

Physics Department
Indian Institute of Technology Delhi

Notice inviting quotations

Dt: 16-12-2013

Ref: PHYS/FIST/02

Sub: Purchase of **PL/Raman imaging and laser ablation /writing setup and accessories**

Please send your quotation for purchase of above said item(s) as per specifications given below. Your quotations should reach latest by **5 PM on 13-01-2014**. Quotations are solicited only for items manufactured by reputed company with proven past record of sales, supply and after-sale service.

<p>1. <u>High-resolution confocal microscope</u>, inverted open system for Raman/PL spectral imaging (fully automated system)</p> <ul style="list-style-type: none"> - with laser port attachment; Revolving nose piece for 5 objectives - Rectangular mechanical stage; - Plano-achromatic visible/UV objectives 10x (NA=0.25), 50x (NA=0.75) and 100x (NA=0.9)); 10X/20X NIR objective (for NIR laser); - High resolution (color) camera, - XYZ computer controlled motorised stage with min. of 0.5 micron (for mapping and depth profile). Joystick and software controlled. Removable bottom frame for further expansion. - Reflection/transmission modes, polariser/analyser attachments. Internal whitelight illuminator - Entrance optics laser coupling assembly : includes all optics, ND filter wheel (computer controlled), interference filters and laser line rejection filters (notch or edge) suitable for all the lasers given below - 800mm focal length monochromator: 6000 and 1800 grv/mm gratings with CT type Turner (computer controlled); spectral range 200~1100nm. Spectral resolution: 0.35cm^{-1} (or better) at 633nm for 1800 grv/mm grating. Two exits for detectors are to be provided. Interface : USB/RS232 (with all required softwares and cables). - Confocal coupling optics for coupling light from microscope to spectrometer. - CCD detector: air cooled ($<-70^{\circ}\text{C}$), 200-1100nm; dark noise $<0.002\text{e}^{-}/\text{pixel}/\text{sec}$; $26\times 26\mu\text{m}$ pixel sizes or better, $\text{QY}>30\%$, USB/RS232 interface - Low power laser attachments: 405nm ($>40\text{mW}$) diode laser, 532 nm(DPSS laser); 632.8nm (He-Ne, $>10\text{mW}$) and 786nm (Intra cavity laser diode, $>100\text{mW}$). All the lasers must have appropriate optics and coupled via laser port attachment (with power measuring facility) for both PL and Raman measurements. - A fully computer controlled systems (data acquisition, manipulation, incl. Raman and PL mapping) with all relevant softwares, manuals, cables are to be supplied. 	– 01 Qty
<p>2. <u>High Energy Q-Switched Nd:YAG laser</u>,</p> <ul style="list-style-type: none"> - 2J @ 1064 nm, 10 Hz, Variable Rep Rate $> 1-10$ Hz or better; Pulse width: 8-12 ns. - -Beam diameter < 10 mm dia and divergence < 0.5 m rad, 	01 qty

<ul style="list-style-type: none"> - Stability <50μrad.; - Appropriate frequency conversion optics for output of 1064,532,355 and 266nm (temperature stabilised). - Energy levels 1J@532nm,@500mJ@355nm, ~150mJ@266nm (or better). All required dichroic beam splitters for the above are to be included . - Tap water-free cooling system to be included. - Fully computer controlled. USB/RS232 - Appropriate beam dump(s) has to be provided. - All necessary accessories such as cables, software, manuals, IR/UV cards, tool kits, spares are to be supplied 	
<p>Note: IIT Delhi is a non-profitable educational institute involved in research & teaching. It is expected that special educational discount would be offered and the same be specifically mentioned in the quotation.</p>	

TERMS & CONDITIONS COVERING SUBMISSION OF QUOTATIONS

Technical requirements

- a. One year comprehensive on-site warranty is necessary.
- b. All items are to be in **metric scale** only.
- c. Please include s statement of compliance (as per the NIQ specifications)
- d. The quotation must contain the following details, otherwise quotation cannot be considered.
 - i. The quote must contain at least one of the aforementioned items (1 and/or 2) in **full**.
 - ii. The **technical** bid **must** contain all the required specifications, drawings, graphs of response, transmission/reflection/response spectra of components if any) etc.
 - iii. Along with the technical bid, please enclose support documents related to previous sale of the above items(s) within India.
 - iv. If the items are of proprietary nature, please provide proprietary certificate from the manufacturer.
 - v. All INDIAN agents must provide agency certificate, IEC and central sales tax certificate.

2. DELIVERY:

The rates quoted must be for FOB

3. TERMS OF PAYMENT:

100% post-payment (wire transfer/LC) on delivery and satisfactory installation

4. INSTITUTE'S RIGHTS :

IIT Delhi reserves the rights of acceptance or rejection of any or all quotations.

5. VALIDITY OF QUOTATIONS:

Quotations should be valid at least for a period of 3 months.

6. SUBMISSION OF QUOTATIONS: Both Technical and price bids are to be quoted separately in separate sealed covers. Both these bids should be sent in a sealed cover marked at the top SUBJECT AND DUE DATE

13-01-2014 by 5PM

Quotations should be sent, on or before due date to:

**Prof. Anurag Sharma, Professor
Department of Physics, IIT Delhi, Hauz Khas,
New Delhi 110 016, India.**

Prof. Anurag Sharma, Professor
Department of Physics, IIT Delhi.