

Faculty Profile

Name: Dr. Ch. Leela

Designation: Assistant Professor

Teaching areas: Optics, thermodynamics, mechanics, electro-magnetic theory, measurement techniques, fluid mechanics, fiber optics, research methodology, laser physics, microprocessors and numerical methods.



Research interests: Experimental: Laser matter interaction, imaging of laser induced shock waves from materials, time and spatially resolved spectral studies, laser ablation propulsion, filamentation, acoustic and radiofrequency detection of shock waves.

Education: Ph.D. Physics, University Of Hyderabad, India, 2015.

M.Sc. Physics, Jawaharlal Nehru Technological University, Hyderabad, India, 2006.

B.Sc. Physics, Osmania University College for Women, Hyderabad, India 2004.

Professional experience: 6 years 5 months

1. Assistant Professor (Physics) (July 2016-Present), Faculty of Science and Technology, ICFAI-IFHE, Hyderabad, Telangana, India.
2. Teaching Assistant (Physics) (August 2015-May 2016), Mahindra École Centrale College of Engineering (In collaboration with École Centrale, Paris (now Centrale Supélec) and affiliated to JNTU, Hyderabad, Telangana, India.
3. Post Doctoral Fellow (November 2014-November 2015), University Of Hyderabad, Hyderabad, Telangana, India.
4. Project Fellow (June 2007-June 2009), Advanced Centre of Research in High Energy Materials, Hyderabad, Telangana, India.
5. Assistant Professor (Physics) (October 2006-May 2007), Younis Sultan College of Engineering, Hyderabad, Telangana, India.

Research/Selected Publications:

1. S. Sai Shiva, **Ch. Leela**, P. Prem Kiran, C. D. Sijoy, V. R. Ikkurthi and S Chaturvedi, "Numerical investigation of nanosecond laser induced plasma and shock wave dynamics from air using 2D hydrodynamic code," **Physics Of Plasmas**, Vol. 24, 083110 (2017).
2. E. Manikanta, L. Vinoth Kumar, **Ch. Leela** and P. Prem Kiran, "Effect of laser intensity on temporal and spectral features of laser generated acoustic shock waves: ns versus ps laser pulses," **Applied Optics**, Vol. 56, No.24 (2017).
3. S. Sai Shiva, **Ch. Leela**, P. Prem Kiran, C. D. Sijoy and Shashank Chaturvedi "The effects of electron thermal radiation on laser ablative shock waves from aluminum plasma into ambient air," **Physics Of Plasmas**, Vol. 23, 053107 (2016).
4. E. Manikanta, L. Vinoth Kumar, P. Venkateswarlu, **Ch. Leela** and P. Prem Kiran, "Effect of pulse duration on the acoustic frequency emissions during laser induced breakdown of atmospheric air," **Applied Optics**, Vol. 55, No. 3 (2016).
5. **Ch. Leela**, P. Venkateswarlu, Raja V. Singh, Pankaj Verma and P. Prem Kiran, "Spatio-temporal dynamics behind the shock front from compacted nanopowders," **Optics Express**, Vol.22, No. S2 (2014).
6. L. Vinoth Kumar, E. Manikanta, **Ch. Leela** and P. Prem Kiran, "RF emissions from laser breakdown of target materials radio frequency emissions from laser induced breakdown of target materials," **Appl. Phys. Lett.** 105, 064102 (2014).
7. **Ch. Leela**, S. Bagchi, V. R. Kumar, S.P. Tewari, and P. P. Kiran, "Dynamics of laser induced micro-shock waves and hot core plasma in quiescent air," **Laser and Particle Beams**, 31, 263 (2013).