

PUBLICATIONS AND CONFERENCE PRESENTATIONS

Publications

M. C. Lee, I. Feng, T. G. Wang, and H. Kim, "A Technique for Thick Polymer Coating of Inertial-Confinement-Fusion Targets," *J. Vac. Sci. Technol.* **1**, 886-889 (1983).

B. A. Brinker, J. M. Cavese, J. R. Miller, S. G. Noyes, S. Sheble, and L. T. Whitaker, "Inertial Fusion Target Mounting Methods: New Fabrication Procedures Reduce the Mounting Support Perturbation," *J. Vac. Sci. Technol.* **1**, 941-944 (1983).

D. Glocker, "Biased Magnetron Sputtering of ICF Target Pusher Layers," *J. Vac. Sci. Technol.* **1**, 877-880 (1983).

H. Kim, J. Mason, and J. R. Miller, "High-Z-Doped Laser Fusion Target Ablation Layers Using Metal Colloids and Metal-Substituted-Sulfonated Polystyrene," *J. Vac. Sci. Technol.* **1**, 890-893 (1983).

T. F. Powers and J. R. Miller, "Rotational-Shearing Interferometric Characterization of Inertial Fusion Targets," *J. Vac. Sci. Technol.* **1**, 945-948 (1983).

J. Reynolds, "Information Management Data Base for Fusion Target Fabrication Processes," *J. Vac. Sci. Technol.* **1**, 937-940 (1983).

S. Sarraf and E. A. Williams, "Ion-Ion Two-Stream Instability in Multispecies Laser-Produced Plasma," *Phys. Rev. A* **27**, 2110-2113 (1983).

G. F. Albrecht, L. Lund, and D. Smith, "Building a Simple, Reliable, Low-Cost Modelocked System," *Appl. Opt.* **22**, 1276-1280 (1983)

T. Sizer II, J. D. Kafka, I. N. Duling III, C. W. Gabel, and G. A. Mourou, "Synchronous Amplification of Subpicosecond Pulses," *IEEE J. Quantum Electron.* **QE-19**, 506-511 (1983).

Forthcoming Publications

S. Skupsky and K. Lee, "Uniformity of Energy Deposition for Laser-Driven Fusion," accepted for publication by *Journal of Applied Physics*.

B. Yaakobi, H. Kim, J. M. Soures, H. W. Deckman, and J. Dunsmuir, "Sub-Micron X-Ray Lithography Using UV-Laser-Produced Plasma as a Source," accepted for publication by *Journal of Applied Physics*.

R. W. Short and E. A. Williams, "Brillouin Scattering of Multi-Line Laser Light in a Flowing Plasma Corona," accepted for publication by *Physics of Fluids*.

A. Simon, R. W. Short, E. A. Williams, and T. Dewandre, "On the Inhomogeneous Two-Plasmon Instability," accepted for publication by *Physics of Fluids*.

W. Knox, "Interactive Programming Applied to a Jitter-Free Signal-Averaging Streak Camera," accepted for publication in the *Proceedings of the Annual Meeting of the American Chemical Society Symposium on Image Devices in Spectroscopy*.

C. Hanzlik, W. Knox, T. Nordlund, R. Hilf, and S. Gibson, "Picosecond Fluorescence of Hematoporphyrin Derivative, Its Components and Prophyryns," accepted for publication in the *Proceedings of the Clayton Symposium on Prophyrin Localization and Treatment of Tumors*.

J. A. Abate and R. Roides, "Spatially Resolved Absorption and Detection of Microscopic Impurities in Optical Thin Films by Photothermal Detection," accepted for publication in *Journal De Physique Colloques (Photoacoustique)*.

Conference Presentations

M. C. Richardson, S. Skupsky, J. Kelly, L. Iwan, R. Hutchison, R. Peck, R. McCrory, and J. Soures, "Laser Fusion Target Irradiation Uniformity with the 24-Beam OMEGA Facility," presented at the Los Alamos Conference on Optics, Los Alamos, New Mexico, April 1983.

S. L. Gibson, R. Hilf, C. A. Hanzlik, and W. Knox, "Picosecond Fluorescence of Hematoporphyrin Derivative as Separate Components in Aqueous Solution," presented at the Symposium on Prophyrin Localization and Treatment of Tumors, Santa Barbara, California, April 1983.

J. Abate and R. Roides, "Spatially Resolved Absorption and Detection of Microscopic Impurities in Optical Thin Films by Photothermal Deflection," presented at the Third International Topical Meeting on Photoacoustical and Photothermal Spectroscopy, Paris, France, April 1983.

The following presentations were made at the Annual Meeting of the Conference on Lasers and Electro-Optics, Baltimore, Maryland, May 1983:

R. L. McCrory, "Essential Physics and Technology Issues for Direct-Drive Laser Fusion" (invited talk).

G. Albrecht, M. Gruneisen, and D. Smith, "Development and Characterization of a Nd: Phosphate Glass Active Modelocked Q-Switched (AMQ) Oscillator."

W. Seka, L. M. Goldman, R. L. Keck, S. Letzring, M. C. Richardson, J. M. Soures, K. Tanaka, R. S. Craxton, J. Delettrez, E. A. Williams, R. Boni, and D. Quick, "Comparison of Coronal Plasma Parameters in IR-and UV-Laser Plasmas."

M. C. Richardson, J. M. Soures, S. Skupsky, J. Kelly, L. Iwan, and B. Flaherty, "Irradiation Uniformity of Spherical Targets with Multibeam Irradiation."

T. Boehly, L. M. Goldman, W. Seka, and R. S. Craxton, "Hydrodynamic Efficiency of Flat Targets Irradiated with 0.35- μ m Laser Light."

G. Mourou, J. Valdmans, and S. Williamson, "New Approaches to Electrical Transient Sampling Systems with Picosecond Resolution."

T. M. Nordlund, W. Knox, R. Knox, N. E. Geacinton, and J. Breton, "Intensity Dependence of Time-Resolved Chloroplast Fluorescence," presented at the Eleventh Annual Meeting of the American Society for Photobiology, Madison, Wisconsin, June 1983.

C. A. Hanzlik, T. M. Nordlund, W. Knox, S. L. Gibson, and R. Hilf, "Picosecond Fluorescence of Hematoporphyrin Derivative and Its Components in Aqueous Solution," presented at the Eleventh Annual Meeting of the American Society for Photobiology, Madison, Wisconsin, June 1983.

T. G. Dzuira and D. G. Hall, "Bistable Operation of Two Semiconductor Lasers in an External Cavity: Rate Equation Analysis," presented at the Topical Meeting on Optical Bistability, Optical Society of America, University of Rochester, Rochester, New York, June 1983:

The following presentations were made at the Thirteenth Annual Conference on Anomalous Absorption of Electromagnetic Waves, Banff, Alberta, Canada, June 1983.

R. S. Craxton and R. L. McCrory, "Hydrodynamic Calculations of Thermal Self-Focusing in Laser Plasmas."

J. Delettrez, S. Skupsky, D. Shvarts, and R. L. McCrory, "Simulation of Transport Experiments at LLE Using Non-Local Electron Transport Models."

R. Epstein, S. Skupsky, and B. Yaakobi, "Spectral Signatures of Non-Maxwellian and Non-LTE Effects in Thermal Transport Experiments."

S. Skupsky and J. Delettrez, "The Effect of Thermal Flux Saturation on Lateral Heat Transport-A Multi-Group Analysis."

A. Simon, R. W. Short, E. A. Williams, and T. Dewandre, "On the Inhomogeneous Two-Plasmon Instability."

R. W. Short and E. A. Williams, "The Two-Plasmon Instability in a Filament."

E. A. Williams and R. Short, "The Convective Raman Instability."

M. Strauss, G. Hazak, D. Shvarts, and R. S. Craxton, "Magnetic Field Effects on Electron Heat Transport in Laser-Produced Plasmas," presented at CECAM Workshop Proceedings, Orsay, France, October 1982.

B. P. Wittmershaus, T. M. Nordlund, W. H. Knox, R. S. Knox, N. E. Geacintov, and J. Breton, "Intensity Dependence of Time-Resolved Chloroplast Fluorescence," presented at the Eleventh Annual Meeting of the American Society for Photobiology, Madison, Wisconsin, June 1983.

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