



## CORRIGENDUM

REF.: NIT -11/2013

The tender date for submission & opening of Technical Bid of NIT-11/2013 (Macro Molecular Crystallography) has extended as per the following.

1. Sale of Tender Document : Up to 12.11.2013 (Tuesday)
2. Date & Time of Submission : **15.11.2013 Up to 05:30P.M** (Friday)
3. Date & Time of Opening : **18.11.2013 at 03:30P.M** (Monday)

All other Terms & Conditions of our Tender No. NIT-11/2013 will remain same.

Stores & Purchase Officer



**राष्ट्रीय विज्ञान शिक्षा एवं अनुसंधान संस्थान, भुवनेश्वर**  
(परमाणु उर्जा विभाग, भारत सरकार का एक स्वयं शासित संस्थान)  
**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR**  
(AN AUTONOMOUS INSTITUTE UNDER DEPT. OF ATOMIC ENERGY, GOVT. OF INDIA)

**Notice Inviting Tender No.11-2013 (2 Part Tender)**

**X-RAY DIFFRACTOMETER FACILITY FOR MACRO MOLECULAR CRYSTALLOGRAPHY  
(NC-18-13-14)  
&  
SOLAR SIMULATOR  
(RD-NC-16-2013-2014)**

**Cost of Tender is 1500.00 (Non Refundable)**



**NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH  
INSTITUTE OF PHYSICS CAMPUS, P.O.: SAINIK SCHOOL,  
BHUBANESWAR-751 005**

**Tender Notice No. NIT-11/2013 (2 Part Tender)**

**(Note : For our all Limited & Open Tender please see our website <http://niser.ac.in>)**

Sealed Tenders are invited on behalf of the Director, National Institute of Science Education and Research, Bhubaneswar from the manufacturers(Indian or Foreign) and their authorised reseller/Indian agent only for supply & installation of the following item:-

<b>Sl. No.</b>	<b>Name of the Items</b>	<b>Tender No.</b>	<b>Name of Department</b>	<b>Indent No.</b>	<b>Qty.</b>	<b>EMD in INR</b>
01	X-Ray Diffractometer Facility For Macro Molecular Crystallography	NIT-11	BIOLOGY	NC-18-13-14	01No.	500000.00
02	Solar Simulator	NIT-11	CHEMISTRY	RD-NC-16-13-14	01No.	50000.00

**NB: PARTIES REGISTERED WITH SSI/NSIC/DGS&D/DAE AND FOREIGN PARTIES QUOTING DIRECTLY ARE EXEMPTED FROM PAYING EMD & TENDER FEE.**

Interested parties may collect the Tender Documents from the Dy. Controller of Accounts, NISER, on payment of Rs.1500/-(Non Refundable) in cash up to 21.10.2013 during working hours. The Tender, complete in all respects should be submitted up to 05.30 p.m. of 24.10.2013 along with prescribed Earnest Money Deposit.

Detail Tender Document can also be downloaded from the NISER web-site address: <http://www.niser.ac.in> directly. Bidders who submit the form downloaded from the web site must attach Demand Draft of requisite amount (cost of tender document) with their bid prepared in favour of the FINANCE OFFICER, NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH, BHUBANESWAR.

NISER reserves the right to accept or reject any or all the Tenders without assigning any reason.

**Stores & Purchase Officer**



**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH**  
**NIT OPEN DOCUMENT (2 PART BID)**  
**SUPPLY & INSTALLATION OF X-RAY DIFFRACTOMETER FACILITY FOR MACRO**  
**MOLECULAR CRYSTALLOGRAPHY**  
**&**  
**SOLAR SIMULATOR**

National Institute of Science Education & Research (NISER), Bhubaneswar, India is an Autonomous Institute under Dept of Atomic Energy. NISER would like to procure the following equipment. The Technical Specifications Schedule of Requirements and Allied Technical details are given in Part-1 of tender document.

- **Item:** 1. X-Ray Diffractometer Facility for Macro Molecular Crystallography.  
2. Solar Simulator
- **Tender Enquiry No:** NIT-11/2013
- **Due Date & Time:** 24<sup>th</sup> October, 2013 AT 05.30PM (For submission of Bids)
- **Opening of Technical Bids:** 25<sup>th</sup> October, 2013 AT 03.30 PM

Sealed tenders are invited for supply and installation of Macromolecular Crystallography & Solar Simulator in the National Institute of Science Education & Research, Bhubaneswar. The tender document consists of the following two parts.

Part-1: "TERMS & CONDITIONS" & "TECHNICAL BID" of the tender.

Part-2: "FINANCIAL BID" of the tender.

The sealed envelope containing "Terms & Conditions", "Technical Bid" and "Financial Bid" on prescribed tender document should reach to the Stores & Purchase Officer, National Institute of Science Education & Research, Bhubaneswar on or before **24<sup>th</sup> October, 2013 Up to 5:30 p.m.** otherwise the tender will not be accepted.

The sealed envelope of the bidders containing Part-1 "Terms & Conditions" and "Technical bid" shall be opened on **25<sup>th</sup> October, 2013 at 03:30 p.m.** One representative of each vendor may participate at the time of opening the bids (The representative must have the valid authorisation from their respective company for attending the tender opening meeting). The Part -2 "Financial Bid" of only those parties who qualify in Part -1 will be opened on a later date. The date of opening will be informed to each qualified party separately.

**(Deepak Srivastava)**  
**Stores & Purchase Officer**

**The Institute can provide following documents.**

1. Custom Duty / Excise duty exemption certificate.
2. Road permit for entering in Orissa. Party has to pay Entry Tax & get the reimbursement in their bill on submission of original receipt of Entry Tax.

**The Institute can not provide following documents.**

1. Form D for Central Sales tax/IIID for Orissa commercial Taxes.

**COST OF TENDER IS RS.1500/- (NON REFUNDABLE).**

**This is payable in cash or Demand Draft of a scheduled Bank in favour of Finance Officer, National Institute of Science Education and Research, Bhubaneswar.**



**PART - 1**  
**TERMS & CONDITIONS**  
**FOR SUPPLY AND INSTALLATION**  
**OF**  
**X-RAY DIFFRACTOMETER FACILITY FOR MACRO MOLECULAR CRYSTALLOGRAPHY**  
**&**  
**SOLAR SIMULATOR**  
**FOR**  
**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR**

1. Director, National Institute of Science Education & Research, Bhubaneswar (NISER) invites sealed tenders for Macromolecular Crystallography & Solar Simulator from the manufacturer and their authorised reseller only having following credentials.
  - A. Should have satisfactorily completed **similar supply** (at least one of them in Central Government/Central Autonomous Body/Central PSU)
  - B. **Similar or Similar Nature of work means** Supply & Installation of Macromolecular Crystallography & Solar Simulator for any of the following :
    - a) **Government/Autonomous Institutions**
    - b) **Government Research Centres**
    - c) **Universities**
    - d) **Autonomous/Reputed Private Research Centres**
    - E) Purchase Orders / Completion certificates if any, for supporting above requirements.
2. The Bidders are requested to give detailed tender in the prescribed forms in two Bids i.e. Part - I Technical Bid.  
Part - II Commercial Bid.
3. **Contact for information:** (Only E-mail enquiries will be entertained)

**For Technical Information of Biology Lab Equipments (NC-18-13-14):**

1. **Dr. Rudresh Acharya**  
School of Biological Sciences, NISER.  
E-Mail – rudresh.acharya@niser.ac.in

**For Technical Information of Chemistry Lab Equipments (RD-NC-16-13-14):**

2. **Dr. Sudip Berman**  
School of Chemical Sciences, NISER.  
E-Mail – sbarman@niser.ac.in

**For Information regarding Commercial & all other Terms & Conditions:**

Deepak Srivastava  
Stores & Purchase Officer  
National Institute of Science Education & Research, Bhubaneswar  
E-Mail-dsrivastava@niser.ac.in

**4. Supply means:**

“Supply, Installation, Commissioning and satisfactory demonstration of the whole equipments”.



If any charges extra are payable for Installation and Commissioning, the same should be specified in the commercial offer.

**5. Submission of Bids:**

- (a) Place: Office of Stores & Purchase Officer, NISER, Bhubaneswar.
- (b) Time and Date of Submission: up to **05.30 PM on 24.10.2013**
- (c) Time and Date of Opening of Technical Bid: At **3.30 P.M on 25.10.2013**

NISER will not be responsible, for submission / delivery of quotation at wrong places other than the Office of Stores & Purchase Officer, NISER, Bhubaneswar.

**6. Two Bid System: -**

The two bid system should be followed for this tender. In this system the bidder must submit his offer in two separate sealed envelopes. Both the technical bid and commercial bid envelopes should be securely sealed and stamped separately for each quoted equipment and clearly marked as “Envelope No.1 – Technical Bid” and “Envelope No.2 – Commercial Bid” respectively. Both the sealed envelopes should be placed in a third larger envelope. The main envelope which will contain both the bids should be super scribed with our tender enquiry No.**NIT-11/2013** due on **24.10.2013 with name of the equipment & Department** and to be submitted to the address given below so as to reach on or before **05.30PM on 24.10.2013. Separate envelope should be used for each item super scribing name of the indent.**

Stores & Purchase Officer,  
National Institute of Science Education & Research,  
Institute of Physics Campus, Sachivalaya Marg  
Bhubaneswar – 751005., India.

**The envelopes must be super-scribed with the following information:**

- Tender Reference Number
- Name of the Equipment
- Name of the Department
- Due Date
- Name of the Vendor
- Envelope No. 1: Shall contain “Acceptance of Terms & Conditions”, “Technical Bid” and Earnest Money Deposit (EMD)
- The technical offer should not contain any price information.
- Envelop No.2: Shall contain financial bid only.

The Technical Bid must be submitted in an organized and structured manner. No brochures/leaflets etc. should be submitted in loose form. Please indicate page nos. on your quotation eg. If the quotation is containing 25 Pages, please indicate as 1/25, 2/25, 3/25 -----25/25.

**Printed conditions of the vendor submitted with the tender will not be binding on National Institute of Science Education & Research, Bhubaneswar.**

**Important Instruction**

The parties are requested to make separate bid (technical & financial both) for each quoted equipment along with the requisite amount of EMD.

**The Technical Offer should comprise of the following:**



- a) Tenders, which are submitted without following the Two-Bid Offer System, will summararily be rejected.
- b) The technical offer should be complete to indicate that all products and services asked for are quoted. Each page of the bid and cutting/corrections shall be duly signed and stamped by the bidder. Unsigned Tenders will also be rejected. Failure to comply with this requirement may result in the bid being rejected.
- c) The purpose of certain specific conditions is to get or procure best product/service etc. for NISER. The opinion of Technical Committee shall be the guiding factor for technical short listing.
- d) The earnest money deposit as indicated against the item should be enclosed along with the terms & conditions & technical bid duly signed and stamped in the form of Account Payee Bank Draft payable on any branch of Nationalised/Schedule Bank at Bhubaneswar in favour of "Finance Officer, National Institute of Science Education & Research, Bhubaneswar, in a separate sealed envelope. All tenders submitted without requisite amount of earnest money shall be rejected and their technical and financial bids shall not be opened. No interest is payable on EMD. The EMD will be returned to the bidders(s)/Agents whose offer is not accepted by NISER within one month from the date of the placing of the final order(s) on the selected bidder(s). In case of the bidder(s) whose offer is accepted the EMD will be returned on submission of Performance Bank Guarantee (if applicable). However, if the return of EMD is delayed for any reason, no interest /penalty shall be payable to the bidders.

**The EMD shall be forfeited:**

If the bidder withdraws the bid during the period of bid validity specified in the tender. In case a successful bidder fails to furnish the Performance Bank Guarantee (if applicable).

- e) Undertaking that the successful bidder agrees to give a Performance Bank Guaranty of 10% of the purchase order value in favour of "Director, National Institute of Science Education & Research, Bhubaneswar valid till warranty period.

**Performance Bank Guarantee:**

Within ten (10) days of the award of contract, the vendor shall furnish a Performance Bank Guarantee amounting to 10% of the purchase order value in the form of Bank Guarantee favouring the Director, National Institute of Science Education & Research, Bhubaneswar valid till completion of warranty period.

- f) Duly filled in Technical Bid with proper seal and signature of authorized person on each page of the bid should be submitted and the same should accompany with complete specifications and drawings, Manufacturer's name, address and relevant Technical Literature/Brochures with warranty Terms and EMD.
- g) If the bid is for branded makes, authorization letter from principals clearly indicating that the vendor is the competent authority to sell and provide services towards the items mentioned in the scope of supply given in this tender document.
- h) Copy of LST/CST/WCT No. PAN No. and TIN No. allotted by the concerned authorities.
- i) List of deliverables / Bill of materials and services.
- j) Compliance sheet with any deviation with reference to the terms and specifications.
- k) Indicate the names of the Indian reputed Organizations where you have supplied similar equipment and may attach the satisfactory performance report of the equipment from user Organization.



- l) The item should be supplied with manuals and the manuals including technical drawings should be complete in all respects to operate the system without any problem.
- m) Bid documents should be submitted as per the above sequence with Index page and page numbers (including technical literature). Each page of the bid should be signed & stamped in original. Unsigned bids will not be considered for evaluation.

• **Envelope 2: “Commercial Bid” shall contain:**

- a) Price schedule complete in all respects with proper seal and signature of authorized person.  
**Tender with any condition including conditional rebate shall be rejected forthwith.**
- b) Cost of all the items should be mentioned clearly and individually in the Commercial Offer (Part-II) only.
- c) **The Bidders are requested to quote for Educational/Institutional Price for Machine/ Equipment and, since we are eligible for the same.**
- d) **Printed conditions of the vendor submitted with the tender will not be binding on NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH.**

**7. Date of opening the Technical Bids.**

Technical Bids will be opened on – 25<sup>th</sup> October, 2013 at 03.30 P.M at office of the Stores & Purchase Officer, National Institute of Science Education & Research, Bhubaneswar

The Technical bids will be opened in the presence of the bidders on the specified time and date. Bidders/Agents who have responded to the tender only will be allowed to be present.

The technical bids will be evaluated to shortlist the eligible bidders. The commercial bids of only the short listed bidders shall be considered for further processing. Bidders whose technical offer is found acceptable and meeting the eligibility requirements as specified in this tender will be informed about the date and time of the opening of the commercial bid.

**Note:** (1) Please do not insert ‘Commercial Bid’ (prices quoted) in the technical bid envelope. If the price quoted is submitted with technical bid the tender will be rejected.

(2) No camera mobiles / mobiles are allowed during tender opening.

**8. Opening of Commercial Bids**

NISER will open commercial bids of only the short listed bidders, in the presence of the bidders or their authorized representatives who choose to attend the commercial bid opening. The Date and Time of opening the Commercial Bid will be intimated only to pre-qualified and technically acceptable Bidders for the item at a later date.

The representatives of short listed firms only will be allowed for commercial bid opening.

ONLY TECHNICALLY accepted competitive bids will be considered for placing Purchase Order. The commercial offers of the vendors whose technical offers are found to be technically deficient or do not meet the qualification criteria as specified in this tender will be returned to them without opening.

The bid can be submitted in person or through post/courier (NISER will not be responsible for delayed / late quotations submitted / sent by Post / Courier etc. resulting in disqualification/ rejection of any bid) so as to reach NISER on or before the due date and time. Fax / E-mail / Telegraphic / Telex tenders will not be considered unless it is asked for. The bidders ‘authorized representative can attend the bid opening.

**9. The Director NISER reserves the right to accept the offer in full or in parts or reject summarily or partly.**

**10. Delivery Period / Timeliness**





The deliveries, installation must be completed within 120-180 days, after placement of purchase order. The time is the essence of the contract. It is mandatory for the bidders who respond to this bid to meet these expectations, as they are tightly linked to NISER's plans of completing the project within the time frame.

**11. Locations for the Supply / Services**

The Laboratory Equipments covered by this document is required to be supplied and installed at School of Biological & Chemical Sciences of NISER, Bhubaneswar. Tender has to give under taking that **he will shift & reinstall the equipment supplied by him at our new campus at Jatni free of cost.**

**12. Order Placement and Release of Payment**

The Purchase Order and payment shall be processed by –

**Stores & Purchase Officer**

**National Institute of Science Education & Research, Bhubaneswar,**

**Institute of Physics Campus,**

**Sachivalaya Marg,**

**Bhubaneswar-751005, India.**

Payment for the items to be supplied by the vendor against the purchase order shall be made by National Institute of Science Education & Research as follows:-

80% payment will be made after 100% delivery of the material on submission of original invoice and original delivery challans duly signed and stamped by the authorised representative of NISER along with performance Bank Guarantee.

Balance 20% payment will be released on submission of installation and warranty certificate duly signed and stamped by the authorized representative of the user department along with submission of Performance Bank Guarantee.

In case of imports 100% will be made through letter of credit if the amount is more than USD25,000.00 (or equivalent foreign currency) with payment terms 80% after shipment & balance 20% after satisfactory installation & commissioning along with submission of Performance Bank Guarantee.

Below USD25,000.00 (or equivalent foreign currency) will be made after installation through wire transfer.

**Agency Commission: Agency Commission to be paid to India Agent should be specified separately and same will be paid in INR.**

**The tenderers who are not agreeing to above payment terms are requested not to submit their tender otherwise their EMD will be forfeited.**

**13. NISER** will not provide any accommodation/transportation for the engineers/ representatives for attending installation, commissioning and demonstration work. It is the absolute responsibility of the Principal Supplier/Indian Agent to make their own arrangements.

**14. The successful bidder**, on award of contract / order, must send the contract / order acceptance in writing, within 7 days of award of contract / order failing which the EMD will be forfeited.

**15 Period of validity of bids**

Bids shall be valid for a period of 90 days from the date of opening the Technical bid.

NISER may ask for the bidder's consent to extend the period of validity. Such request and the response shall be made in writing only. The bidder is free not to accept such request without forfeiting the EMD. A bidder agreeing to the request for extension will not be permitted to modify his bid.

Bid evaluation will be based on the bid prices without taking into consideration the above corrections.



## 16. AWARD OF CONTRACT

NISER shall award the contract to the eligible bidder whose bid has been determined as the lowest evaluated commercial bid. If more than one bidder happens to quote the same lowest price, NISER reserves the right to award the contract to more than one bidder or any bidder.

**Purchaser's Right to vary Quantities at the time of Award:** NISER reserves the right at the time of award of Contract to increase or decrease the quantity of items specified in the Schedule of Requirements without any change in price or other terms and conditions.

## 17. Corrupt or Fraudulent Practices

NISER requires that the bidders who wish to bid for this project have highest standards of ethics. NISER will reject a bid if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices while competing for this contract. NISER may declare a vendor ineligible, either indefinitely or for a stated duration, to be awarded a contract if it at any time determines that the vendor has engaged in corrupt and fraudulent practices during the execution of contract.

## 18. Interpretation of the clauses in the Tender Document / Contract Document

In case of any ambiguity / dispute in the interpretation of any of the clauses in this Tender Document, Director, NISER's interpretation of the clauses shall be final and binding on all parties.

## 19. Price

The price quoted shall be considered firm and no price escalation will be permitted at any time. The quotation should be in Indian Rupees or any known foreign currency. Packing, forwarding, freight, insurance, **Agency commission** and commissioning charges, if any extra may be quoted separately in Commercial Bid.

**No conditional discount will be considered against your bid. Any conditional discount will lead to rejection of bid.**

In case of INR bids the price criteria should be on F.O.R., NISER, Bhubaneswar. Govt. Levies like central excise duty, sales tax, octroi, WCT etc., if any, shall be paid at actual rates applicable on the date of delivery. Rates should be quoted accordingly giving the basic price, Central Excise Duty, VAT/ Central Sales Tax etc., if any. Please note that NISER is exempted from payment of Excise duty vide Govt. Notification No.10/97-Central Excise dated 1st March, 1997.

Please provide TIN no. of the firm along with the CST/WCT No. allotted by the concerned authorities in your quotation.

In case of Foreign Currency bid : - Price criteria should be FOB nearest airport detail break up of Price, FCA cost, **Agency Commission**, Insurance, Freight up to Kolkata Airport is required.

## 20. Pre-installation:

Pre-installation facilities required for installation may please be intimated in the technical bid. Subsequently, before the consignment lands in NISER, Bhubaneswar the bidder shall confirm that the pre-installation requirements are sufficient for installation of the equipment. In other words the bidder should continuously monitor the pre-installation requirements and see that everything is ready before the consignment is taken to the site for installation.

## 21. Installation

Bidder shall be responsible for installation / demonstration wherever applicable and for after sales service during the warranty and thereafter.



## **22. Warranty / Support**

**The items covered by the schedule of requirement shall carry minimum three years from the date of satisfactory installation of the equipments by NISER.** Warranty shall include free maintenance of the whole equipment supplied including free replacement of parts. The defects, if any, shall be attended to on immediate basis but in no case any defect should prolong for more than 24 hours. The comprehensive warranty includes onsite warranty with parts.

The defects, if any, during the guarantee/warranty period are to be rectified free of charge by arranging free replacement wherever necessary. This includes cost, insurance, freight, custom duty, octroi, local taxes if any should be borne by the beneficiary or his agent. A clear confirmation should be given for this item.

The bidder shall assure the supply of spare parts after warranty is over for maintenance of the equipment supplied if and when required for a period of 10 years from the date of supply of equipment on payment on approved price list basis.

The equipment must be supported by a Service Centre manned by the principal vendor's technical support engineers. The support through this Centre must be available 24 hours in a day, seven days a week and 365 days a year. Also it should be possible to contract the Principal's vendor support Centre on a toll free number/web/mail.

The vendor will have to arrange for all the testing equipment & tools required for installation, testing & maintenance etc.

## **23. Indemnity**

The vendor shall indemnify, protect and save NISER against all claims, losses, costs, damages, expenses, action suits and other proceeding, resulting from infringement of any law pertaining to patent, trademarks, copyrights etc. or such other statutory infringements in respect of all the equipment's supplied by him.

The successful will be fully responsible for payment of wages and other dues as prescribed and compliance of various Labour Laws.

The successful tender should give an undertaking that the staff deployed at the centre in terms of this contract at all time will be employees of the agency exclusively and they shall not be entitled to any claim of employment or permanency of job with NISER.

NISER reserves the right to forfeit whole or part of the security money towards any damage/lose caused due to the negligence on the part of the agency engaged.

## **24. Insurance**

The equipment's to be supplied will be insured by the vendor against all risks of loss or damage from the date of shipment till such time it is delivered at NISER site in case of Rupee/Foreign currency transaction.

## **25. Penalty for delayed Services / LD**

As time is the essence of the contract, Delivery period mentioned in the Purchase Order should be strictly adhered to. Otherwise the bidder will forfeit EMD/SD and also LD clause will be applicable /enforced.

If the supplier fails to Supply, Install and Commission the equipment as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of 1%



of order value per every week of delay subject to a maximum of 10% beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier. NISER reserves the right to cancel the order in case the delay is more than 30 days Penalties, if any, will be deducted from the EMD.

## **26. Jurisdiction**

If a dispute arises out of or in connection with the contract, or in respect of any defined legal relationship associated therewith or derived therefrom, the parties agree to submit that dispute to arbitration under the ICADR Arbitration Rules, 1996.

The authority to appoint the arbitrator(S) shall be the International Centre for alternative dispute resolution.

The International Centre for Alternative Dispute Resolution will provide administrative services in accordance with the ICADR arbitration Rules, 1996.

**Stores & Purchase Officer  
NISER, Bhubaneswar**

## **DECLARATION BY THE VENDOR**

It is hereby declared that I/We the undersigned, have read and examined all the terms and conditions etc. of the tender document for which I/We have signed and submitted the tender under proper lawful Power of Attorney. It is also certified that all the terms and conditions of the tender document are fully acceptable to me/us and I/We will abide by the conditions from serial no. 1 to 26 and we have not given any printed conditions beyond the scope of this tender. This is also certified that I/We/our principal manufacturing firm have no objection in signing the purchase contract if the opportunity for the supply of the items against this tender is given to me/us.

Date:

Signature:

Address:

Name:

Designation:

On behalf of:

(Company Seal)



**PART - 1**  
**FOR SUPPLY AND INSTALLATION OF**  
**X-RAY DIFFRACTOMETER FACILITY FOR MACRO MOLECULAR CRYSTALLOGRAPHY**  
**&**  
**SOLAR SIMULATOR**  
**FOR**  
**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR**

**General Information**

1.	Name of the Company	
2.	Full address of company alongwith Telephone no. Fax no. E-mail address :	
3.	Local address of company for communication, if any	
4.	Are you a manufacturer or dealer/reseller	
5.(a)	Annual turn over in last 3 financial years in Rs. Crores. (i) Year 2010-2011 (ii) Year 2011-2012 (iii) Year 2012-2013	
5.(b)	<b>Supply &amp; Installation of equivalent to our tendered OF X-RAY DIFFRACTOMETER FACILITY FOR MACRO MOLECULAR CRYSTALLOGRAPHY &amp; SOLAR SIMULATOR last 3 financial years in State Government or Govt. of India Department(s) /Reputed Organisation(s) (in Nos. and Value) (Please attach list of clients)</b> (iii) Year 2010-2011 (iv) Year 2011-2012 (iii) Year 2012-2013	
5.(c)	Trade Tax / Sales Tax Registration no. with Place	
5.(d)	Income Tax Registration no. with place	



**TECHNICAL BID  
SUPPLY AND INSTALLATION  
OF  
X-RAY DIFFRACTOMETER FACILITY FOR MACRO MOLECULAR CRYSTALLOGRAPHY  
FOR  
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR  
TECHNICAL SPECIFICATION**

Sl. No.	Item Specification	Offered specification with Make & Model No. please specify any deviation if any. Please attach separate sheet if required
(1)	(2)	(3)
<b><u>CONFIGURATION OF COMPLETE X-RAY DIFFRACTION SYSTEM FOR MACRO MOLECULAR CRYSTALLOGRAPHY</u></b>		
1	<p><b><u>High brilliance X-ray source:</u></b></p> <ul style="list-style-type: none"><li>▪ Microprocessor controlled true microfocus, high frequency, high brilliance rotating anode x-ray generator, which must be reliable with easy maintenance and filament change.</li><li>▪ Maximum load: 1.2 kW or better.</li><li>▪ Tube Voltage: 20 to 60 kV variable or better.</li><li>▪ Tube Current: 10 to 30 mA variable or better.</li><li>▪ Focal spot: &lt; 100µm point focus circular at anode surface or lower.</li><li>▪ Beam Divergence: ≤ 5 mR or better.</li><li>▪ X-ray flux of the order <math>10^{10}</math> photons / sec/ mm<sup>2</sup> or better</li><li>▪ Filament: Pre-aligned and pre-crystallized.</li><li>▪ Safety circuit: Must include all the safety parameters for its operation.</li></ul>	
2	<p><b><u>Optics:</u></b></p> <ul style="list-style-type: none"><li>▪ Suitable X-Ray confocal multilayered double bounce mirror optical system with high intensity and high monochromaticity optimised for Cu Kα.</li><li>▪ Monitoring accessories for optics, beam alignment and fine tuning of x-ray beam with calibrated response for absolute flux measurement.</li><li>▪ Optics must produce beam with minimum divergence to measure long unit cell with improved resolution. It should also provide a beam size at sample position ≤ 210µm for high <b>signal/noise</b> ratio for small crystals.</li><li>▪ Divergence: Continuously variable divergence.</li></ul>	



	<ul style="list-style-type: none"> <li>▪ Monochromaticity: Atleast 96% for Cu K<math>\alpha</math> or better.</li> <li>▪ Beam Diameter: 0.3mm or better for working with even small crystals</li> <li>▪ Collimator, mount assembly for continuously variable slit, beam stopper, etc. should be provided as standard.</li> </ul>	
3	<p><b><u>DETECTOR &amp; GONIOMETER</u></b></p> <p><b><u>IP Detector &amp; Goniometer:</u></b></p> <ul style="list-style-type: none"> <li>▪ Integrated computer controlled and motorised Image Plate Detector must be provided having large aperture with high resolution, high dynamic range and with high <i>signal/noise</i> ratio for data collection of protein crystals.</li> <li>▪ Compatible software for data collection and processing with output format compatible with current available crystallographic free wares</li> <li>▪ Calibration: No detector calibration is desired.</li> <li>▪ Pixel size: variable, user-selectable.</li> </ul> <p style="text-align: center;"><b>OR</b></p> <p><b><u>Single photon counting Detector:</u></b></p> <ul style="list-style-type: none"> <li>▪ The x-ray crystallography system should be offered alternatively with latest generation 2-D pixel array area detector.</li> <li>▪ The detector should operate in single photon counting mode and provide outstanding data quality with zero dark current signal and zero readout noise and must achieve optimal <i>signal/noise</i> ratio at short readout time with high frame rate.</li> <li>▪ The detector should have following minimum specification: <ul style="list-style-type: none"> <li>▪ Active Area: Minimum 70mm x 80mm or better.</li> <li>▪ Energy Range: 5.4 – 24keV</li> <li>▪ Readout time: 7.0ms or less</li> <li>▪ Frame rate: 20 images/sec or higher</li> <li>▪ Dark current: zero</li> <li>▪ High sensitivity</li> <li>▪ Dynamic range: High in the order of 10<sup>6</sup>:1. Or equivalent</li> <li>▪ Counting Rate: 2 x 10<sup>6</sup> photon/pixel</li> </ul> </li> <li>▪ The detector should be electronically gate-able and air cooled.</li> <li>▪ The detector must be offered with suitable 4-axis goniometer.</li> </ul>	
4	<p><b><u>Crystal Mounting Device:</u></b></p> <ul style="list-style-type: none"> <li>▪ Goniometer head must include Z-platform magnetic base.</li> <li>▪ Colour video camera with video cross hair</li> <li>▪ Monitor for viewing</li> </ul>	



	<ul style="list-style-type: none"> <li>▪ Alignment kit including PIN Diode.</li> </ul> <p>All the goniometer motion should be computer controlled.</p>	
5	<p><b><i>Cryostream:</i></b></p> <ul style="list-style-type: none"> <li>▪ Nitrogen gas cryostream cooler including dry air unit, cryostream cold head, controller, pump, tube set, cold head table, reactivation heater, pump-out adapter, cold head support stand, stainless steel lined drier unit, 60L dewar vessel, LN2 container, nozzle alignment tool, auto re-fill system, instruction manual to make a complete set for crystallography system to be included as a part of the system.</li> <li>▪ Temperature range: 80-400K</li> <li>▪ Two additional 150L liquid nitrogen dewars.</li> </ul>	
6	<p><b><i>Heat Exchanger:</i></b></p> <ul style="list-style-type: none"> <li>▪ Suitable imported refrigerated heat exchanger (preferably Haskris Make) water cooled type should be included.</li> <li>▪ Air to water chiller with ambient temperature of operation 40 degrees Celsius</li> <li>▪ Power mode 3 phase 240/415V</li> </ul>	
7	<p><b><u>Stabilizer / Transformer / UPS:</u></b></p> <ul style="list-style-type: none"> <li>▪ Suitable auto transformer / true online microprocessor controlled 60 kVA-UPS to run the entire XRD unit along with Chiller and cryo system with atleast 30 mins. backup with maintenance free battery is to be offered.</li> </ul>	
8	<p><b><u>External safety Enclosure</u></b></p> <p>Extendable tables, and safety enclosure covering generator and detector system with interlock safety mechanism</p>	
9	<p><b><i>Computer &amp; software:</i></b></p> <ul style="list-style-type: none"> <li>▪ Two computers; one exclusively for instrument interface and other for data analysis, structure solution and visualization</li> <li>▪ Control computer and data processing computer with 24" flat screen colour monitor with minimum following spec is to be offered:</li> <li>▪ Dell Precision Workstation T3500 Intel Dual Core Xeon Processor 3.20 GHz MiniTower configuration or equivalent</li> <li>▪ Operating System: Linux Centos 5.6, 64 bit compatible</li> <li>▪ Memory: 16 GB, 1333 MHz, DDR3 SDRAM memory, NECC extendable up to 64GB</li> <li>▪ Hard drive configuration: SATA, RAID, 1+1 drive</li> </ul>	





	<p>total configuration</p> <ul style="list-style-type: none"> <li>▪ Hard drive: 2TB, SATA, 7.2k RPM hard drive</li> <li>▪ 16XDVD and 16XDVD+/-RW</li> <li>▪ Graphic Card: NVIDIA Quadro 2000 (1 GB)</li> <li>▪ Monitor: Dell 24 inch UltraSharp™ flat panel, adjustable stand</li> <li>▪ Color Laser Printer</li> <li>▪ Fully integrated licensed version software for data collection, processing, scaling, data collection strategy etc. along with HKL 3000 Crystallography data collection, phasing and model building package should be offered.</li> <li>▪ A second computer with similar configuration for structure solving is to be offered.</li> </ul> <p>HKL3000 should be licensed to three computers.</p>	
10	<p><b><u>Spare Parts / Consumables:</u></b></p> <ul style="list-style-type: none"> <li>▪ For 5 years trouble free operation of X-Ray generator, detector, chiller, cryo system, dry air unit etc.</li> <li>▪ Spare anode should be provided to us whenever working anode fails.</li> <li>▪ Including 3 boxes of filaments (pre-aligned and pre-crystallized)</li> <li>▪ Three spare goniometer heads</li> <li>▪ If detector repair is required, a substitute detector to be installed at vendors cost till original detector is replaced.</li> </ul>	
11	<p><b><u>Warranty:</u></b></p> <ul style="list-style-type: none"> <li>▪ Comprehensive Maintenance Warranty for 3 years is to be provided by the manufacturer separately.</li> <li>▪ Warranty should cover service as well as spare parts.</li> <li>▪ Warranty starts from the date of installation to complete satisfaction of the users.</li> <li>▪ In case, anode refurbishing requires shipping to company, a spare anode has to be provided as a backup during warranty period.</li> <li>▪ During service, instrument downtime should be minimal, response time minimal, factory engineer on site visit or call</li> </ul> <p>If the machine is down continuously for a long period (2 or 3 months) within the warranty period, awaiting spares, then warranty should be extended appropriately to cover</p>	



	this down period.	
12	<p><b><i>Installation:</i></b></p> <ul style="list-style-type: none"><li>▪ Necessary pre-installation requisite should be a part of the offer. Any pre-installation advise should be sent immediately after placement of the order.</li><li>▪ Complete X-Ray Diffraction unit has to be installed properly and must be checked for correct operation and demonstration for all the parameters.</li><li>▪ Multiple installations may be necessary during extended warranty period.</li></ul>	
13	<p><b><i>Training:</i></b></p> <ul style="list-style-type: none"><li>▪ In house technical and application training for routine maintenance, operation and data collection should be given for the entire system. The supplier is required to train the Purchaser's technical personnel thoroughly for the operation of the complete XRD unit.</li></ul>	
14	<p><b><i>List of Users:</i></b></p> <ul style="list-style-type: none"><li>▪ The bidder must provide list of national users with contact details.</li></ul>	
15	<p><b><i>Local Items:</i></b></p> <ul style="list-style-type: none"><li>▪ Computer, Stereo zoom Microscope (at least 7:1 zoom ratio or better and Magnification range 8x to 112x or better), capillaries etc should be part of the offer. <b><u>Two split air-conditioners and dehumidifier to be installed at the site of installation.</u></b></li></ul>	



**FINANCIAL BID**  
**FOR SUPPLY AND INSTALLATION OF**  
**X-RAY DIFFRACTOMETER FACILITY FOR MACRO MOLECULAR CRYSTALLOGRAPHY**  
**FOR**  
**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR**

Sl. No.	Systems	Approx. Qty.	Unit Price FOB in Foreign currency	Unit Price including all taxes, freight and Insurance (delivered at NISER, Bhubaneswar service charges, installation and warranty charges in INR
(1)	(2)	(3)	(4)	(5)
1	<b>X-RAY DIFFRACTOMETER FACILITY FOR MACRO MOLECULAR CRYSTALLOGRAPHY (NC-18-13-14)</b> (DETAILED SPECIFICATION AS PER OUR TECHNICAL BID)	<b>01 Unit</b>		
2.	<b>Above item should carry three years onsite comprehensive warranty. In case the tendered provide warranty less than 03 years then he has to give justification for lesser period of warranty. Without justification his tender is liable to be rejected.</b>			
3.	Agency Commission to be paid to Indian Agent (will be paid in INR only after successful installation)	Included/Excluded _____% of basic price		
4	CIP Kolkata Charges	Amount		
5	Excise Duty Included/Excluded in the quoted price	_____ . _____% of basic price (Excise duty exemption certificate will be issued)		
6	Custom Duty Included/Excluded in quoted price	_____ . _____% of basic price (Custom Duty exemption certificate will be issued)		
7	Any other charges Included/Excluded in the quoted price (i) Trade tax/Sales tax (Institute will not issue any Sales Tax concession form) (ii) Any other levies	_____ . _____% of (basic price + excise duty) _____ . _____%		
8	Additional 02 years Warranty/AMC Charges	Amount		

**ALL ABOVE ITEMS ON 3 YEARS & ADDITIONAL 2 YEARS ONSITE FULL COMPREHENSIVE FREE WARRANTY.**

Date:  
Address:

Signature:  
Name:  
Designation:  
On behalf of:  
(Company Seal)



**TECHNICAL BID  
SUPPLY AND INSTALLATION  
OF  
SOLAR SIMULATOR  
FOR  
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, BHUBANESWAR  
TECHNICAL SPECIFICATION**

<b>Sl. No.</b>	<b>Item Specification</b>	<b>Offered specification with Make &amp; Model No. please specify any deviation if any. Please attach separate sheet if required</b>
(1)	(2)	(3)
01	<p><b><u>Specifications of Solar Simulator</u></b></p> <p>2x2 inch Class-AAA Solar Simulator for Solar cell characterization for DSSC and Organic Solar cells.</p> <p>Spectral Match, Non-Uniformity of Irradiance and Temporal Instability of irradiance should be <b>certified to all the three standards IEC60904-9 Edition 2 2007, JIS C 8912 and ASTM E 927-05 standards.</b></p> <p>Collimation Angle: <math>&lt;\pm 4^\circ</math></p> <p>Typical Power Output: 100 mW/cm<sup>2</sup> (1 Sun) <math>\pm 20\%</math> adjustable</p> <p>Should be able to vary the Intensity from 0.25 to 1.0 Sun without any change in Class A for Non Uniformity.</p> <p>Spectral Range: 400 to 1100 nm</p> <p>Non Uniformity: <math>\leq 2\%</math></p> <p>Uniformity Classification A (IEC 60904-9 2007) A (JIS C 8912) A (ASTM E927 - 05)</p> <p>Temporal Instability <math>&lt;0.5\%</math> STI <math>&lt;2.0\%</math> LTI</p> <p>Temporal Instability Classification A (IEC 60904-9 2007) A (JIS C 8912) A (ASTM E927 - 05)</p> <p><b>Spectral Match 13.8% - 23.0% (400-500nm)</b> <b>14.9% - 24.9% (500-600nm)</b> <b>13.8% - 23.0% (600-700nm)</b> <b>11.2% - 18.6% (700-800nm)</b> <b>9.4% - 15.6% (800-900nm)</b> <b>11.9% - 19.9% (900-1100nm)</b></p> <p>Spectral Match Classification A (IEC 60904-9 2007) A (JIS C 8912) A (ASTM E927 - 05)</p> <p>Working Distance 12 <math>\pm 0.5</math> in.</p> <p>Lamp Power 450W</p> <p>Input Power (Simulator) :95 - 264 VAC/15A 47 - 63 Hz</p>	

<p>Line Regulation 0.01 %</p> <ul style="list-style-type: none"> <li>▪ System should come with Calibration certificate validating Class AAA performance for all 3 standards for all the standards organizations.</li> <li>▪ Non-reflective black finish reduces stray light</li> <li>▪ Temperature sensors and interlocks ensure operator safety</li> <li>▪ CE certified</li> </ul> <p><b>(1) I-V Station with the 1A Current/source meter.</b></p> <p>Electrical Interface : 4 Wire          Current range : +/- 200 Volts          Voltage range : 1 Amps          Current accuracy : better than 0.5%          Voltage accuracy : better than 0.05%          Max Output Power : 20 W or better          No. of Measurement points : 2-100 or better          Software : Lab View based          Parameters to be measured : Voc, Isc, Jsc, Vmax, Imax, Pmax, efficiency, fill factor, Rsc, Rshunt</p> <p>Cell Holder : Should be vacuum compatible with vacuum pump          Probe Kits: Magnetic electrical contact probe kits with X-Y joystick</p> <p>Reference Solar Cell and Meter : Monocrystalline based Solar reference cell with Meter should be quoted. It should be certified by NIST and traceable to NREL and SI unit. To read 0 - 3.5 Sun. Should equipped in accordance with IEC 60904-2</p> <p><b><u>Optional:</u></b>          Temperature controlled Vacuum Chuck (10 °C to 40 °C)          Chiller I-V Tester - 3Amp version.</p>	
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**FINANCIAL BID  
FOR SUPPLY AND INSTALLATION  
OF  
SOLAR SIMULATOR  
FOR  
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH,  
BHUBANESWAR**

Sl. No.	Systems	Approx. Qty.	Unit Price FOB in Foreign currency	Unit Price including all taxes, freight and Insurance (delivered at NISER, Bhubaneswar service charges, installation and warranty charges in INR)
(1)	(2)	(3)	(4)	(5)
1.	<b>SOLAR SIMULATOR (RD-NC-16-13-14)</b> (DETAILED SPECIFICATION AS PER OUR TECHNICAL BID)	<b>01 Unit</b>		
2.	<b>Above item should carry three years onsite comprehensive warranty. In case the tendered provide warranty less than 03 years then he has to give justification for lesser period of warranty. Without justification his tender is liable to be rejected.</b>			
3.	Agency Commission to be paid to Indian Agent (will be paid in INR only after successful installation)	Included/Excluded _____% of basic price		
4.	CIP Kolkata Charges	Amount		
5.	Excise Duty Included/Excluded in the quoted price	_____ . _____% of basic price (Excise duty exemption certificate will be issued)		
6.	Custom Duty Included/Excluded in quoted price	_____ . _____% of basic price (Custom Duty exemption certificate will be issued)		
7.	Any other charges Included/Excluded in the quoted price (i) Trade tax/Sales tax (Institute will not issue any Sales Tax concession form) (ii) Any other levies	_____ . _____% of (basic price + excise duty) _____ . _____%		
8.	Additional 02 years Warranty/AMC Charges	Amount		

**ALL ABOVE ITEMS ON 3 YEARS & ADDITIONAL 2 YEARS ONSITE FULL COMPREHENSIVE FREE WARRANTY.**

Date:  
Address:

Signature:  
Name:  
Designation:  
On behalf of:  
(Company Seal)



(Please take the printout on your letter head along with all details)

**To,**  
The Finance Officer  
NISER, Institute of Physics Campus  
Sachivalaya Marg, PO- Sainik School  
Bhubaneswar – 751 005, Odisha

Ref: Tender Ref. No.: \_\_\_\_\_ Dated. \_\_\_\_\_

Sub: Refund of EMD

Dear Sir,  
We have deposited EMD of Rs. \_\_\_\_\_/- vide D/D No. \_\_\_\_\_ dated.  
\_\_\_\_\_ of \_\_\_\_\_ **(Name of Bank)** against  
above mentioned tender. Since our tender has not being qualified, we request to release our  
EMD.

Yours faithfully,

Signature of the Authorised Signatory  
(with company seal)

Our address is verified as below:

M/s. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Pin Code: \_\_\_\_\_

Phone No.: \_\_\_\_\_



**NATIONAL INSTITUTE OF SCIENCE EDUCATION & RESEARCH  
INSTITUTE OF PHYSICS CAMPUS, P.O.: SAINIK SCHOOL,  
BHUBANESWAR-751 005  
Tender Notice No. NIT-11/2013**

**CHECK LIST**

Your bid should accompany with following documents. Please enclose the required document and put (√) mark in the check list where ever applicable.

<b>Sl. No.</b>	<b>Description of Documents</b>	<b>Enclosure</b>
1.	EMD	Yes / No
2.	Part I of Tender Documents with Declaration by the Vendor	Yes / No
3.	Duly filled EMD refundable sheet (if EMD is there)	Yes / No
4.	General Information Sheet	
	Annual turnover in last 3 financial years in Rs. Crores (i) Year 2010-2011 (ii) Year 2011-2012 (iii) Year 2012-2013	Yes / No
	Supply & Installation of equivalent to our tendered for the required item from last 3 financial years in State Government or Govt. of India Department(s) /Reputed Organisation(s) (in Nos. and Value) (Please attach list of clients) (i) Year 2010-2011 (ii) Year 2011-2012 (iii) Year 2012-2013	Yes / No
	Trade Tax / Sales Tax Registration no. with Place	Yes / No
	Income Tax Registration no. with place	Yes / No
5.	Detailed technical description of the item	Yes / No
6.	Detailed filled Financial Bid	Yes / No
7.	Authorisation letter in letter head duly signed by the authorised signatory for allowing your representative to attend the tender opening meeting.	Yes / No

Signature of the Authorised Signatory with Date  
(with Company Seal)