

Centre for Renewable Energy and Materials

Department of Chemistry Building

University of Kerala,

Kariavattom, Thiruvananthapuram-695581

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QUOTATION NOTICE

Competitive quotations are invited from reputed firms / manufactures for the supply, installation and commissioning of the following instruments / equipments as detailed below.

Tender Notification Date	: 27/01/2021
Last Date of Issuing Tender Document	: 11/02/2021
Last Date of Receiving Tender/Bid Closing	: 11/02/2021, 4.00 pm
Date and Time of Opening Tender	: 12/02/2021, 3.00 pm

Documents to be Submitted: Data sheet of the items and Compliance statement, Details of warranty, Address and details of the firm, Financial bid and any other relevant information.

Item No: 18

Ref. No. CREM/Eq/PUR/18/2021

Equipment Name: Battery cyclor

Quantity: 1 No.

Technical Specifications

- Multichannel (>5 channels) battery cyclor
- Current output ranges: 0.5mA-100mA; 100mA-3A; 3A-6A
- Voltage output range: 10mV-5V
- Minimum discharge voltage: -2V
- Accuracy: 0.05% or better
- Data record frequency: up to 10Hz or better
- Compatible for testing coin cells and pouch cells
- Minimum onsite warranty for two years

Item No: 19

Ref. No. CREM/Eq/PUR/19/2021

Equipment Name: Conductivity meter

Quantity: 1 No.

Technical Specifications

- Digital electrical conductivity meter with conductivity probe having internal temperature sensor
- Electrical conductivity range: 0 to 1999 $\mu\text{S/cm}$, 0.0 to 199.9 mS/cm , 0.0 to 199.9 $\mu\text{S/cm}$, 0.00 to 19.99 mS/cm
- Electrical conductivity resolution 0.1 $\mu\text{S/cm}$, 1 $\mu\text{S/cm}$, 0.01 mS/cm , 0.1 mS/cm
- Accuracy of $\pm 1\%$ FS or better
- Automatic temperature compensation (in an environment of 0 to 50°C or better)
- Built-in probe holder and solution holders
- Minimum one year warranty

Item No: 20

Ref. No. CREM/Eq/PUR/20/2021

Equipment Name: Online UPS (5 KVA - 120 VDC) with batteries

Quantity: 1 No.

Technical Specifications

- CAP/VDC: 5 KVA / 120 V
- Input Voltage range: 160V-270V
- Output Voltage: 200-250V $\pm 1\%$
- LCD Display for: Input & Output Voltage, Battery Voltage, Output load % & Frequency, Battery low, Over load
- Indications for: Mains on, Inverter on, Battery low, Over load, Trip
- Alarms: Battery low, Output overload & short-circuit
- Protections against: Over load, Input low & high, Input surge, Battery low & high, Output short-circuit
- 12 V-42 Ah SMF-VRLA batteries compatible with UPS: 10 Nos
- Minimum warranty for two years (for both UPS and batteries)

Item No: 21

Ref. No. CREM/Eq/PUR/21/2021

Equipment Name: Coin cell crimper machine

Quantity: 1 No.

Technical Specifications

- Hydraulic crimping machine
- Working pressure 80-100 kg/cm²

Item No: 22

Ref. No. CREM/Eq/PUR/22/2021

Equipment Name: Film coater machine (for battery electrode coating)

Quantity: 1 No.

Technical Specifications

- Coating Speed: 0-100 mm/s
- Film Width: >100 mm
- Coating thickness of applicator: 0.01~3.5mm

Item No: 23

Ref. No. CREM/Eq/PUR/23/2021

Equipment Name: Ball mill machine

Quantity: 1 No.

Technical Specifications

- Ball milling tank volume: 50 ml x 4 or 100 ml x 4
- Max continuous working time: 72 hours
- Rotation speed: 0-900rpm
- Zirconia grinding balls
- Material: Wet or Dry, free flowing
- Output material size: Min 0.1um
- One year warranty

Item No: 24

Ref. No. CREM/Eq/PUR/24/2021

Equipment Name: Battery electrode sheets calendaring machine (Electric roller press)

Quantity: 1 No.

Technical Specifications

- Roller diameter: 96mm
- Roller width: 100mm
- Programmable roller press with digital temperature display

Item No: 25

Ref. No. CREM/Eq/PUR/25/2021

Equipment Name: Muffle furnace with programmable controller

Quantity: 1 No.

Technical Specifications

- Maximum Working Temperature: ~1700°C
- Digital display
- Programmable temperature controller with ramping, cooling and dwelling steps
- Temperature control accuracy of ± 1 °C
- Built-in over-temperature alarm and thermocouple failure alarm
- Gas fitting & exhaust
- One year warranty

Item No: 26

Ref. No. CREM/Eq/PUR/26/2021

Equipment Name: Digital ceramic-top hot plate stirrers

Quantity: 1 No.

Technical Specifications

- Ceramic heating plate with dimension of 180 x 180 mm
- Heating temperature control from room temperature to 550 °C or better
- Stirring speed adjustable up to 1500 rpm with a minimum volume of 15 liter
- Digital LED display

Item No: 27

Ref. No. CREM/Eq/PUR/27/2021

Equipment Name: Portable mini Potentiostat with compatible electrodes

Quantity: 1 No.

Technical Specifications

- Voltage range: ± 2 V or better
- Voltage resolution: 1 mV
- Maximum current range: ± 2 mA or better
- Current measurement: 2 nA to 200 μ A or better
- Current resolution: 0.1% of the current measurement range
- Operating software and interface cables
- Compatible reference and counter electrodes with connecting cables
- Compatibility for current measurement techniques such as Linear Sweep Voltammetry, Cyclic Voltammetry, Square Wave Voltammetry, Differential Pulse Voltammetry, Amperometry and Pulsed Amperometry

Item No: 28

Ref. No. CREM/Eq/PUR/28/2021

Equipment Name: Metal cutting mitre saw

Quantity: 1 No.

Technical Specifications

- Type : Compound Slide Mitre Saw
- Saw Blade Diameter: >300mm
- Blade Speed: 1900- 3800 RPM or better
- Suitable for MS, SS, Aluminium
- Spare blades: 2 Nos

Item No: 29

Ref. No. CREM/Eq/PUR/29/2021

Equipment Name: Pump assisted filtering system for plating chemicals

Quantity: 1 No.

Technical Specifications

- Capacity: 40LPM

Item No: 30

Ref. No. CREM/Eq/PUR/30/2021

Equipment Name: Pump assisted filtering system for plating chemicals

Quantity: 1 No.

Technical Specifications

- Capacity: 50LPM

Item No: 31

Ref. No. CREM/Eq/PUR/14/2021

Equipment Name: Pump assisted filtering system for plating chemicals

Quantity: 1 No.

Technical Specifications

- Capacity: 60LPM

Tender Inviting Authority: Director, Centre for Renewable Energy and Materials, University of Kerala, Kariavattom Campus, Thiruvananthapuram, Kerala-695581.

Terms and Conditions

1. Incomplete & conditional quotations and quotations received after the due date will be summarily rejected without assigning any reasons thereof.

2. The Bidder shall quote the price in clear terms and the specification of products. The rates quoted must be inclusive of all taxes, cost of supply at the site, warranty and installation charges etc.
3. The price should be quoted only in Indian rupees. The bid shall be typed and signed by the bidder.
4. All the documents mentioned above shall be submitted without fail.
5. **Validity:** The Bid will be valid for 90 days from its date of opening. Further extension can be done by mutual consent.
6. **Delivery:** The item should be delivered at the Centre for Renewable Energy and Materials, University of Kerala, Kariavattom Campus.
7. **Installation and commissioning:** The items shall be installed and commissioned at the Centre for Renewable Energy and Materials, University of Kerala, Kariavattom Campus. All incidental expenses should be borne by the supplier.
8. **Payment:** The University will release the payment only after inspecting the equipment and satisfy that the supply is as per the requirements. The payment will be made after successful completion of the supply and producing invoice in duplicate.
9. **Warranty/Guarantee:** The supplier shall guarantee to repair/replace the items or its part – if found defective within the warranty period. The entire expenditure for repair/ replace of the item in this regard shall be borne by the supplier.
10. **Service facility:** Supplier should mention their details of service setup and manpower in Trivandrum who are responsible for after sales service.
11. In case of the dispute arises, the decision of University authority shall be final and binding on bidders.

12. The undersigned reserves the right to reject or accept any or all the tenders received fully or partly without assigning any reason thereof.
13. General rules relating to the purchase of materials/equipment will also applicable to this tender.
14. Those who are interested should send their bid in a sealed cover superscribed with **“Quotation for Ref. No: (.....) Equipment Name: (.....)”** and addressed to The Director, Centre for Renewable Energy and Materials, Department of Chemistry Building, University of Kerala, Kariavattom Campus, 695581, Thiruvananthapuram, Kerala.
15. Those firms who are interested to quote more than one instrument should sent individual quotations for each item separately.
16. The bids shall be opened at the office of the Director, Centre for Renewable Energy and Materials, University of Kerala, Kariavattom Campus on the Date mentioned above. If the above date of opening tender happens to be on a holiday or due to any other valid reason, the tender opening process will be done on the next working day or the day fixed by the undersigned.

Sd/

Hon. Director

Centre for Renewable Energy and Materials

University of Kerala