

## Indian Institute of Technology, Delhi (IIT Delhi)

### Expression of Interest

IITD/CRF(SP-2851)/2020

Date:28/01/2020

IIT Delhi wishes to set-up an advanced microscopy facility at IIT Delhi Sonapat campus. This facility approved under DST-SATHI scheme is expected to be a flagship-imaging center with a comprehensive range of imaging technologies for research and training. IIT Delhi researchers, users from other academic and industry entities are expected to use this facility. Under this facility we plan to setup a **Stimulated Emission and Depletion (STED) Microscope having Single Molecule capabilities**. Given below are some desirable specifications of this setup.

#### Desired Capabilities of the Instrument:

1. Multicolour (at least three laser excitation lines: ~595 nm, ~640 nm, ~660 nm) STED measurements, and a pulsed STED Laser (~766 nm; for depletion); STED resolution in X-Y better than 50 nm.
2. Independent excitation/imaging lasers: 3 different wavelengths (other than the excitation lines of the STED molecule) with the following central wavelengths: ~405 nm; ~485 nm; ~532 nm
3. Lasers to be operable in both pulsed and continuous wave (cw) mode
4. System should be capable of performing live-cell imaging using the Gated STED (gSTED) option
5. Single molecule imaging and measurements like Single Molecule FRET (smFRET), fluorescence correlation spectroscopy (FCS), fluorescence cross-correlation spectroscopy (FCCS), fluorescence lifetime imaging (FLIM), fluorescence lifetime correlation spectroscopy (FLCS), Computer controlled Pulsed Interleaved Excitation (PIE) and FLCCS. FRAP measurements should also be possible.
6. Multiple detection channels: (a) **two** single photon counting modules (SPAD) (b) **two** hybrid photodetectors (single molecule sensitive) and (c) a spectrograph (showing single molecule sensitivity)
7. Galvanometer based laser scanning module for fast imaging
8. Single confocal pinhole for each detector for ease of alignment (*i.e. there should be a single confocal for all the detectors*)
9. High throughput TCSPC based data acquisition electronics: Capability to perform rapid-FLIM
10. Motorised inverted microscope with a range of suitable objectives
11. Filter sets for all laser lines and PIE
12. Wide-field imaging capabilities with a metal halide lamp and standard filter sets for wide-field epifluorescence
13. Optical Table (vibration free)
14. Modular system capable of upgrading with several add-ons like:
  - (i) Incubator (for live-cell imaging)
  - (ii) Dual focus FCS
  - (iii) Attachment of Ultrafast Laser for Two-photon imaging
  - (iv) Provision for AFM attachment

- (v) Optional Comprehensive Warranty for additional 2 yrs (after completion of comprehensive warranty of 3 yrs as mentioned below)

Services:

1. Platform for raw data access and data processing
2. Complete comprehensive warranty for 3 years
3. Installation, operation and training of users for usage of equipment for 3 years
4. Conduct of periodic workshops / training programs for the facility users

Eligibility criteria:

1. Vendor must be original manufacturer or authorized dealer for the OEM
2. Vendor must have a minimum of INR 10 Cr revenue internationally
3. Successfully established user-base in India and abroad.

Requested material:

1. Vendor covering letter detailing their expertise and experience in setting up similar facilities in India or Abroad.
2. Technical specifications and application notes of the microscopy technologies available with them. Please give as much details as possible for the products and also the services that can be provided.
3. Application note on how the technical specification adds value in imaging application.
4. Overall proposal in terms of execution time, services and value they can provide in setting up, operation of this STED setup.

Submission of proposal:

Vendors are requested to submit a proposal for the above mentioned items as a single PDF on NIC portal (E-Procurement).

Deadline for submitting proposal: **18<sup>th</sup> Feb 2020 3 PM**

Evaluation procedure: The purchase committee will invite all the vendors for presentations on their submitted proposals. Date of interaction will be communicated individually to all vendors. Based on the proposal and technical specifications presented to the purchase committee, technical specifications of the final tender will be finalized and uploaded.

For queries related to this EOI, you may send an email to [bsinghiitd@iitd.ac.in](mailto:bsinghiitd@iitd.ac.in)

### SCHEDULE

Name of Organization	Indian Institute of Technology Delhi
Tender Type (Open/Limited/EOI/Auction/Single/Global)	EOI
Tender Category (Services/Goods/works)	Goods & Services
Type/Form of Contract (Work/Supply/ Auction/ Service/ Buy/ Empanelment/ Sell)	Goods & Services
Product Category (Civil Works/Electrical Works/Fleet Management/ Computer Systems)	Others
Date of Issue/Publishing	<b>28/01/2020 (16:00 Hrs)</b>
Document Download/Sale Start Date	<b>28/01/2020 (16:00 Hrs)</b>
Document Download/Sale End Date	<b>18/02/2020 (15:00 Hrs)</b>
Last Date and Time for Uploading of Bids	<b>18/02/2020 (15:00 Hrs)</b>
Date and Time of Opening of Technical Bids	<b>19/02/2020 (15:00 Hrs)</b>
Tender Fee	Rs. ___NIL___/- (For Tender Fee)
EMD	Rs. ___NIL___/- (For EMD) (To be paid through RTGS/NEFT. IIT Delhi Bank details are as under: Name of the Bank A/C : IITD Revenue Account SBI A/C No. : 10773572622 Name of the Bank : State Bank of India, IIT Delhi, Hauz Khas, New Delhi-110016 IFSC Code : SBIN0001077 MICR Code : 110002156 Swift No. : SBININBB547 (This is mandatory that UTR Number is provided in the on-line quotation/bid. (Kindly refer to the UTR Column of the Declaration Sheet at Annexure-II))
No. of Covers (1/2/3/4)	01
Bid Validity days (180/120/90/60/30)	120 days (From last date of opening of tender)
Address for Communication	CRF office, Room No-155 B, IIT Delhi, Hauz Khas, New Delhi-110016
Contact No.	011-26591057
Email Address	<a href="mailto:bsinghiitd@iitd.ac.in">bsinghiitd@iitd.ac.in</a>