



Name: Manish Tak

Qualification:

M.Tech. – in Laser
Science and Applications
(2004) from Devi Ahilya
University, Indore (MP)
M.Sc. – Physics (2002),

- Jay Narayan Vyas University, Jodhpur (Rajasthan)

Designation: Scientist ‘C’

Contact Information:

Center for Laser Processing of Materials (CLPM)

Off. : +91 - 040 – 2445 2450

Fax: +91 - 040 - 2444 2699

Email: manish@arci.res.in

Experience:

- Center for Laser Processing of Materials at ARCI – Hyderabad from Dec -2006 to till date
 - Laser surface hardening, laser surface melting, Laser cladding / material deposition, Refurbishment of critical components/parts like automotive components etc.

Research Areas of Interest:

- Laser surface engineering for enhanced surface properties
- Component forming by laser material deposition
- Laser refurbishment/repair techniques

List of Patents:

- “Improved method of manufacturing copper-indium-gallium diselenide thin films by laser treatment” by Sanjay Dhage, Manish Tak and S V Joshi, 2084/DEL/2012 dated 05/07/2012
- “A novel laser surface modification technique for hardening steels” by Manish Tak, S M Shariff and G Padmanabham, 337/DEL/2013, 06/02/2013

List of Publications and Conference Proceedings:

- “A novel method of pulsed laser cladding for effective control of melting of WC particulates in NiCr-WC composite coatings” Manish Tak, SM Shariff, Vikram Sake, G Padmanabham, Proceedings of 31st International Congress of Laser & Electro optic (ICALEO), p515-523, 2012
- “Process parameter impact on microstructure of laser cladded In-Cr₃C₂ layers” L Venkatesh, Manish Tak, I Samajdar, Ravi Chandra, S V Joshi, 16th International conference on Textures of Materials, (ICOTOM 16), Material Science Forum, 702-703, 2012, p963-964
- Effect of heat treatment on microstructure and properties of laser cladded H13 tool steel layer on H13 tool steel, Gururaj T, Dutta Majumdar J., Manish Tak, G. Padmanabham, Manna. I, ASMP -2012, IIT – Chennai, India.
- “Laser surface hardening of crankshaft”, Proceedings of SAE India Mobility Engineering Congress and Exposition 2009, Chennai, SAE-2009-28-0053,2009
- “Characteristics and erosive wear performance of Ni-Cr based coatings on SS-310 steel by diode laser cladding and weld-overlay processes”, Proceeding of International conference on Surface Modification Technologies (SMT-23), Chennai 2009.
- “Laser surface treatment of automotive piston rings”, Proceedings of International Conference on Automotive Materials and Manufacturing 2010, Pune, p 01-03, 2010

- Effect of surface peak temperature on laser surface hardening behavior of cast iron”, International conference on Surface Modification Technologies (SMT-23), Chennai 2009
- Photodissociation of isomeric dichloroethylenes in the ultraviolet: Effect of the second chlorine atom substitution on the dynamics, Manabendra Chandra, Dulal Senapati, Manish Tak, Puspendu K. Das, Chemical Physics Letters, Vol. 430, Issue 1-3, pp. 32-35
- Quantum yield of Cl* ($2P_{1/2}$) production in the gas phase photolysis of CCl₄ in the ultraviolet, Manish Tak, Manabendra Chandra, Dulal senapati and P K Das, J. Chem. Sci., Vol. 118, No. 4, July 2006, pp. 341–344