spectrometer System

The system should be a research-grade time-resolved fluorescence spectrometer with Time Correlated Single Photon Counting (TCSPC) detection technique. It should come with a Sample Compartment, Emission Monochromator, Detector, Data Acquisition System, and Software for data analysis.

Excitation Sources:

Pulsed LED with a typical pulse width of <1ns or better and maximum Repetition Rate should be 20 MHz

1. 290 +/- 10 nm

Pulsed Laser Diodes witha typical pulse width of 100ps or better

1. 375 +/- 10 nm (Max repetition rate 20 MHz or better)
2. 405 +/- 10 nm(Max repetition rate 80 MHz or better)
3. 510 +/- 10 nm(Max repetition rate 80 MHz or better)
4. 635 +/- 10 nm(Max repetition rate 80 MHz or better)
5. 820 +/- 20 nm(Max repetition rate 80 MHz or better)

Sample Chamber:

- It should havea large sample compartment to accommodate cryostat
- 2 Numbers of 1x1 cm quartz cuvettes should be provided

- Front surface sample holder should be provided for use with solid or highly scatteringsamples
- Safety shutters interlocked to the lid of the sample chamber should be provided.

Emission Monochromator:

- Motorized monochromator onthe emission side.
- Wavelength Range: 200 – 1700nm or better
- A computer-controlled stepper motor-driven diffraction grating position is necessary for automated time-resolved emission spectral (TRES) measurements and for choosing the emission wavelength as required for decay measurements.
- The grating must be blazed at a suitable wavelength to achieve the best sensitivity.
- Adjustable slitsshould be available.
- Computer interface: USB

TCSPC Electronics:

- It should be high-performance TCSPC Platform with four parallel timing channels, 13ps timing resolution or better, and a USB3 or better interface.
- Lifetimes measurable with appropriate detector and sources: 25 ps to >1s

Detector:

- Fast, cooled, photomultiplier tube detector with power supply
- Detection Range from 230–850nm or better
- Dark counts should be less than 100cps (typical)
- The response time of the detector should be 400 ps or better

Detector-2 for NIR:

- NIR PMT: Range 950-1700nm
- Peltier cooled
- The response time of the detector should be 600 ps or better

Polariser:

- Motorized polarisers should be provided for doing Time Resolved Anisotropy Measurements.
- Polarizers should be provided for UV-VIS-NIR range

Variable Temperature Accessory:

- **Cryostat: Temperature Range:** 77K-500K with Turbo Pump

Software:

- Suitable software should be provided for Fluorescence Decay Acquisition, Time Resolved Fluorescence Spectra, Quasi-Steady State Spectra (with spectral correction), Multi-exponential fitting of fluorescence decay with standard algorithm(s) and Multi-exponential fluorescence anisotropy fits etc.

Warranty: Three years from the date of installation

Discount: special discount for educational institutions shall be mentioned in the price bid

Optional:

1. Laser diode with an excitation energy above 980 nm with a maximum repetition rate 20 MHz or better)
2. Liquid sample holder and cuvettes for low-temperature measurements.