

## IN BRIEF

This volume of the LLE Review, covering the period January–March 1988, contains articles on the spectra of scattered laser radiation from laser-produced plasmas and on the bounce coating of ablation layers on fusion targets. The advanced technology section has reports on a novel technique for characterizing surface breakdown on semiconductor devices and on a versatile alexandrite regenerative amplifier. Finally, the activities of the National Laser Users Facility and the GDL and OMEGA laser facilities are summarized.

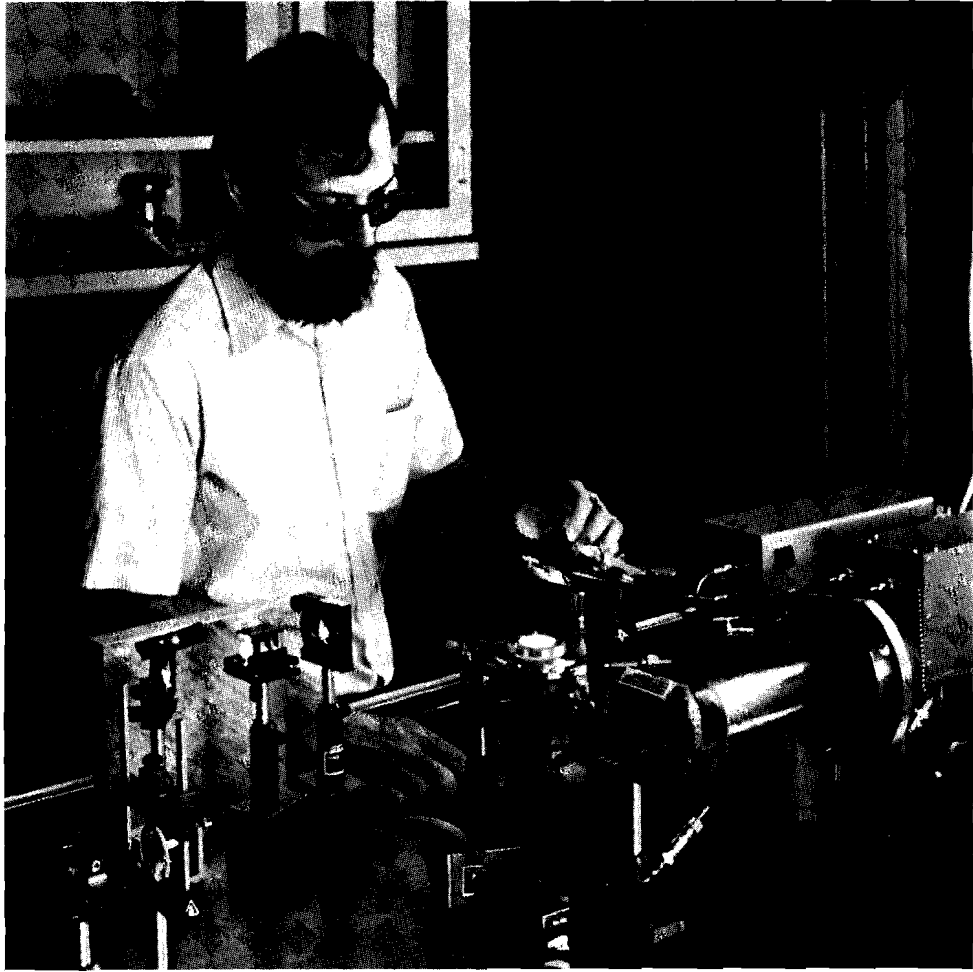
The highlights of this issue are

- A systematic study of the scattered-light spectrum from a laser-produced plasma has observed features both above and below  $3\omega_0/2$ , as well as between the laser frequency ( $\omega_0$ ) and its half-harmonic. All of these features can be self-consistently interpreted in terms of enhanced Thomson scattering.
- A careful parameter study has optimized the process control parameters in the plasma-assisted bounce coating of parylene ablation layers on fusion targets. The high tensile strength coatings obtained with this technique allow high fuel pressures in polymer shell targets.
- An electro-optic crystal placed in the fringing fields above a semiconductor device was probed with a large-area, short optical pulse. The modulated optical pulse was imaged onto a detector array to produce a map of the surface fields and information about semiconductor surface breakdown.

- A tunable alexandrite regenerative amplifier has been used to amplify pulses from such diverse sources as a picosecond gain-switched laser diode, a synch-pumped femtosecond dye laser, and the nanosecond-sliced output of a cw dye laser, while retaining the temporal and spectral characteristics of each source.

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William Donaldson, a scientist in the Ultrafast Science Division, adjusts the optical alignment of the surface electric field imaging system.