



**Centre for Advanced Research in Sciences (CARS)
University of Dhaka, Dhaka-1000.**

Office of the Director

Ph: 966 1920-59/Ext. 4618
FAX: +880-02-9667222
Email: cars@du.ac.bd
Website : www.cars.du.ac.bd

Tender Ref. No. CARS/ST/P-342/OTM/2023

Date: ০২-১১-১৪২৯ বঙ্গাব্দ
15-02-2023 খ্রিষ্টাব্দ

Invitation for Tender (National)

Sealed Tenders (P-342) are hereby invited from reputed supplier for Supply, Installation, Testing and Commissioning of Equipment for CARS, University of Dhaka.

1.	Ministry/Division	Ministry of Education		
2.	Agency	University of Dhaka		
3.	Procuring Entity Name	Centre for Advanced Research in Sciences (CARS), University of Dhaka.		
4.	Procuring Entity Code	342		
5.	Procuring Entity District	Dhaka		
6.	Invitation for	Supply, Installation, Testing and Commissioning of Equipment for CARS		
7.	Invitation TenderRef No.	CARS/ST/P-342/OTM/2023		
8.	Date :	15-02-2023 খ্রিষ্টাব্দ		
KEY INFORMATION				
9.	Procurement Method	Open Tendering Method		
FUNDING INFORMATION				
10.	Budget and Source of Funds	Revenue Budget (RB)		
11.	Development Partner (if applicable)	N/A		
PARTICULAR INFORMATION				
12.	Project/Programme Code (if applicable)	Not used		
13.	Project/Programme Name (if applicable)	Not Applicable		
14.	Tender Package No.	Single lot		
15.	Tender Package Name	Supply, Installation, Testing and Commissioning of Equipment for CARS		
16.	Tender Publication Date	15-02-2023 খ্রিষ্টাব্দ		
17.	Tender Last Selling Date	13-03-2023 খ্রিষ্টাব্দ Up to office hours		
18.	Tender Closing Date and Time	Date :		Time:
		14-03-2023 খ্রিষ্টাব্দ		11:00 am
19.	Tender Opening Date and Time	14-03-2023 খ্রিষ্টাব্দ		11:30 am
20.	Name & Address of the Office(s)	Address(s)		
	-Selling Tender Document (Principal)	(i) Centre for Advanced Research in Sciences (CARS), University of Dhaka.		
	-Receiving Tender Document	(i) Centre for Advanced Research in Sciences (CARS), University of Dhaka.		
	-Opening Tender Document	Centre for Advanced Research in Sciences (CARS), University of Dhaka.		
21.	Place/Date/Time of Pre-Tender Meeting	Name/Address	Date:	Time
INFORMATION FOR TENDERER				
22.	Eligibility of Tenderer	(i) Up to date Trade License (ii) Up to date VAT Registration Certificate (iii) Up to date Income Tax Clearance Certificate (iv) Experience Certificate in similar works of comparable value in a single tender in last five years as mentioned in TDS (v) Bank solvency Certificate (vi) Manufacturer Authorization letter for applicable Equipment.		



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		<p>(vii) Applicant must be owner of the firm or Representative of the firm will be authorized by the owner of the Firm signature with name and seal of the owner.</p> <p>viii) Country of origin and made in country will be same. If differ then explain clearly with black and white.</p> <p>(ix) catalogue of the Equipment.</p> <p>(x) The Supplier has to avail an expert maintenance team, list of application training support team and needed submission of team member's list with Bio-data.</p> <p>(xi) Competency certificate of after sale service as mentioned in the TDS. Availability of Spare- Parts Certainty declaration at least 10 years.</p> <p>(xii) Warranty: 2 years, Installation and training must be provided by the supplier (free of cost).</p>		
23.	Brief Description of Goods	Supply, Installation, Testing and Commissioning of Equipment		
24.	Brief Description of Related Services	Supply, Installation, Testing and Commissioning of Equipment for CARS		
25.	Tender Document Price TK.-4,000.00	The Price of Tender Schedule as mentioned is to be deposited in A/C No. 36000392, Janata Bank, T.S.C branch, Dhaka University . Tender schedule and terms and conditions may be collected on submission of the deposit receipt from the above mentioned offices on all working days except on the date fixed for submitting the tender.		
26.	Identification/Name of Goods	Location	Tender Security Amount in Taka	Completion Time
	Equipment	CARS, DU.	Equipment 37,500.00	90 days from the date of issuance a Purchase order (Supply of Goods)
PROCURING ENTITY DETAILS				
27.	Name of Official Inviting Tender	Professor Dr. Ishtiaque M. Syed		
28.	Designation of Official Inviting Tender	Director		
29.	Address of Official Inviting Tender	Centre for Advanced Research in Sciences (CARS), University of Dhaka.		
30.	Contact details of Official Inviting Tender	9661900/Ext. 4616/ 4636.		
31.	The procuring entity reserves the right to accept or reject any or all tenders without assigning any reason whatsoever. The procuring authority also reserves the right to omit, increase or decrease the quantities of Equipment from the Tender. The suppliers must abide by the decision of the University authority. Tender form, schedule of requirements of supply, tender notice and terms and conditions etc. will form the integral part of the tender. The suppliers should write the name of the item and the name of the firm on the envelope clearly . Vat, Income Tax and other Taxes, if any, imposed by the Govt. will be deducted from their bills as per Govt. rules.			

স্বাক্ষরিত/-

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Section 6. Schedule of Requirements

This Section provides the List of Goods and Delivery Schedule and List of Related Services and Completion Schedule and must be carefully prepared by a Procuring Entity for each object of procurement.

Invitation for Tender No :

Date :

Tender Package No :

A. List of Goods & Related services and Delivery Schedule

Item No.	Description of Item	Unit of Measurement	Quantity	Point of Delivery	Delivery Period Required
1	2	3	4	5	6
	Equipment			CARS	90 days from the date of issuance a Purchase order (Supply of Goods)
01	Potentiostat with Standard Electrochemical Cell	Potentiostat Potential range: Minimum ± 7.5 V Potential compliance: Minimum ± 10 V Applied potential accuracy: ± 10 mV offset Applied potential resolution: 333 μ V Maximum current: ± 200 mA Current ranges: ± 20 μ A to ± 200 mA (5 ranges) Current measurement accuracy: ± 20 nA offset (at 20 μ A range) Current measurement resolution: 5 nA (at 20 μ A range) Communication Port: USB-B Standard Electrochemical Cell: Screw-fit PTFE lid with three electrode holes and two gas holes. Length: Minimum 52mm Diameter: Minimum 55mm Platinum Working Electrode Highly polished platinum embedded in polytetrafluoroethylene (PTFE) plastic bodies.			1 No's



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		<p>platinum wire Length: minimum 20mm Purity: 99.99% Diameter: 2 mm Platinum wire counter electrode platinum wire Length: minimum 15mm Purity: 99.99% Diameter: 0.5 mm Non-aqueous Ag/Ag⁺ Reference Electrode Software: Potentiostat must come with control and measurement software for performing linear sweep and cyclic voltammetry, open circuit potential, and constant potential electrolysis. Software updates should be provided free of charge. Should have Intuitively-designed user interface Easy to use, start using the potentiostat to take electrochemical measurements within minutes Live updating plot Plot voltammograms in real time Data saved to .csv file Software agnostic data exports enable you to use your favourite analytical tools Create settings profiles Repeat experiments without having to re-enter your settings.</p>	
02	Contact Angle Goniometer	<p>The Contact Angle Goniometer should provide a fast, reliable, and easy method to measure contact angles and surface tensions of liquid droplets. Measurement Accuracy: $\pm 1^\circ$ Measurement Range: $5^\circ - 180^\circ$ Stage Area: Minimum 50 mm x 50 mm Maximum Sample Thickness: 20 mm Maximum Camera Resolution: 1920 x 1080 Syringe Specifications Syringe Volume: 25 μl Needle Diameter: 0.47 mm Needle Length: 51 mm Tip Shape: Blunt Software: The Contact Angle Goniometer must have a user-friendly measurement software. The software should have two main interactive sections: recording and analysis. The analysis section should allow the user to measure either the contact angle or surface tension of a droplet. Recording: should capture high-resolution videos in the</p>	1 No's



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		<p>recording section of the software. The videos automatically be saved to the destination of choosing and are saved in .avi file format, which means the user can watch them in any common video player or edit them in a video editor. When loaded into the contact angle software, the videos will appear as a series of images which can be analysed individually.</p> <p>Analysis: Measure contact angle and surface tension of the recorded droplets in the analysis section of the software. The software performs an edge detection algorithm on the droplet, then uses an appropriate fitting technique to calculate its properties.</p>	
03	Four-Point Probe System	<p>Specifications</p> <p>Voltage range: $\pm 100 \mu\text{V}$ to $\pm 10 \text{V}$</p> <p>Current range: $\pm 1 \mu\text{A}$ to $\pm 200 \text{mA}$ (5 ranges)</p> <p>Sheet resistance range: $100 \text{m}\Omega/\square$ to $10 \text{M}\Omega/\square$ (ohms per square)</p> <p>Probe Spacing: 1.27 mm</p> <p>Rectangular Sample Size Range: Long Edge Minimum: 5 mm Short Edge Maximum: 60 mm</p> <p>Circular Sample Size Range (Diameter): 5 mm to 76.2 mm</p> <p>Maximum Sample Thickness: 10 mm</p> <p>Software: An intuitive and user-friendly standalone PC program is used to control the four-point probe measurement. This software should calculate appropriate geometrical correction factors for the given sample geometry, ensuring accurate results. It should also calculate the resistivity and conductivity of the sample, if the thickness is provided, to allow for extensive electrical characterisation of materials.</p> <p>Clean and intuitively-designed interface</p> <p>Data saved to .csv file</p> <p>Calculates resistivity and conductivity for samples with a known thickness</p> <p>Automatic correction factor calculation</p>	1 No's

Warranty : 24 Months from the date of installation for the all equipments.

Country of Origin : USA/UK/EU/Japan/Germany/Australia/Canada/Singapore/Equivalent.



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Section 7. Technical Specifications.

The Goods and Related Services shall comply with following Technical Specifications:

Item No	Name of Item or Related Service	Technical Specification and Standards
»	CARS	Supplier
	Equipment	
01	Potentiostat with Standard Electrochemical Cell	Potentiostat Potential range: Minimum ± 7.5 V Potential compliance: Minimum ± 10 V Applied potential accuracy: ± 10 mV offset Applied potential resolution: $333 \mu\text{V}$ Maximum current: ± 200 mA Current ranges: $\pm 20 \mu\text{A}$ to ± 200 mA (5 ranges) Current measurement accuracy: ± 20 nA offset (at $20 \mu\text{A}$ range) Current measurement resolution: 5 nA (at $20 \mu\text{A}$ range) Communication Port: USB-B Standard Electrochemical Cell: Screw-fit PTFE lid with three electrode holes and two gas holes. Length: Minimum 52mm Diameter: Minimum 55mm Platinum Working Electrode Highly polished platinum embedded in polytetrafluoroethylene (PTFE) plastic bodies. platinum wire Length: minimum 20mm Purity: 99.99% Diameter: 2 mm Platinum wire counter electrode platinum wire Length: minimum 15mm Purity: 99.99% Diameter: 0.5 mm Non-aqueous Ag/Ag+ Reference Electrode Software: Potentiostat must come with control and measurement software for



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		<p>performing linear sweep and cyclic voltammetry, open circuit potential, and constant potential electrolysis. Software updates should be provided free of charge.</p> <p>Should have Intuitively-designed user interface</p> <p>Easy to use, start using the potentiostat to take electrochemical measurements within minutes</p> <p>Live updating plot</p> <p>Plot voltammograms in real time</p> <p>Data saved to .csv file</p> <p>Software agnostic data exports enable you to use your favourite analytical tools</p> <p>Create settings profiles</p> <p>Repeat experiments without having to re-enter your settings.</p>	
02	Contact Angle Goniometer	<p>The Contact Angle Goniometer should provide a fast, reliable, and easy method to measure contact angles and surface tensions of liquid droplets.</p> <p>Measurement Accuracy: $\pm 1^\circ$</p> <p>Measurement Range: $5^\circ - 180^\circ$</p> <p>Stage Area: Minimum 50 mm x 50 mm</p> <p>Maximum Sample Thickness: 20 mm</p> <p>Maximum Camera Resolution: 1920 x 1080</p> <p>Syringe Specifications</p> <p>Syringe Volume: 25 μl</p> <p>Needle Diameter: 0.47 mm</p> <p>Needle Length: 51 mm</p> <p>Tip Shape: Blunt</p> <p>Software: The Contact Angle Goniometer must have a user-friendly measurement software. The software should have two main interactive sections: recording and analysis. The analysis section should allow the user to measure either the contact angle or surface tension of a droplet.</p> <p>Recording: should capture high-resolution videos in the recording section of the software. The videos automatically be saved to the destination of choosing and are saved in .avi file format, which means the user can watch them in any common video player or edit them in a video editor.</p> <p>When loaded into the contact angle</p>	



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