

**Department of Physics  
Indian Institute of Technology Delhi**

**GLOBAL EOI NOTICE**

**Sub: Purchase of Sophisticated Ultrafast Laser Systems - Expression of Interest**

Expression of Interest (EOI) is invited from reputed and experienced international manufacturers / suppliers for following sophisticated systems/instruments in department of Physics, IIT Delhi.

**[1.] Femtosecond laser system and accessories**

**[2.] Nanosecond and CW lasers for PL/Raman/ablation /writing facility**

The eligibility requirements, technical description, scope of work and commercial terms are given at the end of this notice. The same can also be obtained from the undersigned.

Those who satisfy the eligibility criteria may submit their proposal for **each system in separate envelope** to **Prof. Anurag Sarma, Professor, Department of Physics, Indian Institute of Technology Delhi 110016.**

The last date of submitting EOI is **4.00 P.M. on 16<sup>th</sup> September 2013** superscribing on the sealed envelope with “**EOI for supply of .....** (name of the equipment) for Ultrafast Optics Facility, Department of Physics, IIT Delhi”.

Prof. Anurag Sarma  
Professor,  
Ultrafast Optics Facility , Department of Physics,  
Indian Institute of Technology Delhi 110016

**Brief technical details**

**1. Femto second laser system and accessories**

**Parts contains:**

(a) Ti-Sapphire Oscillator with pump

- Power = ~400mW-4W, Wavelength = 780-820nm, Rep. rate= ~ 80MHz Pulse width = 25 to 100fs ( necessary optics to be supplied for tuning); TEM<sub>00</sub>; linear pol
- ( chiller and other necessary arrangements to be included)
- Seed pump CW laser to be included

(b) Nd:YLF pump laser ( Q-switched) for regenerative amplifier

Wavelength = 527/532nm, Rep. rate= 1 to 10KHz, Power = >20W, diode pumped ( chiller included) , typ. Pulse width <150ns, P-P 1%, beam div=<8 rad, power spec= 220V@50Hz ( typical)

(c) Regenerative Amplifier Pumped for the above item :

- Wavelength= 800nm ( tunable upto ~100nm), Pulse Energy= >4mJ@ 1kHz, Pulse width= ~40-120fs, Rep. rate= 1 /5/10kHz, TEM<sub>00</sub>; linear pol

(d) Optical parametric oscillator using (b) as pump :

- Computer controlled, Spectral range= 240-2500nm( or above), Pulse width= 35-100fs, Pulse Energy = ~several tens of μJ per pulse; ( NLO crystals and optics included . Indicate different modules)

(e) accessories/parts – **assorted quantities, as required**

1. Autocorrelators: ~500-1000nm; 10fs-20ps ; PMT type or CCD, (computer controlled)
2. single-photon counters,

3. UV/VIS/NIR detectors,
4. miniature fiber optic spectrometer,
5. fiber spectral analyzer
6. Laser energy and power meters : digital/Analog, Energy (1 $\mu$ J to 10 J), Power ( 10nW-50W), 200nm -20 micron spectral range, with ND filters, suitable to fs, ns and CW lasers.
7. IR viewers (650-2000nm)
8. Laser safety : goggles and other necessary safety equipment

## 2. Lasers for PL/Raman/ablation /writing facility

### (a) Laser

- Ar-ion (CW) laser: 2-5W in multiline, includes chiller
- Nd-YAG nanosecond laser: upto 4<sup>th</sup> harmonic (Wavelengths= 1064, 532, 355 and 266 nm) energy upto ~2J @ 1064 nm, pulse width= 5-10ns, rep rate= 10 Hz-1KHz or more ( selectable), includes chiller
- UV/ Deep UV lasers ( Wavelength = 288nm, 325/442nm, CW, power> 100mW or above), includes all the required filters.
- Other accessories/systems required for Mirco Raman/PL, laser ablation and laser writing facility using above mentioned lasers

### **Terms and conditions:**

- 1) *The bid must contain the following details, otherwise quotation cannot be considered.*
  - a. *The bid **must** contain all the required technical specifications, such as block diagrams, technical specifications etc.,. The EOI will be accepted only from the vendor who can supply complete system at least one of the above systems.*
  - b. *The bid must contain all the support documents related to previous sale of the above items(s) within India.*
  - c. *The bid must confirm the willingness to participate in EOI discussion meeting and give full details of the technical presenter(s) details (qualification and experience etc.,). Also the bid must contain the qualification and experience details of technical expert(s), those will be involved in the installation and maintenance.*