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# Publications and Conference Presentations

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## Publications

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- R. Betti and C. Zhou, "High-Density and High- $\rho R$  Fuel Assembly for Fast-Ignition Inertial Confinement Fusion," *Phys. Plasmas* **12**, 110702 (2005).
- K. M. Chandler, S. A. Pikuz, T. A. Shelkovenko, M. D. Mitchell, D. A. Hammer, and J. P. Knauer, "Cross Calibration of New X-Ray Films Against Direct Exposure Film from 1 to 8 keV Using the X-Pinch X-Ray Source," *Rev. Sci. Instrum.* **76**, 113111 (2005).
- A. C.-A. Chen, J. U. Wallace, L. Zeng, S. K.-H. Wei, and S. H. Chen, "Novel Light-Emitting Organic Materials with Variable Electron and Hole Conductivities," in *Liquid Crystals IX*, edited by I.-C. Khoo (SPIE, Bellingham, WA, 2005), Vol. 5936-18.
- J. E. DeGroote, A. E. Marino, J. P. Wilson, K. E. Spencer, and S. D. Jacobs, "Effects of Nanodiamond Abrasive Friability in Experimental MR Fluids with Phosphate Laser Glass LHG-8 and Other Optical Glasses," in *Optical Manufacturing and Testing VI*, edited by H. P. Stahl (SPIE, Bellingham, WA, 2005), Vol. 5869, pp. 121–132.
- J. A. Delettrez, J. Myatt, P. B. Radha, C. Stoeckl, S. Skupsky, and D. D. Meyerhofer, "Hydrodynamic Simulations of Integrated Experiments Planned for the OMEGA/OMEGA EP Laser Systems," *Plasma Phys. Control. Fusion* **47**, B791 (2005).
- E. Fess, J. Schoen, M. Bechtold, D. Mohring, and C. Bouvier, "Ultraform Finishing Process for Optical Materials," in *Optical Manufacturing and Testing VI*, edited by H. P. Stahl (SPIE, Bellingham, WA, 2005), Vol. 5869, pp. 88–93.
- J. M. Foster, B. H. Wilde, P. A. Rosen, R. J. R. Williams, B. E. Blue, R. F. Coker, R. P. Drake, A. Frank, P. A. Keiter, A. M. Khokhlov, J. P. Knauer, and T. S. Perry, "High-Energy-Density Laboratory Astrophysics Studies of Jets and Bow Shocks," *Astrophys. J.* **634**, L77 (2005).
- D. R. Harding, T. C. Sangster, D. D. Meyerhofer, P. W. McKenty, L. D. Lund, L. Elasky, M. D. Wittman, W. Seka, S. J. Loucks, R. Janezic, T. H. Hinterman, D. H. Edgell, D. Jacobs-Perkins, and R. Q. Gram, "Producing Cryogenic Deuterium Targets for Experiments on OMEGA," *Fusion Sci. Technol.* **48**, 1299 (2005).
- M. Haurylau, S. P. Anderson, K. L. Marshall, and P. M. Fauchet, "Electrical Tuning of Silicon-Based 2-D Photonic Bandgap Structures," in *Tuning the Optical Response of Photonic Bandgap Structures II*, edited by P. M. Fauchet and P. V. Braun (SPIE, Bellingham, WA, 2005), Vol. 5926, pp. 15–24.
- A. Jukna, I. Barboy, G. Jung, S. S. Banerjee, Y. Myasoedov, V. Plausinaitiene, A. Abrutis, X. Li, D. Wang, and R. Sobolewski, "Laser Processed Channels of Easy Vortex Motion in  $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$  Films," *Appl. Phys. Lett.* **87**, 192504 (2005).
- J. Keck, J. B. Oliver, T. J. Kessler, H. Huang, J. Barone, J. Hettrick, A. L. Rigatti, T. Hoover, K. L. Marshall, A. W. Schmid, A. Kozlov, and T. Z. Kosc, "Manufacture and Development of Multilayer Diffraction Gratings," in *Laser-Induced Damage in Optical Materials: 2005*, edited by G. J. Exarhos, A. H. Guenther, K. L. Lewis, D. Ristau, M. J. Soileau, and C. J. Stoltz (SPIE, Bellingham, WA, 2005), Vol. 5991, pp. 443–448.
- K. L. Marshall, K. Adelsberger, B. Kolodzie, G. Mhyre, and D. W. Griffin, "A Second-Generation, Liquid Crystal Phase-Shifting Point-Diffraction Interferometer Employing Structured Substrates," in *Optical Diagnostics*, edited by L. M. Hanssen and P. V. Farrell (SPIE, Bellingham, WA, 2005), Vol. 5880, pp. 103–114.
- R. L. McCrory, S. P. Regan, S. J. Loucks, D. D. Meyerhofer, S. Skupsky, R. Betti, T. R. Boehly, R. S. Craxton, T. J. B. Collins, J. A. Delettrez, D. Edgell, R. Epstein, K. A. Fletcher, C. Freeman, J. A. Frenje, V. Yu. Glebov, V. N. Goncharov, D. R.

Harding, I. V. Igumenshchev, R. L. Keck, J. D. Kilkenny, J. P. Knauer, C. K. Li, J. Marciante, J. A. Marozas, F. J. Marshall, A. V. Maximov, P. W. McKenty, J. Myatt, S. Padalino, R. D. Petrasso, P. B. Radha, T. C. Sangster, F. H. Séguin, W. Seka, V. A. Smalyuk, J. M. Soures, C. Stoeckl, B. Yaakobi, and J. D. Zuegel, "Direct-Drive Inertial Confinement Fusion Research at the Laboratory for Laser Energetics: Charting the Path to Thermonuclear Ignition," *Nucl. Fusion* **45**, S283 (2005).

A. G. Noto and K. L. Marshall, "Application of Computational Chemistry Methods to the Prediction of Chirality and Helical Twisting Power in Liquid Crystal Systems," in *Liquid Crystals IX*, edited by I.-C. Khoo (SPIE, Bellingham, WA, 2005), Vol. 5936-27.

J. B. Oliver, T. J. Kessler, H. Huang, J. Keck, A. L. Rigatti, A. W. Schmid, A. Kozlov, and T. Z. Kosc, "Thin-Film Design for Multilayer Diffraction Gratings," in *Laser-Induced Damage in Optical Materials: 2005*, edited by G. J. Exarhos, A. H. Guenther, K. L. Lewis, D. Ristau, M. J. Soileau, and C. J. Stoltz (SPIE, Bellingham, WA, 2005), Vol. 5991, pp. 402–408.

J. B. Oliver, A. L. Rigatti, J. D. Howe, J. Keck, J. Szczepanski, A. W. Schmid, S. Papernov, A. Kozlov, and T. Z. Kosc, "Thin-Film Polarizers for the OMEGA EP Laser System," in *Laser-Induced Damage in Optical Materials: 2005*, edited by G. J. Exarhos, A. H. Guenther, K. L. Lewis, D. Ristau, M. J. Soileau, and C. J. Stoltz (SPIE, Bellingham, WA, 2005), Vol. 5991, pp. 394–401.

S. Papernov, A. W. Schmid, A. L. Rigatti, J. B. Oliver, and J. D. Howe, "Damage Behavior of  $\text{HfO}_2$  Monolayer Film Containing Gold Nanoparticles as Artificial Absorbing Defects," in *Laser-Induced Damage in Optical Materials: 2005*, edited by G. J. Exarhos, A. H. Guenther, K. L. Lewis, D. Ristau, M. J. Soileau, and C. J. Stoltz (SPIE, Bellingham, WA, 2005), Vol. 5991, pp. 429–435.

O. Sadot, V. A. Smalyuk, J. A. Delettrez, D. D. Meyerhofer, T. C. Sangster, R. Betti, V. N. Goncharov, and D. Shvarts, "Observation of Self-Similar Behavior of the 3D, Nonlinear Rayleigh-Taylor Instability," *Phys. Rev. Lett.* **95**, 265001 (2005).

V. A. Smalyuk, O. Sadot, J. A. Delettrez, D. D. Meyerhofer, S. P. Regan, and T. C. Sangster, "Fourier-Space Nonlinear Rayleigh-Taylor Growth Measurements of 3D Laser-Imprinted Modulations in Planar Targets," *Phys. Rev. Lett.* **95**, 215001 (2005).

C. Stoeckl, T. R. Boehly, J. A. Delettrez, S. P. Hatchett, J. A. Frenje, V. Yu. Glebov, C. K. Li, J. E. Miller, R. D. Petrasso, F. H. Séguin, V. A. Smalyuk, R. B. Stephens, W. Theobald, B. Yaakobi, and T. C. Sangster, "Direct-Drive Fuel-Assembly Experiments with Gas-Filled, Cone-in-Shell, Fast-Ignitor Targets on the OMEGA Laser," *Plasma Phys. Control. Fusion* **47**, B859 (2005).

L. Zheng, J. C. Lambropoulos, and A. W. Schmid, "Molecular Dynamics Study of UV-Laser-Induced Densification of Fused Silica. II. Effects of Laser Pulse Duration, Pressure, and Temperature, and Comparison with Pressure-Induced Densification," *J. Non-Cryst. Solids* **351**, 3271 (2005).

## Forthcoming Publications

Y. V. Artemova, G. S. Bisnovatyi-Kogan, I. V. Igumenshchev, and I. D. Novikov, "Black Hole Advective Accretion with Optical Depth Transition," to be published in the Astrophysical Journal.

R. Betti and C. Zhou, "Low-Adiabat Implosions for Fast-Ignition Inertial Confinement Fusion," to be published in Inertial Fusion Sciences and Applications 2005.

T. R. Boehly, E. Vianello, J. E. Miller, R. S. Craxton, T. J. B. Collins, V. N. Goncharov, I. V. Igumenshchev, D. D. Meyerhofer, D. G. Hicks, P. M. Celliers, and G. W. Collins, "Shock-Timing

Experiments Using Double-Pulse Laser Irradiation," to be published in Physics of Plasmas (invited).

A. C.-A. Chen, J. U. Wallace, S. K.-H. Wei, L. Zeng, and S. H. Chen, "Light-Emitting Organic Materials with Variable Charge Injection and Transport Properties," to be published in Chemistry of Materials.

D. Clay, D. Poslunsy, M. Flinders, S. D. Jacobs, and R. Cutler, "Effect of  $\text{LiAl}_5\text{O}_8$  Additions on the Sintering and Optical Transparency of LiAlON," to be published in the Journal of European Ceramic Society.

J. L. DeCiantis, F. H. Séguin, V. Berube, M. J. Canavan, C. D. Chen, J. A. Frenje, S. Kurebayashi, C. K. Li, J. R. Rygg, B. E. Schwartz, R. D. Petrasso, J. A. Delettrez, S. P. Regan, V. A. Smalyuk, V. Yu. Glebov, J. P. Knauer, F. J. Marshall, D. D. Meyerhofer, S. Roberts, T. C. Sangster, C. Stoeckl, K. Mikaelian, H. S. Park, and H. F. Robey "Proton Core Imaging of the Nuclear Burn in Inertial Confinement Fusion Implosions," to be published in *Review of Scientific Instruments*.

D. H. Edgell, W. Seka, R. S. Craxton, L. M. Elasky, D. R. Harding, R. L. Keck, L. D. Lund, and M. D. Wittman, "Characterization of Cryogenic Direct-Drive ICF Targets During Layering Studies and Just Prior to Shot Time," to be published in *Inertial Fusion Sciences and Applications* 2005.

D. H. Edgell, W. Seka, R. S. Craxton, L. M. Elasky, D. R. Harding, R. L. Keck, and M. D. Wittman, "Analysis of Cryogenic Target Shadowgraphs at LLE," to be published in *Fusion Science and Technology*.

V. N. Goncharov, O. V. Gotchev, R. L. McCrory, P. W. McKenty, D. D. Meyerhofer, T. C. Sangster, S. Skupsky, and C. Cherfils-Clérouin, "Ablative Richtmyer-Meshkov Instability: Theory and Experimental Results," to be published in *Inertial Fusion Science and Applications* 2005.

V. N. Goncharov, O. V. Gotchev, E. Vianello, T. R. Boehly, J. P. Knauer, P. W. McKenty, P. B. Radha, S. P. Regan, T. C. Sangster, S. Skupsky, V. A. Smalyuk, R. Betti, R. L. McCrory, D. D. Meyerhofer, W. Manheimer, D. Colombant, and C. Cherfils-Clérouin, "Early Stage of Implosion in Inertial Confinement Fusion: Shock Timing and Perturbation Evolution," to be published in *Physics of Plasmas*.

D. R. Harding, D. D. Meyerhofer, S. J. Loucks, L. D. Lund, R. Janezic, L. M. Elasky, T. H. Hinterman, D. H. Edgell, W. Seka, M. D. Wittman, R. Q. Gram, and M. J. Bonino, "Forming Smooth Cryogenic Target Layers for OMEGA Direct-Drive ICF Implosions and Prospects for Direct-Drive Targets for the NIF," to be published in *Physics of Plasmas* (invited).

J. H. Kelly, L. J. Waxer, V. Bagnoud, I. A. Begishev, J. Bromage, B. E. Kruschwitz, T. J. Kessler, S. J. Loucks, D. N. Maywar, R. L. McCrory, D. D. Meyerhofer, S. F. B. Morse, J. B. Oliver, A. L. Rigatti, A. W. Schmid, C. Stoeckl, S. Dalton, L. Folnsbee, M. J. Guardalben, R. Jungquist, J. Puth, M. J. Shoup III, D. Weiner, and J. D. Zuegel, "OMEGA EP: High-Energy

Petawatt Capability for the OMEGA Laser Facility," to be published in *Inertial Fusion Sciences and Applications* 2005.

A. K. Knight and D. R. Harding, "Modeling the Sensitivity of a Polymer Vapor Deposition Process to Different Operating Conditions and Parameters," to be published in *Fusion Science and Technology*.

B. E. Kruschwitz, R. Jungquist, J. Qiao, S. Abbey, S. E. Dean, D. N. Maywar, M. D. Moore, L. J. Waxer, and M. E. Wilson, "Large-Aperture Deformable Mirror Correction of Tiled-Grating Wavefront Error," to be published in *Inertial Fusion Sciences and Applications* 2005.

S. I. Kudryashov, S. D. Allen, S. Papernov, and A. W. Schmid, "Nanoscale Laser-Induced Spallation in SiO<sub>2</sub> Films Containing Gold Nanoparticles," to be published in *Applied Physics B*.

C. K. Li and R. D. Petrasso, "Energy Deposition of MeV Electrons in Compressed Targets of Fast-Ignition Inertial Confinement Fusion," to be published in *Physics of Plasmas*.

C. K. Li and R. D. Petrasso, "Stopping, Straggling, and Blooming of Directed Energetic Electrons in Hydrogenic and Arbitrary-Z plasmas," to be published in *Physical Review E*.

J. A. Marozas, F. J. Marshall, R. S. Craxton, I. V. Igumenshchev, S. Skupsky, P. B. Radha, T. J. B. Collins, R. Epstein, P. W. McKenty, M. J. Bonino, D. Jacobs-Perkins, D. D. Meyerhofer, T. C. Sangster, J. P. Knauer, V. A. Smalyuk, V. Yu. Glebov, S. G. Noyes, W. Seka, and R. L. McCrory, "Progress in Polar-Direct-Drive Simulations and Experiments," to be published in *Physics of Plasmas* (invited).

F. J. Marshall, R. S. Craxton, M. J. Bonino, R. Epstein, V. Yu. Glebov, D. Jacobs-Perkins, J. P. Knauer, J. A. Marozas, P. W. McKenty, S. G. Noyes, P. B. Radha, W. Seka, S. Skupsky, V. A. Smalyuk, J. A. Frenje, C. K. Li, R. D. Petrasso, and F. H. Séguin, "Polar-Direct-Drive Experiments on OMEGA," to be published in *Inertial Fusion Science and Applications* 2005.

R. L. McCrory, D. D. Meyerhofer, S. J. Loucks, S. Skupsky, R. Betti, T. R. Boehly, T. J. B. Collins, R. S. Craxton, J. A. Delettrez, D. H. Edgell, R. Epstein, K. A. Fletcher, C. Freeman, J. A. Frenje, V. Yu. Glebov, V. N. Goncharov, D. R. Harding, I. V. Igumenshchev, R. L. Keck, J. D. Kilkenny, J. P. Knauer, C. K. Li, J. R. Marcante, J. A. Marozas, F. J. Marshall, A. V. Maximov, P. W. McKenty, S. F. B. Morse, J. Myatt, S. Padalino,

R. D. Petrasso, P. B. Radha, S. P. Regan, T. C. Sangster, F. H. Séguin, W. Seka, V. A. Smalyuk, J. M. Soures, C. Stoeckl, B. Yaakobi, and J. D. Zuegel, “Progress in Direct-Drive Inertial Confinement Fusion Research at the Laboratory for Laser Energetics,” to be published in *Inertial Fusion Sciences and Applications* 2005.

F. H. Séguin, J. L. DeCiantis, J. A. Frenje, C. K. Li, J. R. Rygg, R. D. Petrasso, J. A. Delettrez, S. P. Regan, V. A. Smalyuk, V. Yu. Glebov, J. P. Knauer, F. J. Marshall, D. D. Meyerhofer, S. Roberts, T. C. Sangster, C. Stoeckl, K. Mikaelian, H. S. Park, and H. F. Robey “Measured Dependence of Burn Profiles on Implosion Conditions in Inertial Confinement Fusion Experiments,” to be published in *Physics of Plasmas*.

W. T. Shmayda, R. Janezic, T. W. Duffy, D. R. Harding, and L. D. Lund, “Tritium Operations at the Laboratory for Laser Energetics,” to be published in *Fusion Science and Technology*.

S. Skupsky, R. S. Craxton, F. J. Marshall, R. Betti, T. J. B. Collins, R. Epstein, V. N. Goncharov, I. V. Igumenshchev, J. A. Marozas, P. W. McKenty, P. B. Radha, J. D. Kilkenny, D. D. Meyerhofer, T. C. Sangster, and R. L. McCrory, “Polar Direct Drive—Ignition at 1-MJ,” to be published in *Inertial Fusion Sciences and Applications* 2005.

V. A. Smalyuk, O. Sadot, R. Betti, V. N. Goncharov, J. A. Delettrez, D. D. Meyerhofer, S. P. Regan, T. C. Sangster, and D. Shvarts, “Rayleigh–Taylor Growth Measurements of 3-D Modulations in Nonlinear Regime,” to be published in *Physics of Plasmas* (invited).

C. Stoeckl, J. A. Delettrez, J. H. Kelly, T. J. Kessler, B. E. Kruschwitz, S. J. Loucks, R. L. McCrory, D. D. Meyerhofer, D. N. Maywar, S. F. B. Morse, J. Myatt, A. L. Rigatti, L. J. Waxer, J. D. Zuegel, and R. B. Stephens, “High-Energy Petawatt Project at the University of Rochester’s Laboratory for Laser Energetics,” to be published in *Fusion Science and Technology*.

S. Wu, P. Geiser, J. Jun, J. Karpinski, J.-R. Park, and R. Sobolewski, “Long-Lived Coherent Acoustic Oscillators in GaN Single Crystals,” to be published in *Applied Physics Letters*.

J. D. Zuegel, S. Borneis, C. Barty, B. LeGarrec, C. Danson, N. Miyanaga, P. K. Rambo, T. J. Kessler, A. W. Schmid, L. J. Waxer, B. E. Kruschwitz, R. Jungquist, N. Blanchot, E. Moses, J. Britten, C. LeBlanc, F. Amiranoff, J. L. Porter, J. Schwarz, M. Geissel, I. C. Smith, I. Jovanovic, and J. Dawson, “Laser Challenges for Fast Ignition,” to be published in *Fusion Science and Technology*.

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## Conference Presentations

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The following presentations were made at the 11th International Topical Meeting on Optics of Liquid Crystals, Sand Key, FL, 2–7 October 2005:

S. G. Lukishova, N. Lepeshkin, R. W. Boyd, and K. L. Marshall, “Feedback-Free Hexagon Pattern Formation with Liquid Crystals and Isotropic Liquids.”

S. G. Lukishova and A. W. Schmid, “Near-Field Optical Microscopy of Cholesteric Oligomeric Liquid Crystal Layers.”

S. G. Lukishova, A. W. Schmid, C. M. Supranowitz, A. J. McNamara, P. Freivald, R. P. Knox, R. W. Boyd, and C. R. Stroud, “Single-Photon Source for Quantum Information Based on Single Dye Molecule Fluorescence in Liquid Crystal Host.”

K. L. Marshall, K. Adelsberger, G. Mhyre, and D. W. Griffith, “The LCPDI: A Compact and Robust Phase-Shifting, Point-Difraction Interferometer Based on Dye-Doped LC Technology.”

K. L. Marshall, G. Painter, K. Lotito, A. G. Noto, and P. Chang, “Transition Metal Dithiolene Near-IR Dyes and Their Applications in Liquid Crystal Devices” (invited).

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The following presentations were made at the 47th Annual Meeting of the APS Division of Plasma Physics, Denver, CO, 24–28 October 2005:

K. Anderson and R. Betti, “2-D Simulations of Adiabat-Shaped Targets.”

R. Betti and C. Zhou, “Fuel Assembly for Fast-Ignition Inertial Confinement Fusion.”

R. Betti and C. Zhou, “High-Density and High- $\rho R$ -Fuel Assembly for Fast-Ignition Inertial Confinement Fusion.”

- T. R. Boehly, E. Vianello, J. E. Miller, R. S. Craxton, T. J. B. Collins, V. N. Goncharov, I. V. Igumenshchev, D. D. Meyerhofer, D. G. Hicks, P. M. Celliers, and G. W. Collins, "Shock-Timing Experiments Using Double-Pulse Laser Irradiation" (invited).
- M. J. Canavan, J. A. Frenje, R. Leiter, C. K. Li, J. R. Rygg, F. H. Séguin, R. D. Petrasso, and S. Roberts, "Characterization of a Fusion Product Source for ICF Diagnostic Development."
- D. T. Casey, J. A. Frenje, C. K. Li, J. R. Rygg, F. H. Séguin, R. D. Petrasso, V. Yu. Glebov, D. D. Meyerhofer, T. C. Sangster, C. Stoeckl, S. W. Haan, S. P. Hatchett, P. A. Amendt, D. Eder, N. Izumi, O. L. Landen, R. A. Lerche, D. C. Wilson, R. Leeper, and R. E. Olson, "Design of the Shielding for the Magnetic Recoil Spectrometer (MRS) on OMEGA and the NIF Using the Neutron Transport Code TART2002."
- C. D. Chen, C. K. Li, J. A. Frenje, F. H. Séguin, R. D. Petrasso, J. Myatt, and J. A. Delettrez, "Monte Carlo Simulations for Studying Hot-Electron Transport in Nondegenerate Plasmas of Arbitrary  $Z$ ."
- T. J. B. Collins, P. W. McKenty, P. B. Radha, V. N. Goncharov, and S. Skupsky, "Stability and Performance of a Direct-Drive, 1-MJ, Wetted-Foam Target Design."
- R. S. Craxton, F. J. Marshall, M. J. Bonino, S. G. Noyes, and V. A. Smalyuk, "Radiation Transport in Saturn Targets Used for Polar Direct Drive."
- J. A. Delettrez, J. Myatt, P. B. Radha, C. Stoeckl, and D. D. Meyerhofer, "Hydrodynamic Simulations of Integrated Experiments Planned for the OMEGA/OMEGA EP Laser Systems."
- D. H. Edgell, R. S. Craxton, L. M. Elasky, D. R. Harding, L. S. Iwan, R. L. Keck, L. D. Lund, S. J. Verbridge, M. J. Wittman, and W. Seka, "Calibration of Cryogenic Target Optical Shadowgraphic Characterization."
- R. Epstein, T. J. B. Collins, J. A. Delettrez, V. N. Goncharov, J. P. Knauer, J. A. Marozas, P. W. McKenty, P. B. Radha, and V. A. Smalyuk, "Effects of Perturbed Picket Pulses in Adiabat-Shaped Direct-Drive Implosion Experiments."
- J. A. Frenje, D. T. Casey, C. K. Li, J. R. Rygg, F. H. Séguin, S. Volkmer, R. D. Petrasso, V. Yu. Glebov, D. D. Meyerhofer, T. C. Sangster, C. Stoeckl, S. W. Haan, S. P. Hatchett, P. A. Amendt, D. Eder, N. Izumi, O. L. Landen, R. A. Lerche, D. C. Wilson, R. Leeper, and O. L. Olson, "A Magnetic Recoil Spectrometer (MRS) for  $\rho R$ , Yield, and  $T_i$  Measurements of Implosions on OMEGA and the NIF."
- M. Ghilea, D. D. Meyerhofer, T. C. Sangster, D. Lonobile, A. Dillenbeck, R. A. Lerche, and L. Disdier, "Neutron Imaging with Bubble Chambers."
- V. Yu. Glebov, T. C. Sangster, S. Roberts, M. J. Moran, and B. Davis, "Neutron Time-of-Flight Detectors Based on Vacuum Photodiodes for the NIF and LMJ."
- V. N. Goncharov, G. Li, P. B. Radha, J. A. Delettrez, A. V. Maximov, and R. L. McCrory, "Electron Transport Modeling in Inertial Confinement Fusion Experiments."
- O. V. Gotchev, D. D. Meyerhofer, and C. Stoeckl, "A Compact, Multiangle Electron Spectrometer for Ultra-Intense Laser-Plasma Interaction Experiments."
- L. Guazzotto, R. Betti, and J. P. Freidberg, "First Results of a Linear MHD Stability Code for Axisymmetric Plasmas with Arbitrary Equilibrium Flow."
- D. R. Harding, D. D. Meyerhofer, S. J. Loucks, L. D. Lund, R. Janezic, L. M. Elasky, T. H. Hinterman, D. H. Edgell, W. Seka, M. D. Wittman, R. Q. Gram, and M. J. Bonino, "Forming Smooth Cryogenic Target Layers for OMEGA Direct-Drive ICF Implosions and Prospects for Direct-Drive Targets for the NIF" (invited).
- I. V. Igumenshchev, R. S. Craxton, P. W. McKenty, J. A. Marozas, and S. Skupsky, "Reduction of the Effects of Non-uniform Laser Irradiation in Polar-Direct-Drive Implosions on the NIF."
- P. A. Jaanimagi, R. Boni, and D. D. Meyerhofer, "Update on the Rochester Optical Streak System."
- N. Jang, J. P. Knauer, R. Betti, and D. D. Meyerhofer, "Laser Driven Magnetic Field Compression."
- J. P. Knauer, K. Anderson, R. Betti, T. J. B. Collins, V. Yu. Glebov, V. N. Goncharov, F. J. Marshall, D. D. Meyerhofer, P. B. Radha, S. P. Regan, T. C. Sangster, C. Stoeckl, J. A. Frenje, C. K. Li, R. D. Petrasso, and F. H. Séguin, "Direct-Drive, Low-Adiabat ICF Implosions."

C. K. Li and R. D. Petrasso, "Stopping, Straggling and Blooming of Directed Energetic Electrons in Hydrogenic and Arbitrary-Z Plasmas" (invited).

C. K. Li, F. H. Séguin, J. R. Rygg, J. A. Frenje, R. D. Petrasso, T. C. Sangster, V. A. Smalyuk, J. A. Delettrez, J. P. Knauer, S. P. Regan, J. M. Soures, F. J. Marshall, P. W. McKenty, D. D. Meyerhofer, C. Stoeckl, R. P. J. Town, A. J. MacKinnon, P. A. Amendt, N. Izumi, and O. L. Landen, "Proton Radiography of Electro-magnetic Fields Generated by Laser-Driven Plastic Foils."

D. Li and V. N. Goncharov, "Numerical Study of Temporal Density Variation Effects on Nonlinear Perturbation Evolution in Classical Rayleigh–Taylor Instability."

G. Li and V. N. Goncharov, "Effect of Ponderomotive Terms on Heat Flux in Laser-Produced Plasmas."

J. A. Marozas, F. J. Marshall, R. S. Craxton, I. V. Igumenshchev, S. Skupsky, P. B. Radha, T. J. B. Collins, R. Epstein, P. W. McKenty, M. J. Bonino, D. Jacobs-Perkins, D. D. Meyerhofer, T. C. Sangster, J. P. Knauer, V. A. Smalyuk, V. Yu. Glebov, S. G. Noyes, W. Seka, and R. L. McCrory, "Progress in Polar-Direct-Drive Simulations and Experiments" (invited).

F. J. Marshall, R. S. Craxton, M. J. Bonino, R. Epstein, V. Yu. Glebov, D. Jacobs-Perkins, J. P. Knauer, J. A. Marozas, P. W. McKenty, S. G. Noyes, P. B. Radha, W. Seka, S. Skupsky, V. A. Smalyuk, J. A. Frenje, C. K. Li, R. D. Petrasso, and F. H. Séguin, "Polar-Direct-Drive Experiments on OMEGA."

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P. W. McKenty and M. D. Wittman, "Role of Hydrogen Fractionation in ICF Ignition Target Designs."

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J. E. Miller, T. R. Boehly, D. D. Meyerhofer, and J. H. Eggert, "Equation-of-State Measurement in High Porosity  $Ta_2O_5$  Foam."

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"Numerical Calculations of Laser-Generated MeV Electrons and Characteristic X-Ray Production in Copper Foil Targets."

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