
PUBLICATIONS AND CONFERENCE PRESENTATIONS

Publications

- S. Alexandrou, C.-C. Wang, M. Currie, R. Sobolewski, and T. Y. Hsiang, "Loss and Dispersion at Subterahertz Frequencies in Coplanar Waveguides with Varying Ground-Plane Widths," in *Technologies for Optical Fiber Communications*, edited by G. J. Brown *et al.* (SPIE, Bellingham, WA, 1994), Vol. 2149, pp. 108–118.
- S. Alexandrou, C.-C. Wang, R. Sobolewski, and T. Y. Hsiang, "Generation of Subpicosecond Electrical Pulses by Nonuniform Illumination of GaAs Transmission Line Gaps," *IEEE J. Quantum Electron.* **30**, 1332 (1994).
- X. D. Cao, G. P. Agrawal, and C. J. McKinstrie, "Self-Focusing of Chirped Optical Pulses in Nonlinear Dispersive Media," *Phys. Rev. A* **49**, 4085 (1994).
- X. D. Cao and D. D. Meyerhofer, "Nonlinear Birefringence of Optical Fibers," *Opt. Commun.* **109**, 151 (1994).
- E. M. Epperlein, "Fokker-Planck Modeling of Electron Transport in Laser-Produced Plasmas," *Laser Part. Beams* **12**, 257 (1994).
- E. M. Epperlein, "Implicit and Conservative Difference Scheme for the Fokker-Planck Equation," *J. Comput. Phys.* **112**, 291 (1994).
- 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)]," *Phys. Plasmas* **1**, 1364 (1994).
- P. Gierlowski, G. Jung, W. Kula, S. J. Lewandowski, B. Savo, R. Sobolewski, A. Tebano, and A. Vecchione, "Low Frequency Voltage Noise in Current Biased HTSC Thin Films," *Physica B* **194–196**, 2043 (1994).
- 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," *Semicond. Sci. Technol.* **9**, 459 (1994).
- T. Gong and P. M. Fauchet, "Carrier-Carrier Interactions in GaAs Investigated by Femtosecond Spectroscopy," in *Ultrafast Pulse Generation and Spectroscopy* (SPIE, Bellingham, WA, 1993), Vol. 1861, pp. 227–236. (invited)
- D. Gupta, "A New Optically Triggered Superconducting Opening Switch for High-Power Applications," in *Research Reports of the Link Energy Fellows*, edited by B. J. Thompson (The University of Rochester Press, Rochester, NY, 1994), Vol. 9, pp. 25–41.
- D. Gupta, W. R. Donaldson, and A. M. Kadin, "Fast Inductively Coupled Superconducting Opening Switch Triggered by Short Laser Pulses," in the *Proceedings of the Ninth IEEE International Pulsed Power Conference* (IEEE, New York, 1993), pp. 131–133.
- 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," *Appl. Opt.* **33**, 1889 (1994).
- Y. Kostoulas, P. M. Fauchet, T. Gong, B. C. Tousley, G. W. Wicks, and P. Cooke, "Femtosecond Carrier Dynamics in Low-Temperature-Grown III–V Semiconductors," in *Ultrafast Phenomena in Semiconductors*, edited by D. K. Ferry and H. M. Van Driel (SPIE, Bellingham, WA, 1994), Vol. 2142, pp. 100–109.
- Y. Kostoulas, T. Gong, and P. M. Fauchet, "Investigation of Carrier-Carrier Scattering by Three-Pulse Pump-Probe Spectroscopy," *Semicond. Sci. Technol.* **9**, 462 (1994).

- W. Kula and R. Sobolewski, "Electric-Field Effect in Partially Deoxygenated YBCO Thin Films," *Physica B* **194–196**, 2083 (1994).
- W. Kula and R. Sobolewski, "Electric-Field-Effect Devices Based on Partially Oxygen-Depleted, Superconducting Y-Ba-Cu-O Thin Films," in *Advances in Cryogenic Engineering*, edited by R. P. Reed *et al.* (Plenum Press, New York, 1994), Vol. 40, pp. 377–383.
- W. Lang, W. Kula, and R. Sobolewski, "Superconducting Fluctuations: Paraconductivity, Excess Hall Effect, and Magnetoconductivity in 2223-BiSrCaCuO Thin Films," *Physica B* **194–196**, 1643 (1994).
- A. I. Lobad, P. J. Rodney, B. C. Tousley, S. M. Mehta, and P. M. Fauchet, "The Starting Mechanism in Coupled-Cavity, Mode-Locked Laser Systems," in *Generation, Amplification, and Measurement of Ultrashort Laser Pulses*, edited by R. P. Trebino and I. A. Walmsley (SPIE, Bellingham, WA, 1994), Vol. 2116, pp. 109–117.
- A. I. Lobad, P. J. Rodney, S. M. Mehta, B. C. Tousley, and P. M. Fauchet, "The Starting Mechanism in Coupled-Cavity Modelocked Laser Systems," *IEEE J. Quantum Electron.* **30**, 812 (1994).
- F. J. Marshall, J. A. Delettrez, R. Epstein, and B. Yaakobi, "Diagnosis of Laser-Target Implosions by Space-Resolved Continuum Absorption X-Ray Spectroscopy," *Phys. Rev. E* **49**, 4381 (1994).
- W. N. Maung, D. P. Butler, W. Xiong, W. Kula, and R. Sobolewski, "Propagation Characteristics of Monolithic Y-Ba-Cu-O Coplanar Strip Transmission Lines Fabricated by Laser Writing Patterning Technique," *IEEE Microw. Guid. Wave Lett.* **MGWL-4**, 132 (1994).
- L. Mu and W. R. Donaldson, "Simulating Photoconductive Switches in a Microwave Transmission Line," in the *Proceedings of the Ninth IEEE International Pulsed Power Conference* (IEEE, New York, 1993), pp. 629–632.
- 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, in *Biomedical Image Processing II*, edited by A. C. Bovik and V. Howard (SPIE, Bellingham, WA, 1991), Vol. 1450, pp. 296–322.
- R. Sobolewski, L. Shi, T. Gong, W. Xiong, X. Weng, Y. Kostoulas, and P. M. Fauchet, "Femtosecond Optical Response of Y-Ba-Cu-O Thin Films and Their Applications in Optoelectronics," in *High-Temperature Superconducting Detectors: Bolometric and Nonbolometric*, edited by M. Nahum and J.-C. Villegier (SPIE, Bellingham, WA, 1994), Vol. 2159, pp. 110–120.
- R. Sobolewski, W. Xiong, W. Kula, and B. McIntyre, "Electrical and Structural Properties of the YBCO Superconducting-Semiconducting Interface," *Physica B* **194–196**, 2143 (1994).
- C. J. Twomey, S.-H. Chen, T. N. Blanton, A. Schmid, and K. L. Marshall, "Poly[(Methylene Oxide)Oligo(Ethylene Oxide)] Vs. Poly(Ethylene Oxide) as Hosts for Neodymium Compounds," *J. Polym. Sci. B, Polym. Phys.* **32**, 1687 (1994).
- 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," *J. Polym. Sci. B, Polym. Phys.* **32**, 1573 (1994).
- C.-C. Wang, S. Alexandrou, D. Jacobs-Perkins, and T.Y. Hsiang, "Comparison of the Picosecond Characteristics of Silicon and Silicon-on-Sapphire Metal-Semiconductor-Metal Photodiodes," *Appl. Phys. Lett.* **64**, 3578 (1994).
- C.-C. Wang, S. Alexandrou, D. Jacobs-Perkins, and T. Y. Hsiang, "Picosecond Characteristics of Silicon-on-Insulator Metal-Semiconductor-Metal Photodiodes," in *Technologies for Optical Fiber Communications*, edited by G. J. Brown *et al.* (SPIE, Bellingham, WA, 1994), Vol. 2149, pp. 271–275.
- W. Xiong, W. Kula, and R. Sobolewski, "Fabrication of High- T_c Superconducting Electronic Devices Using the Laser-Writing Patterning Technique," in *Advances in Cryogenic Engineering* (Plenum Press, New York, 1994), Vol. 40A, pp. 385–391.
- W. Xiong, W. Kula, R. Sobolewski, W. N. Maung, and D. P. Butler, "Monolithic Y-Ba-Cu-O Structures Fabricated Using the Laser-Writing Patterning Technique," *Supercond. Sci. Technol.* **7**, 300 (1994).
- J. F. Young, T. Gong, P. J. Kelly, and P. M. Fauchet, "Carrier-Carrier Scatterings within Athermal Distributions," *Semicond. Sci. Technol.* **9**, 465 (1994).

Forthcoming Publications

- J. J. Armstrong and T. J. Kessler, "Holographic Generation of High-Efficiency, Large-Aperture, Transmission Diffraction Gratings," to be published in *Applied Optics A*.
- R. Betti, V. Goncharov, R. L. McCrory, E. Turano, and C. P. Verdon, "Multiple Cutoff Wave Numbers of the Ablative Rayleigh-Taylor Instability," to be published in *Physical Review Letters*.
- T. R. Boehly, R. S. Craxton, T. H. Hinterman, P. A. Jaanimagi, J. H. Kelly, T. J. Kessler, R. L. Kremens, S. A. Kumpan, S. A. Letzring, R. L. McCrory, S. F. B. Morse, W. Seka, S. Skupsky, J. M. Soures, and C. P. Verdon, "The Upgrade to the OMEGA Laser System," to be published in the *Proceedings of the American Nuclear Society*.
- D. K. Bradley, P. M. Bell, O. L. Landen, J. D. Kilkenny, and J. Oertel, "Development and Characterization of a Pair of 30–40 ps X-Ray Framing Cameras," to be published in the *Review of Scientific Instruments*.
- X. D. Cao, D. D. Meyerhofer, and G. P. Agrawal, "Optimization of Optical Beam Steering in Nonlinear Kerr Media Via Spatial Phase Modulation," to be published in the *Journal of the Optical Society of America B*.
- X. D. Cao and D. D. Meyerhofer, "All-Optical Switching Via Collisions of Spatial Vector Solitons," to be published in *Optics Letters*.
- X. D. Cao and D. D. Meyerhofer, "Frequency-Domain Interferometer for Measurement of the Polarization Modal Dispersion in Single-Mode Optical Fibers," to be published in *Optics Letters*.
- S. H. Chen and S. Krishnamurthy, "Some Fundamental Issues Governing Thermotropic Chiral Nematic Copolymers," to be published in the *Proceedings of the 42nd Society for Polymer Science, Kyoto, Japan, 31 May–2 June 1993*.
- C. T. Cotton, "The Design of an All-Spherical, Three-Mirror, Off-Axis Telescope Objective," to be published in the *OSA Proceedings of the International Optical Design Conference '94*.
- M. J. Cumbo and S. D. Jacobs, "Determination of Near-Surface Forces in Optical Polishing Using Atomic Force Microscopy," to be published in *Nanotechnology*.
- J. A. Delettrez, D. K. Bradley, and C. P. Verdon, "The Role 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*.
- E. M. Epperlein and R. W. Short, "Generalized Electron Fluid Equations in the Presence of Laser Irradiation," to be published in *Physics of Plasmas*.
- E. M. Epperlein and R. W. Short, "Nonlocal Electron Transport in the Presence of High-Intensity Laser Irradiation," to be published in *Physical Review E*.
- D. Fried, R. E. Glens, J. D. B. Featherstone, and W. Seka, "The Nature of Light Scattering in Dental Enamel and Dentin at Visible and Near Infrared Wavelengths," to be published in *Applied Optics*.
- W. Gob, W. Lang, W. Kula, and R. Sobolewski, "Transport Properties and Superconducting Fluctuations in Oxygen Deficient Y-Ba-Cu-O Thin Films," to be published in *Physica C*.
- 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, W. R. Donaldson, and A. M. Kadin, "Energy Extraction from Superconducting Magnets Using Optically Activated $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ Switches," to be published in *Optically Activated Switching IV*.
- 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*.
- P. A. Jaanimagi, R. C. Elton, B. L. Welch, Y. Leng, and H. R. Griem, "Extending X-Ray Streak Camera Operation to VUV Wavelengths," to be published in the *Review of Scientific Instruments*.

- 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*.
- H. Kim, J. M. Soures, 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.
- E. M. Korenic, K. L. Marshall, and J. A. Maiolo, "Blending Polysiloxane 'Glass Resins' to Produce Optical Films with a Specific Refractive Index," to be published in *Optics and Photonics News*.
- W. Kula and R. Sobolewski, "Effect of Hydrogen Doping on Electrical Properties of Y-Ba-Cu-O Thin Films," to be published in *Physica C*.
- 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," to be published in the *Journal of Applied Physics*.
- Y. Lin and T. J. Kessler, "Raman Scattering: A Four-Dimensional System," to be published in *Applied Optics*.
- 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*.
- 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*.
- C. J. McKinstrie, R. Betti, R. E. Giacone, T. Kolber, and J. S. Li, "Two-Dimensional Stimulated Brillouin Scattering," to be published in *Physical Review E*.
- C. I. Moore, J. P. Knauer, and D. D. Meyerhofer, "Relativistic Ponderomotive Acceleration of Electrons from a Laser Focus," to be published in the *Bulletin of the American Physical Society*.
- A. Okishev, M. D. Skeldon, and W. Seka, "Optical Pulse Compression by Stimulated Scattering for Pulse-Shaping Applications in the OMEGA Upgrade Laser," to be published in the *Proceedings of the Conference on Lasers and Electro-Optics (1994)*.
- 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. Peatross, J. L. Chaloupka, and D. D. Meyerhofer, "High-Order Harmonic Generation with an Annular Laser Beam," to be published in *High Field Interactions and Short Wavelength Generation (1994)*.
- J. Peatross, J. L. Chaloupka, and D. D. Meyerhofer, "High-Order Harmonic Generation with an Annular Laser Beam," to be published in *Optics Letters*.
- J. Peatross and D. D. Meyerhofer, "The Angular Distribution of High-Order Harmonics Emitted from Rare Gases at Low Density," to be published in *Physical Review Letters*.
- 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*.
- W. Seka, D. Fried, J. D. B. Featherstone, and S. F. Borzillary, "Light Deposition and Thermal Response in Dental Hard Tissue," to be published in the *Journal of Dental Research*.
- L. Shi, T. Gong, W. Xiong, X. Weng, R. Sobolewski, and P. M. Fauchet, "Femtosecond Optical Spectroscopy in Partially Deoxygenated Y-Ba-Cu-O Thin Films," to be published in *Ultrafast Phenomena, IX*.

H. Shi and S.-H. Chen, "Novel Glassy Nematic and Chiral Nematic Oligomers Derived from 1,3,5-Cyclohexane-tricarboxylic and (1R,3S)-(+)-Camphoric Acids," to be published in *Liquid Crystals*.

H. Shi and S.-H. Chen, "Novel Glass-Forming Liquid Crystals. 2. Systems Containing High Optical Birefringence Moiety 1-(Phenyl)-2-(6-Cyanonaphth-2-yl)Ethyne," to be published in *Liquid Crystals*.

M. D. Skeldon, A. Okishev, S. A. Letzring, W. R. Donaldson, and W. Seka, "Optically Activated Switches for the Generation of Complex Electrical Waveforms with Multigigahertz Bandwidth," to be published in *Optically Activated Switching IV*.

R. Sobolewski and T. Y. Hsiang, "Progress in Ultrafast Superconducting Electronics," to be published in the *Proceedings of the International Workshop on Superconductivity and Particle Detection* (invited).

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.-C. Wang, M. Currie, S. Alexandrou, and T. Y. Hsiang, "Ultrafast, All-Silicon Light Modulator," to be published in *Optics 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, R. Sobolewski, and J. R. Gavaler, "Laser Writing: A New Technique for Fabrication of Electronic and Optoelectronic Y-Ba-Cu-O Devices and Circuits," to be published in *SPIE Vol. 2160: Superconductive Devices and Circuits*.

B. Yaakobi, Q. Su, F. J. Marshall, and R. Epstein, "Monochromatic Backlighting as a Laser-Fusion Diagnostic," 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 Implosions of Argon-Filled Targets," to be published in *Optics Communications*.

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*.

J. D. Zuegel and W. Seka, "Direct Measurements of Lower-Level Lifetime in Nd:YLF," to be published in the *Bulletin of the American Physical Society*.

Conference Presentations

The following presentations were made at the Materials Research Society Spring '94 Meeting, San Francisco, CA, 4-8 April 1994:

S. D. Jacobs, A. L. Rigatti, D. J. Smith, L. D. Lund, H. M. D'Alessandro, K. L. Marshall, and A. W. Schmid, "Design and Manufacture of Laser Quality Liquid Crystal Optics." (invited)

E. M. Korenic and S. D. Jacobs, "Selective Reflection Properties of Embedded Pre-Aligned Cholesteric Domains as Functions of Incident Angle."

J. C. Mastrangelo and S.-H. Chen, "Thermotropic Side-Chain

Polymers Carrying High Optical Birefringence Nematicogenic Group."

H. Shi and S.-H. Chen, "Novel Glassy Nematic and Chiral Nematic Oligomers Derived from 1,3,5-Cyclohexane-tricarboxylic and (1R,3S)-(+)-Camphoric Acids."

L. Shi, T. Gong, W. Xiong, X. Weng, R. Sobolewski, and P. M. Fauchet, "Femtosecond Optical Spectroscopy in Partially Deoxygenated Y-Ba-Cu-O Thin Films," Ultrafast Phenomena Ninth International Meeting, Dana Point, CA, 1-5 May 1994.

The following presentations were made at the APS 10th Annual High-Temperature Plasma Diagnostics, Rochester, NY, 8–12 May 1994:

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, “The Upgrade to the OMEGA Laser System.”

D. K. Bradley, P. M. Bell, O. L. Landen, J. D. Kilkenny, and J. Oertel, “Development and Characterization of a Pair of 30-40 ps X-Ray Framing Cameras.”

P. A. Jaanimagi, R. C. Elton, B. L. Welch, Y. Leng, and H. R. Griem, “Extending X-Ray Streak Camera Operation to VUV Wavelengths.”

J. P. Knauer, R. L. Kremens, M. A. Russotto, and S. Tudman, “Using Cosmic Rays to Monitor Large Scintillator Arrays.”

R. L. Kremens, M. A. Russotto, and S. Tudman, “Performance Simulations of the MEDUSA Neutron Detector.”

S. A. Letzring, “Laser and Plasma Diagnostics for the OMEGA Laser System.” (invited)

F. J. Marshall and B. Yaakobi, “Quantitative Measurements with X-Ray Microscopes in Laser-Fusion Experiments.”

B. Yaakobi, R. Epstein, Q. Su, F. J. Marshall, and D. Shvarts, “Target Imaging and Backlighting Diagnostic on the OMEGA Upgrade.”

B. Yaakobi, F. J. Marshall, R. Epstein, D. K. Bradley, P. A. Jaanimagi, and Q. Su, “New Diagnostic Features in the Laser Implosions of Argon-Filled Targets.”

The following presentations were made at CLEO '94, Anaheim, CA, 8–13 May 1994:

S. Alexandrou, C.-C. Wang, M. Currie, R. Sobolewski, and T. Y. Hsiang, “Terahertz Spectral Analysis of Straight and Bent Coplanar Transmission Lines.”

X. D. Cao, G. P. Agrawal, and D. D. Meyerhofer, “Optimization of Optical Beam Steering in Nonlinear Kerr Media Via Spatial Phase Modulation.”

C. Y. Chien, G. Korn, J. S. Coe, X. Liu, J. Squier, G. Mourou, R. S. Craxton, and J.-C. Kieffer, “High-Efficiency Frequency Doubling of Ultra-High Intensity Nd: Glass Laser Pulses.”

J. H. Kelly, T. R. Boehly, D. L. Brown, and M. D. Tracy, “The Upgrade to the OMEGA Laser System: A Status Report.” (invited)

A. Okishev, M. D. Skeldon, and W. Seka, “Optical Pulse Compression by Stimulated Scattering for Pulse-Shaping Applications in the OMEGA Upgrade Laser.”

L. Zheng and D. D. Meyerhofer, “A Linear Cross-Correlation Technique for Single-Shot Measurements of Weak Light Pulses.”

The following presentations were made at IQEC '94, Anaheim, CA, 8–13 May 1994:

D. D. Meyerhofer, J. Chaloupka, and J. Peatross, “High-Harmonic Generation with an Annular Laser Beam.”

C. I. Moore, J. P. Knauer, and D. D. Meyerhofer, “Observations of Ponderomotively Accelerated Electrons from the Focus of a Very-High-Intensity Laser.”

R. A. London, R. P. Ratowsky, A. L. Osterheld, and R. S. Craxton, “Complete X-Ray Laser Modeling: Hydrodynamics, Kinetics, and Optics,” 4th International Colloquium on X-Ray Lasers, Williamsburg, VA, 16 May 1994.

The following presentations were made at the 24th Annual Anomalous Absorption Conference, Pacific Grove, CA, 5–10 June 1994:

U. Alon, J. Hecht, D. Ofer, D. Mukamel, and D. Shvarts, “Bubble-Competition Model for Hydrodynamically Unstable Interfaces.”

R. Betti, V. Goncharov, R. L. McCrory, E. Turano, and C. P. Verdon, “Cutoff Wave Numbers of the Incompressible Ablative Rayleigh-Taylor Instability.”

A. Chirokikh, W. Seka, R. E. Bahr, R. S. Craxton, R. W. Short, A. Simon, and M. D. Skeldon, “Stimulated Brillouin Scattering at 1 μm in Long-Scale-Length Laser Plasmas.”

R. S. Craxton, M. Dunne, O. Willi, and T. Afshar-Rad, "Simulations of Soft X-Ray Generated Plasmas Created to Enhance Thermal Smoothing."

J. A. Delettrez, "An Interactive Mix Model in *LILAC* for Linear and Near-Linear Regimes of the Rayleigh-Taylor Instability."

E. M. Epperlein, R. W. Short, and A. Simon, "Ion Thermal Conductivity and Viscosity for Plasmas with Light and Heavy Ions."

E. M. Epperlein and R. W. Short, "Nonlocal Electron Transport in the Presence of High-Intensity Laser Irradiation."

R. Epstein, S. Skupsky, and C. P. Verdon, "Smoothing of Laser Irradiation of ICF Targets Using Pre-Formed Refracting Atmospheres with Small-Scale Inhomogeneity and Time Dependence."

J. Hecht, D. Ofer, U. Alon, T. Tlusty, D. Shvarts, C. P. Verdon, R. L. McCrory, and S. A. Orszag, "Three-Dimensional Simulation of the Late Nonlinear Stage of the Rayleigh-Taylor Instability."

T. Kolber, C. J. McKinstrie, R. Betti, and R. E. Giacone, "Numerical Simulations of Two-Dimensional Stimulated Brillouin Scattering."

J. S. Li, C. J. McKinstrie, C. Joshi, and K. Marsh, "Thermal Filamentation of Counterpropagating Laser Beams."

C. J. McKinstrie, R. Betti, R. E. Giacone, T. Kolber, and J. S. Li, "Two-Dimensional Stimulated Brillouin Scattering."

D. D. Meyerhofer, H. Chen, J. A. Delettrez, E. M. Epperlein, Y. Fisher, and B. Soom, "Flux Limiter in Picosecond Laser-Plasma Interactions."

D. Ofer, U. Alon, D. Shvarts, C. P. Verdon, and R. L. McCrory, "A Modal Model for the Nonlinear Evolution of Multimode Rayleigh-Taylor Mixing Zone."

R. W. Short and E. M. Epperlein, "Generalized Fluid Models for Laser-Irradiated Plasmas."

A. Simon and R. W. Short, "Stimulated Scattering from Low-Frequency Modes in Laser-Produced Magneto-Plasmas."

C. T. Cotton, "The Design of an All-Spherical, Three-Mirror, Off-Axis Telescope Objective," International Optical Design Conference, Rochester, NY, 6-9 June 1994.

M. J. Cumbo, D. Fairhurst, S. D. Jacobs, and B. E. Pucebner, "The Effect of Chemically Modulated Surface Charge in the Polishing of Optical Glass," OSA Science of Finishing (1994), Rochester, NY, 6-8 June 1994.

The following presentations were made at the OSA Optical Fabrication and Testing Workshop, Rochester, NY, 7-9 June 1994:

P. D. Funkenbusch, Y. Y. Zhou, C. Lohnes, D. J. Quesnel, S. D. Jacobs, B. E. Pucebner, D. Golini, and A. Lindquist, "Deterministic Microgrinding of Glass with Polycrystalline Diamond Tools."

W. I. Kordonsky, I. V. Prokhorov, B. E. Kashevsky, S. D. Jacobs, B. E. Pucebner, Y. Hsu, D. Pietrowski, and D. Stafford, "Basic Properties of Magnetorheological Fluids for Optical Finishing."

W. I. Kordonsky, I. V. Prokhorov, S. D. Jacobs, B. E. Pucebner, Y. Hsu, D. Pietrowski, and D. Stafford, "Glass Polishing Experiments Using Magnetorheological Fluids."

W. Ng, B. E. Pucebner, and S. D. Jacobs, "Evaluation of Bound Abrasive Media for Fabrication of Ring Tool Polishers."

B. E. Pucebner, A. Feltz, W. Ng, and S. D. Jacobs, "Coolant Performance in Bound Diamond Ring Tool Grinding of K7 Optical Glass."

B. E. Pucebner, A. Feltz, and S. Patterson, "The Effect of Additives in a Commercial Coolant on the Glass Grinding Process."

B. E. Pucebner, "Chlorofluorocarbons in the Workplace: A Summary of Guidelines and Alternatives."

E. M. Korenic, "Fractured Cholesteric Liquid Crystal Polymers," UNY-VAC American Vacuum Society Annual Meeting, Rochester, New York, 9 June 1994.

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