

Notice Inviting Quotation (E-Procurement mode)

कोटेशन को आमंत्रित करने की सूचना (इ-प्रोक्योरमेंट मोड)

INDIAN INSTITUTE OF TECHNOLOGY DELHI

भारतीय प्रौद्योगिकी संस्थान दिल्ली

HAUZ KHAS, NEW DELHI-110016

हौज खास, नई दिल्ली -110016

Dated/ दिनांक : 25/06/2020

Open Tender Notice No. / खुला प्रस्ताव निविदा सूचना नंबर:IITD/BCHE(SP-3027)/2020

Indian Institute of Technology Delhi is in the process of purchasing following item(s) as per details as given as under.

इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी दिल्ली निम्नलिखित मदों की खरीद की प्रक्रिया में है।

Details of the item आइटम का विवरण	STED Super-resolution Facility with Single Molecule Measurement Capabilities
Earnest Money Deposit to be submitted बयाना जमा करने के लिए जमा राशि	Rs. 1500000/- (INR 15 lakhs)
Warranty वारंटी अवधि	2 Years for Part A and 1 year for Part B
Performance security निष्पादन सुरक्षा	5% of FOB value
Delivery Schedule	Maximum of 12 weeks from the date of the opening of LC

Tender Documents may be downloaded from Central Public Procurement Portal <http://eprocure.gov.in/eprocure/app> . Aspiring Bidders who have not enrolled / registered in e-procurement should enroll / register before participating through the website <http://eprocure.gov.in/eprocure/app> . The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.

निविदा दस्तावेज केन्द्रीय सार्वजनिक खरीद पोर्टल <http://eprocure.gov.in/eprocure/app> से डाउनलोड हो सकते हैं ई-प्रोक्योरमेंट में पंजीकृत नहीं होने वाले इच्छुक बोलीदाताओं को वेबसाइट <http://eprocure.gov.in/eprocure/app> के माध्यम से भाग लेने से पहले पंजीकरण करना चाहिए। पोर्टल नामांकन मुफ्त है बोलीदाताओं को सलाह दी जाती है कि 'ऑनलाइन बोली के लिए निर्देश' पर दिए गए निर्देशों के माध्यम से जाने की सलाह दी जाए।

Tenderers can access tender documents on the website (For searching in the NIC site, kindly go to Tender Search option and type 'IIT'. Thereafter, Click on "GO" button to view all IIT Delhi tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <http://eprocure.gov.in/eprocure/app> as per the schedule given in the next page.

निविदाकर्ता वेबसाइट पर निविदा दस्तावेज का उपयोग कर सकते हैं (एनआईसी साइट में खोज के लिए, कृपया निविदा खोज विकल्प और 'आईआईटी' टाइप करें। उसके बाद, सभी आईआईटी दिल्ली निविदाओं को देखने के लिए "गो" बटन पर क्लिक करें) उपयुक्त निविदा का चयन करें और उन्हें सभी प्रासंगिक सूचनाओं से भरें और वेबसाइट पर <http://eprocure.gov.in/eprocure/app> पर पूरा निविदा दस्तावेज ऑनलाइन जमा करें। अगले पृष्ठ में दिए गए कार्यक्रम के अनुसार

No manual bids will be accepted. All quotation (both Technical and Financial should be submitted in the E-procurement portal).

कोई मैनुअल बोली स्वीकार नहीं की जाएगी। सभी कोटेशन (तकनीकी और वित्तीय दोनों को ई-प्रोक्योरमेंट पोर्टल में जमा करना चाहिए)

SCHEDULE

Name of Organization	Indian Institute of Technology Delhi
Tender Type (Open/Limited/EOI/Auction/Single/Global)	Open
Tender Category (Services/Goods/works)	Goods
Type/Form of Contract (Work/Supply/ Auction/ Service/ Buy/ Empanelment/ Sell)	Buy
Product Category (Civil Works/Electrical Works/Fleet Management/ Computer Systems)	Optical Microscope System
Source of Fund (Institute/Project)	Budget Code: <u>CEQPT</u> / Project Code: <u>RP03829</u>
Is Multi Currency Allowed	YES
Date of Issue/Publishing	25/06/2020 (15:00 Hrs)
Document Download/Sale Start Date	25/06/2020 (15:00 Hrs)
Document Download/Sale End Date	23/07/2020 (15:00 Hrs)
Date for Pre-Bid Conference	---
Venue of Pre-Bid Conference	---
Last Date and Time for Uploading of Bids	23/07/2020 (15:00 Hrs)
Date and Time of Opening of Technical Bids	24/07/2020 (15:00 Hrs)
Tender Fee	Rs. ___ NIL ___/- (For Tender Fee)
EMD	Rs. Rs. 1500000/- (INR 15 lakhs) /- (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)	02
Bid Validity days (180/120/90/60/30)	120 days (From last date of opening of tender)
Address for Communication	Prof. Pramit K Chowdhury, Chemistry, IIT Delhi, 110016
Contact No.	+91-11-26591521
Email Address	pramitc@chemistry.iitd.ac.in

**Chairman Purchase Committee
(Buyer Member)**

Instructions for Online Bid Submission/ ऑनलाइन बोली (बिड) के लिए निर्देश:

As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal (URL:<http://eprocure.gov.in/eprocure/app>). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

व्यय विभाग के निर्देशों के अनुसार, यह निविदा दस्तावेज केंद्रीय सार्वजनिक प्रापण पोर्टल (यूआरएल: <http://eprocure.gov.in/eprocure/app>) पर प्रकाशित किया गया है। बोलीदाताओं को मान्य डिजिटल हस्ताक्षर प्रमाण पत्र का उपयोग करते हुए सीपीपी पोर्टल पर इलेक्ट्रॉनिक रूप से अपनी बोलियों की सॉफ्ट प्रतियां जमा करना आवश्यक है। सीपीपी पोर्टल पर पंजीकरण करने के लिए निविदाकर्ताओं की सहायता करने के लिए नीचे दिए गए निर्देशों का मतलब है, सीपीपी पोर्टल पर आवश्यकताओं के अनुसार अपनी बोलियां तैयार करें और अपनी बोलियां ऑनलाइन जमा करें।

More information useful for submitting online bids on the CPP Portal may be obtained at:

अधिक जानकारी सीपीपी पोर्टल पर ऑनलाइन बोलियां जमा करने के लिए उपयोगी हो सकती है:

<http://eprocure.gov.in/eprocure/app>

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL:<http://eprocure.gov.in/eprocure/app>) by clicking on the link “Click here to Enroll”. Enrolment on the CPP Portal is free of charge.

बोलीदाताओं को "नामांकन के लिए यहां क्लिक करें" लिंक पर क्लिक करके सेंट्रल पब्लिक प्रोक्योरमेंट पोर्टल (यूआरएल: <http://eprocure.gov.in/eprocure/app>) के ई-प्रोक्योरमेंट मॉड्यूल पर भर्ती करना आवश्यक है। सीपीपी पोर्टल पर नामांकन निःशुल्क है

- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.

नामांकन प्रक्रिया के भाग के रूप में, बोलीदाताओं को अपने खाते के लिए एक अद्वितीय उपयोगकर्ता नाम चुनना होगा और एक पासवर्ड प्रदान करना होगा।

- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.

बोलीदाताओं को सलाह दी जाती है कि पंजीकरण प्रक्रिया के भाग के रूप में अपना वैध ईमेल पता और मोबाइल नंबर पंजीकृत करें। इन का उपयोग सीपीपी पोर्टल से किसी भी संचार के लिए किया जाएगा।

- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.

नामांकन पर, बोलीदाताओं को सीसीए इंडिया द्वारा मान्यता प्राप्त किसी प्रमाणन प्राधिकरण द्वारा जारी किए गए अपने मान्य डिजिटल हस्ताक्षर प्रमाण पत्र (कक्षा द्वितीय या कक्षा III प्रमाण पत्र के साथ महत्वपूर्ण उपयोग पर हस्ताक्षर करने) की आवश्यकता होगी (जैसे सिफ़ी / टीसीएस / एनकोड / ई-मुद्रा आदि) , उनके प्रोफाइल के साथ

- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.

केवल एक मान्य डीएससी एक बोलीदाता द्वारा पंजीकृत होना चाहिए। कृपया ध्यान दें कि निविदाकर्ता यह सुनिश्चित करने के लिए जिम्मेदार हैं कि वे अपने डीएससी को दूसरों को उधार नहीं देते हैं जिससे दुरुपयोग हो सकता है।

- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / eToken.

बोलीदाता फिर अपने यूजर आईडी / पासवर्ड और डीएससी / ईटीकेन के पासवर्ड को दर्ज करके सुरक्षित लॉग-इन के माध्यम से साइट पर लॉग ऑन करता है।

SEARCHING FOR TENDER DOCUMENTS/ निविदा दस्तावेजों के लिए खोजना

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.

सीपीपी पोर्टल में निर्मित विभिन्न खोज विकल्प हैं, ताकि बोलीदाताओं को कई मापदंडों से सक्रिय निविदाएं खोज सकें। इन मापदंडों में निविदा आईडी, संगठन का नाम, स्थान, तिथि, मूल्य आदि शामिल हो सकते हैं। निविदाओं के लिए उन्नत खोज का एक विकल्प भी है, जिसमें बोलीदाता कई नामों को जोड़ सकते हैं जैसे संगठन का नाम, अनुबंध का स्थान, स्थान, सीपीपी पोर्टल पर प्रकाशित निविदा की खोज के लिए तारीख, अन्य कीवर्ड आदि।

- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

बोलीदाताओं ने एक बार निविदाएं चुनी हैं जिसमें वे रुचि रखते हैं, उसका वे आवश्यक दस्तावेज / निविदा कार्यक्रम डाउनलोड कर सकते हैं। ये निविदाएं 'मेरी निविदाओं' फ़ोल्डर में ले जाई जा सकती हैं। इससे सीपीपी पोर्टल को बोलीदाताओं को एसएमएस / ई-मेल के माध्यम से सूचित किया जा सकता है, यदि निविदा दस्तावेज में कोई शुद्धि जारी कि गई है।

- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

बोलीदाता को प्रत्येक निविदा को निर्दिष्ट अद्वितीय निविदा आईडी का नोट बनाना चाहिए, अगर वे हेल्पडेस्क से कोई स्पष्टीकरण / सहायता प्राप्त करना चाहते हैं।

PREPARATION OF BIDS / बोली (बिड) की तैयारी

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.

बोलीदाता को अपनी बोलियां जमा करने से पहले निविदा दस्तावेज पर प्रकाशित किसी भी शुद्धि को ध्यान में रखना चाहिए।

- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

कृपया बोली के भाग के रूप में जमा किए जाने वाले दस्तावेजों को समझने के लिए निविदा विज्ञापन और निविदा दस्तावेज ध्यान से देखें। कृपया उन अंकों की संख्या पर ध्यान दें जिन में बोली दस्तावेज जमा करना है, दस्तावेजों की संख्या - जिसमें प्रत्येक दस्तावेज के नाम और सामग्री शामिल हैं, जिन्हें प्रस्तुत करने की आवश्यकता है। इनमें से कोई भी विचलन बोली को अस्वीकार कर सकता है।

- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.

बोलीदाता, अग्रिम में, निविदा दस्तावेज / अनुसूची में बताए अनुसार प्रस्तुत करने के लिए बोली दस्तावेज तैयार करना चाहिए और आम तौर पर, वे पीडीएफ / एक्सएलएस / आरएआर / डीडब्ल्यूएफ स्वरूपों में हो सकते हैं। बोली दस्तावेजों को 100 डीपीआई के साथ काले और सफेद विकल्प स्कैन किया जा सकता है।

- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

मानक दस्तावेजों के एक ही सेट को अपलोड करने के लिए आवश्यक समय और प्रयास से बचने के लिए जो प्रत्येक बोली के भाग के रूप में जमा करने के लिए आवश्यक हैं, ऐसे मानक दस्तावेज अपलोड करने का प्रावधान (जैसे पैन कार्ड कॉपी, वार्षिक रिपोर्ट, लेखा परीक्षक प्रमाण पत्र आदि)) बोलीदाताओं को प्रदान किया गया है। ऐसे दस्तावेजों को अपलोड करने के लिए बोलीकर्ता उनके लिए उपलब्ध "मेरा स्पेस" क्षेत्र का उपयोग कर सकते हैं। बोली जमा करते समय ये दस्तावेज सीधे "मेरा स्पेस" क्षेत्र से जमा किए जा सकते हैं, और उन्हें बार-बार अपलोड करने की ज़रूरत नहीं है इससे बोली जमा प्रक्रिया के लिए आवश्यक समय में कमी आएगी।

SUBMISSION OF BIDS/ बोली (बिड) का जमा करना

- 1) Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.

बोलीदाता को बोली प्रस्तुति के लिए अच्छी तरह से साइट पर लॉग इन करना चाहिए ताकि वह समय पर बोली अपलोड कर सके या फिर बोली प्रस्तुत करने के समय से पहले। अन्य मुद्दों के कारण किसी भी देरी के लिए बोलीदाता जिम्मेदार होगा।

- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.

बोलीदाता को निविदा दस्तावेज में दर्शाए अनुसार एक-एक करके आवश्यक बोली दस्तावेजों को डिजिटल हस्ताक्षर और अपलोड करना होगा।

- 3) Bidder has to select the payment option as “on-line” to pay the tender fee / EMD as applicable and enter details of the instrument. Whenever, EMD / Tender fees is sought, bidders need to pay the tender fee and EMD separately on-line through RTGS (Refer to Schedule, Page No.2).

बोलीदाता को निविदा शुल्क / ईएमडी को भुगतान के लिए "ऑन लाइन" के रूप में भुगतान विकल्प चुनना होगा और उपकरण का विवरण दर्ज करना होगा। जब भी, ईएमडी / निविदा शुल्क की मांग की जाती है, बोलीदाताओं को टेंडर शुल्क और ईएमडी अलग-अलग आरटीजीएस के माध्यम से ऑन लाइन पर भुगतान करने की आवश्यकता होती है (अनुसूची, पेज नं .2 देखें)।

- 4) A standard BoQ format has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BoQ file, open it and complete the white colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

एक मानक BoQ प्रारूप को सभी बोलीदाताओं द्वारा भरने के लिए निविदा दस्तावेज प्रदान किया गया है। बोलीदाताओं को इस बात का ध्यान रखना चाहिए कि उन्हें आवश्यक प्रारूप में अपनी वित्तीय बोली जमा करनी चाहिए और कोई अन्य प्रारूप स्वीकार्य नहीं है। बोलीकर्ताओं को BoQ फाइल को डाउनलोड करने, इसे खोलने और अपने संबंधित वित्तीय उद्धरण और अन्य विवरण (जैसे बोलीदाता का नाम) के साथ सफेद रंगीन (असुरक्षित) कोशिकाओं को पूरा करना आवश्यक है। कोई भी अन्य कक्ष नहीं बदला जाना चाहिए। एक बार विवरण पूरा हो जाने पर, बोलीदाता को इसे सहेजना होगा और इसे ऑनलाइन जमा करना होगा, बिना फाइल नाम बदलना। यदि BOQ फाइल को बोलीदाता द्वारा संशोधित किया गया है, तो बोली को खारिज कर दिया जाएगा।

- 5) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

सर्वर का समय (जो बोलीदाताओं के डैशबोर्ड पर प्रदर्शित होता है) बोलीदाताओं द्वारा बोलियों को खोलने के लिए समय सीमा को संदर्भित करने के लिए मानक समय के रूप में माना जाएगा। बोलीदाताओं को खोलना आदि। बोलीदाताओं को बोली प्रस्तुत करने के दौरान इस समय का पालन करना चाहिए।

- 6) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.

बोलीदाताओं द्वारा प्रस्तुत सभी दस्तावेज पीकेआई एन्क्रिप्शन तकनीकों का उपयोग करके एन्क्रिप्ट किया जाएगा जिससे डेटा की गोपनीयता सुनिश्चित हो सके। दर्ज किए गए डेटा को अनधिकृत व्यक्तियों द्वारा बोली खोलने के समय तक नहीं देखा जा सकता है। बोलियों की गोपनीयता को सुरक्षित सॉकेट लेयर 128 बिट एन्क्रिप्शन तकनीक का उपयोग कर रखा जाता है। संवेदनशील क्षेत्रों का डेटा संग्रहण एन्क्रिप्शन किया जाता है।

- 7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

अपलोड किए गए निविदा दस्तावेज केवल अधिकृत बोलीदाता द्वारा निविदा खोलने के बाद ही पठनीय हो सकते हैं।

- 8) Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

बोलियों के सफल और समय पर जमा होने पर, पोर्टल एक सफल बोली प्रस्तुत करने का संदेश देगा और एक बोली सारांश बोली संख्या के साथ प्रदर्शित किया जाएगा। और अन्य सभी प्रासंगिक विवरणों के साथ बोली प्रस्तुत करने की तारीख और समय।

- 9) Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

कृपया अनुपालन पत्रक की एक पीडीएफ फाइल में सभी प्रासंगिक दस्तावेजों के स्कैन किए गए पीडीएफ को जोड़ दें।

ASSISTANCE TO BIDDERS / बोलीदाताओं को सहायता

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

निविदा दस्तावेज से संबंधित कोई भी प्रश्न और इसमें निहित नियमों और शर्तों को निविदा आमंत्रण प्राधिकरण को निविदा के लिए या निविदा में वर्णित प्रासंगिक संपर्क व्यक्ति से संबोधित किया जाना चाहिए।

- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 1800 233 7315.

ऑनलाइन बोली प्रस्तुत करने या सामान्य में सीपीपी पोर्टल से संबंधित प्रश्नों की प्रक्रिया से संबंधित कोई भी प्रश्न 24x7 सीपीपी पोर्टल हेल्पडेस्क पर निर्देशित किया जा सकता है। हेल्पडेस्क के लिए संपर्क संख्या 1800 233 7315 है

General Instructions to the Bidders / बोलीदाताओं के लिए सामान्य निर्देश

- 1) The tenders will be received online through portal <http://eprocure.gov.in/eprocure/app> . In the Technical Bids, the bidders are required to upload all the documents in .pdf format.

निविदाएं पोर्टल <http://eprocure.gov.in/eprocure/app> के माध्यम से ऑनलाइन प्राप्त होंगी तकनीकी बोलियों में, बोलीदाताओं को सभी दस्तावेजों को। पीडीएफ प्रारूप में अपलोड करना होगा।

- 2) Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through <https://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site <https://eprocure.gov.in/eprocure/app> under the link "Information about DSC".

कंपनी के नाम में स्मार्ट कार्ड / ई-टोकन के रूप में मान्य क्लास II / III डिजिटल हस्ताक्षर प्रमाण पत्र (डीएससी) के पंजीकरण के लिए एक शर्त है और <https://eprocure.gov.in/eprocure/> के माध्यम से बोली प्रस्तुत करने की गतिविधियों में भाग ले सकते हैं। डिजिटल हस्ताक्षर प्रमाण पत्र अधिकृत प्रमाणित एजेंसियों से प्राप्त की जा सकती है, जिनमें से जानकारी "डीएससी के बारे में सूचना" लिंक के तहत वेब साइट <https://eprocure.gov.in/eprocure/app> पर उपलब्ध है।

- 3) Tenderer are advised to follow the instructions provided in the 'Instructions to the Tenderer for the e-submission of the bids online through the Central Public Procurement Portal for e Procurement at <https://eprocure.gov.in/eprocure/app>.

निविदाकर्ता को सलाह दी जाती है कि वे निविदाकार को निर्देश दिए गए हों ताकि ई-प्रोक्योरमेंट के लिए सेंट्रल पब्लिक प्रोक्ॉर्ममेंट पोर्टल के जरिए <https://eprocure.gov.in/eprocure/app> पर ऑनलाइन निविदाएं जमा कर सकें।

NOTICE INVITING QUOTATIONS

Subject : Setting up of STED Super-resolution Facility with Single Molecule Measurement Capabilities

Invitation for Tender Offers

Indian Institute of Technology Delhi invites online Bids (Technical bid and Commercial bid) from eligible and experienced OEM (Original Equipment Manufacturer) OR OEM Authorized Dealer for <**Supply, Installation & Integration of STED Super-resolution Facility with Single Molecule Measurement Capabilities**> with (warranty period as stated at page #1 of this tender) on site comprehensive warranty from the date of receipt of the material as per terms & conditions specified in the tender document, which is available on CPP Portal <http://eprocure.gov.in/eprocure/app>

TECHNICAL SPECIFICATION:

Sl. No.	Technical Specifications
	<ul style="list-style-type: none"> (i) The facility has two separate parts, Part A and Part B. Technical and Financial comparisons will be made for Part A and Part B separately. (ii) Part A is a Stimulated emission and depletion (STED) based microscope capable of carrying out imaging with resolution in the X-Y (transverse plane) of 30 nm or better (i.e. less than 30 nm), and a resolution of 120 nm or better in the Z-direction. (iii) Part B should be capable of carrying out confocal based Single molecule imaging and measurements like Single Molecule FRET (smFRET), fluorescence correlation spectroscopy (FCS), fluorescence cross-correlation spectroscopy (FCCS), fluorescence lifetime correlation spectroscopy (FLCS) and Pulsed Interleaved Excitation (PIE). (iv) Equipment in each part should be provided with an active vibration free isolation table having honeycomb table-top for mounting of optics and other accessories. (v) Appropriate uninterrupted power supply (transformer-based) should be supplied for each part, Part A and Part B. Minimum 10 kVA single phase and 30 minutes back up on full load. This item (power supply) should be quoted in INR from OEM authorized company/vendor in India. (vi) Each system in Part A and in Part B should be Modular, having the capability of being upgraded in future with several add-ons
A	<u>PART A: STED Microscope</u>
	<ul style="list-style-type: none"> • Super resolution microscopy system for fluorescence imaging of various samples like live cells, virus, tissues, Drosophila, microbial, and plant samples, solid and solution of different types of

	<p>fluorescence materials</p> <ul style="list-style-type: none"> • Super-resolution in both 2D and 3D • The fully automated super resolution system should be capable of highly sensitive spectral confocal, FRET, FRAP imaging of fixed as well as live biological samples • The system should include multichannel fluorescence imaging, Z-stack, co-localization, FRAP, photo-activation, time-lapse imaging • The system should be able to carry out confocal microscopy imaging as well as STED imaging with the same software
A1.	<u>Microscope System</u>
(a)	<p><i>Research-grade motorized inverted microscope:</i></p> <ul style="list-style-type: none"> (i) The microscope body should have built-in motorized Z movement with step size of at least 20 nm or better, with automatic refocusing to allow long-term drift-free imaging (ii) Dedicated TFT / LCD touch panel control for the microscope (iii) The microscope should be equipped with hardware for LED/IR laser based multimode focus drift correction/management system for conducting long time live cell imaging applications without focus drift. This function should be available, and it should be possible to use with all lasers, including the 775nm STED laser (iv) It should have motorized beam path selection between eye observation and confocal imaging (v) The microscope should be equipped with 12 Volt 100 W halogen <u>or</u> equivalent LED illumination for transmitted light (Bright field & DIC) applications (vi) <i>Illumination Source:</i> Metal Halide (100 W; lamp-life of at least 2000 hours) (vii) Motorized 6 position condenser with DIC prisms for all objectives with analyzer, polarizer and DIC slider should be included (viii) Fully motorized fluorescence turret with band pass fluorescence filters (Appropriate Filter Cubes) for DAPI, FITC/GFP, TRITC/Rhodamine & Cy5 fluorescence (ix) Wide-field Monochrome Camera, 1280 x 960 pixels; should be integrated into the system software; custom camera port module on the microscope (x) A motorized XY scanning stage, part of the system, should come with universal sample holder attachments for glass slide, 35 mm imaging dish, petri-plates and multi-well plates. It should have navigation (whole-slide overviewing) and multi-position imaging capabilities
(b)	<p><i>Objectives:</i></p> <ul style="list-style-type: none"> (i) 4X/5X Objective Lens, semi-apochromat, NA ~ 0.13, WD ~ 17 mm (ii) 20X Objective Lens, apochromat, NA ~ 0.75, WD ~1.0 mm (iii) 40X Objective Lens, apochromat, NA ~ 0.95, WD ~ 0.25 mm (iv) 100X objective with NA = 1.4 chromatically corrected for STED imaging; Include Low fluorescent immersion oil
A2.	<u>Scan Head</u>
	<ul style="list-style-type: none"> (i) Should be having at least 3-axis technology (ii) X-Y scanning possible; beam scanning in XY and piezo/galvo scanning in Z for 3D imaging (iii) Scan lens-free design for minimal wavefront distortions (iv) Software controlled beam alignment (v) Beam position & angle independently addressable (vi) Image rotations upto 200 degrees or above of the field of view (FOV) (vii) Image tilting in 3D (viii) Suitable for wavelengths ranging from 400 nm to 800 nm; preferably should extend upto 1100 nm

	<ul style="list-style-type: none"> (ix) FOV of the system should be 11 mm or more. Maximum field-of-view: 800 x 800 μm with 10X objective, 200 x 200 μm with 40X objective, 80 x 80 μm with 100X objective (x) Should be capable of capturing images at different resolutions from 16 x 16 pixels up to at 8K x 8K pixels (64 Mpixels) (xi) Point scanner with a line frequency of up to 2.6 kHz or more (xii) Imaging Speed: at least 4.0 fps (frames per second) in the 512 x 512 pixel mode (xiii) Synchronization with laser pulse sequence (xiv) Adapter should be provided along with necessary optics to integrate the scanner with the microscope
A3.	<u>Detection System</u>
	<ul style="list-style-type: none"> (i) Motorized confocal pinhole wheel with 16 pinholes (25 μm to 2 mm) (ii) The system should have at least 4 built-in point spectral detectors for 4 colour simultaneous detection facility (iii) All detectors must be high sensitive Power HyD detectors or APDs, out of which at least two of the detectors should be having single photon counting sensitivity (iv) The system must have a PMT for receiving transmitted light and compatible to capture DIC images
A4.	<u>STED Module (3D-STED)</u>
	The system should have capability to perform super-resolution imaging using the STED principle with both fluorophores and proteins, and should be applicable for fixed, live samples and solid and solutions
(a)	All pulsed STED module
(b)	<i>Optical Resolution: Lateral (XY):</i> Less than or equal to 30 nm; <i>Vertical (Z):</i> Less than or equal to 120 nm
(c)	The system should have fully automated beam alignment facility to ensure optimum super-resolution system performance at any time
(d)	Simultaneous multicolour imaging (at least three different colours) with proper combination of the excitation lasers (mentioned below) should be possible. Corresponding filter sets should be provided
(e)	The speed for Super resolution should be at least 4 fps @ 512 x 512 pixels
(f)	The system should be able to capture clear and good quality super resolution images up to 50 μm deep inside any tissue or thick samples
(g)	Narrow notch filters for individual coupling of STED lasers
(h)	<p><i>Excitation Lasers:</i></p> <ul style="list-style-type: none"> (i) 405 \pm 5 nm; cw; Average Power: 50 mW; necessary filters and adapters (ii) 485 \pm 5 nm; pulsed; pulse width \sim100 ps or less; Average power: \sim1 mW @ 40MHz; necessary filters and adapters; repetition rate: 40 MHz or above (iii) 560 \pm 4 nm; pulsed; pulse width \sim 120 ps or less; Average Power: 0.2 mW @ 40MHz; necessary filters and adapters; repetition rate: 40 MHz or above (iv) 640 \pm 10 nm; pulsed; pulse width \sim 200 ps or less; Average Power: \sim1 mW @ 40 MHz; necessary filters and adapters; repetition rate: 40 MHz or above (v) Narrowband dichroics for selection of laser lines <p style="text-align: center;">OR</p> <p>405 \pm 5 nm; cw; Average Power: 50 mW; necessary filters and adapters</p> <p style="text-align: center;">AND</p> <p>White light Laser: Wavelength continuously tunable between 490 – 680 nm; Average Power</p>

	~1.5 mW or greater per wavelength; Average pulse width ~100 ps or less; should be fitted with AOBs (or AOTF) for precise selection of excitation wavelengths <i>(Note: Vendor should make sure that there is a backup white light laser that can replace the existing one within 10 business days in case the latter malfunctions!)</i>
(i)	<i>STED laser (high power depletion laser):</i> (i) 775 ± 5 nm; Average Power: >1200 mW @ 40MHz or above; External triggering possible (ii) High-power AOM/AOTF on 3-axis mount for ultrafast power control for the STED laser (iii) Fast Iris Shutter, Precision Optics and Optomechanics for the STED Laser (iv) Ultra-narrow notch filter for coupling of STED laser
(j)	Should have auto-alignment capability of all excitation beams, 2D and 3D STED beams, lasers and other optical components for super resolution imaging, enabling user-friendliness and ease of use at optimum performance
(k)	The system should have Gated STED (g-STED) detection facility for reducing light stress and increasing resolution. The gate of the detector must start at 0.5 ns
(l)	<i>Software:</i> (i) Should control all motorized functions of the microscope, excitation and depletion lasers, all parameters of image acquisition and image analysis both in confocal and super-resolution mode (ii) Should save of all instrument parameters (metadata) along with the image for reproducibility of experiments (iii) The imaging software should control all the motorized functions of the confocal microscope, multi-dimensional acquisition (iv) Standard geometry measurements like length, areas, angles etc. including intensity measurements should be standard feature of the software (v) Real time/online Spectral imaging, Multi point imaging, image stitching/auto montage; macro imaging capabilities, deep tissue imaging should be included; should be capable of future upgrades with HDR imaging capability and spectral unmixing (vi) Co-localization with histogram analysis, intensity profiles for quantification etc., multi-export formats for data output (vii) Advanced measurements like FRET (Ratio, acceptor photo-bleaching and sensitized emission), FRAP, Photo-Activation, Co-localization should be possible. Co-localization, FRET, FRAP analysis should be part of the software (viii) Raw data should be made available to the user for independent data processing (ix) Software should be capable of 3D rendering of images, i.e. provide for 3D visualization
A5.	<u>Optical Table</u>
	Suitable optical table to be provided with the setup for super-resolution microscopy as per following specifications: (i) Vibration Free with active air compressor control (ii) Dimensions of Table Frame: At least 900 mm (L) x 900 mm (W) and appropriate height (iii) Honey-combed table-top with M6 Grids with labels (iv) The table should be large enough such that future upgrades like rapid FLIM can fit on the same table
A6	<u>PC Workstation</u>
	The system should be supplied with latest and compatible computer workstation tried & tested in factory by the manufacturer. A high-performance professional graphics card (24 GB or higher) with advanced Pascal GPU architecture addressing the highest demands in 3D visualization and computing acceleration should be offered. The system should have at least the following specifications: Windows 10 Professional (64 bit) operating system, Intel XEON W-2133 3.6 6C or better processor, minimum

	64 GB or higher RAM and NVIDIA 24 GB graphic card, 256 GB SATA SSD, 1TB M.2 SSD, 6 TB SATA HDD, 9.5mm Slim Blu-ray Writer 1st ODD, Ethernet Controller, 2 x USB 2.0, 8 x USB 3.0, CD/ DVD writer, IEEE 1394 Firewire with Key Board and Mouse with 38" High resolution LED UHD 4K Monitor or better
A7.	Tools, slides and consumables necessary for calibration and alignment like molecular probes fluorescence test slides, test slide for checking 40 nm XY and 100 nm Z resolution, sub-micron fluorescence beads with multi-wavelength excitation to test super resolution of 30 nm to 100 nm and co-localisation in both XY and Z, etc. should be supplied along with the system
A8.	<u>CO₂ incubator for Live-cell imaging</u>
	(i) Table top incubator chamber (ii) Temperature control up to 40 °C or above (iii) Control of CO ₂ (iv) Control of Humidity (v) Touch screen display (vi) Integration into the microscope system
A9.	<u>Warranty</u>
	Complete Comprehensive Warranty for 2 years which includes <ul style="list-style-type: none"> • Full Service by a STED-expert • Including remote support and maintenance • Unlimited breakdown visits • Include travel & accommodation, work and material • Initial Response time: less than 24 hrs • On-site visit lead time: < 10 working days • Lasers should also be covered by this warranty
A10.	The service, maintenance and spare parts support should be given for a period of 10 years from the date of installation and the response time for attending a call should be within 24 hours by factory trained service engineer based in Delhi. A letter of commitment should be given in this regard from principals head office.
A11.	Latest software upgrades should be provided free of cost for 5 years
A12.	The vendor should be having at least 2 STED-based installations in India in reputed organizations. Detailed list of such customers and installations should be provided along with the technical bid.
A13.	About 1000 cover slips of varied thickness applicable for measurements with the microscope system and different objectives should be provided
A14.	UPS: Transformer-based; Minimum 10 kVA single phase and 30 minutes back up on full load (to be supplied locally)
	<u>List of optional items for Part A</u>
A01	STED Laser 595 nm with Easy 3D upgrade option: <ul style="list-style-type: none"> (i) 595 ± 5 nm; Average Power: upto 400 mW @ 40MHz or CW; variable repetition rates (25-40 MHz) (ii) Full-system integration (electronics, software) (iii) High-power AOM/AOTF on 3-axis mount for ultrafast power control for the STED laser (iv) Fast Iris Shutter, Precision Optics and Optomechanics for both STED Lasers (v) Ultra-narrow notch filter for coupling of STED laser
A02	Additional pulsed diode lasers for excitation with wavelengths: ~460 nm, ~514 nm, ~594 nm and ~680 nm (If a white light laser is supplied spanning all these excitation wavelengths, then these pulsed lasers

	need not be quoted)
A03	60X objective with NA = 1.2, water immersion
A04	UPLFLN10X2 Objective Lens, NA = 0.30, W.D = 10 mm
A05	Upgrade of the system with time-resolved rapid FLIM
A06	2D and 3D deconvolution software to further improve the Confocal and Super Resolution images
B	<u>Part B: Confocal Fluorescence Microscope based Single Molecule Setup</u>
	<p>The system should be able to perform the following experiments:</p> <ul style="list-style-type: none"> • Single molecule FRET • Pulsed-Interleaved Excitation (PIE) FRET • Time resolved FRET • Fluorescence Lifetime Imaging (FLIM) • Fluorescence correlation spectroscopy (FCS), Fluorescence cross correlation spectroscopy (FCCS); FLCS, FLCCS • Antibunching Experiments • Fluorescence anisotropy and anisotropy imaging • Fluorescence time trace and single molecule burst measurements • Wide-field imaging
B1.	<u>Microscope System</u>
(a)	<p><i>Research grade microscope:</i></p> <ul style="list-style-type: none"> (i) Inverted microscope (ii) Should be configured such that it has additional ports and has provisions for future upgrade (iii) The microscope should be equipped with 12 Volt 100 W halogen <u>or</u> equivalent LED illumination for transmitted light (Bright field) applications (iv) Binocular with two eyepieces and crosshair (v) Manual fluorescence filter cube revolver (vi) Beam diagnostics, including camera for monitoring back scattered light, and built in photo diode, for measuring laser intensity close to objective position
(b)	<p><i>Objectives:</i></p> <ul style="list-style-type: none"> (i) 20X objective, NA ~ 0.4 (ii) 40X objective, NA ~ 0.65 (iii) UPLSAPO 60X Ultra-Planapochromat, NA ~ 1.2, water immersion, WD ~ 0.25 mm, with variable correction for 0.15 - 0.2 mm glass coverslips
(c)	<p><i>Scanner:</i></p> <ul style="list-style-type: none"> (i) Manual sample translation stage with micrometer-screws (ii) High resolution Piezo-based scanner; should allow 3D scanning; capable of scanning 80 μm X 80 μm or larger area (iii) Positioning accuracy 1 nm or better in X, Y and Z directions; should allow Z-stacking (iv) Z scanning along with X-Y scanning should be possible (v) Piezo-based scanner should not introduce any optical aberrations in the system (vi) 3D piezo controller and integrated into the main software
B2.	<u>Excitation Lasers and Laser Module</u>

(a)	<p><i>Four diode lasers of wavelengths:</i></p> <ul style="list-style-type: none"> (i) 405 ± 10 nm; both pulsed and cw operation; Power: > 3 mW in pulsed mode at maximum repetition rate and > 50 mW in cw mode; pulse width < 100 ps (FWHM); Repetition Rate: from single shot to 40 MHz (ii) 485 ± 10 nm; both pulsed and cw operation; Power: > 5 mW in pulsed mode at maximum repetition rate and > 50 mW in cw mode; pulse width < 100 ps (FWHM); Repetition Rate: from single shot to 40 MHz (iii) 532 ± 5 nm; both pulsed and cw operation; Power: > 0.7 mW in pulsed mode at maximum repetition rate and > 20 mW in cw mode; pulse width < 100 ps (FWHM); Repetition Rate: <10 Hz to 80 MHz (iv) 640 ± 10 nm; both pulsed and cw operation; Power: > 20 mW in pulsed mode at maximum repetition rate and > 40 mW in cw mode; pulse width < 100 ps (FWHM)
(b)	<p><i>Laser Driver Module:</i></p> <ul style="list-style-type: none"> (i) To allow pulsed and continuous wave operation of at least 4 laser heads (ii) Continuous Wave (cw) and pulsed operation for the suitable lasers being driven by this module (iii) Adjustable internal repetition rates (2.5 to 80 MHz) (iv) External trigger input (v) Synchronisation output (vi) Should support computer controlled pulsed interleaved excitation (PIE) experiments and should allow simultaneous two-colour excitation. It should also allow measurement of burst sequence
(c)	<p><i>Combining Unit for Lasers:</i></p> <ul style="list-style-type: none"> (i) Should be able to combine at least 4 independent lasers into one single mode fibre (fibre should be polarization maintaining) (ii) Manual light attenuation via beam waist reduction and neutral density (ND) filters on a filter wheel (iii) Laser mounting with proper adapters and beam adjustment elements (iv) Provision should be kept to couple an external laser into the existing fibre of this laser combination unit. Adjustable mirror to be provided to switch between the internal and external lasers (v) Dichroic Filters: <ul style="list-style-type: none"> • for combining a 405 nm laser with a second laser between 440 nm and 640 nm • for combining a 532 nm laser with additional lasers between 550 nm and 640 nm • for combining a 485 nm laser with a second laser between 510 nm and 640 nm
(d)	<p><i>Single Mode Fiber Cable:</i></p> <ul style="list-style-type: none"> (i) Polarization maintaining (ii) Cutoff wavelength <375 nm (iii) Output connector FC/APC (iv) Fiber coupler to be provided
(e)	<p><i>Filters and mirrors:</i></p> <ul style="list-style-type: none"> (i) Each excitation laser should be accompanied by a laser-clean up filter and a suitable fluorescence long-pass filter (ii) Each excitation laser should also be accompanied by dichroic mirrors (rectangular in shape) for installation in the microscope body (iii) PIE-FRET Filter Sets: Should include suitable bandpass filters for both excitation channels, main excitation dichroic mirror and detection dichroic mirror as detailed below :- <ul style="list-style-type: none"> • 485 and 532 nm excitation: main excitation dichroic is a dual line one with greater than 90% reflection at 488 and 532 nm; emission splitter with greater than 90% reflection in the range 405 – 532 nm and greater than 95% transmission in the range 545 – 750 nm; bandpass filter centered around 510 nm with 20 nm bandpass (~501-520 nm), a 532

	<p>long pass filter with cutoff range being 280 – 532 nm</p> <ul style="list-style-type: none"> • <i>485 and 640 nm excitation</i>: main excitation dichroic is a dual line one with greater than 90% reflection for 470 – 488 nm and 640 nm; emission splitter with greater than 90% reflection in the range 470 – 630 nm and greater than 95% transmission above 645 nm; bandpass filter centered around 520 nm with 35 nm bandpass (~503-537 nm); bandpass filter centered around 690 nm with 70 nm bandpass • <i>405 and 485 nm excitation</i>: main excitation dichroic is a dual line one with greater than 90% reflection for 405 nm and 488 nm; emission splitter with greater than 90% reflection in the range 345 – 490 nm and greater than 95% transmission above 505 nm; bandpass filter centered around 445 nm with 30 nm bandpass (~430-460 nm); bandpass filter centered around 480 nm with 20 nm bandpass (~470-490 nm) • <i>532 and 640 nm excitation</i>: main excitation dichroic is a dual line one with greater than 90% reflection for 532 nm and 640 nm; emission splitter with greater than 90% reflection in the range 470 – 630 nm and greater than 95% transmission above 645 nm; bandpass filter centered around 580 nm with 64 nm bandpass; bandpass filter centered around 690 nm with 70 nm bandpass
B3.	<u>Detection System</u>
(a)	<p><i>Two Single Photon Counting Modules (SPAD):</i></p> <ul style="list-style-type: none"> (i) Spectral detection range between 400 nm and 1100 nm (ii) Detection efficiency of 70% or more at 700 nm (iii) Temporal resolution of 400 ps (FWHM) (iv) Light tight filter holder and shutter for every detector (v) Include x-y adjustable focusing optics and mounting material (vi) Detector power supply with count rate display and security shut down function at high count rates to prevent detector damage for SPAD detectors (vii) Dark counts: < 100 cps
(b)	<p><i>Extra Ports:</i></p> <ul style="list-style-type: none"> (i) One Extra port for external laser input (ii) One Extra port for fiber-coupled output to external devices
(c)	<p><i>Detector Optomechanics:</i> 20 Filter inserts (round; 25 mm diameter), 5 Filter holders for dichroics (rectangular), Beamsplitter holders, Additional Optical Mounts as deemed necessary</p>
(d)	<p><i>Confocal Pinhole:</i></p> <ul style="list-style-type: none"> (i) There should be a single confocal pinhole for both the SPAD detectors (and any additional detectors to be upgraded with, in future) for ease of alignment (ii) Variable confocal pinhole wheel (iii) Diameter of confocal pinholes for the wheel: 30 μm, 50 μm, 75 μm, 100 μm, 150 μm, 300 μm
B4.	<u>Electronics, Workstation and System Software</u>
(a)	Electronics and software for microscope control to allow both high precision as well as high throughput TCSPC applications
(b)	<p>Electronics for precise and high throughput Time-Correlated Single Photon Counting (TCSPC):</p> <ul style="list-style-type: none"> (i) TCSPC module and event timer with USB 3.0 connection (ii) Supports pulse repetition rate up to 80 MHz (iii) Independent channels with 10 ps temporal resolution suited for 1 sync & 4 detectors or for 5 detectors (iv) With adjustable delay offset (v) Dead time < 1 ns

	(vi) TTTR mode and DLL library for custom programming (vii) High sustained data throughput (80 Mcps in time tagging mode)
(c)	<i>PC system:</i> A suitable desktop with specifications as shown below (i) Operating System: Windows 10, 64 bit (ii) CPU: with SSE2 and EMT64 or AMD64 extension; recommended: quad-core or better; CPU clock speed of 2.2 GHz or better (iii) Motherboard: ASUS Pro WS X570-ACE Socket AM4 (Intel X570 Chipset) (iv) Graphics: AMD Radeon Pro WX 2100 (v) RAM: Minimum 32GB (vi) HDD: Kingston A2000 - 1 TB SSD (vii) A minimum of 34 inch display (TFT)
(d)	<i>Software:</i> An <i>integrated data acquisition and analysis software</i> capable of doing the following: (i) Time-resolved point measurements and 3D imaging (ii) Global fitting of TCSPC decays (iii) Data acquisition and analyses (64 bit) (iv) FLIM (v) Confocal FCS and FLCS (vi) Antibunching Measurements (vii) smFRET (viii) Anisotropy imaging (ix) An additional software license to be quoted
B5.	Accessories (Compulsory)
(a)	Adjustment tools for beam alignment and necessary toolkit
(b)	Slide with immobilised Beads and Single Molecules for alignment and performance checks (i) separate samples on the surface of 2 glass cover slips (ii) cluster and isolated 100 nm diameter Tetraspeck beads, suited for excitation from 405 nm to 640 nm (iii) thin polymer film with isolated Cy5 molecules, suited for excitation with 640 nm Slide with immobilised Beads and Single Molecules for alignment and performance checks
(c)	50/50 beam splitter (polarisation insensitive) for 2 channel FCS measurements, already pre-mounted in a standard filter cube
(d)	Polarization beam splitter cube pre-mounted in a standard filter cube
(e)	Microscope cover slips of proper thickness as per the WD of the objectives: 1000 pieces
(f)	Optical Table: Suitable Optical Table (vibration free) dimensions to be large enough for future upgrades like scanner, multiphoton excitation laser and AFM addition
B6.	UPS: Transformer-based; 10 kVA with at least 30 min backup on full load (to be supplied locally)
B7.	Warranty: Comprehensive Warranty for 1 year
B8.	Additional Important Points <ul style="list-style-type: none"> • 4 days visit for training along with installation • At least one annual visit for three years (including the warranty period of 1 year) post installation. This annual visit should be for a period of at least 2 days for system inspection, user training and hands-on workshop. Dates and times of visits to be mutually decided by the buyer and the vendor

	<ul style="list-style-type: none"> The vendor should be having at least 4 similar ‘Confocal microscope capable of single molecule measurements’ installations in India in reputed organizations. List of customers should be included along with the technical bid
	<u>List of optional items for Part B</u>
BO1	Additional diode lasers having following central wavelengths to be quoted: 450 ± 10 nm and 560 ± 10 nm; both lasers to be operable in cw and pulsed modes
BO2	High end 100X Planapochromat objective with NA = 1.4, oil immersion; Low fluorescent immersion oil to be included; Transmission optimized for 400 - 850 nm
BO3	Attachment of two more Single Photon Counting Modules (MPD series) with necessary optics and attachments to be quoted. These SPADS should be having an active area of 100 μ m or less and a time resolution down to 100 ps or less
BO4	Necessary attachments for high throughput FCS-assay
BO5	Widefield epifluorescence addon <ul style="list-style-type: none"> (i) Xcite-120 metal halide based Widefield illumination (ii) CFP filter cube for widefield epifluorescence imagin - should contain excitation, beamsplitting and detection filters (iii) Monochrome camera with 2048 x 2048 CMOS sensor
BO6	Table-top Live-cell incubator to be quoted having a temperature control upto 45 °C or above. CO ₂ and Humidity should also be controlled
BO7	<i>External single molecule sensitive spectrograph:</i> <ul style="list-style-type: none"> (i) Single molecule sensitive spectrograph with EMCCD camera, fiber-coupled to microscope exit port (ii) Manually adjustable 600 LPMM grating (iii) 260 nm spectral window for 300 – 1050 nm (iv) 1600 x 200 pixel Peltier cooled EMCCD (v) Spectral resolution < 2 nm (vi) Fiber coupler for spectrograph input port (vii) Multi mode fibre cable (50 μm core diameter)
BO8	Attachment for multiphoton laser
BO9	Attachment for AFM upgrade

A complete set of tender documents* may be Downloaded by prospective bidder free of cost from the website <http://eprocure.gov.in/eprocure/app>. Bidder has to make payment of requisite fees (i.e. Tender fees (if any) and EMD) online through RTGS/NEFT only.

Terms & Conditions Details

Sl. No.	Specification
1.	Due date: The tender has to be submitted on-line before the due date. The offers received after the due date and time will not be considered. No manual bids will be considered.
2.	<p>Preparation of Bids: The offer/bid should be submitted in two bid systems (i.e.) Technical bid and financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. Financial bid should indicate item wise price for the items mentioned in the technical bid in the given format i.e BoQ_XXXX.</p> <p>The Technical bid and the financial bid should be submitted Online.</p> <p><i>Note: -Comparison of prices will be done ONLY on the bids submitted for the Main Equipment and anything asked as 'Optional' in the specs is not to be included for overall comparison.</i></p>
3.	EMD (if applicable): The tenderer should submit an EMD amount through RTGS/NEFT. The Technical Bid without EMD would be considered as UNRESPONSIVE and will not be accepted. The EMD will be refunded without any interest to the unsuccessful bidders after the award of contract. Refer to Schedule (at page 1 of this document) for its actual place of submission.
4.	Refund of EMD: The EMD will be returned to unsuccessful Tenderer only after the Tenders are finalized. In case of successful Tenderer, it will be retained till the successful and complete installation of the equipment.
5.	Opening of the tender: The online bid will be opened by a committee duly constituted for this purpose. Online bids (complete in all respect) received along with EMD (if any) will be opened as mentioned at “Annexure: Schedule” in presence of bidders representative if available. Only one representative will be allowed to participate in the tender opening. Bid received without EMD (if present) will be rejected straight way. The technical bid will be opened online first and it will be examined by a technical committee (as per specification and requirement). The financial offer/bid will be opened only for the offer/bid which technically meets all requirements as per the specification, and will be opened in the presence of the vendor’s representatives subsequently for further evaluation. The bidders if interested may participate on the tender opening Date and Time. The bidder should produce authorization letter from their company to participate in the tender opening.
6.	Acceptance/ Rejection of bids: The Committee reserves the right to reject any or all offers without assigning any reason.
7.	<p>Pre-qualification criteria:</p> <p>(i) Bidders should be the manufacturer / authorized dealer. Letter of Authorization from original equipment manufacturer (OEM) on the same and specific to the tender should be enclosed.</p> <p>(ii) An undertaking from the OEM is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend support for the warranty as well. (Ref. Annexure-II)</p> <p>(iii) OEM should be internationally reputed Branded Company.</p> <p>(iv) Non-compliance of tender terms, non-submission of required documents, lack of clarity of the specifications, contradiction between bidder specification and supporting documents etc. may lead to rejection of the bid.</p> <p>(v) In the tender, either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.</p> <p>(vi) If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.</p>
8.	Performance Security: The supplier shall require to submit the performance security in the form of irrevocable bank guarantee issued by any Indian Nationalized Bank for an amount which is stated at page #1 of the tender document within 21 days from the date of receipt of the purchase order/LC and should be kept valid for a period of 60 days beyond the date of completion of

	warranty period.
9.	<p>Force Majeure: The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.</p> <ul style="list-style-type: none"> ● For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes. ● If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
10.	<p>Risk Purchase Clause: In event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from the other source on the total risk of the supplier under risk purchase clause.</p>
11.	<p>Packing Instructions: Each package will be marked on three sides with proper paint/indelible ink, the following:</p> <ol style="list-style-type: none"> i. Item Nomenclature ii. Order/Contract No. iii. Country of Origin of Goods iv. Supplier's Name and Address v. Consignee details vi. Packing list reference number
12.	<p>Delivery and Documents: Delivery of the goods should be made within a maximum of 12 weeks (<i>for goods ready for shipment</i>) & Maximum (<i>To be filled by Purchaser</i>) weeks (<i>For special/ to be fabricated goods</i>) from the date of the opening of LC. Within 24 hours of shipment, the supplier shall notify the purchaser and the insurance company by cable/telex/fax/e mail the full details of the shipment including contract number, railway receipt number/ AAP etc. and date, description of goods, quantity, name of the consignee, invoice etc. The supplier shall mail the following documents to the purchaser with a copy to the insurance company:</p> <ol style="list-style-type: none"> 1. 4 Copies of the Supplier invoice showing contract number, goods' description, quantity 2. unit price, total amount; 3. Insurance Certificate if applicable; 4. Manufacturer's/Supplier's warranty certificate; 5. Inspection Certificate issued by the nominated inspection agency, if any 6. Supplier's factory inspection report; and 7. Certificate of Origin (if possible by the beneficiary); 8. Two copies of the packing list identifying the contents of each package. 9. The above documents should be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.
13.	<p>Delayed delivery: If the delivery is not made within the due date for any reason, the Committee will have the right to impose penalty 1% per week and the maximum deduction is 10% of the contract value / price.</p>
14.	<p>Prices: The price should be quoted in net per unit (after breakup) and must include all packing and delivery charges. The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However the percentage of taxes & duties shall be clearly indicated.</p>

	<p>The price should be quoted without custom duty and excise duty, since IIT Delhi is exempted from payment of Excise Duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand.</p> <p>In case of imports, the price should be quoted on FOB/FCA origin Airport Basis only. Under special circumstances (eg. perishable chemicals), when the item is imported on CIF/CIP, please indicate CIF/CIP charges separately upto IIT Delhi indicating the mode of shipment. IIT Delhi will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges. At any circumstances, it is the responsibility of the foreign supplier to handover the material to our forwarder at the origin airport after completing all the inland clearing. No Ex- Works consignment will be entertained.</p> <p>“In case of CIF/CIP shipments, kindly provide the shipment information at least 2 days in advance before landing the shipment along with the documents i.e. invoice, packing list, forwarder Name, address, contact No. in India to save penalty/demurrage charges (imposed by Indian Customs) . Otherwise these charges will be recovered from the supplier/Indian Agent.”</p> <p>Note: -Comparison of prices will be done ONLY on the bids submitted for the Main Equipment and anything asked as ‘Optional’ in the specs is not to be included for overall comparison.</p>
15.	<p>Notices: For the purpose of all notices, the following shall be the address of the Purchaser and Supplier.</p> <p>Purchaser: Prof. Pramit K Chowdhury, Department of Chemistry Indian Institute of Technology Hauz Khas, New Delhi - 110016.</p> <p>Supplier: (To be filled in by the supplier) (All suppliers should submit its supplies information as per Annexure-II).</p> <p>_____</p> <p>_____</p>
16.	<p>Progress of Supply: Wherever applicable, supplier shall regularly intimate progress of supply, in writing, to the Purchaser as under:</p> <ol style="list-style-type: none"> 1. Quantity offered for inspection and date; 2. Quantity accepted/rejected by inspecting agency and date; 3. Quantity dispatched/delivered to consignees and date; 4. Quantity where incidental services have been satisfactorily completed with date; 5. Quantity where rectification/repair/replacement effected/completed on receipt of any communication from consignee/Purchaser with date; 6. Date of completion of entire Contract including incidental services, if any; and 7. Date of receipt of entire payments under the Contract (In case of stage-wise inspection, details required may also be specified).
17.	<p>Inspection and Tests: Inspection and tests prior to shipment of Goods and at final acceptance are as follows:</p> <ul style="list-style-type: none"> • After the goods are manufactured and assembled, inspection and testing of the goods shall be carried out at the supplier’s plant by the supplier, prior to shipment to check whether the goods are in conformity with the technical specifications attached to the purchase order. Manufacturer’s test certificate with data sheet shall be issued to this effect and submitted along with the delivery documents. The purchaser shall be present at the supplier’s premises during such inspection and testing if need is felt. The location where the inspection is required to be conducted should be clearly indicated. The supplier shall inform the purchaser about the site preparation, if any, needed for installation of the goods at the purchaser’s site at the time of submission of order acceptance.

	<ul style="list-style-type: none"> • The acceptance test will be conducted by the Purchaser, their consultant or other such person nominated by the Purchaser at its option after the equipment is installed at purchaser's site in the presence of supplier's representatives. The acceptance will involve trouble free operation and ascertaining conformity with the ordered specifications and quality. There shall not be any additional charges for carrying out acceptance test. No malfunction, partial or complete failure of any part of the equipment is expected to occur. The Supplier shall maintain necessary log in respect of the result of the test to establish to the entire satisfaction of the Purchaser, the successful completion of the test specified. • In the event of the ordered item failing to pass the acceptance test, a period not exceeding one weeks will be given to rectify the defects and clear the acceptance test, failing which the Purchaser reserve the right to get the equipment replaced by the Supplier at no extra cost to the Purchaser. • Successful conduct and conclusion of the acceptance test for the installed goods and equipment shall also be the responsibility and at the cost of the Supplier.
18.	<p>Resolution of Disputes: The dispute resolution mechanism to be applied pursuant shall be as follows:</p> <ul style="list-style-type: none"> • In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Director, Indian Institute of Technology (IIT) Delhi and if he is unable or unwilling to act, to the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order. • In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules. • The venue of the arbitration shall be the place from where the order is issued.
19.	<p>Applicable Law: The place of jurisdiction would be New Delhi (Delhi) INDIA.</p>
20.	<p>Right to Use Defective Goods If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.</p>
21.	<p>Supplier Integrity The Supplier is responsible for and obliged to conduct all contracted activities in accordance with the Contract using state of the art methods and economic principles and exercising all means available to achieve the performance specified in the contract.</p>
22.	<p>Training The Supplier is required to provide training to the designated Purchaser's technical and end user personnel to enable them to effectively operate the total equipment.</p>
23.	<p>Installation & Demonstration The supplier is required to done the installation and demonstration of the equipment within one month of the arrival of materials at the IITD site of installation, otherwise the penalty clause will be the same as per the supply of materials.</p> <p>In case of any mishappening/damage to equipment and supplies during the carriage of supplies from the origin of equipment to the installation site, the supplier has to replace it with new equipment/supplies immediately at his own risk. Supplier will settle his claim with the insurance</p>

	company as per his convenience. IITD will not be liable to any type of losses in any form.
24.	Insurance: For delivery of goods at the purchaser's premises, the insurance shall be obtained by the supplier in an amount equal to 110% of the value of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War Risks and Strikes. The insurance shall be valid for a period of not less than 3 months after installation and commissioning. In case of orders placed on FOB/FCA basis, the purchaser shall arrange Insurance. If orders placed on CIF/CIP basis, the insurance should be up to IIT Delhi.
25.	Incidental services: The incidental services also include: <ul style="list-style-type: none"> ● Furnishing of 01 set of detailed operations & maintenance manual. ● Arranging the shifting/moving of the item to their location of final installation within IITD premises at the cost of Supplier through their Indian representatives.
26.	Warranty: <p>(i) Warranty period shall be (as stated at page #2 of this tender) from date of installation of Goods at the IITD site of installation. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests. The warranty should be comprehensive on site.</p> <p>(ii) The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall immediately within in 02 days arrange to repair or replace the defective goods or parts thereof free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts/goods thereafter. The period for correction of defects in the warranty period is 02 days. If the supplier having been notified fails to remedy the defects within 02 days, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expenses and without prejudice to any other rights, which the purchaser may have against the supplier under the contract.</p> <p>(iii) The warranty period should be clearly mentioned. The maintenance charges (AMC) under different schemes after the expiry of the warranty should also be mentioned. The comprehensive warranty will commence from the date of the satisfactory installation/commissioning of the equipment against the defect of any manufacturing, workmanship and poor quality of the components.</p> <p>(iv) After the warranty period is over, Annual Maintenance Contract (AMC)/Comprehensive Maintenance Contract (CMC) up to next two years should be started. The AMC/CMC charges will not be included in computing the total cost of the equipment.</p>
27.	Governing Language The contract shall be written in English language. English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the same language.
28.	Applicable Law The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction.
29.	Notices <ul style="list-style-type: none"> ● Any notice given by one party to the other pursuant to this contract/order shall be sent to the other party in writing or by cable, telex, FAX or e mail and confirmed in writing to the other party's address. ● A notice shall be effective when delivered or on the notice's effective date, whichever is

	later.
30.	<p>Taxes Suppliers shall be entirely responsible for all taxes, duties, license fees, octroi, road permits, etc., incurred until delivery of the contracted Goods to the Purchaser. However, GST etc, in respect of the transaction between the Purchaser and the Supplier shall be payable extra, if so stipulated in the order.</p> <p>For research purpose(s) ONLY, 5% GST will be applicable with concessional GST Certificate.</p>
31.	<p>Duties IIT Delhi is exempted from paying custom duty under notification No.51/96 (partially or full) and necessary “Custom Duty Exemption Certificate” can be issued after providing following information and Custom Duty Exemption Certificate will be issued to the shipment in the name of the Institute, (no certificate will be issued to third party): The procured product should be used for teaching, scientific and research work only.</p> <p>a) Shipping details i.e. Master Airway Bill No. and House Airway No. (if exists) b) Forwarder details i.e. Name, Contact No., etc.</p> <p>IIT Delhi is partially exempted from paying GST and necessary GST Exemption Certificate will be provided for which following information are required.</p> <p>b) Quotation with details of Basic Price, Rate, Tax & Amount on which ED is applicable c) Supply Order Copy d) Proforma-Invoice Copy.</p>
32.	<p>Agency Commission: Agency commission if any will be paid to the Indian agent in Rupees on receipt of the equipment and after satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances. The details should be explicitly shown in Tender even in case of Nil commission. The tenderer should indicate the percentage of agency commission to be paid to the Indian agent.</p>
33.	<p>Payment:</p> <p>(i) For imported items Payment will be made through irrevocable Letter of Credit (LC) Cash Against Documents (CAD)/Against delivery/after satisfactory installation by T.T. Letter of Credit (LC) will be established in favour of foreign Supplier after the submission of performance security. The letter of credit (LC) will be established on the exchange rates as applicable on the date of establishment. For Imports, LC will be opened for 100% FOB/CIF value. 80% of the LC amount shall be released on presentation of complete and clear shipping documents and 20% of the LC amount shall be released after the installation and demonstration of the equipment at the INST site of installation in faultless working condition for period of 60 days from the date of the satisfactory installation and subject to the production of unconditional performance bank guarantee as specified in Clause 8 of tender terms and conditions.</p> <p>(ii) For Indigenous supplies, 100% payment shall be made by the Purchaser against delivery, inspection, successful installation, commissioning and acceptance of the equipment at IITD in good condition and to the entire satisfaction of the Purchaser and on production of unconditional performance bank guarantee as specified in Clause 9 of tender terms and conditions.</p> <p>(iii) Indian Agency commission (IAC), if any shall be paid after satisfactory installation & commissioning of the goods at the destination at the exchange rate prevailing on the date of negotiation of LC documents, subject to DGS&D registration for restricted items.</p> <p>(iv) All the bank charges within India will be borne by the Institute and outside India will be borne by the Supplier.</p>
34.	<p>User list: Brochure detailing technical specifications and performance, list of industrial and</p>

	educational establishments where the items enquired have been supplied must be provided. (Ref. Annexure-III)
35.	<p>Manuals and Drawings</p> <p>(i) Before the goods and equipment are taken over by the Purchaser, the Supplier shall supply operation and maintenance manuals. These shall be in such details as will enable the Purchaser to operate, maintain, adjust and repair all parts of the works as stated in the specifications.</p> <p>(ii) The Manuals shall be in the ruling language (English) in such form and numbers as stated in the contract.</p> <p>(iii) Unless and otherwise agreed, the goods equipment shall not be considered to be completed for the purposes of taking over until such manuals and drawing have been supplied to the Purchaser.</p>
36.	Application Specialist: The Tenderer should mention in the Techno-Commercial bid the availability and names of Application Specialist and Service Engineers in the nearest regional office. (Ref. to Annexure-III)
37.	<p>Site Preparation: The supplier shall inform to the Institute about the site preparation, if any, needed for the installation of equipment, immediately after the receipt of the purchase order. The supplier must provide complete details regarding space and all the other infrastructural requirements needed for the equipment, which the Institute should arrange before the arrival of the equipment to ensure its timely installation and smooth operation thereafter.</p> <p>The supplier shall visit the Institute and see the site where the equipment is to be installed and may offer his advice and render assistance to the Institute in the preparation of the site and other pre-installation requirements.</p>
38.	<p>Spare Parts</p> <p>The Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:</p> <p>ii. Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and</p> <p>iii. In the event of termination of production of the spare parts:</p> <p>iv. Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and</p> <p>v. Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.</p> <p>Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods, such as gaskets, plugs, washers, belts etc. Other spare parts and components shall be supplied as promptly as possible but in any case within six months of placement of order.</p>
39.	Defective Equipment: If any of the equipment supplied by the Tenderer is found to be substandard, refurbished, un-merchantable or not in accordance with the description/specification or otherwise faulty, the committee will have the right to reject the equipment or its part. The prices of such equipment shall be refunded by the Tenderer with 18% interest if such payments for such equipment have already been made. All damaged or unapproved goods shall be returned at suppliers cost and risk and the incidental expenses incurred thereon shall be recovered from the supplier. Defective part in equipment, if found before installation and/or during warranty period, shall be replaced within 45 days on receipt of the intimation from this office at the cost and risk of supplier including all other charges. In case supplier fails to replace above item as per above terms & conditions, IIT Delhi may consider "Banning" the supplier.
40.	<p>Termination for Default</p> <p>The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part:</p> <p>i. If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the order, or within any extension thereof granted by the Purchaser; or</p>

	<p>ii If the Supplier fails to perform any other obligation(s) under the Contract.</p> <p>iii If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.</p> <ul style="list-style-type: none"> ● For the purpose of this Clause: <ul style="list-style-type: none"> i. “Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution. ii. “Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition;” ● In the event the Purchaser terminates the Contract in whole or in part, the Purchaser may procure, upon such terms and in such manner, as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.
41.	Shifting: After 1-2 years once our new Academic Block will be ready, the supplier has to shift and reinstall the instrument free of cost (if required).
42.	Downtime: During the warranty period not more than 5% downtime will be permissible. For every day exceeding permissible downtime, penalty of 1/365 of the 5% FOB value will be imposed. Downtime will be counted from the date and time of the filing of complaint with in the business hours.
43.	Training of Personnel: The supplier shall be required to undertake to provide the technical training to the personnel involved in the use of the equipment at the Institute premises, immediately after completing the installation of the equipment for a minimum period of one week at the supplier’s cost.
44.	Disputes and Jurisdiction: Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within New Delhi.
45.	Compliance certificate: This certificate must be provided indicating conformity to the technical specifications. (Annexure-I)
46.	All bidders are requested to quote separately for Part A & Part B. Please note that financial evaluation will be carried out separately for Part A and Part B and hence L1 will be determined separately for Part A and Part B.

COMPLIANCE SHEET

TECHNICAL SPECIFICATION

Sl. No.	Technical Specifications	COMPLIANCE Y/N
	<p>(i) The facility has two separate parts, Part A and Part B. Technical and Financial comparisons will be made for Part A and Part B separately.</p> <p>(ii) Part A is a Stimulated emission and depletion (STED) based microscope capable of carrying out imaging with resolution in the X-Y (transverse plane) of 30 nm or better (i.e. less than 30 nm), and a resolution of 120 nm or better in the Z-direction</p> <p>(iii) Part B should be capable of carrying out confocal based Single molecule imaging and measurements like Single Molecule FRET (smFRET), fluorescence correlation spectroscopy (FCS), fluorescence cross-correlation spectroscopy (FCCS), fluorescence lifetime correlation spectroscopy (FLCS) and Pulsed Interleaved Excitation (PIE).</p> <p>(iv) Equipment in each part should be provided with an active vibration free isolation table having honeycomb table-top for mounting of optics and other accessories.</p> <p>(v) Appropriate uninterrupted power supply (transformer-based) should be supplied for each part, Part A and Part B. Minimum 10 kVA single phase and 30 minutes back up on full load. This item (power supply) should be quoted in INR from OEM authorized company/vendor in India.</p> <p>(vi) Each system in Part A and in Part B should be Modular, having the capability of being upgraded in future with several add-ons</p>	
A	<u>PART A: STED Microscope</u>	
	<ul style="list-style-type: none"> • Super resolution microscopy system for fluorescence imaging of various samples like live cells, virus, tissues, Drosophila, microbial, and plant samples, solid and solution of different types of fluorescence materials • Super-resolution in both 2D and 3D • The fully automated super resolution system should be capable of highly sensitive spectral confocal, FRET, FRAP imaging of fixed as well as live biological samples • The system should include multichannel fluorescence imaging, Z-stack, co-localization, FRAP, photo-activation, time-lapse imaging • The system should be able to carry out confocal microscopy imaging as well as STED imaging with the same software 	

A1.	<u>Microscope System</u>	
(a)	<p><i>Research-grade motorized inverted microscope:</i></p> <ul style="list-style-type: none"> (i) The microscope body should have built-in motorized Z movement with step size of at least 20 nm or better, with automatic refocusing to allow long-term drift-free imaging (ii) Dedicated TFT / LCD touch panel control for the microscope (iii) The microscope should be equipped with hardware for LED/IR laser based multimode focus drift correction/management system for conducting long time live cell imaging applications without focus drift. This function should be available, and it should be possible to use with all lasers, including the 775nm STED laser (iv) It should have motorized beam path selection between eye observation and confocal imaging (v) The microscope should be equipped with 12 Volt 100 W halogen <u>or</u> equivalent LED illumination for transmitted light (Bright field & DIC) applications (vi) <i>Illumination Source:</i> Metal Halide (100 W; lamp-life of at least 2000 hours) (vii) Motorized 6 position condenser with DIC prisms for all objectives with analyzer, polarizer and DIC slider should be included (viii) Fully motorized fluorescence turret with band pass fluorescence filters (Appropriate Filter Cubes) for DAPI, FITC/GFP, TRITC/Rhodamine & Cy5 fluorescence (ix) Wide-field Monochrome Camera, 1280 x 960 pixels; should be integrated into the system software; custom camera port module on the microscope (x) A motorized XY scanning stage, part of the system, should come with universal sample holder attachments for glass slide, 35 mm imaging dish, petri-plates and multi-well plates. It should have navigation (whole-slide overviewing) and multi-position imaging capabilities 	
(b)	<p><i>Objectives:</i></p> <ul style="list-style-type: none"> (v) 4X/5X Objective Lens, semi-apochromat, NA ~ 0.13, WD ~ 17 mm (vi) 20X Objective Lens, apochromat, NA ~ 0.75, WD ~1.0 mm (vii) 40X Objective Lens, apochromat, NA ~ 0.95, WD ~ 0.25 mm (viii) 100X objective with NA = 1.4 chromatically corrected for STED imaging; Include Low fluorescent immersion oil 	
A2.	<u>Scan Head</u>	
	<ul style="list-style-type: none"> (i) Should be having at least 3-axis technology (ii) X-Y scanning possible; beam scanning in XY and piezo/galvo scanning in Z for 3D imaging (iii) Scan lens-free design for minimal wavefront distortions (iv) Software controlled beam alignment (v) Beam position & angle independently addressable (vi) Image rotations upto 200 degrees or above of the field of view 	

	(FOV) (vii) Image tilting in 3D (viii) Suitable for wavelengths ranging from 400 nm to 800 nm; preferably should extend upto 1100 nm (ix) FOV of the system should be 11 mm or more. Maximum field-of-view: 800 x 800 μ m with 10X objective, 200 x 200 μ m with 40X objective, 80 x 80 μ m with 100X objective (x) Should be capable of capturing images at different resolutions from 16 x 16 pixels up to at 8K x 8K pixels (64 Mpixels) (xi) Point scanner with a line frequency of up to 2.6 kHz or more (xii) Imaging Speed: at least 4.0 fps (frames per second) in the 512 x 512 pixel mode (xiii) Synchronization with laser pulse sequence (xiv) Adapter should be provided along with necessary optics to integrate the scanner with the microscope	
A3.	<u>Detection System</u>	
	(i) Motorized confocal pinhole wheel with 16 pinholes (25 μ m to 2 mm) (ii) The system should have at least 4 built-in point spectral detectors for 4 colour simultaneous detection facility (iii) All detectors must be high sensitive Power HyD detectors or APDs, out of which at least two of the detectors should be having single photon counting sensitivity (iv) The system must have a PMT for receiving transmitted light and compatible to capture DIC images	
A4.	<u>STED Module (3D-STED)</u> The system should have capability to perform super-resolution imaging using the STED principle with both fluorophores and proteins, and should be applicable for fixed, live samples and solid and solutions	
(a)	All pulsed STED module	
(b)	<i>Optical Resolution:</i> Lateral (XY): Less than or equal to 30 nm; Vertical (Z): Less than or equal to 120 nm	
(c)	The system should have fully automated beam alignment facility to ensure optimum super-resolution system performance at any time	
(d)	Simultaneous multicolour imaging (at least three different colours) with proper combination of the excitation lasers (mentioned below) should be possible. Corresponding filter sets should be provided	
(e)	The speed for Super resolution should be at least 4 fps @ 512 x 512 pixels	
(f)	The system should be able to capture clear and good quality super resolution images up to 50 μ m deep inside any tissue or thick samples	
(g)	Narrow notch filters for individual coupling of STED lasers	
(h)	<i>Excitation Lasers:</i> (i) 405 \pm 5 nm; cw; Average Power: 50 mW; necessary filters and adapters (ii) 485 \pm 5 nm; pulsed; pulse width ~100 ps or less; Average power: ~1 mW @ 40MHz; necessary filters and adapters; repetition rate: 40	

	<p>MHz or above</p> <p>(iii) 560 ± 4 nm; pulsed; pulse width ~ 120 ps or less; Average Power: 0.2 mW @ 40MHz; necessary filters and adapters; repetition rate: 40 MHz or above</p> <p>(iv) 640 ± 10 nm; pulsed; pulse width ~ 200 ps or less; Average Power: ~1 mW @ 40 MHz; necessary filters and adapters; repetition rate: 40 MHz or above</p> <p>(v) Narrowband dichroics for selection of laser lines</p> <p style="text-align: center;">OR</p> <p>405 ± 5 nm; cw; Average Power: 50 mW; necessary filters and adapters</p> <p style="text-align: center;">AND</p> <p>White light Laser: Wavelength continuously tunable between 490 – 680 nm; Average Power ~1.5 mW or greater per wavelength; Average pulse width ~100 ps or less; should be fitted with AOBs (or AOTF) for precise selection of excitation wavelengths <i>(Note: Vendor should make sure that there is a backup white light laser that can replace the existing one within 10 business days in case the latter malfunctions!)</i></p>	
(i)	<p><i>STED laser (high power depletion laser):</i></p> <p>(i) 775 ± 5 nm; Average Power: >1200 mW @ 40MHz or above; External triggering possible</p> <p>(ii) High-power AOM/AOTF on 3-axis mount for ultrafast power control for the STED laser</p> <p>(iii) Fast Iris Shutter, Precision Optics and Optomechanics for the STED Laser</p> <p>(iv) Ultra-narrow notch filter for coupling of STED laser</p>	
(j)	Should have auto-alignment capability of all excitation beams, 2D and 3D STED beams, lasers and other optical components for super resolution imaging, enabling user-friendliness and ease of use at optimum performance	
(k)	The system should have Gated STED (g-STED) detection facility for reducing light stress and increasing resolution. The gate of the detector must start at 0.5 ns	
(l)	<p><i>Software:</i></p> <p>(i) Should control all motorized functions of the microscope, excitation and depletion lasers, all parameters of image acquisition and image analysis both in confocal and super-resolution mode</p> <p>(ii) Should save of all instrument parameters (metadata) along with the image for reproducibility of experiments</p> <p>(iii) The imaging software should control all the motorized functions of the confocal microscope, multi-dimensional acquisition</p> <p>(iv) Standard geometry measurements like length, areas, angles etc. including intensity measurements should be standard feature of the software</p> <p>(v) Real time/online Spectral imaging, Multi point imaging, image stitching/auto montage; macro imaging capabilities, deep tissue</p>	

	<p>imaging should be included; should be capable of future upgrades with HDR imaging capability and spectral unmixing</p> <p>(vi) Co-localization with histogram analysis, intensity profiles for quantification etc., multi-export formats for data output</p> <p>(vii) Advanced measurements like FRET (Ratio, acceptor photo-bleaching and sensitized emission), FRAP, Photo-Activation, Co-localization should be possible. Co-localization, FRET, FRAP analysis should be part of the software</p> <p>(viii) Raw data should be made available to the user for independent data processing</p> <p>(ix) Software should be capable of 3D rendering of images, i.e. provide for 3D visualization</p>	
A5.	<u>Optical Table</u>	
	<p>Suitable optical table to be provided with the setup for super-resolution microscopy as per following specifications:</p> <p>(i) Vibration Free with active air compressor control</p> <p>(ii) Dimensions of Table Frame: At least 900 mm (L) x 900 mm (W) and appropriate height</p> <p>(iii) Honey-combed table-top with M6 Grids with labels</p> <p>(iv) The table should be large enough such that future upgrades like rapid FLIM can fit on the same table</p>	
A6	<u>PC Workstation</u>	
	<p>The system should be supplied with latest and compatible computer workstation tried & tested in factory by the manufacturer. A high-performance professional graphics card (24 GB or higher) with advanced Pascal GPU architecture addressing the highest demands in 3D visualization and computing acceleration should be offered. The system should have at least the following specifications: Windows 10 Professional (64 bit) operating system, Intel XEON W-2133 3.6 6C or better processor, minimum 64 GB or higher RAM and NVIDIA 24 GB graphic card, 256 GB SATA SSD, 1TB M.2 SSD, 6 TB SATA HDD, 9.5mm Slim Blu-ray Writer 1st ODD, Ethernet Controller, 2 x USB 2.0, 8 x USB 3.0, CD/ DVD writer, IEEE 1394 Firewire with Key Board and Mouse with 38" High resolution LED UHD 4K Monitor or better</p>	
A7.	<p>Tools, slides and consumables necessary for calibration and alignment like molecular probes fluorescence test slides, test slide for checking 40 nm XY and 100 nm Z resolution, sub-micron fluorescence beads with multi-wavelength excitation to test super resolution of 30 nm to 100 nm and co-localisation in both XY and Z, etc. should be supplied along with the system</p>	
A8.	<u>CO₂ incubator for Live-cell imaging</u>	
	<p>(i) Table top incubator chamber</p> <p>(ii) Temperature control up to 40 °C or above</p> <p>(iii) Control of CO₂</p> <p>(iv) Control of Humidity</p> <p>(v) Touch screen display</p> <p>(vi) Integration into the microscope system</p>	

A9.	<u>Warranty</u>	
	Complete Comprehensive Warranty for 2 years which includes <ul style="list-style-type: none"> • Full Service by a STED-expert • Including remote support and maintenance • Unlimited breakdown visits • Include travel & accommodation, work and material • Initial Response time: less than 24 hrs • On-site visit lead time: < 10 working days • Lasers should also be covered by this warranty 	
A10.	The service, maintenance and spare parts support should be given for a period of 10 years from the date of installation and the response time for attending a call should be within 24 hours by factory trained service engineer based in Delhi. A letter of commitment should be given in this regard from principals head office.	
A11.	Latest software upgrades should be provided free of cost for 5 years	
A12.	The vendor should be having at least 2 STED-based installations in India in reputed organizations. Detailed list of such customers and installations should be provided along with the technical bid.	
A13.	About 1000 cover slips of varied thickness applicable for measurements with the microscope system and different objectives should be provided	
A14.	UPS: Transformer-based; Minimum 10 kVA single phase and 30 minutes back up on full load (to be supplied locally)	
	<u>List of optional items for Part A</u>	
AO1	STED Laser 595 nm with Easy 3D upgrade option: <ul style="list-style-type: none"> (i) 595 ± 5 nm; Average Power: upto 400 mW @ 40MHz or CW; variable repetition rates (25-40 MHz) (ii) Full-system integration (electronics, software) (iii) High-power AOM/AOTF on 3-axis mount for ultrafast power control for the STED laser (iv) Fast Iris Shutter, Precision Optics and Optomechanics for both STED Lasers (v) Ultra-narrow notch filter for coupling of STED laser 	
AO2	Additional pulsed diode lasers for excitation with wavelengths: ~460 nm, ~514 nm, ~594 nm and ~680 nm (If a white light laser is supplied spanning all these excitation wavelengths, then these pulsed lasers need not be quoted)	
AO3	60X objective with NA = 1.2, water immersion	
AO4	UPLFLN10X2 Objective Lens, NA = 0.30, W.D = 10 mm	
AO5	Upgrade of the system with time-resolved rapid FLIM	
AO6	2D and 3D deconvolution software to further improve the Confocal and Super Resolution images	

B	<u>Part B: Confocal Fluorescence Microscope based Single Molecule Setup</u>	
	<p>The system should be able to perform the following experiments:</p> <ul style="list-style-type: none"> • Single molecule FRET • Pulsed-Interleaved Excitation (PIE) FRET • Time resolved FRET • Fluorescence Lifetime Imaging (FLIM) • Fluorescence correlation spectroscopy (FCS), Fluorescence cross correlation spectroscopy (FCCS); FLCS, FLCCS • Antibunching Experiments • Fluorescence anisotropy and anisotropy imaging • Fluorescence time trace and single molecule burst measurements • Wide-field imaging 	
B1.	<u>Microscope System</u>	
(a)	<p><i>Research grade microscope:</i></p> <ul style="list-style-type: none"> (i) Inverted microscope (ii) Should be configured such that it has additional ports and has provisions for future upgrade (iii) The microscope should be equipped with 12 Volt 100 W halogen <u>or</u> equivalent LED illumination for transmitted light (Bright field) applications (iv) Binocular with two eyepieces and crosshair (v) Manual fluorescence filter cube revolver (vi) Beam diagnostics, including camera for monitoring back scattered light, and built in photo diode, for measuring laser intensity close to objective position 	
(b)	<p><i>Objectives:</i></p> <ul style="list-style-type: none"> (i) 20X objective, NA ~ 0.4 (ii) 40X objective, NA ~ 0.65 (iii) UPLSAPO 60X Ultra-Planapochromat, NA ~ 1.2, water immersion, WD ~ 0.25 mm, with variable correction for 0.15 - 0.2 mm glass coverslips 	
(c)	<p><i>Scanner:</i></p> <ul style="list-style-type: none"> (i) Manual sample translation stage with micrometer-screws (ii) High resolution Piezo-based scanner; should allow 3D scanning; capable of scanning 80 μm X 80 μm or larger area (iii) Positioning accuracy 1 nm or better in X, Y and Z directions; should allow Z-stacking (iv) Z scanning along with X-Y scanning should be possible (v) Piezo-based scanner should not introduce any optical aberrations in the system (vi) 3D piezo controller and integrated into the main software 	
B2.	<u>Excitation Lasers and Laser Module</u>	
(a)	<p><i>Four diode lasers of wavelengths:</i></p> <ul style="list-style-type: none"> (i) 405 \pm 10 nm; both pulsed and cw operation; Power: > 3 mW in pulsed mode at maximum repetition rate and > 50 mW in cw mode; pulse width < 100 ps (FWHM); Repetition Rate: from single shot to 	

	<p>40 MHz</p> <p>(ii) 485 ± 10 nm; both pulsed and cw operation; Power: > 5 mW in pulsed mode at maximum repetition rate and > 50 mW in cw mode; pulse width < 100 ps (FWHM); Repetition Rate: from single shot to 40 MHz</p> <p>(iii) 532 ± 5 nm; both pulsed and cw operation; Power: > 0.7 mW in pulsed mode at maximum repetition rate and > 20 mW in cw mode; pulse width < 100 ps (FWHM); Repetition Rate: <10 Hz to 80 MHz</p> <p>(iv) 640 ± 10 nm; both pulsed and cw operation; Power: > 20 mW in pulsed mode at maximum repetition rate and > 40 mW in cw mode; pulse width < 100 ps (FWHM)</p>	
(b)	<p><i>Laser Driver Module:</i></p> <p>(i) To allow pulsed and continuous wave operation of at least 4 laser heads</p> <p>(ii) Continuous Wave (cw) and pulsed operation for the suitable lasers being driven by this module</p> <p>(iii) Adjustable internal repetition rates (2.5 to 80 MHz)</p> <p>(iv) External trigger input</p> <p>(v) Synchronisation output</p> <p>(vi) Should support computer controlled pulsed interleaved excitation (PIE) experiments and should allow simultaneous two-colour excitation. It should also allow measurement of burst sequence</p>	
(c)	<p><i>Combining Unit for Lasers:</i></p> <p>(i) Should be able to combine at least 4 independent lasers into one single mode fibre (fibre should be polarization maintaining)</p> <p>(ii) Manual light attenuation via beam waist reduction and neutral density (ND) filters on a filter wheel</p> <p>(iii) Laser mounting with proper adapters and beam adjustment elements</p> <p>(iv) Provision should be kept to couple an external laser into the existing fibre of this laser combination unit. Adjustable mirror to be provided to switch between the internal and external lasers</p> <p>(v) Dichroic Filters:</p> <ul style="list-style-type: none"> • for combining a 405 nm laser with a second laser between 440 nm and 640 nm • for combining a 532 nm laser with additional lasers between 550 nm and 640 nm • for combining a 485 nm laser with a second laser between 510 nm and 640 nm 	
(d)	<p><i>Single Mode Fiber Cable:</i></p> <p>(i) Polarization maintaining</p> <p>(ii) Cutoff wavelength <375 nm</p> <p>(iii) Output connector FC/APC</p> <p>(iv) Fiber coupler to be provided</p>	
(e)	<p><i>Filters and mirrors:</i></p> <p>(i) Each excitation laser should be accompanied by a laser-clean up filter and a suitable fluorescence long-pass filter</p> <p>(ii) Each excitation laser should also be accompanied by dichroic mirrors (rectangular in shape) for installation in the microscope body</p>	

	<p>(iii) PIE-FRET Filter Sets: Should include suitable bandpass filters for both excitation channels, main excitation dichroic mirror and detection dichroic mirror as detailed below :-</p> <ul style="list-style-type: none"> • 485 and 532 nm excitation: main excitation dichroic is a dual line one with greater than 90% reflection at 488 and 532 nm; emission splitter with greater than 90% reflection in the range 405 – 532 nm and greater than 95% transmission in the range 545 – 750 nm; bandpass filter centered around 510 nm with 20 nm bandpass (~501-520 nm), a 532 long pass filter with cutoff range being 280 – 532 nm • 485 and 640 nm excitation: main excitation dichroic is a dual line one with greater than 90% reflection for 470 – 488 nm and 640 nm; emission splitter with greater than 90% reflection in the range 470 – 630 nm and greater than 95% transmission above 645 nm; bandpass filter centered around 520 nm with 35 nm bandpass (~503-537 nm); bandpass filter centered around 690 nm with 70 nm bandpass • 405 and 485 nm excitation: main excitation dichroic is a dual line one with greater than 90% reflection for 405 nm and 488 nm; emission splitter with greater than 90% reflection in the range 345 – 490 nm and greater than 95% transmission above 505 nm; bandpass filter centered around 445 nm with 30 nm bandpass (~430-460 nm); bandpass filter centered around 480 nm with 20 nm bandpass (~470-490 nm) • 532 and 640 nm excitation: main excitation dichroic is a dual line one with greater than 90% reflection for 532 nm and 640 nm; emission splitter with greater than 90% reflection in the range 470 – 630 nm and greater than 95% transmission above 645 nm; bandpass filter centered around 580 nm with 64 nm bandpass; bandpass filter centered around 690 nm with 70 nm bandpass 	
B3.	<u>Detection System</u>	
(a)	<p><i>Two Single Photon Counting Modules (SPAD):</i></p> <ul style="list-style-type: none"> (i) Spectral detection range between 400 nm and 1100 nm (ii) Detection efficiency of 70% or more at 700 nm (iii) Temporal resolution of 400 ps (FWHM) (iv) Light tight filter holder and shutter for every detector (v) Include x-y adjustable focusing optics and mounting material (vi) Detector power supply with count rate display and security shut down function at high count rates to prevent detector damage for SPAD detectors (vii) Dark counts: < 100 cps 	
(b)	<p><i>Extra Ports:</i></p> <ul style="list-style-type: none"> (i) One Extra port for external laser input (ii) One Extra port for fiber-coupled output to external devices 	
(c)	<i>Detector Optomechanics: 20 Filter inserts (round; 25 mm diameter), 5</i>	

	Filter holders for dichroics (rectangular), Beamsplitter holders, Additional Optical Mounts as deemed necessary	
(d)	<p><i>Confocal Pinhole:</i></p> <ul style="list-style-type: none"> (i) There should be a single confocal pinhole for both the SPAD detectors (and any additional detectors to be upgraded with, in future) for ease of alignment (ii) Variable confocal pinhole wheel (iii) Diameter of confocal pinholes for the wheel: 30 μm, 50 μm, 75 μm, 100 μm, 150 μm, 300 μm 	
B4.	<u>Electronics, Workstation and System Software</u>	
(a)	Electronics and software for microscope control to allow both high precision as well as high throughput TCSPC applications	
(b)	<p>Electronics for precise and high throughput Time-Correlated Single Photon Counting (TCSPC):</p> <ul style="list-style-type: none"> (i) TCSPC module and event timer with USB 3.0 connection (ii) Supports pulse repetition rate up to 80 MHz (iii) Independent channels with 10 ps temporal resolution suited for 1 sync & 4 detectors or for 5 detectors (iv) With adjustable delay offset (v) Dead time < 1 ns (vi) TTTR mode and DLL library for custom programming (vii) High sustained data throughput (80 Mcps in time tagging mode) 	
(c)	<p><i>PC system:</i></p> <p>A suitable desktop with specifications as shown below</p> <ul style="list-style-type: none"> (i) Operating System: Windows 10, 64 bit (ii) CPU: with SSE2 and EMT64 or AMD64 extension; recommended: quad-core or better; CPU clock speed of 2.2 GHz or better (iii) Motherboard: ASUS Pro WS X570-ACE Socket AM4 (Intel X570 Chipset) (iv) Graphics: AMD Radeon Pro WX 2100 (v) RAM: Minimum 32GB (vi) HDD: Kingston A2000 - 1 TB SSD (vii) A minimum of 34 inch display (TFT) 	
(d)	<p><i>Software:</i></p> <p>An <i>integrated data acquisition and analysis software</i> capable of doing the following:</p> <ul style="list-style-type: none"> (i) Time-resolved point measurements and 3D imaging (ii) Global fitting of TCSPC decays (iii) Data acquisition and analyses (64 bit) (iv) FLIM (v) Confocal FCS and FLCS (vi) Antibunching Measurements (vii) smFRET (viii) Anisotropy imaging (ix) An additional software license to be quoted 	
B5.	Accessories (Compulsory)	
(a)	Adjustment tools for beam alignment and necessary toolkit	

(b)	Slide with immobilised Beads and Single Molecules for alignment and performance checks (i) separate samples on the surface of 2 glass cover slips (ii) cluster and isolated 100 nm diameter Tetraspeck beads, suited for excitation from 405 nm to 640 nm (iii) thin polymer film with isolated Cy5 molecules, suited for excitation with 640 nm Slide with immobilised Beads and Single Molecules for alignment and performance checks	
(c)	50/50 beam splitter (polarisation insensitive) for 2 channel FCS measurements, already pre-mounted in a standard filter cube	
(d)	Polarization beam splitter cube pre-mounted in a standard filter cube	
(e)	Microscope cover slips of proper thickness as per the WD of the objectives: 1000 pieces	
(f)	Optical Table: Suitable Optical Table (vibration free) dimensions to be large enough for future upgrades like scanner, multiphoton excitation laser and AFM addition	
B6.	UPS: Transformer-based; 10 kVA with at least 30 min backup on full load (to be supplied locally)	
B7.	Warranty: Comprehensive Warranty for 1 year	
B8.	Additional Important Points <ul style="list-style-type: none"> • 4 days visit for training along with installation • At least one annual visit for three years (including the warranty period of 1 year) post installation. This annual visit should be for a period of at least 2 days for system inspection, user training and hands-on workshop. Dates and times of visits to be mutually decided by the buyer and the vendor • The vendor should be having at least 4 similar ‘Confocal microscope capable of single molecule measurements’ installations in India in reputed organizations. List of customers should be included along with the technical bid 	
	<u>List of optional items for Part B</u>	
BO1	Additional diode lasers having following central wavelengths to be quoted: 450 ± 10 nm and 560 ± 10 nm; both lasers to be operable in cw and pulsed modes	
BO2	High end 100X Planapochromat objective with NA = 1.4, oil immersion; Low fluorescent immersion oil to be included; Transmission optimized for 400 - 850 nm	
BO3	Attachment of two more Single Photon Counting Modules (MPD series) with necessary optics and attachments to be quoted. These SPADS should be having an active area of 100 µm or less and a time resolution down to 100 ps or less	
BO4	Necessary attachments for high throughput FCS-assay	
BO5	Widefield epifluorescence addon (i) Xcite-120 metal halide based Widefield illumination (ii) CFP filter cube for widefield epifluorescence imagin - should	

	contain excitation, beamsplitting and detection filters (iii) Monochrome camera with 2048 x 2048 CMOS sensor	
BO6	Table-top Live-cell incubator to be quoted having a temperature control upto 45 °C or above. CO ₂ and Humidity should also be controlled	
BO7	<i>External single molecule sensitive spectrograph:</i> (i) Single molecule sensitive spectrograph with EMCCD camera, fiber-coupled to microscope exit port (ii) Manually adjustable 600 LPMM grating (iii) 260 nm spectral window for 300 – 1050 nm (iv) 1600 x 200 pixel Peltier cooled EMCCD (v) Spectral resolution < 2 nm (vi) Fiber coupler for spectrograph input port (vii) Multi mode fibre cable (50 µm core diameter)	
BO8	Attachment for multiphoton laser	
BO9	Attachment for AFM upgrade	

I have also enclosed all relevant documents in support of my claims, (as above) in the following pages.

Signature of Bidder

Name: _____

Designation: _____

Organization Name: _____

Contact No. : _____

**<< Organization Letter Head >>
DECLARATION SHEET**

We, _____ hereby certify that all the information and data furnished by our organization with regard to this tender specification are true and complete to the best of our knowledge. I have gone through the specification, conditions and stipulations in details and agree to comply with the requirements and intent of specification.

This is certified that our organization has been authorized (Copy attached) by the OEM to participate in Tender. We further certified that our organization meets all the conditions of eligibility criteria laid down in this tender document. Moreover, OEM has agreed to support on regular basis with technology / product updates and extend support for the warranty.

The prices quoted in the financial bids are subsidized due to academic discount given to IIT Delhi.

We, further specifically certify that our organization has not been Black Listed/De Listed or put to any Holiday by any Institutional Agency/ Govt. Department/ Public Sector Undertaking in the last three years.	NAME & ADDRESS OF THE Vendor/ Manufacturer / Agent
1 Phone	
2 Fax	
3 E-mail	
4 Contact Person Name	
5 Mobile Number	
6 GST Number	
7 PAN Number	
(In case of on-line payment of Tender Fees)	
8 UTR No. (For Tender Fee)	
(In case of on-line payment of EMD)	
9 UTR No. (For EMD)	
10 Kindly provide bank details of the bidder in the following format: a) Name of the Bank	
b) Account Number	
c) Kindly attach scanned copy of one Cheque book page to enable us to return the EMD to unsuccessful bidder	

(Signature of the Tenderer)

Name:

Seal of the Company

List of Govt. Organization/Deptt.

List of Government Organizations for whom the Bidder has undertaken such work during last three years (must be supported with work orders)		
Name of the organization	Name of Contact Person	Contact No.

Name of application specialist / Service Engineer who have the technical competency to handle and support the quoted product during the warranty period.		
Name of the organization	Name of Contact Person	Contact No.

Signature of Bidder

Name: _____

Designation: _____

Organization Name: _____

Contact No. : _____

PREVIOUS SUPPLY ORDER DETAILS

Annexure - IV

Name of the Firm _____

Order placed by (Full address of Purchaser)	Order No. and Date	Description and quantity of order equipment	Value of order	Date of Completion of delivery as per contract	Has the equipment been installed satisfactorily (Attach a Certificate from the Purchaser/ Consignee)	Contact person along with Telephone No., Fax No. and email address)

Signature and Seal of the Manufacturer/ Bidder

Place: _____

Date: _____

ORIGINAL EQUIPMENT MANUFACTURER (OEM)
Manufacturing authorisation form (MAF)
(On Letter Head of Manufacturer)

ANNEXURE-V (Revised)

Tender No. :-

Date:-

To
The Director,
Indian Institute of Technology Delhi,
New Delhi- 110016

Dear Sir,

We manufactures of original equipment at (.....address of factory.....) do hereby authorize M/s (Name and address of Agent) to submit a bid, negotiate and receive the order format against your tender enquiry.

M/s. is authorized to bid and conclude the contract in regard to this business.

We hereby extend our full guarantee and warranty as per clause of the terms and conditions NIQ for the goods and services offered by the above firm.

Yours Faithfully,

(Name)

(Name & Seal of Manufactures)

Note: -

1. **Items of indigenous nature or quoted in INR**, more than 1 authorized representative may participate in the same tender and submit their bids on behalf of their OEM/Principal/Manufacturer if the OEM permits more than one authorized bidder in such case as per their policy.
2. **In cases of agents quoting in offshore procurements**, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. **One manufacturer can also authorize only one agent/dealer**
3. The letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. The same should be included by the bidder in its techno-commercial unpriced bid.

Bid Submission

Online Bid Submission:

The Online bids (complete in all respect) must be uploaded online in **two** Envelops as explained below:-

Envelope – 1 (Following documents to be provided as single PDF file)			
Sl. No.	Document	Content	File Types
1.	Technical Bid	Compliance Sheet as per Annexure - I	.PDF
2.		Organization Declaration Sheet as per Annexure - II	.PDF
3.		List of organizations/ clients where the same products have been supplied (in last two years) along with their contact number(s). (Annexure-III)	.PDF
4.		Technical supporting documents in support of all claims made at Annexure-I (Annexure-IV)	.PDF
5.		PREVIOUS SUPPLY ORDER as per Annexure - IV	.PDF
6.		ORIGINAL EQUIPMENT MANUFACTURING (OEM) MANUFACTURING AUTHORISATION FORM as per Annexure - V	.PDF
Envelope – 2			
Sl. No.	Document	Content	
1.	Financial Bid	Price bid should be submitted in given BOQ_XXXX.xls format. <i>(Note: -Comparison of prices will be done ONLY on the bids submitted for the Main Equipment and anything asked as ‘Optional’ in the specs is not to be included for overall comparison.)</i> Bids for optional items are to be submitted in ‘sheet2_Quote for optional items’	.XLS