



The Laser Spectroscopy Laboratory (LSL) is a pillar of the research and teaching infrastructure of the Department of Chemistry at UCI. Its vision is to act as a nexus of research and education of light-matter interrogations by providing the necessary expertise, modern methods, and seeding intramural and extramural collaborations. Its mission encompasses all aspects of light-matter interactions in time, frequency, and spatial domains, executed through linear and nonlinear optics, spectroscopy, and microscopy with time resolution ranging from ultrafast (femtoseconds) to continuous wave, at frequencies ranging from the THz to the extreme ultraviolet (XUV). The LSL has a long history of collaborations with groups and research units on the UCI campus, across UC campuses, with other universities and national labs across the country and around the world, along with collaborative activities with local and international industry partners. The development of the LSL infrastructure and its maintenance is spearheaded by its Director, through funds obtained from state, federal and private sources.

As a dedicated research infrastructure within the Department of Chemistry, the priorities of the LSL is to provide education and advanced research services to the Department of Chemistry in linear and nonlinear optics, spectroscopy and microscopy. The primary focus of the LSL and its Director are as follows:

1. Initiate original and collaborative research with Department Faculty.
2. Strategic planning of laboratory development along with the research community's needs.
3. Spearhead and lead major funding opportunities from federal and private agencies.
4. Collaborate and establish synergetic projects with the research community broadly, within and outside the UC system, with universities and research centers.
5. Provide educational support to students and researchers of the Department of Chemistry.
6. Provide basic instrumentation training to Department of Chemistry students and researchers.
7. Mentor and supervise graduate and undergraduate students, and postdoctoral scholars whose research interests are within the field of linear and nonlinear optical spectroscopy and microscopy.
8. Manage laboratory budget and finances.
9. Project, justify and implement laboratory recharge structure.
10. Maintain equipment.

Access policies:

1. LSL is a research infrastructure within the Department of Chemistry.
2. Extra-Departmental users are welcome, as long as resources permit and do not interfere with on-going research projects and educational activities within the LSL. Interested users are encouraged to contact the Director to discuss experiments, access possibilities and potential collaborations.
3. The LSL is maintained through research grants and industry collaborations spearheaded by its Director. To maintain its broad operability, access to the LSL is limited to two members per research group (Linear Lab) and one member (Microscopy Lab).
4. All users are required to attend a training session(s) with the Director or his designate. Depending on the type of instrument and skill level of the trainee, the duration of the training session may vary between 1 and several hours. The current training fee is \$55/hour. If a certified user does not use a given instrument for more than one year, at the discretion of the Director, they may be required to attend a refresher training session.
5. Currently, training and independent access is provided only for instruments in the Linear Lab (except Multi-Angle Light Scattering setup) and standard microscopy setups within the Microscopy Lab.
6. All advanced nonlinear optical experiments in Microscopy and Ultrafast Labs are conducted together with LSL researchers and its Director, in conventional scientific collaboration spirit.

Access logistics:

For the Linear Lab and part of the Microscopy Lab, reservations are made through the online reservation system. Slots can be reserved, with a minimum of 1 hour of use, subject to user fees.

Oversight: A committee of three faculty members from the Department of Chemistry provides oversight for the LSL. The Oversight Committee is tasked with writing an annual report that evaluates the LSL, its usage and user satisfaction (including interviews), and financial health of the LSL. The Oversight Committee may give feedback and recommendations to the Director. Its report is submitted to the Vice Chair of Chemistry for Infrastructure and Facilities for further action, including a meeting with the Director to discuss the findings in the report.