

### N.8 : Transfer of technology from RRCAT:

The technology for the Laser Uranium Analyser developed at the Laser Biomedical Applications and Instrumentation Division, RRCAT (details available in the article T.1 in this newsletter) has been transferred to Quantalase Enterprises Private Limited, Indore. The system was developed to meet the requirement of Atomic Minerals Directorate, DAE, for measuring the concentration of uranyl salts in ground water, for uranium exploration. These measurements are used for locating ground uranium deposits. The instrument can measure uranium concentration down to 1 ppb. It can also be used for effluent monitoring and environmental survey applications. The excitation source used is a compact sealed-off nitrogen laser, also developed in-house. A few of these systems were field tested by supplying them to the end users in various units of DAE. After successful field trials, the technology for the Laser Uranium Analyser has now been transferred to the industry for commercial production.

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### N.9 : Awards and Prizes won by RRCAT scientists during July 2006 to Dec. 2006



Shri A. K. Sharma of Laser Plasma Division won the “Best Thesis Award” for 2006 given by the Indian Laser Association (I.L.A.)\_ for his Ph.D. thesis entitled “Development and characterization of a Table Top Terawatt Nd:glass laser system and ultrashort pulse diagnostics”. This award carries a cash prize of Rs. 2,500 and a certificate. The thesis work was carried out under the supervision of Dr. P.D. Gupta, Head, Laser Plasma Division.



Shri P. K. Mukhopadhyay of Solid State Laser Division also won the “Best Thesis Award” for 2006 given by the I. L. A. for his Ph.D. thesis entitled “Development and characterization of diode-pumped solid-state lasers”. The thesis work was carried out under the supervision of Dr. P. K. Gupta, Head, Bio-Medical Applications Section and Head, Laser Materials &

Device Development Division. The award carries a cash prize of Rs. 2,500 and a certificate.

Following papers from RRCAT presented in NLS-06 have bagged the “Best Poster Award” for 2006 given by I. L. A..

1. “Performance of high power transverse flow CO<sub>2</sub> laser with a Super-Gaussian graded phase mirror resonator” by Biswas A.K., Ramagopal S.V., Kumar S., Bhagat M.S., Premsingh C.H. and Nath A.K.
2. “Laser surface melting of AISI 304 stainless steel for enhanced intergranular corrosion resistance” by Mahajan S., Ganesh P., Adhe K.N., Kaul R., Kain V., Prasad R.C. and Nath A.K.
3. “On the origin of dual band emission from UV exposed TPD solution” by Joshi M.P., Rajmohan S., Jain B., Dhami T.S. and Tiwari S.K.

Each of these three awards carries a cash prize of Rs. 1,500 and a certificate.

A paper entitled “Enhancement and extinction of single harmonic intensity of high order harmonics” by H. Singhal, V. Arora, P.A. Naik, U.Chakravarty, J.A. Chakera, M. Raghuramaiah, S.R. Kumbhare, R.A. Khan, P.D.Gupta, and R.A. Ganeev, presented in the “21<sup>st</sup> National Symposium on Plasma Science and Technology” held at Malaviya National Institute of Technology, Jaipur, during December 19 - 22, 2006, bagged the “Best Poster Award” given by the Plasma Science Society of India. This award carries a cash prize of Rs. 5,000 and a certificate.

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### Retirements during July 2006 to June 2007

Following staff members retired from service due to superannuation / VRS during the above period.

1. Shri MG. Karmarkar, (SO/H)
2. Shri AG. Bhujle, (SO/H)
3. Shri M.V. Devrajan, (TM/F)
4. Shri E.A. Gopinathan, (Stores Officer)
5. Shri D.S. Rao, (CAO)
6. Dr. R.V. Nandedkar, (SO/H)
7. Dr. A.K. Nath, (SO/H)
8. Shri U. Nundy, (SO/H)
9. Dr. P. Choudhary, (SO/G)

RRCAT is highly indebted to them for the service given by them for the Centre.