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08-03-2018

Tender Due Date: 23-03-2018

To,

Sub: Procurement of Contact angle meter (Goniometer)

Ref no:CHE/2017/KANN/1173/SPIX

Dear Sir/Madam

On behalf of Indian Institute of Technology, Madras we invite tender for the purchase of a Goniometer conforming to the specifications given in the annexure.

This instrument must be capable of measuring **static contact angle, advancing and receding contact angles, surface / interfacial tension by pendant drop method, surface free energy and dilatational interfacial rheology by oscillating drop method.**

S no	Basic	Description
1	Measuring Range	Contact Angle: ± 0.1 , ± 0.01 or better
2	Surface and Interfacial Tension	0 0...180, 0.01...2000
3	Video System	Up to 3000 fps or more with 672 x 57 resolution. Approx. zoom lens should be 0.7 – 4.5 magnifications
4	Sample stage	manual XYZ movement
5	Tilting stage	assembly with Resolution of 0.1^0 for measurement of dynamic contact angle with range of $0 - 90^0$

6	Drop control	Automatic single liquid dosing with manual adjustable vertical and horizontal positions.
7	Illumination	Software controlled modular, illuminating with LED, an interface for extra light source
8	Temperature Control	Thermostatic electrically heated measuring chamber for air phase temp control from ambient to 250° C along with necessary accessories.
9	Software determination	1.Contact angle by sessile/rising drop method with automatic base line detection 2. Surface/ interfacial tension by pendant/ rising drop method 3. Contact angle by liquid meniscus method 4. System should have Software controlled drop size pulsing for interfacial rheology measurement of viscoelastic properties of interfacial layers at liquid-air or liquid-liquid interfaces.
10	Image fitting	1. Polynomial, Basforth-Adams, circular fit, Young-Laplace, including auto baseline algorithm 2. Surface free energy, based on calculation equations: Zisman, OWRK/ extended Fowkes, Wu
11	Power supply	The unit should be able to work with 220 + 20 VAC, 50 Hz.
12	Upgradability	The software should have adequate provision for incorporating additional features as and when required for getting upgraded effortlessly. <ul style="list-style-type: none"> • Should have provision to upgrade 3D Topography system for advanced adhesion and wettability studies for micro-rough surfaces.
13	Computer System	Windows 10 (32 and 64 bit), Windows 8 (32 and 64 bit), Windows 7 (32 and 64 bit). One free USB3 or a Gigabit Ethernet port depending on the camera type. One USB2/3 port. 2 GHz processor, 2 GB RAM, 120 GB hard disk drive*. With the 3D Topography module, one extra USB2/3 port required. (*SDD hard disk (min.

	500MB/s) needed for high speed recording.)
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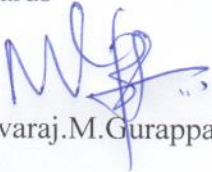
1. Acid-Base tool, Equation of State, Schultz 1, Schultz 2

Please consider the following aspects while giving the quotation:

1. We are an academic institution: therefore please include any special discount that you have for our institution.
2. We would like to have your commitment in terms of maintenance. Please provide an offer for annual maintenance contract (after warranty period) or an extended warranty so that the instrument will be maintained for 3 years after installation.
3. Specify the delivery/insurance/installation/initial training charges(quote should be CIF Chennai)

Please submit your quotation by March 23, 2018. Submit technical brochure and a point by point compliance statement with your quotation.

Best regards



Dr. Basavaraj.M. Gurappa