

Shock Physics Papers 1998

- 1998, Abdulazeem, M.S. "Condensed media shock waves and detonations: Equation of state and performance" *High Temp. High Press.* 30 387-422
- 1998, Addressio, F.L. and Aidun, J.B. "Analysis of shock-induced damage in fiber-reinforced composites", in "High Pressure Shock Compression of Solids III", ed. L. Davison and M. Shahinpoor, pp. 241-275, publ. New York, Springer
- 1998, Afanasev, S.A., Belov, N.N., Konyaev, A.A., Platova, T.M., Simonenko, V.G., Starenchenko, S.V., Stukanov, A.L., Trushkov, V.G. and Khabibullin, M.V. "Computer simulation of the behavior of materials subjected to impact-shock loading" *Mech. Solids* 33(5) 92-97
- 1998, Ahrens, T.J., Holland, K.G. and Chen, G.Q. "Shock temperatures and the melting point of iron" *AIP Conf. Proc.* 429 133-136
- 1998, Aizawa, T., Yen, B.K. and Syono, Y. "Shock-induced reaction mechanism to synthesize refractory metal silicides" *AIP Conf. Proc.* 429 651-654
- 1998, Akbulut, H. "The effect of explosive treatment on the formation of nitrides in Ti6Al4V alloy" *J. Mater. Process. Manuf. Sci.* 6 275-287
- 1998, Alcon, R.R., Sheffield, S.A., Martinez, A.R. and Gustavsen, R.L. "Magnetic gauge instrumentation on the LANL gas-driven two-stage gun" *AIP Conf. Proc.* 429 845-848
- 1998, Anderson, W.W., Yang, W.B., Chen, G. and Ahrens, T.J. "Shock wave equation of state of rhyolite" *Geophys. J. Int.* 132 1-13
- 1998, Anderson, W.W. and Ahrens, T.J. "Shock wave equations of state of chondritic meteorites" *AIP Conf. Proc.* 429 115-118
- 1998, Anderson, M.U., Chhabildas, L.C. and Reinhart, W.D. "Simultaneous PVDF/VISAR measurement technique for isentropic loading with graded density impactors" *AIP Conf. Proc.* 429 841-844
- 1998, Andreev, V.G., Klopotov, R.V., Pishchalnikov, Y.A. and Sapozhnikov, O.A. "Shear excited in a rubberlike medium by an acoustic pulse with shock front" *Bull. Russ. Acad. Sci.: Physics* 62 1903-1906
- 1998, Andreev, S.G., Zyuzin, V.V., Imkhovik, N.A., Smirnov, S.P. and Soloviev, V.S. "Inhibition of RDX decomposition under mechanical and shock impacts by nonexplosive additives" *Chem. Phys. Rep.* 17 55-66
- 1998, Andreev, S.G. "Semiempirical analysis of benzotrifuroxan decomposition under mechanical and shock impacts" *Chem. Phys. Rep.* 17 67-86
- 1998, Antman, S.S. "Physically unacceptable viscous stresses" *Z. angew. Math. Phys.* 49 980-988
- 1998, Antsiferov, V.N., Bekker, V.A. and Mazein, S.A. "Structure formation in powdered iron under a pulsed load" *Russ. Metall.* (4) 107-112

- 1998, Arad, B., Moshe, E., Eliezer, S., Dekel, E., Ludmirsky, A., Henis, Z., Goldberg, I.B., Eliaz, N. and Eliezer, D. "Spall strength measurements in aluminum, copper and metallic glass at strain rates of about 10^7 s^{-1} " AIP Conf. Proc. 429 459-462
- 1998, Archer, P. and Gupta, V. "Measurement and control of ice adhesion to aluminum 6061 alloy" J. Mech. Phys. Solids 46 1745-1771
- 1998, Armstrong, R.W., Elban, W.L., Tsai, D.H. and Zerilli, F.J. "Dislocation mechanics aspects of deformation-induced detonations and dynamic deformations", in "New Models and Numerical Codes for Shock Wave Processes in Condensed Media", ed. I.G. Cameron, pp. 123-127, publ. Aldermaston, UK, AWE Hunting
- 1998, Barker, L.M. "The accuracy of VISAR instrumentation" AIP Conf. Proc. 429 833-836
- 1998, Barrett, J.J.C., Robertson, D.H., Elert, M.L. and White, C.T. "Detonation Hugoniot for ozone from molecular dynamics simulations" AIP Conf. Proc. 429 329-331
- 1998, Batani, D., Benuzzi, A., Koenig, M., Faral, B., Temporal, M., Nazarov, W., Hall, T. and Grandjouan, N. "Shock impedance matching experiments in foam-solid targets: Implications for 'foam-buffered ICF'" Plasma Phys. Controlled Fusion 40 1567-1574
- 1998, Batsanov, S.S. "The E-phase of boron nitride as a fullerene" Combust. Explos. Shock Waves 34 106-108
- 1998, Bauer, F., Moulard, H. and Samara, G. "Advances in ferroelectric polymers for shock compression sensors" AIP Conf. Proc. 429 789-792
- 1998, Belak, J. "On the nucleation and growth of voids at high strain-rates" J. Computer-Aided Mater. Design 5 193-206
- 1998, Belak, J. "Molecular dynamics simulation of high strain rate void nucleation and growth in copper" AIP Conf. Proc. 429 211-214
- 1998, Belkov, S.A., Mkhitarian, L.S., Vinokurov, O.A., Kochemasov, G.G., Bondarenko, S.V., Wilson, D.C. and Hoffman, N.M. "Simulation of instability growth rates on the front and back of laser accelerated planar targets" Phys. Plasmas 5 2988-2996
- 1998, Benson, D.J. and Do, I. "Eulerian finite element modeling of shock induced chemical reactions in heterogeneous solid powder mixtures", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 113-116, publ. Fulton, Maryland, Neat Press
- 1998, Benuzzi, A., Koenig, M., Faral, B., Krishnan, J., Pisani, F., Batani, D., Bossi, S., Beretta, D., Hall, T., Ellwi, S., Huller, S., Honrubia, J. and Grandjouan, N. "Preheating study by reflectivity measurements in laser-driven shocks" Phys. Plasmas 5 2410-2420

- 1998, Benuzzi, A., Koenig, M., Krishnan, J., Faral, B., Nazarov, W., Temporal, M., Muller, L., Torsiello, F., Hall, T. and Grandjouan, N. "Dynamics of laser-produced shocks in foam-solid targets" *Phys. Plasmas* 5 2827-2829
- 1998, Benzoni-Gavage, S. "Semi-discrete shock profiles for hyperbolic systems of conservation laws" *Physica D* 115 109-123
- 1998, Bernecker, R.R. and Simpson, R.L. "Further observations on HMX particle size and buildup to detonation" *AIP Conf. Proc.* 429 719-722
- 1998, Berthe, L., Fabbro, R., Peyre, P. and Bartnicki, E. "Experimental study of the transmission of breakdown plasma generated during laser shock processing" *Eur. Phys. J.: Appl. Phys.* 3 215-218
- 1998, Berthe, L., Fabbro, R., Peyre, P., Bartnicki, E. and Sollier, A. "Study of physical processes involved in laser shock processing of materials", in "Proc. Laser Materials Processing Conference. Vol. 2", pp. D121-D129, publ. Orlando, Florida, Laser Institute of America
- 1998, Betekhtin, V.I., Roitman, V.M., Slutsker, A.I. and Kadomtsev, A.G. "Kinetics of the failure of loaded materials at variable temperature" *Tech. Phys.* 43 1342-1346
- 1998, Bethe, H.A. "On the theory of shock waves for an arbitrary equation of state", in "Classic Papers in Shock Compression Science", ed. J.N. Johnson and R. Chéret, pp. 421-492, publ. Berlin, Springer
- 1998, Betti, R., Goncharov, V.N., McCrory, R.L. and Verdon, C.P. "Growth rates of the ablative Rayleigh-Taylor instability in inertial confinement fusion" *Phys. Plasmas* 5 1446-1454
- 1998, Billingsley, J.P. "The decay limit of the Hugoniot elastic limit" *Int. J. Impact Engng* 21 267-281
- 1998, Billingsley, J.P. "The Hugoniot elastic limit decay limit" *AIP Conf. Proc.* 429 199-202
- 1998, Bjørnerud, M.G. "Superimposed deformation in seconds: Breccias from the impact structure at Kentland, Indiana, USA" *Tectonophysics* 290 259-269
- 1998, Blatter, A. and Peguiron, D.A. "Explosive joining of precious metals" *Gold Bulletin* 31(3) 93-98
- 1998, Blokhin, A.M., Trakhinin, Y.L. and Merzhov, I.Z. "On the stability of shock waves in a continuous medium with a space charge" *J. Appl. Mech. Tech. Phys.* 39 184-193
- 1998, Bodner, S.E., Colombant, D.G., Gardner, J.H., Lehmborg, R.H., Obenshain, S.P., Phillips, L., Schmitt, A.J., Sethian, J.D., McCrory, R.L., Seka, W., Verdon, C.P., Knauer, J.P., Afeyan, B.B. and Powell, H.T. "Direct-drive laser fusion: Status and prospects" *Phys. Plasmas* 5 1901-1918
- 1998, Boettger, J.C. and Wallace, D.C. "A model for the shock-induced phase transition in iron" *AIP Conf. Proc.* 429 129-132

- 1998, Bogach, A.A., Kanel, G.I., Razorenov, S.V., Utkin, A.V., Protasova, S.G. and Sursaeva, V.G. "Resistance of zinc crystals to shock deformation and fracture at elevated temperatures" *Phys. Solid State* 40 1676-1680
- 1998, Bogach, A.A. "Analysis of temperature influence on the dynamic fracture of metals" *AIP Conf. Proc.* 429 223-226
- 1998, Boillat, G. and Ruggeri, T. "On the shock structure problem for hyperbolic system of balance laws and convex entropy" *Continuum Mech. Thermodyn.* 10 285-292
- 1998, Bola, M.S., Madan, A.K., Suneja, H.R. and Singh, M. "Acceleration of heavy mild steel plates by unconfined high explosives", in "Proc. 17th Int. Symp. on Ballistics. Vol. 2", ed. C. van Niekerk, pp. 473-480, publ. Moreleta Park, South Africa, The South African Ballistics Organisation
- 1998, Bondar, M.P., Pervukhina, O.L., Nesterenko, V.F. and Lukyanov, Y.L. "Development of the titanium structure in explosive collapse of thick-walled cylinders" *Combust. Explos. Shock Waves* 34 590-597
- 1998, Bonnan, S., Hereil, P.-L. and Collombet, F. "Experimental characterization of quasi static and shock wave behavior of porous aluminum" *J. Appl. Phys.* 83 5741-5749
- 1998, Bonnet, N. "Etude du comportement sous sollicitations intenses d'elastomères: Application au cas du blindage reactif", PhD thesis, Univ. of Ecole Nationale Supérieure des Arts et Métiers, France
- 1998, Bordzilovsky, S.A., Karakhanov, S.M. and Merzhievsky, L.A. "Shock response of a unidirectional composite at various orientation of fibers" *AIP Conf. Proc.* 429 545-548
- 1998, Borschevsky, A.O., Gorshkov, M.M. and Tarasov, A.M. "The twofold quartzite shock adiabat under pressures of 55-150 GPa" *AIP Conf. Proc.* 429 95-98
- 1998, Borshchevskii, A.O., Gorshov, M.M. and Tarasov, A.M. "The two-stage shock compression of quartzite to pressures of 550-1500 kbar" *Phys. Solid Earth* 34 291-294
- 1998, Boteler, J.M. "Compression-shear study of glass-reinforced polyester" *AIP Conf. Proc.* 429 537-540
- 1998, Bouma, R.H.B., Jordan, T., Cardell, A., van Esveld, R.J., Prinse, W.C. and van der Steen, A.C. "Flyer impact characterisation of booster explosives for IM applications", in "Proc. Insensitive Munitions & Energetic Materials Technology Symposium", paper IIB-5, publ. Lancaster, PA, National Defense Industrial Association
- 1998, Bourne, N.K., Millett, J.C.F., Rosenberg, Z. and Murray, N.H. "On the shock induced failure of brittle solids" *J. Mech. Phys. Solids* 46 1887-1908

- 1998, Bourne, N.K. and Gray III, G.T. "Shock induced spallation of Teflon, Estane and Kel-F 800 polymers", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 619-622, publ. Fulton, Maryland, Neat Press
- 1998, Bourne, N.K., Rosenberg, Z. and Field, J.E. "Surface fracture zones in shock-loaded polycrystalline ceramics" AIP Conf. Proc. 429 493-496
- 1998, Bourne, N.K. and Rosenberg, Z. "Simultaneous manganin gauge and VISAR measurements of shock wave profiles" AIP Conf. Proc. 429 849-852
- 1998, Boustie, M., Seymarc, C., Auroux, E., de Ressaiguier, T. and Romain, J.P. "Coating debonding induced by confined laser shock interpreted in terms of shock wave propagation" AIP Conf. Proc. 429 985-988
- 1998, Boyarshinova, T.S., Sudareva, S.V., Greenberg, B.A., Antonova, O.V., Panova, E.V. and Shorokhov, E.V. "Analysis of the heterogeneous structures of titanium aluminides prepared by the spherical shock wave method. 3: Electron microscopic examination of the Ti_3Al structure" Phys. Metals Metallog. 85 463-468
- 1998, Bradley, D.K., Delettrez, J.A., Epstein, R., Town, R.P.J., Verdon, C.P., Yaakobi, B., Regan, S., Marshall, F.J., Boehly, T.R., Knauer, J.P., Meyerhofer, D.D., Smalyuk, V.A., Seka, W., Haynes Jr., D.A., Gunderson, M., Junkel, G., Hooper Jr., C.F., Bell, P.M., Ognibene, T.J. and Lerche, R.A. "Measurements of core and pusher conditions in surrogate capsule implosions on the OMEGA laser system" Phys. Plasmas 5 1870-1879
- 1998, Brar, N.S. and Espinosa, H.D. "A review of micromechanics of failure waves in silicate glasses" Chem. Phys. Rep. 17 317-342
- 1998, Brown, J., Ratcliff, P.R. and Endersby, P.C. "PVDF as an impact sensor and discriminator", in "Proc. 17th Int. Symp. on Ballistics. Vol. 3", ed. C. van Niekerk, pp. 119-126, publ. Moreleta Park, South Africa, The South African Ballistics Organisation
- 1998, Browning, R.V. and Scammon, R.J. "Mechanical strength model for plastic bonded granular materials at high strain rates and large strains" AIP Conf. Proc. 429 277-280
- 1998, Buchanan, P.C., Koeberl, C. and Reid, A.M. "Impact into unconsolidated, water-rich sediments at the Marquez Dome, Texas" Meteor. Planet. Sci. 33 1053-1064
- 1998, Bugrimov, A.L. "Characteristics of the evolution of plane and spherical shock waves in dense media" Combust. Explos. Shock Waves 34 342-345
- 1998, Bukiet, B. "Solving curved detonation Riemann problems" AIP Conf. Proc. 429 321-324
- 1998, Bultelle, M., Grassin, M. and Serre, D. "Unstable Godunov discrete profiles for steady shock waves" SIAM J. Numer. Anal. 35 2272-2297

- 1998, Burchell, M.J., Leliwa-Kopystynki, J., Vaughan, B. and Zarnecki, J. "Comparison of H₂O and CO₂ ices under hypervelocity impact" AIP Conf. Proc. 429 949-952
- 1998, Bystrzycki, J. and Varin, R.A. "Anomalous softening behaviour prior to static recrystallization of shock wave deformed FeAl intermetallic alloys" Scripta mater. 38 465-470
- 1998, Cagnoux, J. and Tranchet, J.-Y. "Response of high-strength ceramics to plane and spherical shock waves", in "High Pressure Shock Compression of Solids III", ed. L. Davison and M. Shahinpoor, pp. 147-169, publ. New York, Springer
- 1998, Campbell, E.M., Cauble, R. and Remington, B.A. "High energy density science on the National Ignition Facility" AIP Conf. Proc. 429 3-11
- 1998, Caramana, E.J., Shashkov, M.J. and Whalen, P.P. "Formulations of artificial viscosity for multi-dimensional shock wave computations" J. Comput. Phys. 144 70-97
- 1998, Carlton, R.W., Koeberl, C., Baranoski, M.T. and Schumacher, G.A. "Discovery of microscopic evidence for shock metamorphism at the Serpent Mound structure, south-central Ohio: Confirmation of an origin by impact" Earth Planet. Sci. Letts 162 177-185
- 1998, Carton, E.P., Stuivinga, M. and Verbeek, H.J. "Crack prevention in shock compaction of powders" AIP Conf. Proc. 429 549-552
- 1998, Cauble, R., Perry, T.S., Bach, D.R., Budil, K.S., Hammel, B.A., Collins, G.W., Gold, D.M., Dunn, J., Celliers, P., Da Silva, L.B., Foord, M.E., Wallace, R.J., Stewart, R.E. and Woolsey, N.C. "Absolute equations of state data in the 10-40 Mbar (1-4 TPa) regime" Phys. Rev. Letts 80 1248-1251
- 1998, Celliers, P.M., Collins, G.W., Da Silva, L.B., Gold, D.M. and Cauble, R. "Accurate measurement of laser-driven shock trajectories with velocity interferometry" Appl. Phys. Letts 73 1320-1322
- 1998, Chakraborty, S. "On distortion of waves in a nonlinear magnetoelastic conductor" Arch. Mech. 50 1047-1053
- 1998, Chambers, G., Sandusky, H., Zerilli, F., Rye, K. and Tussing, R. "Pressure measurements on a deforming surface in response to an underwater explosion" AIP Conf. Proc. 429 397-400
- 1998, Chang, S.N. and Choi, J.H. "High strain rate response of a tungsten heavy alloy" AIP Conf. Proc. 429 415-418
- 1998, Chen, S.-J. and Howitt, D.G. "Observations of partial dislocations and basal twin boundaries in shock-wave deformed sapphire" Philos. Mag. A 78 765-776
- 1998, Chen, H.C., Nesterenko, V.F. and Meyers, M.A. "Shear localization and chemical reaction in Ti-Si and Nb-Si powder mixtures: Thermochemical analysis" J. Appl. Phys. 84 3098-3106

- 1998, Chen, H.C., Lasalvia, J.C., Nesterenko, V.F. and Meyers, M.A. "Shear localization and chemical reaction in high strain, high strain-rate deformation of Ti-Si powder mixtures" *Acta mater.* 46 3033-3046
- 1998, Chen, G.Q. and Ahrens, T.J. "Radio frequency heating coils for shock wave experiments" *Mater. Res. Soc. Symp. Proc.* 499 63-71
- 1998, Chen, X.-H. and Wang, M. "Studies on diamond synthesis via laser shock processing (in Chinese)" *J. Nanjing Univ. Aeronaut. Astronaut.* 30 100-105
- 1998, Chen, G.Q. and Wang, D.H. "Shock capturing approximations to the compressible Euler equations with geometric structure and related equations" *Z. angew. Math. Phys.* 49 341-362
- 1998, Chen, G.Q. and Ahrens, T.J. "High pressure and high temperature equation-of-state of gamma and liquid iron" *Mater. Res. Soc. Symp. Proc.* 499 41-61
- 1998, Cheng, H.Y., Chu, N.-C., Leung, P.T. and Yuan, L. "How important are shock waves to single-bubble sonoluminescence?" *Phys. Rev. E* 58 2705-2708
- 1998, Chernai, A.V. "Application of laser triggering an explosive charge for the hardening treatment of materials by an explosion (in Russian)" *Metallofiz. Noveish. Tekhnol.* 20(2) 76-79
- 1998, Chhabildas, L.C., Konrad, C.H., Mosher, D.A., Reinhart, W.D., Duggins, B.D., Trucano, T.G., Summers, R.M. and Peery, J.S. "ALEGRA-code validation: Experiments and simulations", in "Structures under Shock and Impact V", ed. N. Jones, D.G. Talaslidis, C.A. Brebbia and G.D. Manolis, pp. 603-612, publ. Southampton, UK, Computational Mechanics Publications
- 1998, Chhabildas, L.C. and Brannon, R.M. "Shock-induced vaporization of zinc: Experiment and numerical simulations" *Chem. Phys. Rep.* 17 203-213
- 1998, Chhabildas, L.C., Furnish, M.D. and Grady, D.E. "Impact of alumina: A comprehensive study", in "New Models and Numerical Codes for Shock Wave Processes in Condensed Media", ed. I.G. Cameron, pp. 17-25, publ. Aldermaston, UK, AWE Hunting
- 1998, Chichili, D.R., Ramesh, K.T. and Hemker, K.J. "The high strain rate response of alpha-titanium: Experiments, deformation mechanisms and modeling" *Acta mater.* 46 1025-1043
- 1998, Chou, I.M., Blank, J.G., Goncharov, A.F., Mao, H.K. and Hemley, R.J. "In situ observations of a high pressure phase of water ice" *Science* 281 809-812
- 1998, Church, P., Cullis, I. and Goldthorpe, B. "Some issues concerning the implementation of advanced constitutive relations in hydrocodes", in "New Models and Numerical Codes for Shock Wave Processes in Condensed Media", ed. I.G. Cameron, pp. 40-45, publ. Aldermaston, Berkshire, UK, AWE Hunting Brae

- 1998, Clements, B.E., Johnson, J.N. and Addessio, F.L. "Wave propagation in laminates: A study of the nonhomogenized dynamic method of cells" *Wave Motion* 27 193-209
- 1998, Clemett, S.J., Chilliier, X.D.F., Gillette, S., Zare, R.N., Maurette, M., Engrand, C. and Kurat, G. "Observation of indigenous polycyclic aromatic hydrocarbons in 'giant' carbonaceous Antarctic micrometeorites" *Origins Life Evolution Biospheres* 28 425-448
- 1998, Clifton, R.J., Mello, M. and Brar, N.S. "Effect of shear on failure waves in sodalime glass" *AIP Conf. Proc.* 429 521-524
- 1998, Cobble, J.A., Johnson, R.P. and Mason, R.J. "Wavelength scaling of high-intensity illumination of an exploded foil" *Phys. Plasmas* 5 4005-4008
- 1998, Coffey, C.S. "Mechanisms of elastoplastic response of metals to impact", in "High Pressure Shock Compression of Solids III", ed. L. Davison and M. Shahinpoor, pp. 59-80, publ. New York, Springer
- 1998, Coffey, C.S. "Initiation by impact or mild shock" *Chem. Phys. Rep.* 17 3-11
- 1998, Collins, G.W., Celliers, P., da Silva, L.B., Cauble, R., Gold, D., Foord, M., Budil, K.S., Stewart, R., Holmes, N.C., Ross, M., Hammel, B.A., Kilkenny, J.D., Wallace, R.J. and Ng, A. "Equation of state measurements of hydrogen isotopes on Nova" *Phys. Plasmas* 5 1864-1869
- 1998, Collins, G.W., Da Silva, L.B., Celliers, P., Gold, D.M., Foord, M.E., Wallace, R.J., Ng, A., Weber, S.V., Budil, K.S. and Cauble, R. "Measurements of the equation of state of deuterium at the fluid insulator-metal transition" *Science* 281 1178-1181
- 1998, Collins, G.W., DaSilva, L.B., Celliers, P., Budil, K.S., Cauble, R., Gold, D., Foord, M., Stewart, R., Holmes, N.C., Ross, M., Hammel, B.A., Kilkenny, J.D., Wallace, R.J. and Ng, A. "Equation of state measurements of deuterium on NOVA" *AIP Conf. Proc.* 429 55-60
- 1998, Connolly Jr., H.C. and Love, S.G. "The formation of chondrules: Petrologic tests of the shock wave model" *Science* 280 62-67
- 1998, Conrad, C.H., Trott, W.M., Hall, C.A., Lash, J.S., Dukart, R.J., Clark, B., Hanson, D.L., Chandler, G.A., Fleming, K.J., Trucano, T.G., Chhabildas, L.C. and Asay, J.R. "Use of Z-pinch sources for high pressure shock wave experiments" *AIP Conf. Proc.* 429 997-1000
- 1998, Corey, E.M. and Young, D.A. "A new prototype equation of state data library" *AIP Conf. Proc.* 429 43-46
- 1998, Counihan, P.J., Crawford, A. and Thadhani, N.N. "Nanostructure formation by dynamic densification and recrystallization of amorphous titanium-silicon alloy" *AIP Conf. Proc.* 429 419-422
- 1998, Crandall, D.H. "The National Ignition Facility and atomic data" *AIP Conf. Proc.* 434 287-293

- 1998, Cudzilo, S., Maranda, A. and Trzcinski, A. "Shock initiation of nitromethane based explosives in gap test configuration", in "Proc. 29th Int. Ann. Conf. of ICT: Energetic Materials Production, Processing and Characterization", paper 119, publ. Karlsruhe, Germany, Fraunhofer Institut für Chemische Technologie
- 1998, Cudzilo, S., Maranda, A., Nowaczewski, J. and Trzcinski, W. "Experimental and theoretical determination of impact parameters for explosive cladding purposes", in "Processing and Fabrication of Advanced Materials VI", ed. K.A. Khor, T.S. Srivatsan and J.J. Moore, pp. 329-337, publ. London, IOM Communications Ltd.
- 1998, Curran, D.R., Seaman, L. and Simons, J.W. "Equation of state models for hydrocodes", in "New Models and Numerical Codes for Shock Wave Processes in Condensed Media", ed. I.G. Cameron, pp. 155-164, publ. Aldermaston, Berkshire, UK, AWE Hunting Brae
- 1998, Curran, D.R. "The importance of material properties for cratering and penetration in geologic materials" AIP Conf. Proc. 429 945-948
- 1998, Curtis, J.P., Lee, P.R., Moyses, M. and Nixon, G.C. "Analytical modelling of the initiation of explosives by shaped charge jets", in "Proc. Insensitive Munitions & Energetic Materials Technology Symposium", paper IVB-9, publ. Lancaster, PA, National Defense Industrial Association
- 1998, Dandekar, D.P. "Index of refraction and mechanical behavior of soda lime glass under shock and release wave propagations" J. Appl. Phys. 84 6614-6622
- 1998, Dandekar, D.P. "Shock induced deformation of tungsten and one of its alloys", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 631-634, publ. Fulton, Maryland, Neat Press
- 1998, Dandekar, D.P., Boteler, J.M. and Beaulieu, P.A. "Elastic constants and delamination strength of a glass-fiber-reinforced polymer composite" Compos. Sci. Technol. 58 1397-1403
- 1998, Dandekar, D.P. "Shock, release, and tension response of sodalime glass" AIP Conf. Proc. 429 525-528
- 1998, Davidson, D.F., Bates, R., Petersen, E.L. and Hanson, R.K. "Shock tube measurements of the equation of state of argon" Int. J. Thermophys. 19 1585-1594
- 1998, Davis, W.C. "Introduction to explosives", in "Explosive Effects and Applications", ed. J.A. Zukas and W.P. Walters, pp. 1-22, publ. New York, Springer
- 1998, Davis, J.J. and Miller, P.J. "Shock and impact initiation of an incendiary material", in "JANNAF 17th Propulsion Systems Hazards Subcommittee Meeting. Vol. 1", ed. J.E. Cocchiaro, M.T. Gannaway and M. Rognan, pp. 139-147, publ. Columbia, MD, Chemical Propulsion Information Agency

- 1998, Davis, J.J. and Lindfors, A.J. "Inert Hugoniot for a porous titanium-Teflon mixture: Experiment and calculations" AIP Conf. Proc. 429 663-666
- 1998, Davis, L.L. and Brower, K.R. "Shock initiation chemistry of nitroarenes" AIP Conf. Proc. 429 699-702
- 1998, Davison, L. and Shahinpoor, M., Eds. "High-Pressure Shock Compression of Solids III", publ. New York, Springer
- 1998, Davison, L. "Attenuation of longitudinal elastoplastic pulses", in "High Pressure Shock Compression of Solids III", ed. L. Davison and M. Shahinpoor, pp. 277-327, publ. New York, Springer
- 1998, De, S., Heaney, P.J., Hargraves, R.B., Vicenzi, E.P. and Taylor, P.T. "Microstructural observations of polycrystalline diamond: A contribution to the carbonado conundrum" Earth Planet Sci. Letts 164 421-433
- 1998, de Rességuier, T. and Hallouin, M. "Stress relaxation and precursor decay in laser shock-loaded iron" J. Appl. Phys. 84 1932-1938
- 1998, de Rességuier, T. and Hallouin, M. "Elastic-plastic behavior of iron subjected to laser shock loading", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 635-638, publ. Fulton, Maryland, Neat Press
- 1998, DeCarli, P.S. "More on the possibility of impact origin of carbonado" AIP Conf. Proc. 429 681-684
- 1998, Dekel, E., Eliezer, S., Henis, Z., Moshe, E., Ludmirsky, A. and Goldberg, O.B. "Spallation model for the high strain rates range" J. Appl. Phys. 84 4851-4858
- 1998, Delius, M., Ueberle, F. and Eisenmenger, W. "Extracorporeal shock waves act by shock wave-gas bubble interaction" Ultrasound Med. Biol. 24 1055-1059
- 1998, Denoual, C. and Hild, F. "A continuum model for dynamic fragmentation of SiC ceramics", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 321-324, publ. Fulton, Maryland, Neat Press
- 1998, Dick, J.J., Martinez, A.R. and Hixson, R.S. "Plane impact reponse of PBX-9501 and its components below 2 GPa", Tech. Rep. LA-13426-MS, Los Alamos National Laboratory
- 1998, Dinariev, O.Y. and Nikolaevskii, V.N. "Electromagnetic signals generated by the deformation waves in media with microstructure (in Russian)" Dokl. Akad. Nauk 358 627-629
- 1998, Dlott, D.D., Hambir, S. and Franken, J. "The new wave in shock waves" J. Phys. Chem. B 102 2121-2130
- 1998, Dobler, E.A., Gryadunov, A.N. and Shteinberg, A.S. "On the possible gas detonation explosion of BaO₂/zirconium powder mixture" AIP Conf. Proc. 429 635-638
- 1998, Doig, A. "Military Metallurgy", publ. London, Institute of Materials

- 1998, Dolgoborodov, A.Y. "Attenuation of shock waves in a mixture of aluminum oxide and PMMA" Chem. Phys. Rep. 17 959-969
- 1998, Dontsov, V.E. "Reflection of pressure waves of moderate intensity at a solid wall in a liquid with bubbles of readily soluble gas" J. Appl. Mech. Tech. Phys. 39 666-670
- 1998, Dremov, V.V. and Modestov, D.G. "Calculation of shock compression parameters for chlorinated methanes" Chem. Phys. Rep. 17 781-790
- 1998, Drugan, W.J. "Thermodynamic equivalence of steady-state shocks and smooth waves in general media: Applications to elastic-plastic shocks and dynamic fracture" J. Mech. Phys. Solids 46 313-336
- 1998, Drumheller, D.S. "Introduction to Wave Propagation in Nonlinear Fluids and Solids", publ. Cambridge, Cambridge University Press
- 1998, Duprey, K.E. and Clifton, R.J. "Dynamic constitutive response of tantalum at high strain rates" AIP Conf. Proc. 429 475-478
- 1998, Dyka, C.T. and Badaliance, R. "Damage in marine composites caused by shock loading" Compos. Sci. Technol. 58 1433-1442
- 1998, Ege, E.S., Inal, O.T. and Zimmerly, C.A. "Response surface study on production of explosively welded aluminum-titanium laminates" J. Mater. Sci. 33 5327-5338
- 1998, Engelke, R. and Sheffield, S.A. "Initiation and propagation of detonation in condensed-phase high explosives", in "High Pressure Shock Compression of Solids III", ed. L. Davison and M. Shahinpoor, pp. 171-239, publ. New York, Springer
- 1998, Engquist, B. and Sjogren, B. "The convergence rate of finite difference schemes in the presence of shocks" SIAM J. Numer. Anal. 35 2464-2485
- 1998, Erlebacher, G., Hussaini, M.Y. and Jackson, T.L. "Nonlinear strong shock interactions: A shock-fitted approach" Theor. Comput. Fluid Dynamics 11 1-29
- 1998, Erofeev, E., Silberschmidt, V.V., Kalin, A.A. and Moiseev, V.A. "Evolution of a laser-generated shock wave in iron and its interaction with martensitic transformation and twinning" Shock Waves 8 177-181
- 1998, Espinosa, H.D. "Recent developments in velocity and stress measurements applied to the dynamic characterization of brittle materials" Mech. Mater. 29 219-232
- 1998, Espinosa, H.D., Zavattieri, P.D. and Emore, G.L. "Adaptive FEM computation of geometric and material nonlinearities with application to brittle failure" Mech. Mater. 29 275-305
- 1998, Fabbro, R., Peyre, P., Berthe, L. and Schepereel, X. "Physics and applications of laser-shock processing" J. Laser Appl. 10 265-279
- 1998, Fedorov, A.V., Menshikh, A.V. and Yagodin, N.B. "On detonation wave front structure of condensed high explosives" AIP Conf. Proc. 429 735-738

- 1998, Feklichev, V.G. "The new data on a compactness of atomic placing and its bond with a compressibility of native elements (in Russian)" Dokl. Akad. Nauk 362 389-392
- 1998, Feng, R., Raiser, G.F. and Gupta, Y.M. "Material strength and inelastic deformation of silicon carbide under shock wave compression" J. Appl. Phys. 83 79-86
- 1998, Feng, R. and Gupta, Y.M. "Determination of lateral stresses in shocked solids: Simplified analysis of piezoresistance gauge data" J. Appl. Phys. 83 747-753
- 1998, Feng, R., Gupta, Y.M. and Yuan, G. "Dynamic strength and inelastic deformation of ceramics under shock wave loading" AIP Conf. Proc. 429 483-488
- 1998, Feoktistov, L.P. "Thermonuclear detonation" Phys. Uspekhi 41 1139-1147
- 1998, Fernández, G.E. "A Debye-Grüneisen thermal correction to the Murnaghan equation of state of solids" J. Phys. Chem. Solids 59 867-870
- 1998, Ferrel, R. and Romero, V. "SPH simulation of high density hydrogen compression" AIP Conf. Proc. 429 203-206
- 1998, Field, J.E., Walley, S.M., Bourne, N.K. and Huntley, J.M. "Review of experimental techniques for high rate deformation studies", in "Proc. Acoustics and Vibration Asia '98", pp. 9-38, publ. Singapore, Acoustics and Vibration Asia 98 Conference
- 1998, Fiske, P.S., Holmes, N. and Lassila, D. "Shock loading of tantalum: Yield and hardening behavior of polycrystalline and oriented single crystal samples", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 639-642, publ. Fulton, Maryland, Neat Press
- 1998, Fiske, P.S., Nellis, W.J., Xu, Z. and Stebbins, J.F. "Shocked quartz: A ^{29}Si magic-angle spinning NMR study" Amer. Mineralogist 83 1295-1292
- 1998, Forbes, J.W., Urtiev, P.A., Tarver, C.M. and Garcia, F. "Hugoniot of PTFE (Teflon) at initial temperature of 250 °C", UCRL-JC-135387, Lawrence Livermore National Laboratory
- 1998, Fortov, V.E., Khishchenko, K.V., Levashov, P.R. and Lomonosov, I.V. "Wide-range multiphase equations of state for metals" Nuclear Instrum. Methods Phys. Res. A 415 604-608
- 1998, Foster Jr., J.C., Christopher, F., Wilson, L., Jerome, D. and Toness, O. "Observations concerning the damage in concrete subjected to high rates of loading", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 643-646, publ. Fulton, Maryland, Neat Press

- 1998, Frank, A.C., Stowasser, F., Stark, O., Kwak, H.-T., Sussek, H., Rupp, A., Pritzkow, H., Ambacher, O., Giersig, M. and Fischer, R.A. "Microstructural characterisation of nanocrystalline GaN prepared by detonations of gallium azides" *Adv. Mater. Opt. Electron.* 8 135-146
- 1998, Franken, J., Hambir, S.A. and Dlott, D.D. "Ultrafast spectroscopy of laser-driven shock waves in molecular materials" *Molec. Cryst. Liq. Cryst. Sci. Technol. A* 314 25-36
- 1998, Franken, J., Hambir, S.A. and Dlott, D.D. "Picosecond vibrational spectroscopy of shocked energetic materials" *AIP Conf. Proc.* 429 819-822
- 1998, French, B.M. "Traces of Catastrophe: A Handbook of Shock-Metamorphic Effects in Terrestrial Meteorite Impact Structures", publ. Houston, TX, Lunar and Planetary Institute
- 1998, Freund, F., Butow, S.J., Lise, M. and Borucki, J.F. "Shock-generated conductivity pulses in oxide insulators" *Vide Sci. Tech. Appl.* 287 210-214
- 1998, Fritz, J.N. and Kennedy, J.E. "Air cushion effect in the short-pulse initiation of explosives" *AIP Conf. Proc.* 429 393-396
- 1998, Frutschy, K.J. and Clifton, R.J. "High temperature pressure-shear plate impact experiments using pure tungsten carbide impactors" *Exper. Mech.* 38 116-125
- 1998, Frutschy, K.J. and Clifton, R.J. "High temperature pressure-shear plate impact experiments on OFHC copper" *J. Mech. Phys. Solids* 46 1723-1743
- 1998, Frutschy, K.J., Clifton, R.J. and Mello, M. "High-temperature pressure-shear plate impact studies on OFHC copper and pure tungsten carbide" *AIP Conf. Proc.* 429 463-466
- 1998, Fuchs, B.E., Droughton, J. and Persson, P.-A. "Modifications to Oh-Persson equation of state" *AIP Conf. Proc.* 429 31-34
- 1998, Funk, D.J., Asay, B.W., Bennett, B.I., Bowman, J.D., Boat, R.M., Dickson, P.M., Henson, B.F., Hull, L.M., Idar, D.J., Laabs, G.W., London, R.K., Mace, J.L., Morgan, G.L., Murk, D.M., Rabie, R.L., Ragan, C.E., Satcy, H.L. and Yuan, V.W. "Dynamic measurement of temperature using neutron resonance spectroscopy" *AIP Conf. Proc.* 429 887-890
- 1998, Funtikov, A.I. "Shock compression of porous uranium" *High Temp.* 36 384-388
- 1998, Furnish, M.D. and Chhabildas, L.C. "Alumina strength degradation in the elastic regime" *AIP Conf. Proc.* 429 501-504
- 1998, Galbraith, S.D. "The response of potassium chloride, ammonium nitrate solutions, and emulsion explosives to plate impact loading", PhD thesis, Univ. of Cambridge
- 1998, Garcés, J.E. and Guillermet, A.F. "Equation of state parameters for stable and non-stable transition metal phases from universal binding energy relations" *Calphad* 22 469-493

- 1998, Garcia, B.O. and Persson, P.A. "The shock Hugoniot of liquid hydrazine in the pressure range of 3.1 to 21.4 GPa" *Chem. Phys. Rep.* 17 223-232
- 1998, Gardner, J.H., Schmitt, A.J., Dahlburg, J.P., Pawley, C.J., Bodner, S.E., Obenschain, S.P., Serlin, V. and Aglitskiy, Y. "Computational modeling of direct-drive fusion pellets and KrF-driven foil experiments" *Phys. Plasmas* 5 1935-1944
- 1998, Gebbeken, N. and Ruppert, M. "On the concrete material response to explosive loading: Numerical simulations", in "Structures under Shock and Impact V", ed. N. Jones, D.G. Talaslidis, C.A. Brebbia and G.D. Manolis, pp. 773-782, publ. Southampton, UK, Computational Mechanics Publications
- 1998, Gerasimov, A.V. "Asymmetric compression, expansion, and fracture under explosive loading" *Strength Mater.* 30 540-550
- 1998, Gerasimov, M.V., Ivanov, B.A., Yakovlev, O.I. and Dikov, Y.P. "Physics and chemistry of impacts" *Earth Moon Planets* 80 209-259
- 1998, Gibson, H.M. and Spray, J.G. "Shock-induced melting and vaporization of shatter cone surfaces: Evidence from the Sudbury impact structure" *Meteor. Planet. Sci.* 33 329-336
- 1998, Gibson, R.L., Reimold, W.U. and Stevens, G. "Thermal-metamorphic signature of an impact event in the Vredefort Dome, South Africa" *Geology* 26 787-790
- 1998, Gil, F. and Fanget, A. "Implementation of the Johnson damage model in the explicit hydrocode OURANOS", in "New Models and Numerical Codes for Shock Wave Processes in Condensed Media", ed. I.G. Cameron, pp. 46-52, publ. Aldermaston, Berkshire, UK, AWE Hunting Brae
- 1998, Giles, A.R. and Maw, J.R. "Modelling the temperature and strain rate dependence of spallation in metals" *AIP Conf. Proc.* 429 243-246
- 1998, Gilev, S.D. "Electric current waves generated by shock compression of condensed material in a magnetic field" *Chem. Phys. Rep.* 17 247-265
- 1998, Gilev, S.D. and Trubachev, A.M. "A study of semiconductor-metal transition in shocked monocrystalline silicon" *AIP Conf. Proc.* 429 777-780
- 1998, Gilmour, J.D., Whitby, J.A. and Turner, G. "Xenon isotopes in irradiated ALH84001: Evidence for shock-induced trapping of ancient Martian atmosphere" *Geochim. Cosmochim. Acta* 62 2555-2571
- 1998, Ginzburg, A. and Rosenberg, Z. "Using reverberation techniques to study the properties of shock loaded sodalime glass" *AIP Conf. Proc.* 429 529-531
- 1998, Glenn, L.A. "Optimization studies of a three-stage light gas gun" *AIP Conf. Proc.* 429 963-966
- 1998, Glushak, B.L., Trunin, I.R. and Uvarova, O.A. "The spallation kinetics of armco iron alpha-phase" *Chem. Phys. Rep.* 17 307-316

- 1998, Goel, B., Baumung, K., Hobel, W., Kanel, G.I., Marten, H., Mintsev, V.B., Razorenov, S.V., Rusch, D., Shutov, A.V., Singer, J., Utkin, A.V. and Vorobiev, O.Y. "Investigations on physics and dynamics of matter with the Karlsruhe Light Ion Facility (KALIF)", FZKA 5991, Forschungszentrum Karlsruhe GmbH
- 1998, Gogulya, M.F., Dolgoborodov, A.Y. and Brazhnikov, M.A. "Fine structure of detonation waves in HMX-Al mixtures" Chem. Phys. Rep. 17 51-54
- 1998, Golubev, V.K., Sobolev, Y.S. and Trunin, I.R. "Strength and fracture of plutonium and its alloy with gallium under impact loading" J. Appl. Mech. Tech. Phys. 39 600-604
- 1998, Golubev, V.K. and Trunin, I.R. "Distinctive features of fracture processes in beryllium under impact loading" Strength Mater. 30 55-58
- 1998, Golubev, V.K., Sobolev, Y.S. and Trunin, I.R. "Determination of the conditions of fracture of plutonium and its alloy with gallium under impact loading" Strength Mater. 30 531-535
- 1998, Golubev, V.K., Sobolev, Y.S. and Yukina, N.A. "Failure of uranium alloys with molybdenum and zirconium under shock-wave loading in the temperature range from -196 to 800 °C" Russian Metallurgy (1)130-131
- 1998, Golyandin, S.N., Sapozhnikov, K.V., Emelyanov, Y.A., Sinani, A.B., Kustov, S.B. and Robinson, W.H. "Influence of temperature and strain on the amplitude-dependent internal friction of high-purity aluminum" Phys. Solid State 40 1667-1671
- 1998, Gong, S.W. and Lam, K.Y. "Transient response of stiffened composite submersible hull subjected to underwater explosive shock" Compos. Struct. 41 27-38
- 1998, Gong, Z., Tan, H. and Jing, F. "Shock wave equation of state and shock-induced phase transition of Halloysite" AIP Conf. Proc. 429 167-170
- 1998, Gorbachev, L.P. and Matronchik, A.Y. "Radiation mechanism of generation of geomagnetic signals from underground and contact explosions" J. Appl. Mech. Tech. Phys. 39 837-841
- 1998, Grady, D.E. "Scattering as a mechanism for structured shock waves in metals" J. Mech. Phys. Solids 46 2017-2032
- 1998, Grady, D.E. "Shock wave compression of brittle solids" Mech. Mater. 29 181-203
- 1998, Grady, D.E. "Shock profile studies on selected silicon carbide ceramics with application to dynamic yield mechanisms", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 803-806, publ. Fulton, Maryland, Neat Press
- 1998, Grady, D.E. and Kipp, M.E. "Impact failure and fragmentation properties of metals", SAND98-0387, Albuquerque, NM, Sandia National Laboratories

- 1998, Grady, D. "Differential Hugoniot and experimental estimate of the Grüneisen parameter for SiO₂" AIP Conf. Proc. 429 867-870
- 1998, Graton, M. "Comportement d'un composite 3D carbone-carbone: Méso-modélisation pour la prévision de la réponse sous choc", PhD thesis, Univ. of ENS Cachan, France
- 1998, Gray, J.M.N.T. and Tai, Y.C. "Particle size segregation, granular shocks and stratification patterns", in "Physics of Dry Granular Media", ed. H.J. Herrmann, J.-P. Hovi and S. Luding, pp. 697-702, publ. Dordrecht, The Netherlands, Kluwer
- 1998, Gray III, G.T. "Shock-induced defects in bulk materials" Mater. Res. Soc. Symp. Proc. 499 87-98
- 1998, Grebenkin, K.F. "Physical model for shock wave initiation of detonation in pressed fine crystalline explosives" Tech. Phys. Letts 24 789-790
- 1998, Gribin, S.V., Komissarova, I.I., Ostrovskaya, G.V., Spesivtsev, B.I., Filippov, V.N. and Shedova, E.N. "Optical study of parameters of the passage of a shock wave from air to water" Tech. Phys. 43 912-916
- 1998, Gribin, S.V. and Ostrovskaya, G.V. "Problems of interpretation of holographic interferograms near shock wave fronts" Tech. Phys. 43 1087-1090
- 1998, Grove, D.J. and Rajendran, A.M. "A comparison between scalar and multi-plane microcracking ceramic damage models" AIP Conf. Proc. 429 255-258
- 1998, Gruzdkov, Y.A. and Gupta, Y.M. "Mechanism of amine sensitization of shocked nitromethane" J. Phys. Chem. A 102 2322-2331
- 1998, Gruzdkov, Y.A. and Gupta, Y.M. "Emission and fluorescence spectroscopy to examine shock-induced decomposition in nitromethane" J. Phys. Chem. A 102 8325-8332
- 1998, Gruzdkov, Y.A. and Gupta, Y.M. "Mechanism of chemical decomposition in a shocked condensed explosive" AIP Conf. Proc. 429 813-818
- 1998, Gryaznov, V.K., Fortov, V.E. and Iosilevski, I.L. "Equation of state of shock compressed plasma of metals" Nuclear Instrum. Methods Phys. Res. A 415 581-585
- 1998, Gryaznov, V.K., Nikolaev, D.N., Ternovoi, V.Y., Fortov, V.E., Filimonov, A.S. and Keeler, N. "Generation of a nonideal plasma by shock compression of a highly porous SiO₂ aerogel" Chem. Phys. Rep. 17 239-245
- 1998, Gryaznov, V.K., Kulish, M., Mintsev, V.B., Fortov, V.E., Sharkov, B., Golubev, A., Fertman, A., Mescheryakov, N., Hoffmann, D.H.H., Stetter, M., Stöcki, C. and Gardes, D. "About measurements of stopping power behind intense shock waves" AIP Conf. Proc. 429 879-882
- 1998, Gu, Z. and Jin, X. "Temperature-dependence on shock response of stainless steel" AIP Conf. Proc. 429 467-470
- 1998, Gudarenko, L.F. and Zherebstov, V.A. "A model for assessing the temperature of metals behind the shock wave front" Chem. Phys. Rep. 17 275-289

- 1998, Guengant, Y. and Quidot, M. "Transition study using the double card gap test", in "Proc. Insensitive Munitions & Energetic Materials Technology Symposium", paper IVA-6, publ. Lancaster, PA, National Defense Industrial Association
- 1998, Gumbrell, E.T., Smith, R.A., Ditmire, T., Djaoui, A., Rose, S.J. and Hutchinson, M.H.R. "Picosecond optical probing of ultrafast energy transport in short pulse laser solid target interaction experiments" *Phys. Plasmas* 5 3714-3721
- 1998, Gupta, Y.M., Gruzdkov, Y.A. and Pangilinan, G.I. "Time-resolved molecular changes in a chemically reacting shocked energetic liquid" *Chem. Phys. Letts* 283 251-252
- 1998, Gustavsen, R.L., Sheffield, S.A. and Alcon, R.R. "Detonation wave profiles in HMX-based explosives" *AIP Conf. Proc.* 429 739-742
- 1998, Habashi, F. "Meteorites: History, mineralogy and metallurgy" *Interdiscip. Sci. Rev.* 23 71-81
- 1998, Hall, C.A., Chhabildas, L.C. and Reinhart, W.D. "Shock Hugoniot and release states in concrete mixtures with different aggregate sizes form 3 to 23 GPa" *AIP Conf. Proc.* 429 119-122
- 1998, Hama, J. and Suito, K. "Equation of state of perovskite and its thermoelastic properties under lower mantle conditions" *J. Geophys. Res.* 103 7443-7462
- 1998, Hambir, S.A., Franken, J., Hare, D.E., Chronister, E.L., Baer, B.J. and Dlott, D.D. "Ultrahigh time resolution vibrational spectroscopy laser driven nanoshocks in molecular crystals" *Rev. High Press. Sci. Technol.* 7 891-896
- 1998, Hambir, S.A., Franken, J., Hill, J.R. and Dlott, D.D. "Ultrafast vibrational spectroscopy of shocks in molecular materials: The first 100 ps" *AIP Conf. Proc.* 429 823-826
- 1998, Hammerberg, J.E., Holian, B.L. and Zhou, S.J. "Sliding friction in compressed metals at high velocities" *Chem. Phys. Rep.* 17 343-354
- 1998, Hanim, S., Arkalgud, K. and Ahzi, S. "Modeling of dynamic failure by a criterion based on dislocation mechanism", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 807-810, publ. Fulton, Maryland, Neat Press
- 1998, Haskins, P.J. and Cook, M.D. "Shock-induced reactions in energetic materials, studied by molecular dynamics with directly evaluated quantum mechanical potentials" *AIP Conf. Proc.* 429 305-308
- 1998, Hayes, B.T. and Lefloch, P.G. "Nonclassical shocks and kinetic relations: Finite difference schemes" *SIAM J. Numer. Anal.* 35 2169-2194
- 1998, Hazak, G., Velikovich, A.L., Gardner, J.H. and Dahlburg, J.P. "Shock propagation in a low-density foam filled with fluid" *Phys. Plasmas* 5 4357-4365
- 1998, Hemley, R.J. and Mao, H.K. "New phenomena in low-Z materials at megabar pressures" *J. Phys.: Condens. Matter* 10 11157-11167

- 1998, Hemley, R.J. and Ashcroft, N.W. "The revealing role of pressure in the condensed matter sciences" *Phys. Today* 51(8) 26-32
- 1998, Henderson, L.F. and Menikoff, R. "Triple-shock entropy theorem and its consequences" *J. Fluid Mech.* 366 179-210
- 1998, Henninger, R.J., Maudlin, P.J. and Rightley, M.L. "Accuracy of differential sensitivity for one-dimensional shock problems" *AIP Conf. Proc.* 429 187-190
- 1998, Herzler, J., Leiberich, R., Mick, H.-J. and Roth, P. "Shock tube study of the formation of TiN molecules and particles" *NanoStruct. Mater.* 10 1161-1171
- 1998, Hiltl, M. and Hornemann, U. "Structural deformations on fluorophlogopite crystals of a pre-heated and experimentally shocked mica glass-ceramic" *AIP Conf. Proc.* 429 623-626
- 1998, Hirai, H. and Kondo, K. "A wide variety of carbon behavior: Amorphous diamond fabricated from C₆₀ fullerene by shock compression and rapid quenching" *AIP Conf. Proc.* 429 675-680
- 1998, Hironaka, Y., Nicol, M. and Kondo, K. "Shock induced polarization in some liquids" *AIP Conf. Proc.* 429 773-776
- 1998, Hixson, R.S., Vorthman, J.E., Gustvsen, R.L., Zurek, A.K., Thissell, W.R. and Tonks, D.L. "Spall wave-profile and shock-recovery experiments on depleted uranium" *AIP Conf. Proc.* 429 479-482
- 1998, Hobbs, M.L. and Baer, M.R. "Prediction of pure liquid shock Hugoniot", in "Proc. 24th Int. Pyrotechnics Seminar", pp. 301-314, publ. Chicago, IIT Research Institute
- 1998, Hokamoto, K., Fujita, M., Tanaka, S., Kodama, T. and Ujimoto, Y. "High temperature shock consolidation of diamond powders using converging underwater shock wave" *Scripta mater.* 39 1383-1388
- 1998, Holian, B.L. and Lomdahl, P.S. "Plasticity induced by shock waves in nonequilibrium molecular-dynamics simulations" *Science* 280 2085-2088
- 1998, Holian, B.L., Hammerberg, J.E. and Lomdahl, P.S. "The birth of dislocations in shock waves and high-speed friction" *J. Computer-Aided Mater. Design* 5 207-224
- 1998, Holian, B.L. and Lomdahl, P.S. "Plasticity induced by shock waves in nonequilibrium molecular dynamics simulations" *Science* 280 2085-2088
- 1998, Holian, B.L. "Shockwave-induced plasticity via large-scale nonequilibrium molecular dynamics" *AIP Conf. Proc.* 429 173-177
- 1998, Holland, K.G. and Ahrens, T.J. "Properties of LiF and alumina to 240 GPa for metal shock temperature measurements", in "Properties of Earth and Planetary Materials at High Pressure and Temperature", ed. M.H. Manghnani and T. Yagi, pp. 335-343, publ. Washington DC, American Geophysical Union
- 1998, Holmes, N.C., Nellis, W.J. and Ross, M. "Sound velocities in shocked liquid deuterium" *AIP Conf. Proc.* 429 61-64

- 1998, Holzapfel, W.B. "Equations of state for solids under strong compression" High Press. Res. 16 81-126
- 1998, Honda, H., Nishimura, H., Miyamoto, S., Ohnuki, D., Fujita, K., Ochi, Y., Miki, H., Takabe, H., Nakai, S. and Mima, K. "Influence of specularly reflected laser light on uniformity of implosion of indirect-drive fusion capsule" Plasma Phys. Controlled Fusion 40 1097-1104
- 1998, Hong, X., Wang, S.B., Guo, D.H., Wu, H.X., Wang, J., Dai, Y.S., Xia, X.P. and Xie, Y.N. "Confining medium and absorptive overlay: Their effects on a laser-induced shock wave" Optics Lasers Engng 29 447-455
- 1998, Honrubia, J.J., Dezulian, R., Batani, D., Bossi, S., Koenig, M., Benuzzi, A. and Granjouan, N. "Simulation of preheating effects in shock wave experiments" Laser Particle Beams 16 13-20
- 1998, Horioka, K., Aizawa, T. and Tsuchida, M. "Ion-beam driven shock device using accelerated high density plasmoid by phased Z-pinch" AIP Conf. Proc. 429 993-996
- 1998, Hsiung, L.M. and Lassila, D.H. "Shock induced omega phase in tantalum" Scripta mater. 38 1371-1376
- 1998, Hsiung, L.M. and Lassila, D.H. "Shock induced displacive transformations in tantalum and tantalum-tungsten alloys" Scripta mater. 39 603-609
- 1998, Huang, X.S., Ono, M. and Mashimo, T. "Preparation of metastable alloy bulk material in iron-copper system by mechanical alloying and shock compression" AIP Conf. Proc. 429 631-633
- 1998, Huber, P., Jöchle, K. and Debus, J. "Influence of shock wave pressure amplitude and pulse repetition frequency on the lifespan, size and number of transient cavities in the field of an electromagnetic lithotripter" Phys. Med. Biol. 43 3113-3128
- 1998, Hugoniot, H. "On the propagation of motion in bodies and in perfect gases in particular", in "Classic Papers in Shock Compression Science", ed. J.N. Johnson and R. Chéret, pp. 161-358, publ. Berlin, Springer
- 1998, Hyun, J.-K., Sharma, S.M. and Gupta, Y.M. "Ruby R-line shifts for shock compression along (1102)" J. Appl. Phys. 84 1947-1952
- 1998, Imkhovik, N.A., Machieva, I.P. and Soloviev, V.S. "The effect of composition and energy parameters of explosives on the velocity of plane fliers in a two-step cascade assembly" Chem. Phys. Rep. 17 107-125
- 1998, Inaoka, H., Toyosawa, E. and Takayasu, H. "Error propagation in a model of impact fracture" Phys. Rev. E 58 5179-5182
- 1998, Isakov, A.L. and Shmelev, V.V. "Wave processes when driving metal pipes into the ground using shock-pulse generators" J. Mining Sci. 34 139-147
- 1998, Isakov, A.L. and Shmelev, V.V. "Shock-pulse transmission in driving metal tubes into the ground" J. Mining Sci. 34 73-79

- 1998, Itoh, S., Kubota, S., Nagano, S. and Fujita, M. "On generation of ultra-high pressure by converging of underwater shock waves" *Trans. ASME: J. Pressure Vessel Technol.* 120 51-55
- 1998, Itoh, S., Nagano, S. and Liu, Z. "Underwater shock wave loading on wood", in "Structures under Shock and Impact V", ed. N. Jones, D.G. Talaslidis, C.A. Brebbia and G.D. Manolis, pp. 435-444, publ. Southampton, UK, Computational Mechanics Publications
- 1998, Itoh, S., Nagano, S., Fujita, M., Takano, T., Honda, R. and Ikeda, M. "The improvement of the permeability of wood by underwater shock wave" *Metals Materials Korea* 4 843-846
- 1998, Itoh, S., Natamitsu, Y., Liu, Z.Y. and Fujita, M. "On von Neumann reflection of shock wave in condensed matter" *AIP Conf. Proc.* 429 195-198
- 1998, Jackson, I. "Elasticity, composition and temperature of the Earth's lower mantle: A reappraisal" *Geophys. J. Int.* 134 291-311
- 1998, Jeong, S.H., Greif, R. and Russo, R.E. "Propagation of the shock wave generated from excimer laser heating of aluminum targets in comparison with ideal blast wave theory" *Appl. Surf. Sci.* 127-129 1029-1034
- 1998, Jiang, J., Goroshin, S. and Lee, J.H.S. "Shock wave induced chemical reaction in manganese+sulfur mixture" *AIP Conf. Proc.* 429 655-658
- 1998, Jindal, V.K. and Dlott, D.D. "Orientation dependence of shock-induced heating in anharmonic molecular crystals" *J. Appl. Phys.* 83 5203-5211
- 1998, Johnson, J.N. and Chéret, R., Eds. "Classic Papers in Shock Compression Science", publ. New York, Springer
- 1998, Johnson, J.N., Dick, J.J. and Hixson, R.S. "Transient impact response of three polymers" *J. Appl. Phys.* 84 2520-2529
- 1998, Johnson, J.D. "The features of the principal Hugoniot" *AIP Conf. Proc.* 429 27-30
- 1998, Jones, N., Talaslidis, D.G., Brebbia, C.A. and Manolis, G.D., Eds. "Structures under Shock and Impact V", publ. Southampton, UK, Computational Mechanics Publications
- 1998, Jones, H.D. and Zerilli, F.J. "Analytic equation of state for H6" *AIP Conf. Proc.* 429 65-68
- 1998, Joshi, K.D., Suresh, N., Jyoti, G., Kulshreshtha, S.K., Gupta, S.C. and Sikka, S.K. "Shock wave induced phase transition in α -FePO₄" *Shock Waves* 8 173-176
- 1998, Joshi, K.D., Suresh, N., Jyoti, G., Kulshreshtha, S.K., Gupta, S.C. and Sikka, S.K. "Shock wave induced phase transitions from the trigonal phase to the coexisting amorphous and orthorhombic phases in α -FePO₄" *AIP Conf. Proc.* 429 163-166
- 1998, Joshi, V.S., Persson, P.-A. and Brower, K. "Shock-induced grain burning in mixtures of ammonium perchlorate and aluminum" *AIP Conf. Proc.* 429 731-734

- 1998, Juanicotena, A. "Etude théorique et expérimentale du comportement viscoplastique des matériaux aux grandes déformations et grandes vitesses de déformation: Application à l'acier Mars 190 et au tantale", PhD thesis, Univ. of Metz, France
- 1998, Kalitkin, N.N. and Kuzmina, L.V. "Copper as a shock wave standard" Dokl. Physics 43 276-279
- 1998, Kalitkin, N.N., Kuzmina, L.V. and Rozanov, R.V. "Wide-range shock Hugoniot of condensed materials" Chem. Phys. Rep. 17 215-221
- 1998, Kameda, M., Shimaura, N., Higashino, F. and Matsumoto, Y. "Shock waves in a uniform bubbly flow" Phys. Fluids 10 2661-2668
- 1998, Kanel, G.I., Razorenov, S.V., Utkin, A.V., He, H.L., Jing, F.Q. and Jin, X.G. "Influence of the load conditions on the failure wave in glasses" High Press. Res. 16 27-44
- 1998, Kanel, G.I. "Some new data on deformation and fracture of solids under shock-wave loading" J. Mech. Phys. Solids 46 1869-1886
- 1998, Kanel, G.I., Baumung, K., Bluhm, H. and Fortov, V.E. "Possible applications of the ion beams technique for investigations in the field of equation of state" Nuclear Instrum. Methods Phys. Res. A 415 509-516
- 1998, Kanel, G.I., Baumung, K., Rush, D., Singer, J., Razorenov, S.V. and Utkin, A.V. "Melting of shock-compressed metals in release" AIP Conf. Proc. 429 155-158
- 1998, Kanel, G.I., Razorenov, S.V., Utkin, A.V., Dudin, S.N., Mintsev, V.B., Bless, S. and Simha, C.H.M. "Investigation of mechanical properties of ceramics using axisymmetric shock waves" AIP Conf. Proc. 429 489-492
- 1998, Karmanova, T.I., Loboiko, B.G., Sapozhnikov, A.T., Syrtsov, A.B., Shaposhnikov, V.V., Gtsy, U.Z., Shian, U., Gan, T.S., Gan, T.S. and Chvin, S.S. "Calibration of manganin gauges for shock wave studies" Chem. Phys. Rep. 17 819-822
- 1998, Kashcheeva, S.S. and Khokhlova, V.A. "Nonlinear evolution of a pulse with shock front in a medium with exponential absorption" Bull. Russ. Acad. Sci.: Physics 62 1910-1913
- 1998, Kaszuwara, W., Leonowicz, M., Januszewski, D., Mendoza, G., Davies, H.A. and Paszula, J. "Consolidation of magnetic powders by shock compression" J. Mater. Sci.: Mater. Electron. 9 17-23
- 1998, Kauffman, R.L., Powers, L.V., Dixit, S.N., Glendenning, S.G., Glenzer, S.H., Kirkwood, R.K., Landen, O.L., Macgowan, B.J., Moody, J.D., Orzechowski, T.J., Pennington, D.M., Stone, G.F., Suter, L.J., Turner, R.E., Weiland, T.L., Richard, A.L. and Blain, M.A. "Improved gas-filled hohlraum performance on Nova with beam smoothing" Phys. Plasmas 5 1927-1934
- 1998, Kedrinskii, V.K. "The Lordansky-Kogarko-van Wijngaarden model: Shock and rarefaction wave interactions in bubble media" Appl. Sci. Res. 58 115-130

- 1998, Kedrinskii, V.K., Vshivkov, V.A., Dudnikova, G.I. and Shokin, Y.I. "Amplification of shock waves while colliding and focusing in bubbly media" Dokl. Physics 43 400-403
- 1998, Kennedy, J.E. "The Gurney model of explosive output for driving metal", in "Explosive Effects and Applications", ed. J.A. Zukas and W.P. Walters, pp. 221-257, publ. New York, Springer
- 1998, Kerley, G.I. "Equations of state for aluminum and beryllium", KPS98-1, Kerley Publishing Services
- 1998, Kheifets, A.E., Frolova, N.Y., Zeldovich, V.I., Litvinov, B.V. and Purygin, N.P. "Periodic character of the phase transformation in steel accompanying reflection of converging shock waves from the center of focusing" JETP Letts 67 849-855
- 1998, Kheifets, A.E., Frolova, N.Y., Zeldovich, V.I., Litvinov, B.V., Purygin, N.P., Rinkevich, O.S. and Khomskaya, I.V. "Experimental study and numerical simulation of the interaction of converging shock waves with pressure up to 200 GPa" Bull. Russ. Acad. Sci.: Physics 62 1059-1063
- 1998, Khishchenko, K.V., Lomonosov, I.V. and Fortov, V.E. "Equations of state for PMMA and PTFE in a wide range of densities and temperatures" High Temp. High Press. 30 373-378
- 1998, Khishchenko, K.V. and Lomonosov, I.V. "Thermodynamic properties of PMMA at high temperatures and pressure in compression and depressurization waves" Chem. Phys. Rep. 17 1313-1321
- 1998, Khishchenko, K.V., Zhemokletov, M.V., Lomonosov, I.V. and Sutulov, Y.N. "Shock compressibility and equation of state of stilbene" Chem. Phys. Rep. 17 233-237
- 1998, Khishchenko, K.V., Fortov, V.E. and Lomonosov, I.V. "High temperature, high pressure equation of state for polymer materials" AIP Conf. Proc. 429 103-106
- 1998, Kim, A.S. "Simultaneous measurement of temperature and pressure" Tech. Phys. Letts 24 64-65
- 1998, Kinnunen, K.A. and Lindqvist, K. "Agate as an indicator of impact structures: An example from Sääksjärvi, Finland" Meteor. Planet. Sci. 33 7-12
- 1998, Kipp, M.E., Chhabildas, L.C. and Reinhart, W.D. "Elastic shock response and spall strength of concrete" AIP Conf. Proc. 429 557-560
- 1998, Kiselev, S.P. "Structure of compression shock waves in porous elastoplastic materials" J. Appl. Mech. Tech. Phys. 39 842-846
- 1998, Kitamura, H. and Ichimaru, S. "Metal-insulator transitions in dense hydrogen: Equations of state, phase diagrams and interpretation of shock-compression experiments" J. Phys. Soc. Jpn 67 950-963
- 1998, Klevert, P. "Shock-to-detonation transition in homogeneous explosives" AIP Conf. Proc. 429 703-706

- 1998, Knudson, M.D. and Gupta, Y.M. "Real-time observation of a metastable state during the phase transition in shocked cadmium sulfide" *Phys. Rev. Letts* 81 2938-2941
- 1998, Kobayashi, T., Sekine, T., Fatyanov, O.V., Takazawa, E. and Zhu, Q.Y. "Radiation temperatures of soda-lime glass in shock-compressed liquid state" *J. Appl. Phys.* 83 1711-1716
- 1998, Kobayashi, T., Sekine, T., Fatyanov, O.V., Takazawa, E. and Zhu, Q.Y. "Shock temperatures of sodalime glass measured by an optical pyrometer" *AIP Conf. Proc.* 429 797-800
- 1998, Kobelev, V.P., Stepanov, E.S. and Trofimov, V.S. "Detonation excitation in explosive charges by small diameter impactors" *Chem. Phys. Rep.* 17 191-194
- 1998, Kolotov, O.S., Krasnojon, A.P. and Pogozev, V.A. "On the intensity of shock-initiated magnetoelastic oscillations arising in iron borate single crystals during pulsed magnetizing or magnetization switching processes" *Tech. Phys.* 43 1126-1127
- 1998, Komatsu, T. and Samejima, M. "Balloon-shaped graphitic carbon material induced by shock-compression of dehydrochlorinated poly(vinylidene chloride)" *J. Mater. Chem.* 8 2725-2728
- 1998, Komatsu, T. "Attempted preparation of diamond-like carbon nitride by explosive shock compression of poly(methineimine)" *J. Mater. Chem.* 8 2475-2478
- 1998, Komatsu, T. and Samejima, M. "Preparation of carbon nitride by shock-wave compression of poly(aminomethineimine)" *J. Mater. Chem.* 8 193-196
- 1998, Kondaurov, V.I. "Features of failure waves in highly-homogeneous brittle materials" *J. Appl. Math. Mech.* 62 657-663
- 1998, Kondo, K.-I., Hirai, H. and Yoshida, M. "Amorphous and nanocrystalline diamond synthesized by SCARQ: Shock compression and rapid quenching" *Ceram. Engng Sci. Proc.* 19(5) 433-444
- 1998, Konotop, V.V., Salerno, M. and Takeno, S. "Shock waves in one-dimensional Heisenberg ferromagnets" *Phys. Rev. B* 58 14892-14895
- 1998, Kotelnikov, A.D. and Montgomery, D.C. "Shock induced turbulence in composite materials at moderate Reynolds numbers" *Phys. Fluids* 10 2037-2054
- 1998, Kotelnikov, A.D. and Montgomery, D.C. "Numerical study of shock propagation in inhomogeneous material" *AIP Conf. Proc.* 429 183-186
- 1998, Kozlov, E.A., Kovalenko, G.V., Litvinov, B.V., Uvarov, A.I. and Teplov, V.A. "Strain and fracture features of 60Kh3G8N8F austenitic steel exposed to spherical stress waves" *Dokl. Phys.* 43 26-29
- 1998, Kozlov, E.A., Elkin, V.M., Litvinov, B.V., Dobromyslov, A.V., Taluts, N.I. and Kazantseva, N.V. "Formation features and structure of the adiabatic shear bands arising in zirconium in spherical stress waves" *Dokl. Physics* 43 309-312

- 1998, Kozlov, E.A., Zhugin, Y.N., Litvinov, B.V., Feldman, V.I., Sazonova, L.V. and Medvedev, A.V. "Evaluation of the shock loading amplitude required to change the composition of feldspars in impacted rocks" Dokl. Physics 43 419-422
- 1998, Kress, J.D., Goedecker, S., Hoisie, A., Wasserman, H., Lubeck, O., Collins, L.A. and Holian, B.L. "Parallel O(N) tight-binding molecular dynamics of polyethylene and compressed methane" J. Computer-Aided Mater. Design 5 295-316
- 1998, Krivchenko, A.A. and Krivchenko, A.L. "Cavitation effect on the detonation structure in homogeneous explosives" Chem. Phys. Rep. 17 47-49
- 1998, Krivtsov, A.M. "Particle simulation of inelastic deformation and destruction under impact loading" Z. angew. Math. Mech. 78 S563-S564
- 1998, Kuk, J.H., Lee, J., Song, S.-Y. and Cho, Y.S. "Numerical modeling of an underwater explosion for an aluminized explosive" AIP Conf. Proc. 429 401-404
- 1998, Kumar, M. "Thermodynamic relations in high temperature and high pressure physics of solids" Indian J. Pure Appl. Phys. 36(3) 119-124
- 1998, Kuroyama, Y., Itoh, K., Liu, Z.Y., Fujita, M. and Itoh, S. "A new apparatus for direct transformation from hBN to cBN" AIP Conf. Proc. 429 615-617
- 1998, Laabs, G.W., Funk, D.J. and Asay, B.W., "Light gas-gun with reduced timing jitter", United States, patent no. 5,762,057
- 1998, Laber, M.W., Brar, N.S. and Rosenberg, Z. "Shock response of 5083-0 aluminum" AIP Conf. Proc. 429 451-454
- 1998, Lam, K.Y., Zhang, Z.J., Gong, S.W. and Chan, E.S. "The transient response of submerged orthotropic cylindrical shells exposed to underwater shock" Compos. Struct. 43 179-194
- 1998, Lam, K.Y., Zhang, Z.J., Gong, S.W. and Chan, E.S. "The transient response of a two-layered cylindrical shell impinged by an underwater shock wave" Composites B 29 673-685
- 1998, Langenhorst, F. and Deutsch, A. "Minerals in terrestrial impact structures and their characteristic features", in "Advanced Mineralogy. Vol. 3", ed. A.S. Marfunin, pp. 95-119, publ. Berlin, Springer
- 1998, Lax, P.D. "The beginnings of applied mathematics after the Second World War" Quart. Appl. Math. 56 607-615
- 1998, le Vu, O. "Etude et modelisation du comportement du béton sous sollicitations de grande amplitude: Application au problème de la pénétration dynamique", PhD thesis, Univ. of Ecole Polytechnique, France
- 1998, Leal, B., Presles, H.N. and Baudin, G. "Shock initiation of detonation in nitromethane" AIP Conf. Proc. 429 687-690
- 1998, Lee, Y. and Prakash, V. "Dynamic fracture toughness versus crack tip speed relationship at lower than room temperature for high strength 4340VAR structural steel" J. Mech. Phys. Solids 46 1943-1967

- 1998, Lee, J.-H. and Thadhani, N.N. "Enhanced solid-state reaction kinetics of shock-compressed titanium and carbon powder mixtures" *J. Mater. Res.* 13 3160-3173
- 1998, Lee, F.H., Goh, S.H., Tan, T.S. and Anand, S. "Blast tests on underground structures in saturated sand", in "Centrifuge 98", ed. T. Kimura, O. Kusakabe and J. Takemura, pp. 421-426, publ. Rotterdam, The Netherlands, Balkema
- 1998, Lee, J., Kuk, J.H., Song, S.-Y., Cjoi, K.Y. and Lee, J.W. "Detonation in an aluminized explosive and its modeling" *AIP Conf. Proc.* 429 369-372
- 1998, Lefrançois, A. and Demol, G. "Increase of sensitivity of HMX-based pressed explosives resulting of the damage induced by hydrostatic compression", in "Proc. 29th Int. Ann. Conf. of ICT: Energetic Materials Production, Processing and Characterization", paper 33, publ. Karlsruhe, Germany, Fraunhofer Institut für Chemische Technologie
- 1998, Leman, L.B. "Elastic deformation of a plate in a right shield and an acoustic waveguide when loaded by weak shock waves" *Int. Appl. Mech.* 34 498-504
- 1998, Lemar, E.R., Forbes, J.W. and Cowperthwaite, M. "Oblique shock wave calculations for detonation waves in brass confined and bare PBXN-111 cylindrical charges" *AIP Conf. Proc.* 429 385-388
- 1998, Leonowicz, M., Kaszuwara, W., Jexierska, E., Januszewski, D., Mendoza, G., Davies, H.A. and Paszula, J. "Application of the shock compaction technique for consolidation of hard magnetic powders" *J. Appl. Phys.* 83 6634-6636
- 1998, Levashov, E.A., Borovinskaya, I.P., Rogachev, A.S., Ohyanagi, M., Hosomi, S. and Koizumi, M. "Structure and properties of novel diamond-containing materials produced by forced SHS densification and sintering" *Int. J. Self-Propag. High-Temp. Synth.* 7 103-117
- 1998, Levashov, P.R., Fortov, V.E., Khishchenko, K.V., Lomov, I.N. and Lomonosov, I.V. "Shock wave data base" *AIP Conf. Proc.* 429 47-50
- 1998, Levitas, V.I., Nesterenko, V.F. and Meyers, M.A. "Strain-induced chemical reactions in shear bands: Experiments and modelling", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 243-246, publ. Fulton, Maryland, Neat Press
- 1998, Levitas, V.I., Nesterenko, V.F. and Meyers, M.A. "Strain-induced structural changes and chemical reactions. 1: Thermomechanical and kinetic models" *Acta mater.* 46 5929-5945
- 1998, Levitas, V.I., Nesterenko, V.F. and Meyers, M.A. "Strain-induced structural changes and chemical reactions. 2: Modelling of reactions in shear band" *Acta mater.* 46 5947-5963
- 1998, Levy, A., Ben-Dor, G. and Sorek, S. "Numerical investigation of the propagation of shock waves in rigid porous materials: Flow field behavior and parametric study" *Shock Waves* 8 127-137

- 1998, Lewis, M.W. "On predicting and modelling material failure under impact loading", in "Structures under Shock and Impact V", ed. N. Jones, D.G. Talaslidis, C.A. Brebbia and G.D. Manolis, pp. 569-578, publ. Southampton, UK, Computational Mechanics Publications
- 1998, Li, X.-Z., Nakano, M., Yamauchi, Y., Kishida, K. and Tanaka, K.A. "Microcracks, spall and fracture in glass: A study using short pulsed laser shock waves" J. Appl. Phys. 83 3583-3594
- 1998, Likalter, A.A. "Is superdense fluid hydrogen a molecular metal?" J. Exper. Theor. Phys. 86 598-601
- 1998, Lin, K.W., Cheng, C.L. and Chang, H.C. "Laser-induced intracluster reactions of oxygen-containing nanodiamonds" Chem. Mater. 10 1735-1738
- 1998, Lin, E.L., Novikov, S.A., Sukharenko, A.I., Blank, V.D., Dubitskii, G.A. and Semenova, E.E. "Shock-initiated and static synthesis of semiconducting materials based on ultrafine diamond" Chem. Phys. Rep. 17 291-294
- 1998, Lindfors, A.J. and Miller, P.J. "Shock initiation of porous PBXN-5", in "JANNAF 17th Propulsion Systems Hazards Subcommittee Meeting. Vol. 1", ed. J.E. Cocchiaro, M.T. Gannaway and M. Rognan, pp. 149-156, publ. Columbia, MD, Chemical Propulsion Information Agency
- 1998, Liu, C.L. and Ahrens, T.J. "Wave generations from confined explosions in rocks" AIP Conf. Proc. 429 859-862
- 1998, Lomonosov, I.V., Fortov, V.E., Frolova, A.A., Khishchenko, K.V., Charakhchyan, A.A. and Shurshalov, L.V. "A possible approach to the production of synthetic diamonds" Physics Doklady 43 306-308
- 1998, Lomov, I.N. and Kondaurou, V.I. "Fracture of brittle material with initial porosity under high energy density flows" AIP Conf. Proc. 429 247-250
- 1998, Löwer, T., Kondrashov, V.M., Basko, M., Kendl, A., Meyer-ter-Vehn, J., Sigel, R. and Ng, A. "Reflectivity and optical brightness of laser-induced shocks in silicon" Phys. Rev. Letts 80 4000-4003
- 1998, Lubyatinsky, S.N. and Loboiko, B.G. "Density effect on detonation reaction zone length in solid explosives" AIP Conf. Proc. 429 743-746
- 1998, Luo, T. and Serre, D. "Linear stability of shock profiles for a rate-type viscoelastic system with relaxation" Quart. Appl. Math. 56 569-586
- 1998, Ma, G.W., Hao, H. and Zhou, Y.X. "Modeling of wave propagation induced by underground explosion" Comput. Geotech. 22 283-303
- 1998, Mader, C.L. "Numerical Modeling of Explosives and Propellants (Second Edition)", publ. Boca Raton, Florida, CRC Press
- 1998, Maienschein, J.L., Urtiew, P.A., Garcia, F. and Chandler, J.B. "Effect of microvoids on the shock initiation of PETN" AIP Conf. Proc. 429 711-714
- 1998, Mäkinen, K. "Cavitation models for structures excited by a plane shock wave" J. Fluids Structures 12 85-101

- 1998, Makovicka, D. "Shock wave load of window glass plate structure and hypothesis of its failure", in "Structures under Shock and Impact V", ed. N. Jones, D.G. Talaslidis, C.A. Brebbia and G.D. Manolis, pp. 43-52, publ. Southampton, UK, Computational Mechanics Publications
- 1998, Mamalis, A.G., Szalay, A., Vaxevanidis, N.M. and Manolakos, D.E. "Fabrication of bimetallic rods by explosive cladding and warm extrusion" *J. Mater. Process. Technol.* 83 48-53
- 1998, Mamalis, A.G., Szalay, A., Göbl, N., Vajda, I. and Raveau, B. "Near net-shape manufacturing of metal sheathed superconductors by high energy rate forming techniques" *Mater. Sci. Engng B* 53 119-124
- 1998, Mao, H.-K., Shu, J., Shen, G., Hamley, R.J., Li, B. and Singh, A.K. "Elasticity and rheology of iron above 220 GPa and the nature of the Earth's inner core" *Nature* 396 741-743
- 1998, Marinak, M.M., Haan, S.W., Dittrich, T.R., Tipton, R.E. and Zimmerman, G.B. "A comparison of three-dimensional multimode hydrodynamic instability growth on various National Ignition Facility capsule designs with HYDRA simulations" *Phys. Plasmas* 5 1125-1132
- 1998, Mariotti, C. and Tranchet, J.-Y. "Behaviour of a quartzite subjected to a spherical divergent shock wave: experiments and modelling", in "Structures under Shock and Impact V", ed. N. Jones, D.G. Talaslidis, C.A. Brebbia and G.D. Manolis, pp. 613-631, publ. Southampton, UK, Computational Mechanics Publications
- 1998, Marshall, F.J., Allen, M.M., Knauer, J.P., Oertel, J.A. and Archuleta, T. "A high-resolution X-ray microscope for laser-driven planar-foil experiments" *Phys. Plasmas* 5 1118-1124
- 1998, Martikka, H. and Martikainen, J. "Testing and simulation of manufacture of metal machine components using explosive welding", in "Structures under Shock and Impact V", ed. N. Jones, D.G. Talaslidis, C.A. Brebbia and G.D. Manolis, pp. 243-250, publ. Southampton, UK, Computational Mechanics Publications
- 1998, Martinez, I. and Agrinier, P. "Meteorite impact craters on Earth: Major shock-induced effects in rocks and minerals" *Comptes Rendus Acad. Sci. Ser. IIA* 327 75-86
- 1998, Martynyuk, P.A. and Sher, E.N. "Effect of the parameters of the biaxial field of rock pressure on the shape of the fracture zone formed by an explosion of a cylindrical charge in a brittle medium" *J. Appl. Mech. Tech. Phys.* 39 113-120
- 1998, Masaitis, V.L. "Popigal Crater: Origin and distribution of diamond-bearing impactites" *Meteor. Planet. Sci.* 33 349-359
- 1998, Mashimo, T. "Effects of shock compression on ceramic materials", in "High Pressure Shock Compression of Solids III", ed. L. Davison and M. Shahinpoor, pp. 101-146, publ. New York, Springer

- 1998, Mashimo, T., Nakamura, M. and Uchino, M. "Measurement of shock-wave structure of LiF single crystal by the VISAR" AIP Conf. Proc. 429 439-441
- 1998, Mason, R.J., Kopp, R.A., Vu, H.X., Wilson, D.C., Goldman, S.R., Watt, R.G., Dunne, M. and Willi, O. "Computational study of laser imprint mitigation in foam-buffered inertial confinement fusion targets" Phys. Plasmas 5 211-221
- 1998, Mathieu, D., Simonetti, P. and Martin, P. "A model to study the electronic response to an impact in energetic materials" AIP Conf. Proc. 429 309-312
- 1998, Matuska, D. and Gunger, M. "Greek fire: A Eulerian view of HE ignition", in "Proc. Insensitive Munitions & Energetic Materials Technology Symposium", paper IVB-3, publ. Lancaster, PA, National Defense Industrial Association
- 1998, Matytsin, A.I. "Deformation of cylindrical containers and ceramic powders by explosive compaction" J. Appl. Mech. Tech. Phys. 39 959-965
- 1998, Maugin, G.A. "Thermomechanics of forces driving singular point sets" Arch. Mech. 50 509-519
- 1998, Maurette, M. "Carbonaceous micrometeorites and the origin of life" Origins Life Evolution Biospheres 28 385-412
- 1998, Maw, J.R. and Whitworth, N.J. "Shock compression and the equation of state of fully dense and porous polyurethane" AIP Conf. Proc. 429 111-114
- 1998, Melvin, A. "Modeling a shock wave source for seismic well survey" Shock Waves 8 257-265
- 1998, Mendes, R., Plaksin, I., Ribeiro, J. and Campos, J. "Electrical explosion of an aluminium foil: Behaviour of the explosion products in the process of dielectric flyer plate launch" Chem. Phys. Rep. 17 267-273
- 1998, Merzieskii, L.A. "Simulation of the dynamic compression of polycrystalline alumina" Combust. Explos. Shock Waves 34 679-687
- 1998, Meyers, M.A., Nesterenko, V.F., Vecchio, K.S. and Batsanov, S.S. "Shock and shear induced chemical reactions in Mo-Si, Nb-Si, and Ti-Si systems", in "Molybdenum and Molybdenum Alloys", ed. A. Crowson, E.S. Chen, J.A. Shields and P.R. Subramanian, pp. 221-239, publ. Warrendale, Pennsylvania, Minerals, Metals and Materials Society
- 1998, Miller, P.J. and Lindfors, A.J. "Shock loading and reactive flow modeling studies of void-induced AP/Al/HTPB propellant" AIP Conf. Proc. 429 373-376
- 1998, Millett, J., Bourne, N. and Rosenberg, Z. "The piezoresistance of constantan strain gauges under shock loading conditions" J. Phys. D: Appl. Phys. 31 1126-1130
- 1998, Millett, J.C.F., Bourne, N.K. and Rosenberg, Z. "Observations of the Hugoniot curves for glasses as measured by embedded stress gauges" J. Appl. Phys. 84 739-741
- 1998, Millett, J.C.F., Bourne, N.K. and Rosenberg, Z. "An investigation of the α - ϵ phase transition in shock loaded EN3 mild steel" AIP Conf. Proc. 429 137-140

- 1998, Mimura, K., Kato, M., Ohashi, M. and Sugisaki, R. "Shock reaction of hexane at 77, 193 and 273 K with special reference to shock pressure" *Shock Waves* 8 311-319
- 1998, Mintmire, J.W., Barrett, J.J.C., Robertson, D.H. and White, C.T. "Atomistic simulations of shock induced pore collapse in model materials" *Chem. Phys. Rep.* 17 37-46
- 1998, Mintsev, V., Gryaznov, V., Kulish, M., Fortov, V.E., Sharkov, B., Golubev, A., Fertman, A., Meshcheryakov, N., Suss, W., Hoffmann, D.H.H., Stetter, M., Bock, R., Roth, M., Stockl, C. and Gardes, D. "On measurements of stopping power in explosively driven plasma targets" *Nuclear Instrum. Methods Phys. Res. A* 415 715-719
- 1998, Mochihara, M., Hokamoto, K. and Fujita, M. "Experimental analysis on a small horizontal displacement during shearing process using a copper plate made by multilayered explosive welding" *Metals Mater. Int.* 4 859-861
- 1998, Mock Jr., W., Holt, W.H. and Kerley, G.I. "Shock and recovery of PTFE powder" *AIP Conf. Proc.* 429 671-674
- 1998, Molodets, A.M. "Free energy of diamond" *Combust. Explos. Shock Waves* 34 453-459
- 1998, Molodets, A.M., Molodets, M.A. and Nabatov, S.S. "Free energy and shock compression of diamond" *AIP Conf. Proc.* 429 91-94
- 1998, Mori, Y., Tamura, T. and Nagayama, K. "Sensitive optical detection of the shock front and fast moving surface for shock study in condensed media in the 1 GPa stress region" *Rev. Sci. Instrum.* 69 1730-1734
- 1998, Mori, Y. and Nagayama, K. "Shock Hugoniot curves for polymers with different crystallinity in 1 GPa region" *Rev. High Pressure Sci. Technol.* 7 841-843
- 1998, Mori, Y. and Nagayama, K. "Sensitive detection of shock front and free surface velocity history for polymeric materials by new inclined-prism method in 1 GPa pressure region" *AIP Conf. Proc.* 429 875-878
- 1998, Morrey, W.C. and Wille, L.T. "Molecular dynamics simulations of spallation in metals and alloys" *Comput. Mater. Sci.* 10 432-435
- 1998, Mortimer, B.J.P., Skews, B.W. and Felthun, L.T. "The use of a slow sound speed fluorocarbon liquid for shock wave research" *Shock Waves* 8 63-69
- 1998, Moshe, E., Eliezer, S., Dekel, E., Ludmirsky, A., Henis, Z., Werdiger, M., Goldberg, I.B., Eliaz, N. and Eliezer, D. "An increase of the spall strength in aluminum, copper and Metglas at strain rates larger than 10^7 s^{-1} " *J. Appl. Phys.* 83 4004-4011
- 1998, Mossman, D.J., Grantham, R.G. and Langenhorst, F. "A search for shocked quartz at the Triassic-Jurassic boundary in the Fundy and Newark basins of the Newark supergroup" *Canad. J. Earth Sciences* 35 101-109

- 1998, Murphy, M.J. "Utility of coupling nonlinear optimization methods with numerical modeling software" Chem. Phys. Rep. 17 355-362
- 1998, Murphy, T.J., Wallace, J.M., Delamater, M.D., Barnes, C.W., Gobby, P., Hauer, A.A., Lindman, E.L., Magelssen, G., Moore, J.B., Oertel, J.A., Watt, R., Landen, O.L., Amendt, P., Cable, M., Decker, C., Hammel, B.A., Koch, J.A., Suter, L.J., Turner, R.E., Wallace, R.J., Marshall, F.J., Bradley, D., Craxton, R.S., Keck, R., Knauer, J.P., Kremens, R. and Schnittman, J.D. "Indirect drive experiments utilizing multiple beam cones in cylindrical hohlraums on OMEGA" Phys. Plasmas 5 1960-1065
- 1998, Murray, N.H., Bourne, N.K., Rosenberg, Z. and Field, J.E. "The spall strength of alumina ceramics" J. Appl. Phys. 84 734-738
- 1998, Murray, N.H., Bourne, N.K. and Rosenberg, Z. "The dynamic compressive strength of aluminas" J. Appl. Phys. 84 4866-4871
- 1998, Nagai, N., Yang, H.S., Takano, N., Murakami, M. and Teraoka, S. "Development of superfluid shock tube facility" Adv. Cryogenic Engng 43 1393-1400
- 1998, Nagayama, K. and Mori, Y. "Thermal nonequilibrium of the shock-compressed state of polymers realised by 1 GPa shock waves" J. Appl. Phys. 84 6592-6599
- 1998, Nagayama, K., Mori, Y. and Hidaka, K. "Evolution of shock front structure in polymers" Rev. High Pressure Sci. Technol. 7 858-860
- 1998, Nagayama, K. and Mori, Y. "Anomaly in the temperature calculation of shocked polymers" AIP Conf. Proc. 429 107-110
- 1998, Nahme, H. "Dynamic material properties of German armor steels", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 667-670, publ. Fulton, Maryland, Neat Press
- 1998, Nahme, H., Stilp, A.J. and Weber, K. "Shock wave reflection behavior in double-layer meteoroid bumper systems" AIP Conf. Proc. 429 941-944
- 1998, Naimark, O.B. "Defect-induced instabilities in condensed media" JETP Letts 67 751-758
- 1998, Nakazawa, S., Kato, M., Watanabe, M., Higa, K., Shirai, K., Fujinami, S. and Iijima, Y. "Shock wave attenuation in basalt" Rev. High Pressure Sci. Technol. 7 936-938
- 1998, Nalimov, V.I. "Problem of a strong explosion in a weakly compressible medium" J. Appl. Mech. Tech. Phys. 39 175-183
- 1998, Namjoshi, S.A. and Thadhani, N.N. "Reaction synthesis of shock-densified titanium-silicon powder mixtures" AIP Conf. Proc. 429 659-662
- 1998, Narayana, C., Lou, H., Orloff, J. and Ruoff, A.L. "Solid hydrogen at 342 GPa: No evidence for an alkali metal" Nature 393 46-49
- 1998, Nath, O. "Propagation of cylindrical shock waves in a rotating atmosphere under the action of monochromatic radiation" Nuovo Cimento D 20 1845-1852

- 1998, Nellis, W.J., Louis, A.A. and Ashcroft, N.W. "Metallization of fluid hydrogen" Phil. Trans. R. Soc. Lond. A 356 119-138
- 1998, Nellis, W.J., Weir, S.T., Holmes, N.C., Ross, M. and Mitchell, A.C. "Hydrogen at high pressures and temperatures: Implications for Jupiter", in "Properties of Earth and Planetary Materials at High Pressure and Temperature", ed. M.H. Manghnani and T. Yagi, pp. 357-364, publ. Washington DC, American Geophysical Union
- 1998, Nellis, W.J. and Mitchell, A.C. "Molecular and planetary fluids at high shock pressures" AIP Conf. Proc. 429 13-19
- 1998, Nemat-Nasser, S., Okinaka, T., Nesterenko, V. and Liu, M. "Dynamic void collapse in crystals: Computational modelling and experiments" Philos. Mag. A 78 1151-1174
- 1998, Nemat-Nasser, S., Okinaka, T. and Nesterenko, V. "Experimental observation and computational simulation of dynamic void collapse in single crystal copper" Mater. Sci. Engng A 249 22-29
- 1998, Nemtchinov, I.V., Shulov, V.V., Artemieva, N.A., Ivanov, B.A., Kosarev, I.B. and Trubetskaya, I.A. "Light flashes caused by impacts against the Moon" AIP Conf. Proc. 429 957-960
- 1998, Nesterenko, V.F. "Controlled high rate strain shear bands in inert and reactant porous materials" AIP Conf. Proc. 429 609-614
- 1998, Neuvazhayev, V.E., Lykhov, V.A., Ljagina, E.L., Murashkina, V.A., Podkorytova, A.F., Frolov, V.D. and Shushlebin, A.N. "Instability and turbulent mixing of ablatively accelerated thin layer" Phys. Plasmas 5 1094-1103
- 1998, Nichols III, A.L. "Nonequilibrium detonation of composite explosives" AIP Conf. Proc. 429 345-348
- 1998, Nikolaev, D.N., Filimonov, A.S., Fortov, V.E., Lomonosov, I.V. and Ternovoi, V.Y. "Mechanical properties of preshocked sapphire driver" AIP Conf. Proc. 429 509-512
- 1998, Nishihara, K., Ishizaki, R., Wouchuk, J.G., Fukuda, Y. and Shimuta, Y. "Hydrodynamic perturbation growth in start-up phase in laser implosion" Phys. Plasmas 5 1945-1952
- 1998, Nithiarasu, P., Zienkiewicz, O.C., Satya Sai, B.V.K., Morgan, K., Codina, R. and Vázquez, M. "Shock capturing viscosities for the general fluid mechanics algorithm" Int. J. Numer. Meth. Fluids 28 1325-1353
- 1998, Nitta, M., Iino, S., Fukai, Y., Fukuoka, K. and Syono, Y. "Shock compression of interstitial oxygen in vanadium: Universal compression behavior of oxygen in metallic environments" Phys. Rev. B 58 8301-8305
- 1998, Noack, J., Hammer, D.X., Noojin, G.D., Rockwell, B.A. and Vogel, A. "Influence of pulse duration on mechanical effects after laser-induced breakdown in water" J. Appl. Phys. 83 7488-7495

- 1998, Noack, J. and Vogel, A. "Single-shot spatially resolved characterization of laser-induced shock waves in water" *Appl. Opt.* 37 4092-4099
- 1998, Noma, T., Fujii, K., Masumara, O. and Mayama, T. "Dynamic mechanical properties of materials measured by plate impact experiments. 1: Titanium alloy (in Japanese)" *Trans. Jpn. Soc. Mech. Engng* 64 2107-2114
- 1998, Novik, G.M., Pobitko, A.I. and Salnikov, L.I. "Site of origination of shock waves on exposure of metal targets to high-current electron beams" *J. Engng Phys. Thermophys.* 71 543-545
- 1998, Novikov, S.A., Pushkov, V.A., Sinitsyn, V.A. and Gray III, G.T. "Crack resistance of aluminium composite under shock loading at different temperatures" *AIP Conf. Proc.* 429 455-457
- 1998, Ogorodnikov, V.A., Sadovoi, A.A. and Safronov, V.N. "Role of dissipation processes in experiments on overall extension and compression in explosive loading of spheres" *Combust. Explos. Shock Waves* 34 88-92
- 1998, Ogorodnikov, V.A., Ivanov, A.G., Mikhailov, A.L., Kryukov, N.I., Tolochko, A.P. and Golubev, V.A. "Particle ejection from the shocked free surface of metals and diagnostic methods for these particles" *Combust. Explos. Shock Waves* 34 696-700
- 1998, Oron, D., Alon, U. and Shvarts, D. "Scaling laws of the Rayleigh-Taylor ablation front mixing zone evolution in inertial confinement fusion" *Phys. Plasmas* 5 1467-1476
- 1998, Orth, L. and Krier, H. "Shock physics for nonideal detonations of metallized energetic explosives", in "Proc. 27th Int. Symp. on Combustion", pp. 2327-2333, publ. Pittsburgh, PA, The Combustion Institute
- 1998, Osinov, V.A. "On the formation of discontinuities of wave fronts in a saturated granular body" *Continuum Mech. Thermodyn.* 10 253-268
- 1998, Osipov, R.S., Funtikov, A.I. and Tsyganov, V.A. "Determination of the thermodynamic parameters of shock compression of lead, tin, copper and nickel by their melting in conservation ampoules" *High Temp.* 36 566-571
- 1998, Pai, V.V., Yakovlev, I.V. and Kuzmin, G.E. "Electromagnetic processes in thermocouples under dynamic loading" *Combust. Explos. Shock Waves* 34 692-695
- 1998, Pandey, R.K. "Temperature dependence of volume thermal expansion and interatomic separation for NaCl crystal" *J. Phys. Chem. Solids* 59 989-992
- 1998, Pandey, R.K. "Study of PVT relationship and thermodynamic properties for NaCl crystal" *J. Phys. Chem. Solids* 59 993-996
- 1998, Pangilinan, G.I. and Gupta, Y.M. "Molecular processes in a shocked explosive: Time-resolved spectroscopy of liquid nitromethane", in "High Pressure Shock Compression of Solids III", ed. L. Davison and M. Shahinpoor, pp. 81-100, publ. New York, Springer

- 1998, Partom, Y. "Modeling failure waves in glass" *Int. J. Impact Engng* 21 791-799
- 1998, Partom, Y. "Calibration of detonation shock dynamics (DSD) parameters for LX-07 from rate-stick data" *AIP Conf. Proc.* 429 361-364
- 1998, Perzyna, P. "Constitutive modelling of dissipative solids for localization and fracture", in "Localization and Fracture Phenomena in Inelastic Solids", ed. P. Perzyna, pp. 99-241, publ. New York, Springer
- 1998, Petrov, A.I., Razuvaeva, M.V., Sinani, A.V. and Nikitin, V.V. "Effect of static and dynamic compression on the healing of pores in copper" *Tech. Phys.* 43 1385-1387
- 1998, Petrov, Y.V. "Determining the Debye temperature and Grüneisen constant of solid hydrogen at high pressures" *Phys. Solid State* 40 318-319
- 1998, Peyre, P., Berthe, L., Scherpereel, X. and Fabbro, R. "Laser-shock processing of aluminium-coated 55C1 steel in water-confinement regime, characterization and application to high-cycle fatigue behaviour" *J. Mater. Sci.* 33 1421-1429
- 1998, Peyre, P., Berthe, L., Scherpereel, X., Fabbro, R. and Bartnicki, E. "Experimental study of laser-driven shock waves in stainless steels" *J. Appl. Phys.* 84 5985-5992
- 1998, Peyre, P., Scherpereel, X., Berthe, L. and Fabbro, R. "Current trends in laser shock processing" *Surf. Engng* 14 377-380
- 1998, Piechór, K. "The dependence of dynamic phase transitions on parameters" *Arch. Mech.* 50 811-827
- 1998, Plazanet, L. and Nardou, F. "Processing of NiAl intermetallic and NiAl matrix composites by the simultaneous use of thermal explosion and hot pressing" *Int. J. Self-Propag. High-Temp. Synth.* 7 281-292
- 1998, Plohr, B.J. and Sharp, D.H. "Instability of accelerated elastic metal plates" *Z. angew. Math. Phys.* 49 786-804
- 1998, Pollock, E.L. "A survey of some outstanding questions in dense hydrogen" *J. Comput.-Aided Mater. Des.* 5 163-171
- 1998, Poplavskii, V.A. "Hierarchy of fragments in concrete block crushing by explosion" *Combust. Explos. Shock Waves* 34 93-96
- 1998, Postnov, V.I., Nikolaev, D.N., Ternovoi, V.J., Filimonov, A.S., Fortov, V.E. and Yakushev, V.V. "The opportunity of the use of sapphire at multiple shock-wave compression of hydrogen" *AIP Conf. Proc.* 429 769-772
- 1998, Prakash, V. "Time-resolved friction with applications to high-speed machining: Experimental observations" *Tribol. Trans.* 41 189-198
- 1998, Prieto, F.E. and Renero, C. "Remarks on the Kumar isothermal equation" *Physica B* 253 138-141
- 1998, Prokopenko, G.I., Kozlov, O.V., Mordyuk, B.N. and Abramov, V.O. "An influence of activation parameters on the deformation of metals under the impact loading repeated many times (in Russian)" *Metallofiz. Noveish. Tekhnol.* 20(7) 30-34

- 1998, Pronin, A.N. and Gupta, V. "Measurement of thin film toughness by using laser-generated stress pulses" *J. Mech. Phys. Solids* 46 389-410
- 1998, Proud, W.G., Bourne, N.K. and Field, J.E. "Shock-induced luminescence in PMMA" *AIP Conf. Proc.* 429 801-804
- 1998, Prümmer, R., Weimar, P. and Knitter, R. "High pressure (explosive) consolidation of alumina ceramics", in "Proc. 24th Int. Pyrotechnics Seminar", pp. 783-788, publ. Chicago, IIT Research Institute
- 1998, Psakhe, S.G., Saraev, D.Y. and Zolnikov, K.P. "Propagation of solitary compression waves in heterogeneous materials under high-speed loading" *Combust. Explos. Shock Waves* 34 364-365
- 1998, Psakhe, S.G. and Zolnikov, K.P. "Possibility of a vortex mechanism of displacement of the grain boundaries under high-rate shear loading" *Combust. Explos. Shock Waves* 34 366-368
- 1998, Pyalling, A., Gryaznov, V., Kvitov, S., Nikolaev, D., Ternovoi, V., Filimonov, A., Fortov, V., Hoffmann, D., Stockl, C. and Dornik, M. "Time-resolved optical spectroscopy of lead at near critical-point states" *Int. J. Thermophys.* 19 993-1001
- 1998, Qiu, C. and van der Zwaag, S. "Modelling of the thermal expansion and compression of manganese" *J. Phys. Chem. Solids* 59 167-174
- 1998, Raghukandan, K., Rathinasabapathi, M. and Vaidyanathan, P.V. "Modeling of process parameters in dynamic form-cladding" *Metals Mater. Int.* 4 1057-1062
- 1998, Rajendran, A.M. and Grove, D.J. "Modeling of inelastic strains in ceramics under shock and impact loading" *Int. J. Fract.* 88 L57-L62
- 1998, Rajendran, A.M. and Grove, D.J. "Modeling of shock and impact behaviors of aluminum oxide", in "Structures under Shock and Impact V", ed. N. Jones, D.G. Talaslidis, C.A. Brebbia and G.D. Manolis, pp. 447-460, publ. Southampton, UK, Computational Mechanics Publications
- 1998, Rajendran, A.M. and Grove, D.J. "Comparison study of damage evolution using Rajendran-Grove and Johnson-Holmquist ceramic models", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 671-674, publ. Fulton, Maryland, Neat Press
- 1998, Rankine, W.J.M. "On the thermodynamic theory of waves of finite longitudinal disturbance", in "Classic Papers in Shock Compression Science", ed. J.N. Johnson and R. Chéret, pp. 133-148, publ. Berlin, Springer
- 1998, Rayleigh, L. "Aerial plane waves of finite amplitude", in "Classic Papers in Shock Compression Science", ed. J.N. Johnson and R. Chéret, pp. 361-404, publ. Berlin, Springer
- 1998, Razorenov, S.V., Bogatch, A.A., Kanel, G.I., Utkin, A.V., Fortov, V.E. and Grady, D.E. "Elastic-plastic deformation and spall fracture of metals at high temperatures" *AIP Conf. Proc.* 429 447-450

- 1998, Retallack, G.J., Seyedolali, A., Krull, E.S., Holser, W.T., Ambers, C.P. and Kyte, F.T. "Search for evidence of impact at the Permian-Triassic boundary in Antarctica and Australia" *Geology* 26 979-982
- 1998, Richmond, C.T. "Gap test modeling to predict wedge tests initiation of PBXN-103" *AIP Conf. Proc.* 429 405-408
- 1998, Rigg, P.A. and Gupta, Y.M. "Real-time X-ray diffraction to examine elastic-plastic deformation in shocked lithium fluoride crystals" *Appl. Phys. Letts* 73 1655-1657
- 1998, Roberson, S., Davis, R.F., Joshi, V.S. and Fienello, D. "Shock compaction of molybdenum nitride powder" *AIP Conf. Proc.* 429 643-646
- 1998, Robertson, D.H., Brenner, D.W. and White, C.T. "Molecular dynamics analysis of shock phenomena", in "High Pressure Shock Compression of Solids III", ed. L. Davison and M. Shahinpoor, pp. 37-57, publ. New York, Springer
- 1998, Robertson, D.H., Barrett, J.J.C., Elert, M.L. and White, C.T. "Self-similar behavior from molecular dynamics simulations of detonations" *AIP Conf. Proc.* 429 297-300
- 1998, Ross, M. "Linear mixing model for shock compressed liquid deuterium" *Phys. Rev. B* 58 669-677
- 1998, Rothman, S.D. and Evans, A.M. "High accuracy EOS experiments using the AWE HELEN laser" *AIP Conf. Proc.* 429 79-82
- 1998, Rudenskii, G.E., Cadyrov, R.I., Kaminskii, P.P. and Kuznetsov, V.M. "Calculation of Hugoniot adiabats and isentropic unloading curves for Ni-Al alloys by the model electron-density functional method" *Combust. Explos. Shock Waves* 34 688-691
- 1998, Ruoff, A.L., Rodriguez, C.O. and Christensen, N.E. "Elastic moduli of tungsten to 15 Mbar, phase transition at 6.5 Mbar, and rheology to 6 Mbar" *Phys. Rev. B* 58 2998-3002
- 1998, Rutkevich, I., Zaretsky, E. and Mond, M. "Stability of strong shocks in metals" *AIP Conf. Proc.* 429 207-210
- 1998, Ruzicka, A., Snyder, G.A. and Taylor, L.A. "Mega-chondrules and large, igneous-textured clasts in Julesberg (L3) and other ordinary chondrites: Vapor fractionation, shock melting, and chondrule formation" *Geochim. Cosmochim. Acta* 62 1419-1442
- 1998, Rychkov, V.N. "Method of measuring pressures up to 1 GPa on a pulsed gas-dynamic device" *J. Appl. Mech. Tech. Phys.* 39 816-819
- 1998, Ryutov, D. and Toor, A. "Enhanced thermal dissipation and the Rayleigh-Taylor instability in emulsion-like media" *Phys. Plasmas* 5 22-35
- 1998, Sadler, B.M., Pham, T. and Sadler, L.C. "Optimal and wavelet-based shock detection and estimation" *J. Acoust. Soc. Amer.* 104 955-963

- 1998, Salas, J., Duggins, B.D. and Benham, R.A. "Extended calibration of thin-foil manganin gage in ALOX material", in "Structures under Extreme Loading Conditions. PVP 361", ed. H.S. Levine, pp. 133-138, publ. New York, American Society of Mechanical Engineers
- 1998, Sandusky, H.W. and Chambers, G.P. "Shock reactivity of the liquid propellant Otto Fuel II" AIP Conf. Proc. 429 695-698
- 1998, Sano, Y. and Miyamoto, I. "Shock jump equations for unsteady wave fronts of finite rise time" J. Appl. Phys. 84 6606-6613
- 1998, Sargis, P.D., Molau, N.E. and Swelder, D. "Photonic Doppler velocimetry", in "Engineering Research, Development and Technology (UCRL 53868-98)", pp. 4: 77-79, publ. Springfield, VA, National Technical Information Service
- 1998, Scheidler, M. "Response of nonlinear elastic solids to oblique plate impact" AIP Conf. Proc. 429 921-924
- 1998, Schilling, J.S. "The use of high pressure in basic and materials science" J. Phys. Chem. Solids 59 553-568
- 1998, Schmidt, S.C., Dandekar, D.P. and Forbes, J.W., Eds. "Shock Compression of Condensed Matter - 1997 (AIP Conf. Proc. 429)", publ. Woodbury, NY, American Institute of Physics
- 1998, Seaman, L., Boustie, M. and de Resseguier, T. "Use of the Steinberg and Carroll-Holt model concepts in ductile fracture" AIP Conf. Proc. 429 219-222
- 1998, See, T.H., Wagstaff, J., Yang, V., Horz, F. and McKay, G.A. "Compositional variation and mixing of impact melts on microscopic scales" Meteor. Planet. Sci. 33 937-948
- 1998, Segletes, S.B. "Thermodynamic relations along the principal Hugoniot", ARL-TR-1641, Army Research Laboratory, Aberdeen Proving Ground, Maryland
- 1998, Segletes, S.B. "The vibrational stiffness of an atomic lattice", ARL-TR-1757, Army Research Laboratory, Aberdeen Proving Ground
- 1998, Segletes, S.B. "Thermodynamic relations along the principal Hugoniot" Shock Waves 8 361-366
- 1998, Segletes, S.B. and Walters, W.P. "On theories of the Grüneisen parameter" J. Phys. Chem. Solids 59 425-433
- 1998, Segletes, S.B. "A frequency-based equation of state for metals" Int. J. Impact Engng 21 747-760
- 1998, Segletes, S.N. "Thermodynamic relations along the principal Hugoniot" Shock Waves 8 361-366
- 1998, Segletes, S.B. and Walters, W.P. "Comments on the Grüneisen parameter" AIP Conf. Proc. 429 39-42
- 1998, Sekine, T., Takazawa, E. and Kobayashi, T. "High pressure carbon behavior deduced from carbide Hugoniot" Mater. Res. Soc. Symp. Proc. 499 99-104

- 1998, Sekine, T. and Kobayashi, T. "Shock-induced phase transition of 6H polytype SiC and an implication for post-diamond phase" AIP Conf. Proc. 429 141-144
- 1998, Selezenev, A.A., Golubev, V.G. and Ganchuk, N.S. "Effect of temperature and structure defects on the deformation and fracture dynamics of iron crystallites" Chem. Phys. Rep. 17 295-305
- 1998, Semkin, N.D. and Voronov, K.E. "Conductance of shock compressed metal-insulator-metal structures based on polymethylmethacrylate" Tech. Phys. 43 934-937
- 1998, Setchell, R.E., Chhabildas, L.C., Furnish, M.D., Montgomery, S.T. and Holman, G.T. "Dynamic electromechanical characterization of the ferroelectric ceramic PZT 95/5" AIP Conf. Proc. 429 781-784
- 1998, Sharma, S.M. and Gupta, Y.M. "Wurtzite-to-rocksalt structural transformation in cadmium sulfide shocked along the a axis" Phys. Rev. B 58 5964-5971
- 1998, Shaw, M.S. "An equation of state for detonation products incorporating small carbon clusters" AIP Conf. Proc. 429 69-72
- 1998, Sheffield, S.A., Gustavsen, R.L. and Alcon, R.R. "Porous HMX initiation studies: Sugar as an inert simulant" AIP Conf. Proc. 429 575-578
- 1998, Shelkov, D.A., Verchovsky, A.B., Milledge, H.J., Kaminsky, F.V. and Pillinger, C.T. "Carbon, nitrogen, argon and helium study of impact diamonds from Ebeliakh alluvial deposits and Popigai crater" Meteor. Planet. Sci. 33 985-992
- 1998, Shih, C.J., Nesterenko, V.F. and Meyers, M.A. "High strain rate deformation and comminution of silicon carbide" J. Appl. Phys. 83 4660-4671
- 1998, Shih, J. "Dynamic deformation of silicon carbide", PhD thesis, Univ. of California, San Diego
- 1998, Shin, Y.S., Lee, M., Lam, K.Y. and Yeo, K.S. "Modeling mitigation effects of watershield in shock waves" Shock Vibration 5 225-234
- 1998, Shtertser, A.A. "Rotational components of deformation in metal bodies under dynamic loading" Combust. Explos. Shock Waves 34 234-238
- 1998, Shugaev, F.V. and Shtemenko, L.S. "Propagation and Reflection of Shock Waves", publ. Singapore, World Scientific
- 1998, Sikka, S.K., Godwal, B.K. and Chidambaram, R. "Equation of state at high pressure", in "High Pressure Shock Compression of Solids III", ed. L. Davison and M. Shahinpoor, pp. 1-35, publ. New York, Springer
- 1998, Sikka, S.K. and Gupta, S.C. "Shock-induced amorphization of materials" AIP Conf. Proc. 429 145-150
- 1998, Simha, C.H.M. "High rate loading of a high purity ceramic: 1D stress experiments and constitutive modeling", PhD thesis, Univ. of Texas at Austin
- 1998, Simha, C.H.M., Bless, S.J. and Bedford, A. "Modelling precursor decay in AD-99.5 alumina" AIP Conf. Proc. 429 231-234

- 1998, Simonson, B.M., Davies, D., Wallace, M., Reeves, S. and Hassler, S.W. "Iridium anomaly but no shocked quartz from late archean microkrystite layer: Oceanic impact ejecta?" *Geology* 26 195-198
- 1998, Sivakumar, K., Balakrishna Bhat, T. and Ramakrishnan, P. "Effect of process parameters on the densification of 2124 Al-20 vol.% SiCp composites fabricated by explosive compaction" *J. Mater. Process. Technol.* 73 268-275
- 1998, Skews, B.W., Draxl, M.A., Felthun, L.T. and Seitz, M.W. "Shock wave trapping" *Shock Waves* 8 23-28
- 1998, Skidmore, C.B., Phillips, D.S., Son, S.F. and Asay, B.W. "Characterization of HMX particles in PBX 9501" *AIP Conf. Proc.* 429 579-582
- 1998, Skokov, V.I., Lin, E.E., Medvedkin, V.A. and Novikov, S.A. "Character of the shock loading under dynamic compaction of ultradispersed diamonds" *Combust. Explos. Shock Waves* 34 346-347
- 1998, Skripnyak, V.A. and Skripnyak, E.G. "Computer modelling of the mechanical behaviour of constructional ceramics under shock loading", in "New Models and Numerical Codes for Shock Wave Processes in Condensed Media", ed. I.G. Cameron, pp. 26-36, publ. Aldermaston, UK, AWE Hunting
- 1998, Smoller, J. and Temple, B. "Shock wave solutions in closed form and the Oppenheimer-Snyder limit in general relativity" *SIAM J. Appl. Math.* 58 15-33
- 1998, Soderlind, P. and Moriarty, J.A. "First-principles theory of tantalum up to 10 Mbar pressure: Structure and mechanical properties" *Phys. Rev. B* 57 10340-10350
- 1998, Söderlind, P. and Moriarty, J.A. "First principles theory of Ta up to 10 Mbar pressure: Structural and mechanical properties" *Phys. Rev. B* 57 10340-10350
- 1998, Souers, P.C. and Garza, R. "Size effect and detonation front curvature" *AIP Conf. Proc.* 429 325-328
- 1998, Span, R., Lemmon, E.W., Jacobsen, R.T. and Wagner, W. "A reference quality equation of state for nitrogen" *Int. J. Thermophys.* 19 1121-1132
- 1998, Stebnovskii, S.V. "Experimental investigation of pulsed stretching of cavitating media" *J. Appl. Mech. Tech. Phys.* 39 758-761
- 1998, Steiner, H., Gretler, W. and Hirschler, T. "Numerical solution for spherical laser-driven shock waves" *Shock Waves* 8 139-147
- 1998, Stewart, D.S. and Yao, J. "The normal detonation shock velocity-curvature relationship for materials with nonideal equation of state and multiple turning points" *Combust. Flame* 113 224-235
- 1998, Stewart, D.S. "The shock dynamics of multi-dimensional condensed and gas-phase detonations", in "Proc. 27th Int. Symp. on Combustion", pp. 2189-2205, publ. Pittsburgh PA, The Combustion Institute
- 1998, Stiel, L.I. and Baker, E.L. "Detonation energies of explosives by optimized JCZ3 procedures" *AIP Conf. Proc.* 429 357-360

- 1998, Stixrude, L. and Brown, J.M. "The Earth's core" *Rev. Mineralogy* 37 261-282
- 1998, Stuivinga, M. and Carton, E.P. "Shock wave compacted, melt infiltrated ceramics" *AIP Conf. Proc.* 429 619-622
- 1998, Sturtevant, B. "Shock wave effects in biomechanics" *Sadhana* 23 579-596
- 1998, Suliyanti, M.M., Hedwig, R., Kurniawan, H. and Kagawa, K. "The role of sub-target in the transversely excited atmospheric pressure CO₂ laser-induced shock-wave plasma" *Jpn J. Appl. Phys.* 37 6628-6632
- 1998, Sun, C.W., Feng, S.P., Zhuang, S.M. and Long, X.P. "Dynamic fracture feature in metals under very high strain rate induced by shock loading" *Key Engng Mater.* 145 273-278
- 1998, Sun, C., Zhao, F., Wen, S., Li, Q. and Liu, C. "High velocity flyers accelerated by multi-stage explosive slabs" *AIP Conf. Proc.* 429 971-974
- 1998, Sundaram, S. and Clifton, R.J. "The influence of a glassy phase on the high strain rate response of a ceramic" *Mech. Mater.* 29 233-251
- 1998, Sundaram, S. "Pressure-shear response of ceramics", PhD thesis, Univ. of Brown
- 1998, Sundaram, S. and Clifton, R.J. "Flow behavior of sodalime glass at high pressures and high shear rates" *AIP Conf. Proc.* 429 517-520
- 1998, Surov, V.S. "Calculating shock wave processes in bubbly liquids" *Tech. Phys.* 43 1280-1287
- 1998, Surov, V.S. "The effect of geometric factor on the propagation of shock waves in dispersed media" *High Temp.* 36 979-982
- 1998, Sutherland, G.T., Gustavson, P.K., Lemar, E.R. and O'Connor, J. "Shock response of the explosive PBXN-103" *AIP Conf. Proc.* 429 747-750
- 1998, Swift, D.C. "Ab fere initio equations of state for solids" *AIP Conf. Proc.* 429 23-26
- 1998, Syono, Y., Noguchi, Y. and Kusaba, K. "Pressure-induced phase transitions of B1 oxides in relation to shock compression behavior of MnO", in "Properties of Earth and Planetary Materials at High Pressure and Temperature", ed. M.H. Manghnani and T. Yagi, pp. 319-325, publ. Washington DC, American Geophysical Union
- 1998, Syono, Y., Noguchi, Y., Fukuoka, K., Kusuba, K. and Atou, T. "Shock-induced phase transition of MnO and several other transition metal oxides" *AIP Conf. Proc.* 429 151-154
- 1998, Tahir, N.A., Hoffmann, D.H.H., Maruhn, J.A., Lutz, K.-J. and Bock, R. "Creation of metallic hydrogen in imploding cylindrical targets with intense heavy ion beams to be produced at the GSI Darmstadt SIS facility" *Phys. Letts A* 249 489-494
- 1998, Takano, N., Nagai, H., Yang, H. and Murakami, M. "Visualization study of phase transitions of helium II induced by shock wave compression", in "Proc. 17th Int. Cryogenic Engineering Conference", pp. 691-694, publ. Bristol, UK, Institute of Physics Publishing

- 1998, Takazawa, E., Sekine, T., Kobayashi, T. and Zhu, Y. "Hugoniot equation of state and high-pressure transformation of jadeite" *J. Geophys. Res.* 103 12261-12268
- 1998, Tanaka, K. and Ido, Y. "Dynamical properties of solid CO₂ under shock compression" *Jpn J. Appl. Phys.* 37 1989-1993
- 1998, Tanaka, K.K., Tanaka, H., Nakazawa, K. and Nakagawa, Y. "Shock heating due to accretion of a clumpy cloud onto a protoplanetary disk" *Icarus* 134 137-154
- 1998, Tanaka, H., Tomoshige, R., Imamura, K., Chiba, A. and Kato, A. "Hot-shock consolidation and mechanical/thermal properties of Ti-Al-C composites using explosive shock energy and combustion synthesis (in Japanese)" *J. Ceram. Soc. Jpn* 106 676-681
- 1998, Tanaka, K., Nishida, M., Mochida, T. and Kousaka, A. "In-plane shock compression of aluminum honeycombs", in "Proc. 22nd Int. Symp. Shock Waves", pp. 547-552, publ. London,
- 1998, Tang, W.-H., Zhang, R.-Q., Jing, F.-Q. and Hu, J.-B. "Theoretical investigation of the apparent spectral radiance from the metal/window interface in shock temperature experiments" *J. Appl. Phys.* 83 2469-2472
- 1998, Tang, P.K., Hixson, R.S. and Fritz, J.N. "Modeling PBX 9501 overdriven release experiments" *AIP Conf. Proc.* 429 365-368
- 1998, Tarver, C.M. "Chemical reaction and equilibration mechanisms in detonation waves" *AIP Conf. Proc.* 429 301-304
- 1998, Teasley, L.N., Bailey, N.F. and Bergmann, O.R. "Micropolycrystalline diamond by shock synthesis: Advances in performance and property characterization", in "Proc. 5th Int. Symp. on Diamond Materials", pp. 48-57, publ. Pennington, New Jersey, The Electrochemical Society
- 1998, Temporal, M., Atzeni, S., Batani, D., Koenig, M., Benuzzi, A. and Faral, B. "Design of absolute equation of state measurements in optically thick materials by laser-driven shock waves" *Nuclear Instrum. Methods Phys. Res. A* 415 668-673
- 1998, Ternovoi, V.Y., Filimonov, A.S., Fortov, V.E., Lomosonov, O.V., Nikolaev, D.N. and Pyalling, A.A. "Investigation of tin thermodynamics in near critical point region" *AIP Conf. Proc.* 429 87-90
- 1998, Thadhani, N.N., Vandersall, K.S., Russell, R.T., Graham, R.A., Holman, G.T. and Anderson, M.U. "Shock compression of Al+Fe₂O₃ powder mixtures of different volumetric distributions" *AIP Conf. Proc.* 429 553-556
- 1998, Thissell, W.R., Zurek, A.K., Rivas, J.M., Tonks, D.L. and Hixson, R.S. "Quantitative microstructural damage evolution in incipiently spalled 10100 OFHC copper", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 675-678, publ. Fulton, Maryland, Neat Press

- 1998, Tingle, T.N. "Accretion and differentiation of carbon in the early Earth" *Chem. Geol.* 147 3-10
- 1998, Tollier, L., Fabbro, R. and Bartnicki, E. "Study of the laser-driven spallation process by the velocity interferometer system for any reflector technique. 1: Laser-shock characterization" *J. Appl. Phys.* 83 1224-1230
- 1998, Tollier, L. and Fabbro, R. "Study of the laser-driven spallation process by the VISAR interferometry technique. 2: Experiment and simulation of the spallation process" *J. Appl. Phys.* 83 1231-1237
- 1998, Tonks, D.L., Zurek, A.K., Thissell, W.R., Rivas, J.M. and Hixson, R.S. "The importance of deviatoric stress in modeling void growth in ductile metals", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 679-682, publ. Fulton, Maryland, Neat Press
- 1998, Tonks, D.L., Hixson, R., Gustavsen, R.L., Vorthman, J.E., Kelly, A., Zurek, A.K. and Thissell, W.R. "Spallation studies on shock-loaded uranium" *AIP Conf. Proc.* 429 239-242
- 1998, Treiman, A.H. "The history of Allan Hills 84001 revised: Multiple shock events" *Meteor. Planet. Sci.* 33 753-764
- 1998, Trott, W.M. and Asay, J.R. "Investigation of microscale shock phenomena using a line-imaging optically recording velocity interferometer system" *AIP Conf. Proc.* 429 837-840
- 1998, Trunin, R.F. "Shock Compression of Condensed Materials", publ. Cambridge, Cambridge University Press
- 1998, Trunin, R.F., Zhernokletov, M.V., Simakov, G.V., Gudarenko, L.F. and Gushchina, O.N. "Shock compression of highly porous samples of copper, iron, nickel and their equation of state" *AIP Conf. Proc.* 429 83-86
- 1998, Tsukinovsky, D., Zaretsky, E. and Rutkevich, I. "Polyurethane in plane impact with velocities from 10 to 400 m/sec" *AIP Conf. Proc.* 429 541-544
- 1998, Tsvigunov, A.N., Khotin, V.G., Krasnikov, A.S., Puzyreva, T.B., Svetlov, B.S. and Vlasov, A.S. "Synthesis of FeAl_2O_4 under a shock-wave effect" *Glass & Ceramics* 55 282-284
- 1998, Turner-Adomatis, B.L. and Thadhani, N.N. "Shock enhanced alpha to beta phase transformation in Si_3N_4 powders" *Mater. Sci. Engng A* 256 289-300
- 1998, Urlin, V.D., Mochalov, M.A. and Mikhailova, O.L. "Quasi-isentropic compression of liquid xenon up to the density of 20 g/cm^3 under the pressure of 700 GPa" *AIP Conf. Proc.* 429 125-128
- 1998, Urtiew, P.A., Tarver, C.M., Forbes, J.W. and Garcia, F. "Shock sensitivity of LX-04 at elevated temperatures" *AIP Conf. Proc.* 429 727-730

- 1998, Utkin, A.V., Kanel, G.I., Razorenov, S.V., Bogach, A.A. and Grady, D.E. "Elastic moduli and dynamic yield strength of metals near the melting temperature" AIP Conf. Proc. 429 443-446
- 1998, Valyaev, A.N., Pogrebnyak, A.D., Lavrentev, V.I., Volkov, S.N. and Plotnikov, S.V. "Influence of the shock wave pressure gradient in alpha-iron irradiated by a high power ion beam on the occurrence of a microhardness maximum at large depths" Tech. Phys. Letts 24 102-104
- 1998, Valyaev, A.N., Pogrebnyak, A.D., Bratushka, S.N., Lavrentev, V.I., Volkov, S.N. and Plotnikov, S.V. "Influence of the shock wave pressure gradient on the appearance of a microhardness maximum in alpha-iron irradiated by a high power ion beam" Tech. Phys. Letts 24 819-821
- 1998, van der Heijden, A.E.D. and Bouma, R.H.B. "Shock sensitivity of HMX/HTPB PBXs: Relation with HMX crystal density", in "Proc. 29th Int. Ann. Conf. of ICT: Energetic Materials Production, Processing and Characterization", paper 65, publ. Karlsruhe, Germany, Fraunhofer Institut für Chemische Technologie
- 1998, van Dijk, K., Gupta, V., Yu, A.K. and Jansen, J.A. "Measurement and control of interface strength of RF magnetron-sputtered Ca-PO coatings on Ti-6Al-4V substrates using a laser spallation technique" J. Biomed. Mater. Res. 41 624-632
- 1998, Vandersall, K.S. and Thadhani, N.N. "Dynamic densification of molybdenum-silicon powder compacts for reactive solid state processing" AIP Conf. Proc. 429 647-650
- 1998, Vasilev, E.I., Mitichkin, S.Y., Testov, V.G. and Haibo, H. "Pressure dynamics during shock loading of aqueous foams" Tech. Phys. 43 761-765
- 1998, Velikovich, A.L., Dahlsburg, J.P., Gardner, J.H. and Taylor, R.J. "Saturation of perturbation growth in ablatively driven planar laser targets" Phys. Plasmas 5 1491-1505
- 1998, Viljoen, H.J. and Cohn, S. "Reaction driven elastic waves in solid media" J. Mater. Synth. Process. 6 105-113
- 1998, Vlasov, Y.A., Kosolapov, V.B., Fomicheva, L.V. and Khabarov, I.P. "Effect of temperature, density, and technical factors on the shock-wave sensitivity of plastic TATB" Combust. Explos. Shock Waves 34 467-469
- 1998, Voskoboinikov, I.M. "Assessment of shock compression parameters of fluorine-containing compounds" Chem. Phys. Rep. 17 1777-1784
- 1998, Vrel, D., Huang, X.S. and Mashimo, T. "Shock compression recovery experiments on some dioxides" AIP Conf. Proc. 429 627-630
- 1998, Wada, Y., Ogata, Y., Kubota, S. and Masui, A. "Explosive welding steel plate to steel pipe with less damage", in "Proc. 24th Int. Pyrotechnics Seminar", pp. 571-578, publ. Chicago, IIT Research Institute

- 1998, Walker, F.E. "New studies and applications of microkinetics (physical kinetics)", in "Proc. 24th Int. Pyrotechnics Seminar", pp. 579-605, publ. Chicago, IIT Research Institute
- 1998, Wang, L., Feng, C. and Han, C. "Experimental study on non-potassium nitrate initiated by shock" J. Propuls. Power 14 416-420
- 1998, Waschl, J.A. "An investigation of PETN sensitivity to small-scale flyer plate impact" J. Energ. Mater. 16 279-288
- 1998, Watson, S. "The production and study of laser-driven flyer plates", PhD thesis, Univ. of Cambridge
- 1998, Watt, R.G., Duke, J., Fontes, C.J., Gobby, P.L., Hollis, R.V., Kopp, R.A., Mason, R.J., Wilson, D.C., Verdon, C.P., Boehly, T.R., Knauer, J.P., Meyerhofer, D.D., Smalyuk, V., Town, R.P.J., Iwase, A. and Willi, O. "Laser imprint reduction using a low-density foam buffer as a thermal smoothing layer at 351 nm wavelength" Phys. Rev. Letts 81 4644-4647
- 1998, Weir, S.T., Akella, J., Ruddle, C., Goodwin, T. and Hsiung, L. "Static strengths of tantalum and uranium under ultrahigh pressures" Phys. Rev. B 58 11258-11265
- 1998, Weir, S.T. "Metallization of fluid hydrogen by multiple shock compression" J. Phys.: Condens. Matter 10 11147-11156
- 1998, Weyl, H. "Shock waves in arbitrary fluids", in "Classic Papers in Shock Compression Science", ed. J.N. Johnson and R. Chéret, pp. 497-519, publ. Berlin, Springer
- 1998, Williams, P.R., Williams, P.M. and Brown, S.W.J. "A study of liquid jets formed by bubble collapse under shock waves in elastic and Newtonian liquids" J. Non-Newton. Fluid Mech. 76 307-325
- 1998, Wilson, D.C., Bradley, P.A., Hoffman, N.M., Swenson, F.J., Smitherman, D.P., Chrien, R.E., Margevicius, R.W., Thoma, D.J., Foreman, L.R., Hoffer, J.K., Goldman, S.R., Caldwell, S.E., Dittrich, T.R., Haan, S.W., Marinak, M.M., Pollaine, S.M. and Sanchez, J.J. "The development and advantages of beryllium capsules for the National Ignition Facility" Phys. Plasmas 5 1953-1959
- 1998, Wolfrum, E., Wark, J., Zhang, J., Kalantar, D., Key, M.H., Remington, B.A., Weber, S.V., Nelly, D., Rose, S., Warwick, J., MacPhee, A., Lewis, C.L.S., Demir, A., Lin, J., Smith, R. and Talents, G.J. "Measurement of single mode imprint in laser ablative drive of a thin Al foil by extreme UV laser radiography" Phys. Plasmas 5 227-233
- 1998, Wynn, J.C. and Shoemaker, E.M. "The meteorite hunters. 1: The day the sands caught fire" Scientific American 279(5) 64-71
- 1998, Xiong, D., Wang, X., Tian, R. and Xiong, S. "Explosion shock separation: A new approach in pretreatment technique of lignocellulosic materials", in "Proc. 24th Ann. Conf. on Explosives and Blasting Technique", pp. 263-271, publ. Cleveland, OH, International Society of Explosives Engineers

- 1998, Yadav, S. and Ramesh, K.T. "The mechanical behavior of polycrystalline hafnium: Strain rate and temperature dependence" Mater. Sci. Engng A 246 265-281
- 1998, Yagi, T., Kondo, T. and Syono, Y. "High pressure in situ X-ray diffraction study of MnO to 137 GPa and comparison with shock compression experiment" AIP Conf. Proc. 429 159-162
- 1998, Yakushev, V.V. "Electrical conductivity of shock-compressed sulfur, iodine, bromine and water" Mater. Res. Soc. Symp. Proc. 499 121-126
- 1998, Yakushev, V.V. and Yakusheva, T.I. "Electrical conductivity of shock-compressed PVDF films" AIP Conf. Proc. 429 785-788
- 1998, Yamada, K. "Shock synthesis of a graphitic boron-carbon-nitrogen system" J. Amer. Ceram. Soc. 81 1941-1944
- 1998, Yang, W.-B. and Ahrens, T.J. "Shock vaporization of anhydrite and global effects of the K/T bolide" Earth Planet. Sci. Letts 156 125-140
- 1998, Yang, Y., Gould, R.D., Horie, Y. and Iyer, K.R. "New evidence concerning the shock-induced chemical reaction mechanism in a nickel/aluminum mixture" AIP Conf. Proc. 429 639-642
- 1998, Yano, K. and Horie, Y. "A numerical study of shock-induced particle velocity dispersion in solid mixtures" J. Appl. Phys. 84 1292-1298
- 1998, Yano, K. and Horie, Y. "Particle velocity dispersion in shock compression of solid mixtures" AIP Conf. Proc. 429 259-262
- 1998, Young, D.A., Barbee III, T.W. and Rogers, F.J. "New equation of state models for hydrodynamic applications" AIP Conf. Proc. 429 35-38
- 1998, Zabusky, N.J. and Zeng, S.M. "Shock cavity implosion morphologies and vortical projectile generation in axisymmetric shock-spherical fast/slow bubble interactions" J. Fluid Mech. 362 327-346
- 1998, Zaretsky, E. "Dislocation mechanism and kinetics of shock-induced phase transformation in KCl" J. Phys. Chem. Solids 59 253-259
- 1998, Zaretsky, E. "X-ray diffraction technique with VISAR support for study of shock-compressed single crystals" AIP Conf. Proc. 429 883-886
- 1998, Zeldovich, V.I., Uvarov, A.I., Frolova, N.Y., Rinkevich, O.S., Tereshchenko, N.A. and Purygin, N.P. "Discontinuous precipitation in shocked austenitic nitrogen-bearing steel" Phys. Metals Metallog. 86 575-584
- 1998, Zerilli, F.J. and Armstrong, R.W. "Dislocation mechanics based constitutive equation incorporating dynamic recovery and applied to thermomechanical shear instability" AIP Conf. Proc. 429 215-218
- 1998, Zhang, Y. and Ramesh, K.T. "On the compressibility of a glass-forming lubricant: Experiments and molecular modelling" J. Mech. Phys. Solids 46 1699-1722
- 1998, Zhang, H. and Ye, C. "Laser shock processing of 2024-T62 aluminum alloy" Mater. Sci. Engng A 257 322-327

- 1998, Zhang, H., Yu, C., Wu, H.-X. and Guo, D.-H. "Effects of laser shock processing on the fatigue crack growth rates of 2024-T62 aluminum alloy" Proc. SPIE 3550 195-198
- 1998, Zhernokletov, M.V. "Shock compression and isentropic expansion of natural uranium" High Temp. 36 214-221
- 1998, Zhernokletov, M.V., Trunin, R.F., Gudarenko, L.F., Trushchin, V.D. and Gushchina, O.N. "Database on material properties studied in experiments using shock waves" AIP Conf. Proc. 429 51-54
- 1998, Zhilin, A.A. and Fedorov, A.V. "The shock-wave structure in a two-velocity mixture of compressible media with different pressures" J. Appl. Mech. Tech. Phys. 39 166-174
- 1998, Zhou, M. "Effects of microstructure on resistance to shear localization for a class of metal matrix composites" Fatigue Fract. Engng Mater. Struct. 21 425-438
- 1998, Zhu, Y.Q., Sekine, T., Kobayashi, T. and Takazawa, E. "Shock induced phase transitions in SiC polytypes" J. Mater. Sci. 33 5883-5890
- 1998, Zhu, Y.Q., Sekine, T., Kobayashi, T. and Takazawa, E. "Collapsing carbon nanotubes and diamond formation under shock waves" Chem. Phys. Letts 287 689-693
- 1998, Zinamon, Z. and Rosenfeld, Y. "Electron correlation effects and the equation of state of shocked liquid deuterium" Phys. Rev. Letts 81 4668-4671
- 1998, Zukas, J.A. and Walters, W.P., Eds. "Explosive Effects and Applications", publ. New York, Springer
- 1998, Zurek, A.K. "Preshock-induced phase transition in spalled U-0.75wt%Ti", in "Plasticity 99: Constitutive and Damage Modeling of Inelastic Deformation and Phase Transformation", ed. A.S. Khan, pp. 863-866, publ. Fulton, Maryland, Neat Press
- 1998, Zurek, A.K., Embury, J.D., Kelly, A., Thissell, W.R., Gustavsen, R.L., Vorthman, J.E. and Hixson, R.S. "Microstructure of depleted uranium under uniaxial strain conditions" AIP Conf. Proc. 429 423-426
- 1998, Zvorykin, V.D., Bakaev, V.G., Korol, V.Y. and Sychugov, G.V. "GARPUN KrF laser application to material studies at megabar pressures" Proc. SPIE 3683 179-185