
PUBLICATIONS AND CONFERENCE PRESENTATIONS

Publications

- S. Alexandrou, C.-C. Wang, T. Y. Hsiang, M. Y. Liu, and S. Y. Chou, "A 75-GHz Silicon Metal-Semiconductor-Metal Schottky Photodiode," *Appl. Phys. Lett.* **62**, 2507 (1993).
- J. J. Armstrong and T. J. Kessler, "Large-Aperture High-Efficiency Holographic Gratings for High-Power Laser Systems," in *Laser Coherence Control: Technology and Applications*, edited by H. T. Powell and T. J. Kessler (SPIE, Bellingham, WA, 1993), Vol. 1870, pp. 47–52.
- R. Betti, R. L. McCrory, and C. P. Verdon, "Stability Analysis of Unsteady Ablation Fronts," *Phys. Rev. Lett.* **71**, 3131 (1993).
- Y.-H. Chuang, T. J. Kessler, and S. Skupsky, "Laser-Beam Pulse Shaping Using Dispersive Spectral Filtering," in *Laser Coherence Control: Technology and Applications*, edited by H. T. Powell and T. J. Kessler (SPIE, Bellingham, WA, 1993), Vol. 1870, pp. 34–46.
- R. S. Craxton, F. S. Turner, R. Hoefen, C. Darrow, E. F. Gabl, and Gar. E. Busch, "Characterization of Laser-Produced Plasma Density Profiles Using Grid Image Refractometry," *Phys. Fluids B* **5**, 4419 (1993).
- A. Denysenko, S. Alexandrou, C.-C. Wang, D. K. Bradley, W. R. Donaldson, T. Y. Hsiang, R. Sobolewski, and P. M. Bell, "Picosecond Electrical Characterization of X-Ray Microchannel-Plate Detectors Used in Diagnosing Inertial-Confinement-Fusion Experiments," *Rev. Sci. Instrum.* **64**, 3285 (1993).
- T. Gong, Y. Kostoulas, L. X. Zheng, W. Xiong, W. Kula, R. Sobolewski, and P. M. Fauchet, "Femtosecond Optical Nonlinearities in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$," in *Ultrafast Pulse Generation and Spectroscopy*, edited by T. R. Gosnell *et al.* (SPIE, Bellingham, WA, 1993), Vol. 1861, pp. 355–362.
- D. Gupta, W. R. Donaldson, and A. M. Kadin, "Fast Optically Triggered Superconducting Opening Switches," in *Optically Activated Switching III*, edited by H. T. Powell and T. J. Kessler (SPIE, Bellingham, WA, 1993), Vol. 1873, pp. 139–143.
- D. Gupta, W. R. Donaldson, and A. M. Kadin, "High-Temperature Superconducting Opening Switches," in the *Proceedings of the Fifth SDIO/ONR Pulse Power Meeting 1992* (Office of Naval Research, Arlington, VA, 1993), pp. 75–82.
- M. Kauranen, A. L. Gacta, and C. J. McKinstrie, "Transverse Instabilities of Two Intersecting Laser Beams in a Nonlinear Kerr Medium," *J. Opt. Soc. Am. B* **10**, 2298 (1993).
- J. H. Kelly, M. J. Shoup III, M. M. Tedrow, and K. Thorp, "Energy Transport in a Modern Disk Amplifier," in *Solid State Lasers III* (SPIE, Bellingham, WA, 1992), Vol. 1627, pp. 286–297.
- T. J. Kessler, Y. Lin, J. J. Armstrong, and B. Velazquez, "Phase Conversion of Lasers with Low-Loss Distributed Phase Plates," in *Laser Coherence Control: Technology and Applications*, edited by H. T. Powell and T. J. Kessler (SPIE, Bellingham, WA, 1993), Vol. 1870, pp. 95–104.
- L. E. Kingsley and W. R. Donaldson, "Numerical Analysis of Electric Field Profiles in High-Voltage GaAs Photoconductive Switches and Comparison to Experiment," *IEEE Trans. Electron Devices* **40**, 2344 (1993).
- B. S. W. Kuo and A. W. Schmid, "Effects of Thin-Film Thermal Conductivity on the Optical Damage Threshold of a-Si Film on c-Si Substrate at 1064 nm," *J. Appl. Phys.* **74**, 5159 (1993).

Y. Lin, T. J. Kessler, J. J. Armstrong, and G. N. Lawrence, "Laser System Power Balance Effects from Stimulated Rotational Raman Scattering in Air," in *Laser Coherence Control: Technology and Applications*, edited by H. T. Powell and T. J. Kessler (SPIE, Bellingham, WA, 1993), Vol. 1870, pp. 14–25.

J. C. Mastrangelo and S.-H. Chen, "New Thermotropic Chiral Nematic Polymers. 3. Copolymers Containing Cyanobiphenyl Group and (S)-(-)-1-Phenylethanol or (S)-(-)-1-Phenylethylamine," *Macromolecules* **26**, 6132 (1993).

R. L. McCrory, J. M. Soures, C. P. Verdon, T. R. Boehly, D. K. Bradley, R. S. Craxton, J. A. Delettrez, R. Epstein, R. J. Hutchison, P. A. Jaanimagi, S. D. Jacobs, J. H. Kelly, R. L. Keck, T. J. Kessler, H. Kim, J. P. Knauer, R. L. Kremens, S. A. Kumpan, S. A. Letzring, F. J. Marshall, P. W. McKenty, S. F. B. Morse, W. Seka, R. W. Short, M. D. Skeldon, S. Skupsky, and B. Yaakobi, "Direct-Drive Laser Fusion Target Physics Experiments," in *Plasma Physics and Controlled Nuclear Fusion Research*, 1992 (IAEA, Vienna, 1993), Vol. 3, pp. 31–38.

C. J. McKinstrie, X. D. Cao, and J. S. Li, "Nonlinear Detuning of Four-Wave Interactions," *J. Opt. Soc. Am. B* **10**, 1856 (1993).

E. A. Murphy, H. E. Elsayed-Ali, K. T. Park, and Y. Gao, "Temperature-Dependent X-Ray Photoelectron Diffraction of Pb(100): Experimental Results and the Single-Scattering Cluster Model," *J. Vac. Sci. Technol. A* **11**, 3106 (1993).

J. Peatross and D. D. Meyerhofer, "Novel Gas Target for Use in Laser Harmonic Generation," *Rev. Sci. Instrum.* **64**, 3066 (1993).

L. Shi and S.-H. Chen, "New Thermotropic Liquid Crystal Polymers Containing High Birefringence Cyanotolan Moiety," *Macromolecules* **26**, 5840 (1993).

M. D. Skeldon and S. T. Bui, "Temporal Pulse-Width Control of a Regenerative Amplifier with Intracavity Etalons," in *Intracavity and Extracavity Control of Laser Beam Properties*, edited by R. L. Facklam, K. H. Guenther, and S. P. Velsko (SPIE, Bellingham, WA, 1993), Vol. 1869, pp. 120–127.

S. Skupsky and T. J. Kessler, "Strategies for Ultra-High Laser Uniformity Using Zero-Correlation Phase Masks," in *Laser Coherence Control: Technology and Applications*, edited by H. T. Powell and T. J. Kessler (SPIE, Bellingham, WA, 1993), Vol. 1870, pp. 112–119.

B. Soom, H. Chen, Y. Fisher, and D. D. Meyerhofer, "Strong K_{α} Emission in Picosecond Laser-Plasma Interactions," *J. Appl. Phys.* **74**, 5372 (1993).

M. Yu, C. J. McKinstrie, and G. P. Agrawal, "Instability Due to Cross-Phase Modulation in the Normal Dispersion Regime," *Phys. Rev. E* **48**, 2178 (1993).

Forthcoming Publications

S. Alexandrou, C.-C. Wang, R. Sobolewski, and T. Y. Hsiang, "Generation of Subpicosecond Electrical Pulses by Nonuniform Illumination of GaAs Transmission Line Gaps," to be published in the *IEEE Journal of Quantum Electronics*.

J. J. Armstrong and T. J. Kessler, "Holographic Generation of High-Efficiency, Large-Aperture, Transmission Diffraction Gratings," to be published in *Applied Optics A*.

D. P. Butler, W. N. Maung, W. Xiong, W. Kula, and R. Sobolewski, "Microwave Properties of Monolithic Y-Ba-Cu-O Transmission Line Devices Fabricated by the Laser-Writing Patterning Technique," to be published in SPIE Vol. 2156: *High- T_c Microwave Superconductors and Applications*.

X. D. Cao and D. D. Meyerhofer, "Soliton Collisions in Optical Birefringent Fibers," to be published in the *Journal of the Optical Society of America B*.

Y.-H. Chuang, T. J. Kessler, S. Skupsky, and D. L. Brown, "Shaping of Nanosecond, Linearly Chirped Pulses," to be published in the *IEEE Journal of Quantum Electronics*.

J. A. Delettrez, D. K. Bradley, and C. P. Verdon, "The Roles of the Rayleigh-Taylor Instability in Laser-Driven Burnthrough Experiments," to be published in *Physics of Fluids B*.

W. R. Donaldson and L. Mu, "Effect of Illumination Uniformity on GaAs Photoconductive Switches," to be published in

the *IEEE Journal of Quantum Electronics*.

H. E. Elsayed-Ali, J. W. Herman, and E. A. Murphy, "Ultrafast Laser Superheating of Metal Surfaces," to be published in the *Materials Research Society Symposia Proceedings*.

H. E. Elsayed-Ali and T. Juhasz, "Femtosecond Time-Resolved Thermomodulation of Thin Gold Films with Different Crystal Structures," to be published in *Physical Review B*.

E. M. Epperlein, "Fokker-Planck Modeling of Electron Transport in Laser-Produced Plasmas," to be published in *Laser & Particle Beams*.

E. M. Epperlein, "Implicit and Conservative Difference Scheme for the Fokker-Planck Equation," to be published in the *Journal of Computational Physics*.

E. M. Epperlein, "Effect of Electron Collisions on Ion-Acoustic Waves and Heat Flow," to be published in *Physics of Plasmas*.

E. M. Epperlein, R. W. Short, and A. Simon, "Transport and Sound Waves in Plasmas with Light and Heavy Ions," to be published in *Physical Review E*.

E. M. Epperlein and R. W. Short, "Comments on 'Theory and Three-Dimensional Simulation of Light Filamentation in Laser-Produced Plasmas' [Phys. Fluids B 5, 2243 (1993)]" to be published in *Physics of Fluids B*.

E. M. Epperlein and R. W. Short, "Generalized Electron Fluid Equations in the Presence of Laser Irradiation," to be published in *Physical Review Letters*.

T. Gong, J. F. Young, G. W. Wicks, P. J. Kelly, and P. M. Fauchet, "Hot-Carrier Dynamics Near the Fermi Edge of N-Doped GaAs," to be published in *Semiconductor Science and Technology*.

T. Gong and P. M. Fauchet, "Carrier-Carrier Interactions in GaAs Investigated by Femtosecond Spectroscopy," to be published in the *Proceedings of SPIE's OE/LASE '93*, Los Angeles, CA, 16–23 January 1993 (invited).

D. Gupta, W. R. Donaldson, and A. M. Kadin, "A Laser-Triggered, Inductive Opening Switch Using High-Temperature Superconducting Thin Films," to be published in *Advances in Cryogenic Engineering*.

D. Gupta, "A New Optically Triggered Superconducting Opening Switch for High-Power Applications," to be published in *Research Reports of the Link Energy Fellows*.

D. Gupta, W. R. Donaldson, and A. M. Kadin, "Fast Inductively Coupled Superconducting Opening Switch Triggered by Short Laser Pulses," to be published in the *Proceedings of the 9th IEEE International Pulsed Power Conference*.

J. W. Herman, H. E. Elsayed-Ali, and E. A. Murphy, "Time-Resolved Structural Studies of the Low-Index Faces of Lead," to be published in *Physical Review B*.

S. D. Jacobs, K. L. Marshall, and A. Schmid, "Liquid Crystals for Laser Applications," to be published in the *CRC Handbook of Laser Science and Technology, Supplement 2: Optical Materials*.

A. M. Kadin, D. Gupta, D. D. Mallory, M. Takahashi, W. R. Donaldson, and J. K. Truman, "Fabrication, Properties, and Applications of *In-Situ* Sputtered YBCO Films," to be published in the *Proceedings of the 6th Annual Conference on Superconductivity and Applications*, Buffalo, NY, 15–17 September 1992.

H. Kim, J. M. Soares, and P.-C. Cheng, "Confocal Microscopic Characterization of Laser-Fusion Target," to be published in the *Proceedings of the 39th AVS National Symposium and Topical Conferences*, Chicago, IL, 9–13 November 1992.

H. Kim and M. D. Wittman, "Optical Characterization of Inertial-Fusion Targets—An Overview," to be published in *Multidimensional Microscopy*.

E. M. Korenic, S. D. Jacobs, J. K. Houghton, F. Kreuzer, and A. Schmid, "Nematic Polymer Liquid-Crystal Waveplate for High-Power Lasers at 1054 nm," to be published in *Applied Optics*.

Y. Kostoulas, T. Gong, G. W. Wicks, and P. M. Fauchet, "Femtosecond Carrier Dynamics in Low-Temperature-Grown InP," to be published in *Applied Physics Letters*.

Y. Kostoulas, T. Gong, and P. M. Fauchet, "Investigation of Carrier-Carrier Scattering by Three-Pulse Probe Spectroscopy," to be published in *Semiconductor Science and Technology*.

- W. Kula and R. Sobolewski, "Electric-Field-Effect Devices Based on Partially Oxygen-Depleted, Superconducting Y-Ba-Cu-O Thin Films," to be published in *Advances in Cryogenic Engineering*, Volume 40.
- W. Kula and R. Sobolewski, "Electric-Field Effect in Partially Deoxygenated YBCO Thin Films," to be published in *Physica B*.
- W. Kula and R. Sobolewski, "Charging Effect in Partially Oxygen-Depleted, Superconducting Y-Ba-Cu-O Thin Films," to be published in *Physical Review B*.
- Y. Lin and T. J. Kessler, "Raman Scattering: A Four-Dimensional System," to be published in *Applied Optics*.
- A. I. Lobad, S. M. Mehta, B. C. Tousley, P. J. Rodney, and P. M. Fauchet, "The Starting Mechanism in Coupled-Cavity Mode-Locked Laser Systems," to be published in the *IEEE Journal of Quantum Electronics*.
- R. S. Marjoribanks, F. W. Budnik, H. Chen, and D. D. Meyerhofer, "Plasma Electron Temperature in Picosecond Laser Plasmas from Quasi-Steady Ratio of Isoelectronic Lines," to be published in *Physical Review Letters*.
- F. J. Marshall, J. A. Delettrez, R. Epstein, and B. Yaakobi, "Diagnosis of Laser-Target Implosions by Space-Resolved Continuum Absorption X-Ray Spectroscopy," to be published in *Physical Review E*.
- R. L. McCrory, "Progress Toward Ignition with Direct Drive," to be published in *Concerning Major Systems in Science and Technology*.
- P. W. McKenty, S. Skupsky, J. H. Kelly, and C. T. Cotton, "Numerical Investigation of the Self-Focusing of Broad-Bandwidth Laser Light with Applied Angular Dispersion," to be published in the *Journal of Applied Physics*.
- D. D. Meyerhofer and J. Peatross, "Angular Distributions of High-Order Harmonics," to be published in *SILAP (Super-Intense Laser Atom Physics)*.
- L. Mu and W. R. Donaldson, "Simulating Photoconductive Switches in a Microwave Transmission Line," to be published in the *Proceedings of the 9th IEEE International Pulsed Power Conference*, Albuquerque, NM, 21–23 June 1993.
- S. Papernov and A. W. Schmid, "Atomic Force Microscopy Studies of Laser-Triggered Morphology Changes in Y_2O_3 Monolayer Coatings," to be published in *SPIE's Proceedings of the Annual Symposium on Optical Materials for High Power Lasers*.
- S. Papernov and A. W. Schmid, "Atomic Force Microscopy Observations of Water-Induced Morphological Changes in Y_2O_3 Monolayer Coatings," to be published in *SPIE's Proceedings of the Annual Symposium on Optical Materials for High Power Lasers*.
- J. Z. Roach, A. Ninkov, S. W. Swales, and T. Morris, "Design and Evaluation of a Screen CCD Imaging System," to be published in *Optical Engineering*.
- J. K. Samarabandu, R. Acharya, C. D. Edirisinghe, P. C. Cheng, H. Kim, T. H. Lin, R. G. Summers, and C. E. Musial, "Analysis of Multi-Dimensional Confocal Images," to be published in the *Proceedings of the SPIE Symposium "Biomedical Imaging"*, San Diego, CA, 24 February 1991.
- A. W. Schmid, K. L. Marshall, and S. D. Jacobs, "Comment to 'Ultraviolet Filters Using Liquid Crystal Molecules' [J. Appl. Phys. **74**, 4867 (1993)]," to be published in the *Journal of Applied Physics*.
- L. Shi, T. Gong, W. Xiong, X. Weng, Y. Kostoulas, R. Sobolewski, and P. M. Fauchet, "Femtosecond Reflectivity of 60-K Y-Ba-Cu-O Thin Films," to be published in *Applied Physics Letters*.
- H. Shi and S.-H. Chen, "Novel Glassy Nematic and Chiral Nematic Oligomers Derived from 1,3,5-Cyclohexanetricarboxylic and (1R,3S)-(+)-Camphoric Acids," to be published in *Liquid Crystals*.
- S. Skupsky and T. J. Kessler, "A Speckle-Free Phase Plate (Diffuser) for Far-Field Applications," to be published in the *Journal of Applied Physics*.
- R. Sobolewski, W. Xiong, W. Kula, and J. R. Gavalier, "Laser Patterning of Y-Ba-Cu-O Thin-Film Devices and Circuits," to be published in *Applied Physics Letters*.
- R. Sobolewski, W. Xiong, W. Kula, and B. McIntyre, "Electrical and Structural Properties of the YBCO Superconducting-Semiconducting Interface," to be published in *Physica B*.

B. Soom, H. Chen, Y. Fisher, and D. D. Meyerhofer, "Strong K_{α} Emission in Picosecond Laser-Plasma Interactions," to be published in *OSA's Proceedings of Shortwavelength V: Physics with Intense Laser Pulses* ('93).

J. M. Soares, "The OMEGA Upgrade Laser Facility for Direct-Drive Experiments," to be published in the *Proceedings of the Fusion Power Associates Annual Meeting and Symposium*, Princeton, NJ, 25-26 June 1991, and in the *Journal of Fusion Energy*.

C. J. Twomey, S. H. Chen, T. Blanton, A. W. Schmid, and K. L. Marshall, "Solid Polymers Doped with Rare Earth Metal Salts. II. Thermal Behavior and Morphology of the Neodymium Acetate-Poly(ethylene oxide) System," to be published in the *Journal of Polymer Science, Polymer Physics Edition*.

C. J. Twomey, S.-H. Chen, T. Blanton, A. W. Schmid, and K. L. Marshall, "Solid Polymers Doped with Rare Earth Metal Compounds. III. Formation and Stability of Macromolecular Complexes Comprising Neodymium Nitrate and Dipivaloylmethane in Poly(Ethylene Oxide)," to be published in the *Journal of Polymer Science, Polymer Physics Edition*.

C. J. Twomey, S.-H. Chen, T. N. Blanton, A. W. Schmid, and K. L. Marshall, "Stoichiometry and Morphology in Terbium Nitrate-Poly (Ethylene Oxide) Macromolecular Complex," to be published in the *Journal of Polymer Science, Polymer Physics Edition*.

C. J. Twomey, S.-H. Chen, T. N. Blanton, P. W. Schmid, and K. L. Marshall, "Poly[(Methylene Oxide)Oligo(Ethylene Oxide)]vs Poly(Ethylene Oxide) as Hosts for Neodymium Compounds," to be published in the *Journal of Polymer Science, Polymer Physics Edition*.

C.-C. Wang, S. Alexandrou, and T. Y. Hsiang, "Picosecond Metal-Semiconductor-Metal and Silicon-on-Sapphire Photodiodes," to be published in *Applied Physics Letters*.

M. D. Wittman, R. Q. Gram, H. Kim, C. K. Immesoete, S. G. Noyes, and S. Scarantino, "Increased Retention Time for Hydrogen and Other Gases by Polymer Shells Using Optically Transparent Aluminum Layers," to be published in the *Journal of Vacuum Science and Technology*.

W. Xiong, W. Kula, and R. Sobolewski, "Fabrication of High Superconducting Electronic Devices Using the Laser-Writing Patterning Technique," to be published in *Advances in Cryogenic Engineering*, Volume 40.

W. Xiong, W. Kula, R. Sobolewski, W. N. Maung, and D. P. Butler, "Monolithic Y-Ba-Cu-O Electronic Devices Fabricated Using the Laser-Writing Patterning Technique," to be published in *Superconductor Science and Technology*.

B. Yaakobi, Q. Su, and F. J. Marshall, "Monochromatic Backlighting in Laser-Fusion Experiments," to be published in the *Journal of X-Ray Science and Technology*.

B. Yaakobi, F. J. Marshall, R. Epstein, and Q. Su, "New Diagnostic Features in the Laser Impositions of Argon-Filled Targets," to be published in *Optics Communications*.

L. Zheng and D. D. Meyerhofer, "A Linear Cross-Correlation Technique for Single-Shot Measurements of Weak Light Pulses," to be published in *Optics Letters*.

X. Zhou, S. Alexandrou, and T. Y. Hsiang, "Monte Carlo Investigation of the Mechanism of Subpicosecond Pulse Generation by Nonuniform Gap Illumination," to be published in *Applied Physics Letters*.

Conference Presentations

The following presentations were made at the 1993 OSA Annual Meeting, Toronto, Canada, 3–8 October 1993:

J. J. Armstrong and T. J. Kessler, "Holographic Diffractive Optics for Use in High-Peak-Power Laser Systems."

D. L. Brown, I. Will, R. G. Roides, C. K. Merle, M. D. Skeldon, and W. Seka, "Regenerative Amplifier with Negative Feedback for Enhanced Amplitude Stability and External Synchronizability."

D. Fried, J. D. B. Featherstone, W. Seka, R. Glena, and B. Bordyn, "Light Scattering in Dental Hard Tissues."

C. Kellogg, K. Kubath, A. Maltsev, and T. J. Kessler, "The Fabrication and Testing of a High-Damage-Threshold, UV Transmissive, Lens Array Telescope."

J. H. Kelly, K. A. Thorp, R. L. Keck, M. D. Tracy, C. Cotton, R. G. Roides, C. K. Merle, M. M. Tedrow, B. Staat, and I. Will, "Design and Performance of a Flexible, kJ-Class Frequency-Converted, Single-Beam Nd:Glass Laser."

Y. Lin, T. J. Kessler, and G. Lawrence, "Optical-Phase-Plate Design and Modeling for Laser Fusion."

J. Peatross and D. D. Meyerhofer, "Observation of Intensity-Dependent Phase of Atomic High-Harmonic Emission in the Far-Field Angular Distribution."

W. Seka, I. Will, J. Chow, D. L. Brown, M. D. Skeldon, C. K. Merle, R. G. Roides, and W. Ragg, "Highly Reliable, Stable, and Synchronizable Long-Pulse Mono-Mode Oscillator for Laser-Fusion Drivers."

M. D. Skeldon, "Transverse Modulational Instabilities in the Presence of Stimulated Rotational Raman Scattering with a High-Power Laser."

R. Stewart, S. Bui, and T. J. Kessler, "Spectral Masks for Optical Pulse Shaping of Lasers in Fusion."

M. D. Tracy, I. Will, C. K. Merle, R. G. Roides, K. Thorp, M. D. Skeldon, J. H. Kelly, and W. Seka, "Versatile Front-End Laser System for Laser-Fusion Drivers."

J. D. Zuegel and W. Seka, "Direct Measurements of Gain-Saturation Phenomena in Nd:YLF," ILS IX (1993), Toronto, Canada, 3–8 October 1993.

S. A. Letzring, "Design of a 60-kJ, 60-Beam Upgrade to the OMEGA Laser at the Laboratory for Laser Energetics, University of Rochester," 15th Symposium on Fusion Engineering, Hyannis, MA, 11–15 October 1993

T. E. Fortner and M. J. Shoup III, "Cooling Flow Management System for the OMEGA Laser System," Sensors Expo, Philadelphia, PA, 26–28 October 1993.

The following presentations were made at the XXV Boulder Damage Symposium on Optical Materials for High Power Lasers, Boulder, CO, 27–29 October 1993:

S. Papernov and A. W. Schmid, "Atomic Force Microscopy Studies of Laser-Triggered Morphology Changes in Y_2O_3 Monolayer Coatings."

S. Papernov and A. W. Schmid, "Atomic Force Microscopy Observations of Water-Induced Morphological Changes in Y_2O_3 Monolayer Coatings."

The following presentations were made at the 35th Annual Meeting of the American Physical Society, Division of Plasma Physics, St. Louis, MO, 1–5 November 1993:

R. Betti, R. L. McCrory, and C. P. Verdon, "Linear Growth Rates of the Ablative Rayleigh-Taylor Instability."

R. Betti and J. P. Freidberg, "Stability of the $m = 1$ Internal Kink in Ignited Plasmas."

T. R. Boehly, R. S. Craxton, R. J. Hutchison, J. H. Kelly, T. J. Kessler, S. A. Kumpan, S. A. Letzring, R. L. McCrory, S. F. B. Morse, W. Seka, S. Skupsky, J. M. Soures, and C. P. Verdon, "Progress on the Upgrade to the OMEGA Laser System."

D. K. Bradley, J. A. Delettretz, P. A. Jaanimagi, S. Skupsky, and C. P. Verdon, "Measurements of the Effects of Pulse Shaping on Rayleigh-Taylor Growth in Burnthrough Targets."

- A. V. Chirokikh, W. Seka, R. S. Craxton, R. E. Bahr, A. Simon, R. W. Short, E. M. Epperlein, H. Baldis, and R. P. Drake, "Stimulated Brillouin Scattering at 1.053 μm in OMEGA Long-Scale-Length Interaction Experiments."
- R. S. Craxton, T. Afshar-Rad, M. Dunne, and O. Willi, "Numerical Modeling of a Thermal Smoothing Experiment."
- G. Cripps, M. A. Russotto, C. P. Verdon, S. Skupsky, and R. L. Kremens, "Simulation of Laser-Fusion Activation Diagnostics."
- J. A. Delettrez, G. Bonnaud, P. Audebert, J. P. Geindre, and J. C. Gauthier, "PIC Code Simulations of the Interaction of 100-fs Gaussian Laser Pulses with Targets of Varying Scale Lengths."
- E. M. Epperlein, "Implicit-Conservative Fokker-Planck Simulations of Heat Flowing Laser Fusion."
- R. Epstein, S. Skupsky, and C. P. Verdon, "Smoothing of Laser Irradiation of Spherical ICF Targets Using a Pre-Formed Refracting Atmosphere Containing Small Inhomogeneities."
- Y. Fisher, B. Soom, and D. D. Meyerhofer, "Ion Emission from High-Contrast, Picosecond, Laser-Plasma Interactions."
- R. E. Giacone, C. J. McKinstrie, and R. Betti, "Angular Dependence of SBS in Homogeneous Plasma."
- J. P. Knauer, C. P. Verdon, T. J. Kessler, S. Skupsky, R. L. McCrory, J. M. Soures, S. G. Glendinning, S. V. Weber, R. J. Wallace, S. N. Dixit, M. A. Henesian, J. D. Kilkenny, and H. T. Powell, "Stabilization of the Rayleigh-Taylor Unstable Ablation Interface with Trace Amounts of Chlorine."
- J. S. Li, C. J. McKinstrie, and C. Joshi, "Thermal Filamentation of Counterpropagating Light Waves."
- C. J. McKinstrie, J. S. Li, and C. Joshi, "Sideward SBS of Counterpropagating Light Waves."
- D. D. Meyerhofer, H. Chen, J. A. Delettrez, E. M. Epperlein, Y. Fisher, and B. Soom, "Thermal Heat Front Penetration in Picosecond Laser-Plasma Interactions."
- W. Seka, R. E. Bahr, R. S. Craxton, A. Chirokikh, R. W. Short, A. Simon, H. Baldis, and R. P. Drake, "OMEGA Long-Scale-Length Laser-Plasma Experiments."
- R. W. Short, "Stimulated Brillouin Scattering Driven by Smoothed Laser Beams."
- A. Simon, "The Effect of Jets of Accelerated Ions on Scattered Laser Light Near ω_0 ."
- M. D. Tracy and E. M. Epperlein, "Eigenvalue Solution of the Fokker-Planck Equation for Ion-Acoustic and Entropy Waves in Multi-Species Plasmas."
- C. P. Verdon, R. Betti, and R. L. McCrory, "Dynamic Stability of Imploding Shells."
- C. P. Verdon, "High-Performance Direct-Drive Capsule Designs for the National Ignition Facility."
- M. Yu, C. J. McKinstrie, and W. L. Kruer, "Relativistic Saturation of Forward SRS."
-
- L. D. Lund, A. Rigatti, P. Glenn, and J. Glenn, "Characterization of Surface Particulate Contamination on Liquid-Crystal Optics for Laser Fusion," ASPE 8th Annual Meeting, Seattle, WA, 7-12 November 1993.
-
- The following presentations were made at the 40th National AVS Symposium & Topical Conference, Orlando, FL, 15-19 November 1993:
- R. Q. Gram, D. S. Brennan, S. G. Noyes, R. A. Mangano, and R. L. Fagaly, "A Low-Mass Mounting Method for Cryogenic Inertial-Fusion Targets."
- H. Kim, P. W. McKenty, and P. Cheng, "Confocal Microscopy of Inertial-Fusion Fuel Capsules."
- C. P. Verdon, "Target Requirements for the OMEGA Upgrade."
- M. D. Wittman, "Compensation of the Lens Effects of Thick Cryogenic Layers Using an Interferometric Imaging System."
-

The following presentations were made at the Materials Research Society 1993 Fall Meeting, Boston, MA, 29 November–3 December 1993:

P. Gierlowski, W. Kula, S. J. Lewandowski, and R. Sobolewski, "Microwave Response of Mixed-Phase $\text{Bi}_2\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_x/\text{Bi}_2\text{Sr}_2\text{Ca}_1\text{Cu}_2\text{O}_y$ Thin Films."

W. Kula and R. Sobolewski, "Hydrogen Doping of Y-Ba-Cu-O Thin Films with Various Oxygen Content."

L. Shi, T. Gong, W. Xiong, X. Weng, Y. Kostoulas, R. Sobolewski, and P. M. Fauchet, "Dependence of Femtosecond Reflectivity on the Oxygen Content in Y-Ba-Cu-O Thin Films."

UNIVERSITY OF
ROCHESTER