



**INDIAN INSTITUTE OF TECHNOLOGY KANPUR**  
**Department of Chemical Engineering**

**Contact:**

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**Enquiry No: IITK/CHE/FIST/AGHATAK-1**

**Enquiry Date:06/08/2018**

**Closing Date:27/08/2018**

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**Tender Notice**

**Sealed quotation(s) in Indian Rupees with all technical details so as to reach latest by 3:00 PM on Aug 27, 2018 are invited for the supply of following item**

Tender Specifications for Advanced Research Polarizing Microscope with Transmitted light and Reflected light illumination, Fluorescence Attachment, High resolution Peltier cooled colour camera and Imaging software.

S. No.	Item	Description
1)	Microscope Body/Frame	Dedicated Pol microscope stand with built-in reflected and transmitted LED light – Brightfield (TL & RL), DarkField (in TL) and Polarization (TL and RL), Transmitted light and Reflected Light DIC and Fluorescence Attachment.
2)	Bertrand Lens	Focusable and centerable Bertrand lens for Conoscopy & Orthoscopy
3)	Phototube	Dedicated Polarizing Phototube with FOV 22-25 mm (or better) with either 2 way switching position (100% eyepiece: 0% camera, 50% eyepiece: 50% camera) or 3 switching positions (100% eyepiece: 0% camera, 50% eyepiece: 50% camera, 0% eyepiece: 100% camera).
4)	Focus	Stroke: 25 mm, 2-3 step focus. Minimum graduation 1 micro-m, height adjustable focus knobs, focus stop and torque adjustment
5)	Nosepiece	Revolving Nosepiece 5-fold, centerable at all 5 positions for maintaining the exact centering without any re-adjustment
6)	Eyepiece	Wide-field focusable eyepiece pair with (22-25)mm or better FOV, one with crosshair reticule, Eyepieces should be suitable for observation with and without eyeglasses.
7)	Objectives	a) Polarizing Strain Free objective set – 5X, 10X, 20X, 40X, 50X or 63X, 100X b) DIC (Transmitted Light) attachment for 20X, 40X and 50X or 63X

		<p>c) DIC (Reflected Light) attachment for 50 X and 100 X</p> <p>d) Dedicated objective for Heating application- 20X with working distance 10.5mm or more, 50X with working distance 7.0mm or more.</p> <p>e) All objectives should have chromatic aberration corrected in the visible region (Violet to Red) (ISO nomenclature: Semi-Apo Chromats/Neofluar/Fluotar).</p> <p>f) All objectives should be compatible with BF, DF, DIC &amp; Fluorescence</p> <p>g) Similar magnification objectives should not be quoted more than once (except for the Heating Application).</p>
8)	Internal Optics	Whole optics should be strain free
9)	Polarizer & Analyzer	360 degree Rotatable polarizer & Analyzer for TL and RL OR 360 degree Rotatable Analyzer and 90 degree rotatable polarizer for TL and RL
10)	Mechanical Stage	<p>a) Rotatable stage for POL with attachable mechanical stage (Object guide X-Y)and 45 deg Click Stop. Graduated 1 deg increments.</p> <p>b) Additional X-Y right hand mechanical stage (75*50mm) or bigger for transmitted and reflected light with attachable slide holder</p>
11)	Illuminations	Independent LED lamp housing for TL and RL, 100W Hg for Fluorescence
12)	Condenser	<p>Strain free Universal Pol condenser centerable for Pol, DIC along with condenser head for thicker specimen slides.</p> <p>Long Working Distance Condenser for Heating Stage Applications</p>
13)	Optical Compensator	$\lambda$ - and $\lambda/4$ plates for compensator slot, Berek tilting compensator, Quartz Wedge Compensators.
14)	Filters	Daylight, yellow, blue and Grey Filter
15)	Camera Adapter	C-mount adapter for camera
16)	Camera & Software	<p>a) Digital Colour, High Sensitivity, Cooled CCD Camera with minimum 2.8 MPs or better.</p> <p>b) Pixel: 1920*1440</p> <p>c) The camera must be capable of controlling Brightfield, Polarization, DIC and Fluorescence Modes,</p> <p>d)Pixel Size: 4.54 <math>\mu\text{m}</math>*4.54 <math>\mu\text{m}</math></p> <p>e) Speed: Fast Live Image with atleast 35-40 fps</p> <p>f) Dark Noise: &lt;0.5e<sup>-</sup>/px/sec</p> <p>g) Related Camera Accessories</p> <p>h) Camera and Software should be from same manufacturer</p> <p>i) Software should be capable of image capturing,</p>

		annotations, identification of areas of significance and derive measurement parameters such as length, area, angle or perimeter. It should also be able to calculate areas and mean intensity. Multichannel imaging should also be possible
17)	Fluorescence attachment	Fluorescence Illuminator attachment for 100W Mercury(Hg) complete with Mirror Housing, Lamp Housing, Mercury Lamp(103 watt), Booster lens, Protective Shield Fluorescence Filter system for UV, Blue, Green & Red excitation
18)	Cover	Dust Cover
19)	Warranty	5 Years Comprehensive Warranty ( Labour & Parts)
20)	Installation	Installation and training at IIT Kanpur free of cost
21)	Computer	<ul style="list-style-type: none"> <li>• Intel Core i7 or better</li> <li>• 1 TB HDD or better</li> <li>• 8 GB DDR RAM or better</li> <li>• Keyboard and Mouse</li> <li>• 21 “ or better TFT Color Monitor</li> <li>• DVD RW writer</li> <li>• Minimum 1 GB Express Graphics card- NVidia GeForce</li> <li>• Windows 10 Professional 64 bit or latest</li> <li>• Suitable UPS</li> </ul>

### **Terms & Conditions:**

- 1) Quotations must reach undersigned by 27.08.2018 by 3.00 pm
- 2) Quotations should have a validity of minimum of 90 days.
- 3) Atleast 10 users list should be provided with satisfactory certificates.
- 4) Technical specification sheets, authorization certificate or proprietary certificate (if applicable) and Any other relevant documentation should be included with the quotation.
- 5) Quotations are required in duplicate: (1) TECHNICAL BID (2) FINANCIAL BID, in separate Sealed envelopes, both to be finally put in one single envelope with Tender Enquiry Number Mentioned clearly in all sealed envelopes.
- 6) The technical bid should include a signed copy of the compliance certificate against the tender specifications.
- 7) The tender specifications should be justified with company catalogue.
- 8) Please specify the maximum permissible educational discount, if any.

- 9) Delivery of system should be within 3-4 weeks on receipt of the final purchase order.
- 10) The downtime of service should be taken care within 48-72 hours on information, otherwise it is subjected to penalty.
- 11) The rate offered should show both F.O.B (specify city) in the country of origin and CIF (New Delhi)
- 12) Please clearly mention the tax rate (like GST etc.) and transportation charges up to IIT Kanpur, India.
- 13) After sales Service in India and warranty period should be clearly mentioned.
- 14) The Institute reserves the right of accepting and rejecting any quotation without assigning any reason.
- 15) Quotations by E-mail will not be accepted.

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Kindly mention the enquiry number on the sealed envelope carrying the quotation and send the sealed quotation(s) to the following address:

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