

### Shock Physics Papers 1997

- 1997, Abashkin, B.I., Gurev, D.L., Ermilov, I.N., Zabirov, I.K. and Kashevarova, L.S. "Effect of a low amplitude shock wave with residual pressure on hexagonal boron nitride" *Combust. Explos. Shock Waves* 33 614-618
- 1997, Abe, A. "Numerical study of the mechanism of wavy interface generation in explosive welding" *JSME Int. J. B* 40 395-401
- 1997, Abeyaratne, R. and Knowles, J.K. "Impact-induced phase transitions in thermoelastic solids" *Phil. Trans. R. Soc. Lond. A* 355 843-867
- 1997, Abeyaratne, R. and Knowles, J.K. "On the kinetics of an austenite to martensite phase transformation induced by impact in a Cu-Al-Ni shape-memory alloy" *Acta mater.* 45 1671-1683
- 1997, Aizawa, T., Yen, B.K. and Kihara, J. "MA-induced SHS and shock reactive synthesis of molybdenum and titanium silicides", in "Proc. Int. Conf. on Thermomechanical Processing of Steels and Other Materials", ed. T. Chandra and T. Sakai, pp. 1551-1557, publ. Warrendale, PA, Minerals, Metals and Materials Society
- 1997, Akahoshi, Y. and Yonehara, K. "Introduction of two-stage light gas gun in SVBL and its performance test" *Adv. Astronaut. Sci.* 96 995-1006
- 1997, Akhmadeev, N.K. "Two-phase media model of shock compression with chemical reaction", in "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Loading", ed. L. Davison, Y. Horie and M. Shahinpoor, pp. 83-103, publ. New York, Springer
- 1997, Akram, M. and Ali, F. "Shock fitting and numerical modeling of detonation waves" *Int. J. Mod. Phys. C* 8 1193-1207
- 1997, Al-Hassani, S.T.S., Chen, D. and Sarumi, M. "A simple non-local spallation failure model" *Int. J. Impact Engng* 19 493-501
- 1997, Allix, O., Dommangeat, M., Gratton, M. and Hérel, P.L. "Impact on 3D carbon/carbon composites: A meso-scale approach" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 675-680
- 1997, Altshuler, L.V., Zeldovich, Y.B. and Styazhkin, Y.M. "Investigation of isentropic compression and equations of state of fissionable materials" *Physics Uspekhi* 40 101-102
- 1997, Amendt, P., Glendinning, S.G., Hammel, B.A., Landen, O.L., Murphy, T.J., Suter, L.J., Hatchett, S., Rosen, M.D., Lafitte, S., Desenne, D. and Jadaud, J.P. "New methods for diagnosing and controlling hohlraum drive asymmetry on Nova" *Phys. Plasmas* 4 1862-1871
- 1997, Anderson, O.L. and Duba, A. "Experimental melting curve of iron revisited" *J. Geophys. Res.* 102 22659-22669
- 1997, Anderson, O.L. "The volume dependence of thermal pressure in solids" *J. Phys. Chem. Solids* 58 335-343

- 1997, Andersson, O.E. and Sundqvist, B. "Low temperature calibration of Manganin pressure gauges" *Rev. Sci. Instrum.* 68 1344-1345
- 1997, Andreev, N.E., Veisman, M.E., Kostin, V.V. and Fortov, V.E. "Various mechanisms of energy redistribution in the shock wave formed by pulsed laser irradiation" *Bull. Russ. Acad. Sci.: Physics* 61 1164-1167
- 1997, Anisimov, S.I., Zhakhovskii, V.V. and Fortov, V.E. "Shock wave structure in simple liquids" *JETP Letts* 65 755-761
- 1997, Argon, A.S., Cornie, J.A., Gupta, V., Lev, L. and Parks, D.M. "Response to the comments of Nutt and King on the bond strength measurements of Gupta et al." *Mater. Sci. Engng A* 237 224-228
- 1997, Arora, M. and Roe, P.L. "On post-shock oscillations due to shock capturing schemes in unsteady flows" *J. Comput. Phys.* 130 25-40
- 1997, Asay, J.R. "The use of shock-structure methods for evaluating high-pressure material properties" *Int. J. Impact Engng* 20 27-61
- 1997, Asay, B.W., Laabs, G.W., Hesnon, B.F. and Funk, D.J. "Speckle photography during dynamic impact of an energetic material using laser-induced fluorescence" *J. Appl. Phys.* 82 1093-1099
- 1997, Atroshenko, S.A. and Meshcheryakov, Y.I. "Propagation velocities of the fronts of martensitic transformations under impact loading of steels" *Phys. Metals Metallog.* 84 270-276
- 1997, Babkin, A.V., Ladov, S.V., Marinin, V.M. and Fedorov, S.V. "Effect of shaped-charge jet compressibility and strength on the characteristics of their inertial stretching in free flight" *J. Appl. Mech. Tech. Phys.* 38 177-184
- 1997, Baer, M.R. "Continuum mixture modeling of reactive porous media", in "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Loading", ed. L. Davison, Y. Horie and M. Shahinpoor, pp. 63-82, publ. New York, Springer
- 1997, Baer, M.R. "Shock wave structure in heterogeneous reactive media", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 923-927, publ. Canberra, Australia, Panther Publishing
- 1997, Baird, J.K., Hough, G.R. and King, T.R. "Velocity dependence of impact fluorescence" *Int. J. Impact Engng* 19 273-276
- 1997, Basista, M. "Modeling of spall fracture in brittle solids" *Engng Trans.* 45 505-531
- 1997, Batikov, Y.V., Glushak, B.L., Novikov, S.A. and Fishman, N.D. "Low-melting metal resistance to plastic strain of shock-compressed state" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 477-480

- 1997, Batkov, Y.V., Kovalev, N.P., Kovtun, A.D., Kuropatkin, V.G., Lebedev, A.I., Makarov, Y.M., Manachkin, S.F., Novikov, S.A., Raevsky, V.A. and Styazhkin, Y.M. "Explosive three-stage launcher to accelerate metal plates to velocities more than 10 km/s" *Int. J. Impact Engng* 20 89-92
- 1997, Batkov, Y.V., Kovalev, N.P., Kovtun, A.D., Kuropatkin, V.G., Lebedev, A.I., Makarov, Y.M., Manachkin, S.F., Novikov, S.A., Raevskii, V.A. and Styazhkin, Y.M. "Acceleration of metal plates up to velocities higher than 10 km/s" *Phys. Doklady* 42 680-682
- 1997, Batsanov, S.S., Gavrilkin, S.M., Kopaneva, L.I., Maksimov, I.I., Meyers, M.A., Chen, H.C., Prümmer, R., Seiko, E.E. and Vazyulin, V.A. "h-Bn to x-BN phase transition under dynamic-static compression" *J. Mater. Sci. Letts* 16 1625-1627
- 1997, Batsanov, S.S., Gavrilkin, G.M., Markis, F.D. and Meyers, M.A. "Thermodynamics and shock synthesis of  $\text{MSi}_2$  formation under shock compression" *Russ. J. Inorg. Chem.* 42 103-109
- 1997, Baumung, K., Kanel, G.I., Razorenov, S.V., Rusch, D., Singer, J. and Utkin, A.V. "Investigations of the dynamic strength variations in metals" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 927-932
- 1997, Baumung, K., Kanel, G.I., Razorenov, S.V., Rusch, D., Singer, J. and Utkin, A.V. "Shock-melting pressures from non-planar impacts" *Int. J. Impact Engng* 20 101-110
- 1997, Bell, M.S. "Experimental shock effects in calcite, gypsum, and quartz" *Meteoritics* 32 A11
- 1997, Belonoshko, A.B. "Atomistic simulation of shock wave induced melting in argon" *Science* 275 955-957
- 1997, Belonoshko, A.B. and Ahuja, R. "Embedded-atom molecular dynamic study of iron melting" *Phys. Earth Planet. Interiors* 102 171-184
- 1997, Belonoshko, A.B. "Response to 'Shock wave-induced melting in argon by atomistic simulation'" *Science* 278 1475-1476
- 1997, Belov, N.N., Konyaev, A.A., Stukanov, A.L., Simonenko, V.G., Khabibullin, M.V. and Yugov, N.T. "The behavior of construction materials under explosive and impact loading" *Mech. Solids* 32 52-57
- 1997, Belov, N.N., Konyaev, A.A., Simonenko, V.G., Stukanov, A.L., Khabibullin, M.V. and Yugov, N.T. "Effect of polymorphous phase transformations on explosive compression of steel spheres" *Combust. Explos. Shock Waves* 33 619-625
- 1997, Belov, N.N., Konyayev, A.A., Korolyov, P.V., Kulkov, S.N., Melnikov, A.G., Platova, T.M., Simonenko, V.G., Tolkachyov, V.F. and Khabibullin, M.V. "Modeling of shock wave compaction of powder ceramics using a ballistic testing unit" *J. Appl. Mech. Tech. Phys.* 38 38-44

- 1997, Ben-Dor, G., Britan, A., Elperin, T., Igra, O. and Jiang, J.P. "Experimental investigation of the interaction between weak shock waves and granular layers" *Exper. Fluids* 22 432-443
- 1997, Ben-Dor, G., Levy, A. and Sorek, S. "Numerical investigation of the propagation of shock waves in rigid porous materials: Solution of the Riemann problem" *Int. J. Numer. Meth. Heat Fluid Flow* 7 801-813
- 1997, Bennett, L.S., Tanaka, K. and Horie, Y. "Developments in constitutive modeling of shock-induced reactions in powder mixtures", in "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Loading", ed. L. Davison, Y. Horie and M. Shahinpoor, pp. 105-142, publ. New York, Springer
- 1997, Benson, D.J., Nesterenko, V.F., Jonsdottir, F. and Meyers, M.A. "Quasistatic and dynamic regimes of granular material deformation under impulse loading" *J. Mech. Phys. Solids* 45 1955-1999
- 1997, Benson, D.J. "The numerical simulation of the dynamic compaction of powders", in "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Loading", ed. L. Davison, Y. Horie and M. Shahinpoor, pp. 233-255, publ. New York, Springer
- 1997, Benson, D.J. "A mixture theory for contact in multi-material Eulerian formulations" *Comput. Meth. Appl. Mech. Engng* 140 59-86
- 1997, Bernecker, R.R. "Numerical simulation of shock initiation of simple nitramine systems", in "Proc. 28th Int. Ann. Conf. of the Institut für Chemische Technologie", paper 12, publ. Karlsruhe, Germany, Institut für Chemische Technologie
- 1997, Bernecker, R.R. and Anderson, E.W. "The calculation of unreacted Hugoniot. 2: Cast plastic-bonded explosives and cast propellants", in "Proc. 28th Int. Ann. Conf. of the Institut für Chemische Technologie", paper 74, publ. Karlsruhe, Germany, Institut für Chemische Technologie
- 1997, Berthe, L., Fabbro, R., Peyre, P., Tollier, L. and Bartnicki, E. "Shock waves from a water-confined laser-generated plasma" *J. Appl. Phys.* 82 2826-2832
- 1997, Berthe, L., Fabbro, R., Peyre, P. and Bartnicki, E. "Laser shock processing of materials: Experimental study of breakdown plasma effects at the surface of confining water" *Proc. SPIE* 3097 570-575
- 1997, Besnard, D., Jourdan, G., Valerio, E. and Zeitoun, D. "Shock wave induced mixing: Experimental results and numerical modeling", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1271-1276, publ. Canberra, Australia, Panther Publishing

- 1997, Bichenkov, E.I. "Structure of a shock-induced stationary current-wave in a conducting material with a transverse magnetic field" *Combust. Explos. Shock Waves* 33 491-503
- 1997, Bichenkov, E.I. "Electromagnetic field and current waves generated by a shock wave entering a conductor with a transverse magnetic field" *J. Appl. Mech. Tech. Phys.* 38 185-191
- 1997, Bilicki, Z. and Kwidzinski, R. "Thermodynamic and mechanical nonequilibrium in flashing flow with a shock wave in liquid-vapour mixture" *J. Theor. Appl. Mech.* 35 263-284
- 1997, Blanco, E. "Température et émissivité des matériaux sous choc: Etude expérimentale par pyrométrie optique à travers un matériau fenêtre", PhD thesis, Univ. of Paris X
- 1997, Blank, J.G. and Miller, G.H. "The fate of organic compounds in cometary impacts", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1205-1210, publ. Canberra, Australia, Panther Publishing
- 1997, Bloom, F. "Internal variable modelling of wave propagation in laminates with nonlinearly elastic constituents" *Math. Comput. Model.* 26(3) 9-30
- 1997, Boehler, R., Ross, M. and Boercker, D.H. "Melting of LiF and NaCl to 1 Mbar: Systematics of ionic solids at extreme conditions" *Phys. Rev. Letts* 78 4589-4592
- 1997, Boehler, R. and Ross, M. "Melting curve of aluminum in a diamond cell up to 0.8 Mbar: Implications for iron" *Earth Planet. Sci. Letts* 153 223-227
- 1997, Boettger, J.C. and Wallace, D.C. "Metastability and dynamics of the shock-induced phase transition in iron" *Phys. Rev. B* 55 2840-2849
- 1997, Bogatyreva, G.P., Gvyazdovskaya, V.L. and Danilenko, V.V. "Physico-chemical properties of shock-wave synthesized nanometric diamond" *J. Chem. Vapor Depos.* 6 65-71
- 1997, Bolshakov, A.P., Golubev, V.K., Sobolev, Y.S. and Yukina, N.A. "Strength and fracture of SPKh18N9T steel and SP36KNM alloy under dynamic loading" *Strength Mater.* 29 661-663
- 1997, Bondar, M., Lukyanov, Y.L. and Teslenko, T. "The influence of a degree of initial material defects on the strain structure formed in the explosive collapsing thick-walled cylinders" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 481-486
- 1997, Bondar, M.P., Kuzmin, G.E., Pai, V.V. and Yakovlev, I.V. "Explosive compaction of composite materials based on a powdered aluminum alloy reinforced by high-strength fibers" *Combust. Explos. Shock Waves* 33 378-383

- 1997, Bondar, M.P. and Teslenko, T.S. "Effect of the degree of defectiveness of an original material on the deformation structure formed in the explosive collapse of thick-walled hollow cylinders" *Combust. Explos. Shock Waves* 33 718-728
- 1997, Bordzilovskii, S.A., Karakhanov, S.M. and Merzhievskii, L.A. "Shock wave structure in a unidirectional composite with differently oriented fibers" *Combust. Explos. Shock Waves* 33 354-359
- 1997, Boreham, B.W., Hora, H., Aydin, M., Eliezer, S., Goldsworthy, M.P., Min, G., Gahatak, A.K., Lalouis, P., Stening, R.J., Szichman, H., Luther-Davies, B., Baldwin, K.G.H., Maddever, R.A.M. and Rode, A.V. "Beam smoothing and temporal effects: Optimized preparation of laser beams for direct-drive inertial confinement fusion" *Laser Particle Beams* 15 277-295
- 1997, Bossi, S., Hall, T.A., Mahdieh, M., Batani, D., Koenig, M., Krishnan, J., Benuzzi, A., B'Oudenne, J.M. and Lower, T. "Determination of the color temperature in laser-produced shocks" *Laser Particle Beams* 15 485-493
- 1997, Bourne, N.K., Obara, T. and Field, J.E. "High-speed photography and stress gauge studies of jet impact upon surfaces" *Philos. Trans. R. Soc. Lond. A* 355 607-624
- 1997, Bourne, N.K. and Rosenberg, Z. "On the ringing observed in shock-loaded piezoresistive stress gauges" *Meas. Sci. Technol.* 8 570-573
- 1997, Bourne, N.K., Millett, J.C.F. and Pickup, I. "Delayed failure in shocked silicon carbide" *J. Appl. Phys.* 81 6019-6023
- 1997, Bourne, N.K., Millett, J.C.F. and Rosenberg, Z. "On the origin of failure waves in glass" *J. Appl. Phys.* 81 6670-6674
- 1997, Bourne, N.K., Forde, L.C., Millett, J.C.F. and Field, J.E. "Impact and penetration of a borosilicate glass" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 157-162
- 1997, Boutreux, T. "Propagation of a pressure step in a granular material: The role of wall friction", in "Friction, Arching, Contact Dynamics", ed. D.E. Wolf and P. Grassberger, pp. 213-218, publ. Singapore, World Scientific
- 1997, Brandenburg, J.E. "Mars as the parent body of the CI carbonaceous chondrites and implications for Mars biological and climatic history" *Proc. SPIE* 3111 69-80
- 1997, Brezina, J., Smutna, J., Krejci, J. and Svejcar, J. "Structure analysis of explosive welds", in "Proc. 5th European Conf. on Advanced Materials and Processes and Applications", ed. L.A.J. Sarton and H.B. Zeedijk, pp. 563-566, publ. Zwijndrecht, The Netherlands, Netherlands Society of Materials Science
- 1997, Britan, A., Ben-Dor, G., Elperin, T., Igra, O. and Jiang, J.P. "Mechanism of compressive stress formation during weak shock waves impact with granular materials" *Exper. Fluids* 22 507-518

- 1997, Britan, A., Ben-Dor, G., elperin, T., Igra, O. and Jiang, J.P. "Gas filtration during the impact of weak shock waves on granular layers" *Int. J. Multiphase Flow* 23 473-491
- 1997, Broadwell, J.E. "Shocks and energy dissipation in inviscid fluids: A question posed by Lord Rayleigh" *J. Fluid Mech.* 347 375-380
- 1997, Brochard-Wyatt, F. and de Gennes, P.G. "Shocks in an inertial dewetting process" *C.R. Acad. Sci. II b* 324 257-260
- 1997, Brown, C., Seely, J., Feldman, U., Obenschain, S., Bodner, S., Pawley, C., Gerber, K., Sethian, J., Mostovych, A., Aglitsky, Y., Lehecka, T. and Holland, G. "High-resolution X-ray imaging of planar foils irradiated by the Nike KrF laser" *Phys. Plasmas* 4 1397-1401
- 1997, Buchar, J., Rolc, S. and Hrebicek, J. "Strain rate dependence of the spall strength of steels" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 951-956
- 1997, Bugrov, N.V. and Zakharov, N.S. "Shock waves generated by short-pulsed laser radiation in solids" *Bull. Russ. Acad. Sci.: Physics* 61 1191-1196
- 1997, Bystrzycki, J., Paszula, J. and Varin, R.A. "Structure and hardness of explosively loaded FeAl intermetallic alloys" *Mater. Sci. Engng A* 239-240 546-558
- 1997, Campbell, E.M., Holmes, N.C., Libby, S.B., Remington, B.A. and Teller, E. "The evolution of high energy density physics: From nuclear testing to the superlasers" *Laser Particle Beams* 15 607-626
- 1997, Carnell, M.T., Barrington, S.J. and Emmony, D.C. "Phase-inverting parabolic concentrator for the generation of negative waves in water" *J. Acoust. Soc. Amer.* 102 2556-2560
- 1997, Carton, E.P., Verbeek, H.J., Stuivinga, M. and Schoonman, J. "Dynamic compaction of powders by an oblique detonation wave in the cylindrical configuration" *J. Appl. Phys.* 81 3038-3045
- 1997, Cates, J.E. and Sturtevant, B. "Shock wave focusing using geometrical shock dynamics" *Phys. Fluids* 9 3058-3068
- 1997, Cauble, R., DaSilva, L.B., Perry, T.S., Bach, D.R., Budil, K.S., Celliers, P., Collins, G.W., Ng, A., Barbee, T.W., Hammel, B.A., Holmes, N.C., Kilkenny, J.D., Wallace, R.J., Chiu, G. and Woolsey, N.C. "Absolute measurements of the equations of state of low Z materials in the multi-Mbar regime using laser driven shocks" *Phys. Plasmas* 4 1857-1861
- 1997, Cavaller, C. "Measurement techniques in detonics", in "High Speed Photography and Photonics", ed. S.F. Ray, pp. 340-352, publ. Oxford, Focal Press
- 1997, Cermelli, P. and Pastrone, F. "Growth and decay of waves in one-dimensional self-adaptive microstructures" *Proc. Estonian Acad. Sci.: Phys. Math.* 46 209-220

- 1997, Chapuis, P. and Maillard, J.M. "Definition of a dynamic optical sensor for measuring unsteady pressures" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 185-191
- 1997, Chen, D., Al-Hassani, S.T.S., Sarumi, M. and Jin, X.-G. "Crack straining based spall model" Int. J. Impact Engng 19 107-116
- 1997, Chen, H.C., Nesterenko, V.F., LaSalvia, J.C. and Meyers, M.A. "Shear-induced exothermic chemical reactions" J. Phys. IV France 7(C3) 27-32
- 1997, Chen, Y.J., LaSalvia, J.C., Nesterenko, V.F., Meyers, M.A., Bondar, M.P. and Lukyanov, Y.L. "High-strain, high-strain rate deformation, shear localization and recrystallization in tantalum" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 435-440
- 1997, Cheng, L.K., Bruinsma, A.J.A., Prinse, W.C. and Smorenburg, C. "A Fabry-Perot interferometer for high-speed velocity measurement" Proc. SPIE 2869 1050-1057
- 1997, Chevrier, P. and Klepaczko, J.R. "Effets de la microstructure sur l'endommagement par écaillage des matériaux industriels" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 897-902
- 1997, Chevrier, P. and Klepackzo, J.R. "Discussion of fracture criteria in spall mechanics" Engng Trans. 45 47-70
- 1997, Chhabildas, L.C., Furnish, M.D. and Grady, D.E. "Impact of alumina rods: A computational and experimental study" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 137-143
- 1997, Chiba, A., Nishida, M., Imamura, K., Morizono, Y., Itoh, S. and Fujita, M. "Dynamic powder consolidation of functionally graded materials using underwater shock waves", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1225-1228, publ. Canberra, Australia, Panther Publishing
- 1997, Chitanvis, S.M. "Revisiting shock waves in metals" Shock Waves 7 49-54
- 1997, Chizhov, A.V., Chistyakov, V.O. and Schmidt, A.A. "Simulation of iron fracture caused by a blast wave" Tech. Phys. Letts 23 347-349
- 1997, Clements, B.E., Johnson, J.N., Addessio, F.L. and Hixson, R.S. "Impact induced stress waves in composites" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 767-772
- 1997, Clements, B.E., Johnson, J.N. and Addessio, F.L. "Wave propagation in an epoxy-graphite laminate" J. Appl. Phys. 82 4831-4837
- 1997, Cobble, J.A., Johnson, R.P. and Mason, R.J. "High-intensity illumination of an exploding foil" Phys. Plasmas 4 3006-3011
- 1997, Cohen, H. and Wang, C.C. "Principal waves in monotropic laminated bodies" Arch. Ration. Mech. Anal. 137 27-47



- 1997, Cole, J.B., Jiang, Z. and Takayama, K. "Generalized non-standard finite differences and applications to shockwave simulation", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1047-1051, publ. Canberra, Australia, Panther Publishing
- 1997, Collombet, F., Bonnan, S. and Hérelil, P.L. "A mesomechanical modelling of porous aluminum under dynamic loading: Comparison experiment-calculation" J. Phys. IV France Colloq. 7(C3) 643-648
- 1997, Cudzilo, S., Trebinski, R. and Trzcinski, W. "Determination of the effective exponent of isentrope for the detonation products of high explosives" Chem. Phys. Rep. 16 1719-1732
- 1997, da Silva, L.B., Celliers, P., Collins, G.W., Budil, K.S., Holmes, N.C., Barbee Jr., T.W., Hammel, B.A., Kilkenny, J.D., Wallace, R.J., Ross, M., Cauble, R., Ng, A. and Chiu, G. "Absolute equation of state measurements on shocked liquid deuterium up to 200 GPa (2 Mbar)" Phys. Rev. Letts 78 483-486
- 1997, Dai, S.-J., Liu, F.-R., Yang, X. and Zou, H.-C. "Effects of laser shock processing on material's properties" Trans. Nonferr. Met. Soc. China 7 120-124
- 1997, Dakar, G.M. and Khakimov, P.A. "Changes in adiabatic compressibility of aqueous solutions of acetone and isopropanol in the presence of sodium chloride" Russ. J. Phys. Chem. 71 551-554
- 1997, Danilenko, V.A. and Mikulyak, S.V. "Propagation of pulsed perturbations in prestressed media" Combust. Explos. Shock Waves 33 230-237
- 1997, DaSilva, L.B., Celliers, P., Collins, G.W., Budil, K.S., Holmes, N.C., Barbee, T.W., Hammel, B.A., Kilkenny, J.D., Wallace, R.J., Ross, M., Cauble, R., Ng, A. and Chiu, G. "Absolute equation of state measurements on shocked liquid deuterium up to 200 GPa" Phys. Rev. Letts 78 483-486
- 1997, Davis, J.J. "Characterization of plastic deformation and chemical reaction in titanium-polytetrafluoroethylene mixture", PhD thesis, Univ. of The American University
- 1997, Davison, L., Horie, Y. and Shahinpoor, M., Eds. "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Compression", publ. New York, Springer
- 1997, de Ressaquier, T., Couturier, S., David, J. and Niérat, G. "Spallation of metal targets subjected to intense laser shocks" J. Appl. Phys. 82 2617-2623
- 1997, de Ressaquier, T., Couturier, S., David, J. and Niérat, G. "Measurements of the effects of high-pressure laser shocks on metallic targets" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 205-210
- 1997, de Ressaquier, T. and Deleignies, M. "Spallation of polycarbonate under laser driven shocks" Shock Waves 7 319-324

- 1997, Demidov, B.A., Efremov, V.P., Ivkin, M.V., Ivonin, I.A. and Petrov, V.A. "Generation of a precursor of a pressure pulse in materials with a cluster structure" *Tech. Phys.* 42 1258-1263
- 1997, Demidov, B.A., Efremov, V.P., Ivkin, M.V., Ivonin, I.A., Petrov, V.A., Gafarov, B.R. and Yushkov, E.S. "Study of a converging short pressure pulse generated in a cylindrical polymer shell by an electron beam" *Tech. Phys.* 42 76-81
- 1997, Deutsch, C., Furukawa, H., Mima, K., Murakami, M. and Nishihara, K. "Interaction physics of the fast ignitor concept" *Laser Particle Beams* 15 557-564
- 1997, Dhareshwar, L.J., Gopi, N., Murali, C.G., Narayan, B.S. and Chatterjee, U.K. "Studies on laser-driven shocks using a Nd:glass laser" *Laser Particle Beams* 15 297-316
- 1997, Dick, J.J. "Anomalous shock initiation of detonation in pentaerythritol tetranitrate crystals" *J. Appl. Phys.* 81 601-612
- 1997, Didyk, R.P. "The effect of explosive hardening treatment of metals related to the attitude of the detonation front (in Russian)" *Metallofiz. Noveish. Tekhnol.* 19(4) 60-65
- 1997, Dimonte, G. and Schneider, M. "Turbulent Richtmyer-Meshkov instability experiments with strong radiatively driven shocks" *Phys. Plasmas* 4 4347-4357
- 1997, Dremin, A.N. "On the reality of chemical changes in molecular condensed explosives during their loading within the shock front of detonation waves" *Chem. Phys. Rep.* 16 1667-1674
- 1997, Dremin, A.N. "On the correlation of shock sensitivity and detonation failure diameter of condensed explosives", in "Proc. 28th Int. Ann. Conf. of the Institut für Chemische Technologie", paper 35, publ. Karlsruhe, Germany, Institut für Chemische Technologie
- 1997, Dremov, V.V. and Modestov, D.G. "Calculation of melting curves and shock compression data for chlorine substituted methane compounds", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 225-228, publ. Canberra, Australia, Panther Publishing
- 1997, Dressler, B.O. and Sharpton, V.L. "Breccia formation at a complex impact crater: Slate Islands, Lake Superior, Ontario, Canada" *Tectonophysics* 275 285-311
- 1997, Dressler, B.O., Crabtree, D. and Schuraytz, B.C. "Incipient melt formation and devitrification at the Wanapitel impact structure, Ontario, Canada" *Meteor. Planet. Sci.* 32 249-258
- 1997, Dubrovinsky, L.S. "Shock wave-induced melting in argon by atomistic simulation" *Science* 278 1474-1475

- 1997, Duffy, T.S. and Ahrens, T.J. "Dynamic compression of an Fe-Cr-Ni alloy to 80 GPa" *J. Appl. Phys.* 82 4259-4269
- 1997, Egorov, L.A., Barenboim, A.I., Mokhova, V.V., Dorohin, V.V. and Samoilo, A.I. "X-ray diffraction studies of structures of Be, Al, LiF, Fe+3%Si, Si, SiO<sub>2</sub>, KCl under dynamic pressures from 2 GPa to 20 GPa" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 355-360
- 1997, Epanchintsev, O.G., Zubchenko, A.S., Korneyev, A.E. and Simonov, V.A. "Highly efficient shock wave diamond synthesis from fullerenes" *J. Phys. Chem. Solids* 58 1785-1788
- 1997, Erskine, D.J. and Holmes, N.C. "Imaging white light VISAR" *Proc. SPIE* 2869 1080-1083
- 1997, Espinosa, H.D., Mello, M. and Xu, Y. "A variable sensitivity displacement interferometer with application to wave propagation experiments" *Trans. ASME: J. Appl. Mech.* 64 123-131
- 1997, Espinosa, H.D., Xu, Y.-P. and Lu, H.-C. "Inelastic behavior of fiber composites subjected to out-of-plane high strain rate shearing" *Acta mater.* 45 4855-4865
- 1997, Espinosa, H.D., Xu, Y.P. and Brar, N.S. "Micromechanics of failure waves in glass. 1: Experiments" *J. Amer. Ceram. Soc.* 80 2061-2073
- 1997, Espinosa, H.D., Xu, Y.P. and Brar, N.S. "Micromechanics of failure waves in glass. 2: Modeling" *J. Amer. Ceram. Soc.* 80 2074-2085
- 1997, Fakhretdinov, I.A. "Equation of state of binary mixtures" *Russ. J. Phys. Chem.* 71 170-173
- 1997, Feng, J.-P., Jing, F.-Q. and Zhang, G.-R. "Dynamic ductile fragmentation and the damage function model" *J. Appl. Phys.* 81 2575-2578
- 1997, Feng, R., Gupta, Y.M. and Wong, M.K.W. "Dynamic analysis of the response of lateral piezoresistance gauges in shocked ceramics" *J. Appl. Phys.* 82 2845-2854
- 1997, Fernández, J.C., Bauer, B.S., Cobble, J.A., DuBois, D.F., Kyrala, G.A., Montgomery, D.S., Rose, H.A., Vu, H.X., Watt, R.G., Wilde, B.H., Wilke, M.D., Wood, W.M., Failor, B.H., Kirkwood, R. and MacGowan, B.J. "Measurements of laser-plasma instability relevant to ignition hohlraums" *Phys. Plasmas* 4 1849-1856
- 1997, Fomin, V.M. and Kiselev, S.P. "Elastic-plastic waves in porous materials", in "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Loading", ed. L. Davison, Y. Horie and M. Shahinpoor, pp. 205-232, publ. New York, Springer
- 1997, Fortov, V.E., Kanel, G.I., Utkin, A.V., Vorobiev, O.Y., Kessler, G., Karow, H.U., Baumung, K. and Goel, B. "Hot dense matter generated by high-power light ion beams" *IEEE Trans. Plasma Sci.* 25 729-732

- 1997, Fortov, V.E. and Lomonosov, I.V. "Thermodynamics of extreme states of matter" *Pure Appl. Chem.* 69 893-904
- 1997, Fortov, V.E., Kotosonov, A.S., Postnov, V.S., Utkin, A.V. and Yakushev, V.V. "Electrical conductivity of pyrolytic graphite single crystals under conditions of multiple shock compression" *Phys. Doklady* 42 674-676
- 1997, Fourney, W.L., Dick, R.D., Wang, X.J. and Weaver, T.A. "Effects of weak layers on particle velocity measurements" *Rock Mech. Rock Engng* 30 1-18
- 1997, Fourney, W.L., Dick, R.D., Fordyce, D.F. and Weaver, T.A. "Effects of open gaps on particle velocity measurements" *Rock Mech. Rock Engng* 30 95-111
- 1997, Frank, A.M., Gillespie, C.H. and Trott, W.M. "High speed imaging of Rayleigh-Taylor instabilities in laser driven plates" *Proc. SPIE* 2869 585-593
- 1997, Franken, J., Hambir, S.A., Hare, D.E. and Dlott, D.D. "Shock waves in molecular solids: Ultrafast vibrational spectroscopy of the first nanosecond" *Shock Waves* 7 135-145
- 1997, Froeschner, K.E., Froeschner, J.S., Youtsos, A.G., Timke, T. and Kiriakopoulos, M. "Sub-nanosecond velocimetry with a new kind of VISAR" *Proc. SPIE* 2869 1058-1064
- 1997, Frutschy, K.J. and Clifton, R.J. "Plate-impact technique for measuring dynamic friction at high temperatures" *Trans. ASME: J. Tribology* 119 590-593
- 1997, Funatsu, M., Shirai, H. and Kasuya, K. "Numerical simulation of viscous shock layer with carbon ablation: Preparatory research works for future reentry experiments with high-power laser and target" *Proc. SPIE* 3092 651-654
- 1997, Funtikov, A.I. "Explosive laboratory devices for the measurement of the dynamic compressibility of porous substances in the pressure range from 0.1 to 1 TPa" *Physics Uspekhi* 40 1067-1068
- 1997, Furnish, M.D. and Remo, J.L. "Ice issues, porosity and snow experiments for NEO and comet modeling" *Ann. New York Acad. Sci.* 822 566-582
- 1997, Gerasimov, A.V. "Protection of an explosion chamber against fracture by a detonation wave" *Combust. Explos. Shock Waves* 33 111-116
- 1997, Gibas, T. and Jaworska, L. "Shock-treated boron nitride as a sintering aid for c-BN compacting under high pressure" *Int. J. Refract. Metals Hard Mater.* 15 57-60
- 1997, Gilev, S.D. "Current switching by a detonation wave in a metal sponge" *Tech. Phys.* 42 107-109
- 1997, Gilev, S.D. and Mihailova, T.Y. "The development of a method of measuring a condensed matter electroconductivity for investigation of dielectric-metal transitions in a shock wave" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 211-216

- 1997, Gilev, S.D. "Effect of the conductivity of a shock-compressed substance on the electromagnetic response of a shock-formed set of conductors" *Combust. Explos. Shock Waves* 33 504-511
- 1997, Gillet, P. and Guyot, F. "Chemical reactions in the deep earth" *Eur. J. Solid State Inorg. Chem.* 34 645-656
- 1997, Glouschenkov, V.A., Grechnikov, F.V. and Malyshev, B.S. "Pulse-magnetic processing technology when making parts and units of aerospace engineering" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 45-48
- 1997, Göbl, N. and Szalay, A. "Working process for superconductors by means of HERF-technique" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 39-44
- 1997, Godwal, B.K., Kaushik, T.C. and Sikka, S.K. "Equation of state in laser shock simulations" *Laser Particle Beams* 15 353-365
- 1997, Gois, J.C., Campos, J., Plaksin, I. and Mendes, R. "Effect of microballoons on detonation pressure of NM-PMMA-GMB mixtures", in "Proc. 28th Int. Ann. Conf. of the Institut für Chemische Technologie", paper 91, publ. Karlsruhe, Germany, Institut für Chemische Technologie
- 1997, Goldanskii, V.O. "Non-traditional pathways of solid-phase astrochemical reactions" *Pure Appl. Chem.* 69 877-892
- 1997, Goldanskii, V.I. "Non-traditional pathways of extraterrestrial formation of organic compounds" *Russ. Chem. Bull.* 46 389-397
- 1997, Goldfarb, I., Orenbakh, Z., Shreiber, I. and Vafina, F. "Sound and weak shock wave propagation in gas-liquid foams" *Shock Waves* 7 77-88
- 1997, Golovneva, E.I., Golovneva, I.F. and Fomin, V.M. "Collision of solids: Modeling the process by molecular dynamics methods" *Phys. Doklady* 42 523-527
- 1997, Golubev, V.K., Sobolev, Y.S. and Yukina, N.A. "On the fracture behavior of uranium subjected to shock wave loading in the temperature range -196 to 800 °C" *Russian Metallurgy* (2)103-105
- 1997, Golubev, V.K., Rabinovich, K.G., Chernyshev, A.K. and Yukina, N.A. "Failure of a cadmium foil under intense X-ray radiation" *J. Appl. Mech. Tech. Phys.* 38 127-129
- 1997, Golubev, V.K., Sobolev, Y.S. and Trunin, I.R. "Damages to conic specimens of titanium and aluminum alloys under impact loading" *Strength Mater.* 29 529-530
- 1997, Goosman, D., Avara, G., Steinmetz, L., Lai, C. and Perry, S. "Manybeam velocimeter for fast surfaces" *Proc. SPIE* 2869 1070-1079
- 1997, Gopala Rao, R.V. and Venkatesh, R. "Methods of evaluation of second Grüneisen constant and Anderson-Grüneisen constant" *J. Phys. Chem. Solids* 58 939-945

- 1997, Gorelski, V.A., Nikulichev, V.B., Spirkin, S.V. and Zelepugin, S.A. "Computer simulation of chemical reactions in the powder Ti-C mixture in condition of high velocity impact", in "Theory and Practice of Energetic Materials. 2", ed. C.-G. Feng, Y.-X. Ou and Q.-X. Zeng, pp. 372-378, publ. Beijing, China, The Publishing House of the Ordnance Industry
- 1997, Grady, D. "Physics and modeling of shock-wave dispersion in heterogeneous composites" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 669-674
- 1997, Graham, R.A. "Comments on shock-compression science in highly porous solids", in "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Loading", ed. L. Davison, Y. Horie and M. Shahinpoor, pp. 1-21, publ. New York, Springer
- 1997, Gran, J.K. and Seaman, L. "Analysis of piezoresistive gauges for stress in divergent flow fields" ASCE: J. Engng Mech. 123 36-44
- 1997, Greenberg, J.M. "Elastic phase transitions: A new model" Physica D 108 209-235
- 1997, Gromilov, S.A., Kinelovskii, S.A., Popov, Y.N. and Trishin, Y.A. "On the possibility of physicochemical transformation of substances upon shaped-charge application of coats" Combust. Explos. Shock Waves 33 734-736
- 1997, Gubaidullin, A.A., Rustyumova, O.S. and Bekishev, S.A. "Specific features of the propagation of nonstationary shock waves in a bubbly fluid with a non-Newtonian carrier phase" J. Appl. Mech. Tech. Phys. 38 685-691
- 1997, Gudehus, G., Kuntze, W., Raju, V.R. and Warmbold, U. "Field tests for blast compaction of loose sand deposits", in "Proc. 14th Int. Conf. on Soil Mechanics and Foundation Engineering", pp. 1593-1597, publ. Rotterdam, The Netherlands, Balkema
- 1997, Guengant, Y. and Guery, J.-F. "Double card gap test", in "Proc. 28th Int. Ann. Conf. of the Institut für Chemische Technologie", paper 26, publ. Karlsruhe, Germany, Institut für Chemische Technologie
- 1997, Gulbin, V.N., Kobelev, A.G. and Borissov, D.E. "Thermobimetals mechanical properties produced by explosive welding with rolling" J. Phys. IV France 7(C3) 49-54
- 1997, Gulyaev, V.I., Lugovoi, P.Z. and Ivanchenko, G.M. "Diffraction of spherical shock wave at plane boundary of elastic media" Int. Appl. Mech. 33 805-812
- 1997, Gupta, Y.M. and Sharma, S.M. "Shocking matter to extreme conditions" Science 277 909-910
- 1997, Gusak, A.M. and Bushin, I.N. "Modelling of point defect motion at a shock wave front" Met. Phys. Adv. Tech. 16 1063-1069
- 1997, Gusak, A.M. and Bushin, I. "MD-simulation and phenomenological description of the mass-transfer and phase formation initiated by the shock waves in alloys" Defect Diffus. Forum 143 1601-1606

- 1997, Guseva, M.B., Babaev, V.G., Babina, V.M., Khvostov, V.V., Zhuk, A.Z., Lash, A.A. and Fedorin, I.A. "Shock-wave-induced phase transition in C:N films" *Diamond Related Mater.* 6 640-644
- 1997, Guskov, S.Y. and Feoktistov, L.P. "Precompression of matter during radiative transfer in a steady-state thermonuclear burn wave" *JETP Letts* 66 823-827
- 1997, Guskov, S.Y., Rozanov, V.B. and Rummyantseva, M.A. "Equations of state for metals (Al, Fe, Cu, Pb), polyethylene, carbon, and boron nitride as applied to problems of dynamical compression" *J. Russ. Laser Res.* 18 311-342
- 1997, Gvozdeva, L.G., Lagutov, Y.P., Sharov, Y.L., Scherbak, N.B. and Baklanov, D.I. "Some peculiarities of interaction of shock waves with porous materials", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1211-1214, publ. Canberra, Australia, Panther Publishing
- 1997, Gvozdevskaya, N.I. and Kulikovskii, A.G. "Electromagnetic shock waves and their structure in anisotropic magnetic materials" *J. Appl. Math. Mech.* 61 135-143
- 1997, Hall, T.A., Benuzzi, A., Batani, D., Beretta, D., Bossi, S., Faral, B., Koenig, M., Krishnan, J., Löwer, T. and Mahdieh, M. "Color temperature measurement in laser-driven shock waves" *Phys. Rev. E* 55 6356-6359
- 1997, Hambir, S.A., Franken, J., Hare, D.E., Chronister, E.L., Baer, B.J. and Dlott, D.D. "Ultrahigh time-resolution vibrational spectroscopy of shocked molecular solids" *J. Appl. Phys.* 81 2157-2166
- 1997, Han, W.-S., Xia, M.-F., Shen, L.-T. and Bai, Y.L. "Statistical formulation and experimental determination of growth rate of micrometre cracks under impact loading" *Int. J. Solids Structures* 34 2905-2925
- 1997, Han, X.-D., Zou, W.-H., Wang, R.-H., Jin, S., Zhang, Z., Li, T.-C. and Yang, D.-Z. "Microstructure of TiNi shape memory alloy synthesized by explosive shock-wave compression of Ti-Ni powder mixture" *J. Mater. Sci.* 32 4723-4729
- 1997, Han, W., Shen, L. and Bai, Y.L. "Analysis of spallation based upon statistical microdamage mechanics" *Int. J. Impact Engng* 19 381-394
- 1997, Han, C.-S., Jing, F.-Q., Ding, J., Zhang, W.-P. and Chen, S.-H. "Effects of dynamic loading rates on mass ejection from a free surface of aluminum", in "Theory and Practice of Energetic Materials. 2", ed. C.-G. Feng, Y.-X. Ou and Q.-X. Zeng, pp. 385-388, publ. Beijing, China, The Publishing House of the Ordnance Industry
- 1997, Hanim, S. and Klepaczko, J.R. "Numerical study of spall in an aluminum alloy under planar impact loading" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 791-796
- 1997, Harris, A. "Dynamic compaction of mechanically milled copper", PhD thesis, Univ. of Queensland, Australia

- 1997, Hayakawa, S. and Takayama, K. "Shock wave propagation in model tissue for medical application of shock waves", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 779-784, publ. Canberra, Australia, Panther Publishing
- 1997, Hayes, B.T. and Lefloch, P.G. "Nonclassical shocks and kinetic relations: Scalar conservation laws" Arch. Ration. Mech. Anal. 139 1-56
- 1997, Hazanov, S. "On shock waves in materials with memory" Wave Motion 25 73-81
- 1997, Hazell, P.J. and Iremonger, M.J. "Crack softening damage model for ceramic impact and its application within a hydrocode" J. Appl. Phys. 82 1088-1092
- 1997, He, H.L., Jin, X.G., Jing, F.Q. and Kanel, G.I. "Dynamic failure of shock-loaded glass" Chinese Phys. Letts 14 538-541
- 1997, He, H. "Dynamic response and microstructure damage of brittle materials under shock wave compression (in Chinese)", PhD thesis, Univ. of Southwest Institute of Fluid Physics, Chengdu, China
- 1997, Held, M. "Plate velocities for asymmetric sandwiches" Propell. Explos. Pyrotech. 22 218-220
- 1997, Henis, Z., Moshe, E., Werdiger, M., Eliezer, S., Dekel, E., Ludmirsky, A., Goldberg, I.B., Arad, B., Shpitalnik, R., Maman, S., Horovitz, Y., Eliaz, N. and Eliezer, D. "Laser aided diagnostic of spalling in laser induced shock waves", in "Proc. 8th Int. Symp. on Laser-Aided Plasma Diagnostics", pp. 349-353
- 1997, Hérelil, P.-L., Allix, O. and Gratton, M. "Shock behaviour of 3D carbon-carbon composite" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 529-534
- 1997, Hérelil, P.-L., Bonnan, S. and Collombet, F. "Experimental characterization of shock wave behavior of porous aluminum" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 535-540
- 1997, Hill, L.G. "Detonation product equation-of-state directly from the cylinder test", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 355-360, publ. Canberra, Australia, Panther Publishing
- 1997, Hiltl, M. and Nahme, H. "Dynamic behavior of a shock-loaded glass-ceramic based on the  $\text{Li}_2\text{O}-\text{Al}_2\text{O}_3-\text{SiO}_2$  system" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 587-592
- 1997, Hirai, H., Kondo, K., Kim, M., Koinuma, H., Kurashima, K. and Bando, Y. "Transparent nanocrystalline diamond ceramics fabricated from  $\text{C}_{60}$  fullerene by shock compression" Appl. Phys. Letts 71 3016-3018



- 1997, Hoarty, D., Iwase, A., Meyer, C., Edwards, J. and Willi, O. "Characterization of laser driven shocks in low density foam targets" *Phys. Rev. Letts* 78 3322-3325
- 1997, Hokamoto, K., Tanaka, S., Fujita, M., Itoh, S., Meyers, M.A. and Chen, H.-C. "High temperature shock consolidation of hard ceramic powders" *Physica B* 239 1-5
- 1997, Hokamoto, K. and Fujita, M. "Shock-wave research on condensed matter at the High-Energy Rate Laboratory of Kumamoto University: An introduction" *Physica B* 239 187-190
- 1997, Holland, K.G. "Phase changes and transport properties of geophysical materials under shock loading", PhD thesis, Univ. of Caltech, Pasadena
- 1997, Horie, Y. and Sawaoka, A.B. "Shock waves", in "Encyclopedia of Applied Physics. Vol. 18", ed. G.L. Trigg, pp. 29-43, publ. New York, VCH Publishers Inc.
- 1997, Hosokawa, T. and Teshima, K. "Cytotoxic effect of high pressure pulses generated by a diaphragmless shock tube on normal and transformed mammalian cells", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 789-793, publ. Canberra, Australia, Panther Publishing
- 1997, Hough, R.M., Gilmour, I., Pillinger, C.T. and Langenhorst, F. "Diamonds from the iridium-rich K-T boundary layer at Arroyo el Mimbral, Tamaulipas, Mexico" *Geology* 25 1019-1022
- 1997, Houwing, A.F.P., Boyce, R.R., Danehy, P.M., Hannemann, M., Kurtz, J.J., McIntyre, T.J., McMahon, S.J., Mee, D.J., Paull, A., Sandemann, R.J. and Tanno, H., Eds. "Proc. 21st Int. Symp. on Shock Waves", publ. Canberra, Australia, Panther Publishing
- 1997, Howard, D.D. and Sturtevant, B. "In vitro study of the mechanical effects of shock wave lithotripsy" *Ultrasound Med. Biol.* 23 1107-1122
- 1997, Hsing, W.W., Barnes, C.W., Beck, J.B., Hoffman, N.M., Galmiche, D., Richard, A., Edwards, J., Graham, P., Rothman, S. and Thomas, B. "Rayleigh-Taylor instability evolution in ablatively driven cylindrical implosions" *Phys. Plasmas* 4 1832-1840
- 1997, Hu, W.-J. "Explosion bonded products in electric industry", in "Theory and Practice of Energetic Materials. 2", ed. C.-G. Feng, Y.-X. Ou and Q.-X. Zeng, pp. 572-576, publ. Beijing, China, The Publishing House of the Ordnance Industry
- 1997, Igra, O., Wang, L., Ben-Dor, G., Reichenbach, H. and Heilig, W. "Uniaxial strain loading of a rubber rod by planar shock waves" *Acta Mech.* 120 91-107

- 1997, Igra, O., Elperin, T., Britan, A. and Jiang, J.P. "Head-on collision of a planar shock wave with granular layers", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1019-1023, publ. Canberra, Australia, Panther Publishing
- 1997, Inal, O.T. and Zimmerly, C.A. "Processing of materials with explosives", in "Proc. Int. Metallurgy and Materials Conference", ed. E.S. Kayali, M. Urgan, K. Sesen, C.H. Gur and L. Ovecoglu, pp. 751-764, publ. Ankara, Turkey, Chamber of Metallurgical Engineers
- 1997, Inogamov, N.A. "Ablative acceleration of foils, their pulsations, and interchange stability" *Laser Particle Beams* 15 495-506
- 1997, Itoh, S., Liu, Z. and Nadamitsu, Y. "An investigation on the shock properties of underwater shock waves generated in underwater explosions of high explosives" *Trans. ASME: J. Pressure Vessel Technol.* 119 498-502
- 1997, Ivanov, V.V., Kolov, Y.A., Vikhrev, A.N. and Noskova, N.I. "Hot dynamical compacting of nanostructured powders of aluminum and titanium oxides" *Phys. Doklady* 42 759-761
- 1997, Jach, K., Mroczkowski, M., Swierczynski, R. and Tyl, J. "Numerical modelling of plate impact phenomena: Optimization of theoretical description of spallation process in steel" *J. Tech. Phys.* 38 693-710
- 1997, Joachim, C.E. and Welch, C.R. "Underwater shocks from blasting", in "Proc. 23rd Ann. Conf. on Explosives and Blasting Technique", pp. 525-536, publ. Cleveland, OH, International Society of Explosives Engineers
- 1997, Johnson, J.D. "General features of Hugoniot. 2", LA-13217-MS, Los Alamos, New Mexico, Los Alamos National Laboratory
- 1997, Johzaki, T., Nakao, Y., Nakashima, H., Takabe, H., Oda, A. and Kudo, K. "Effects of neutron heating on ignition and energy gain of laser-imploded D-T pellets" *Laser Particle Beams* 15 259-276
- 1997, Joreau, P., Leroux, H. and Doukhan, J.-C. "A TEM investigation of shock metamorphism in olivine of the Ilafegh 013 chondrite" *Meteor. Planet. Sci.* 32 309-316
- 1997, Jyoti, G., Joshi, K.D., Gupta, S.C., Sikka, S.K., Dey, G.K. and Banerjee, S. "Crystallography of the alpha to omega transition in shock-loaded zirconium" *Philos. Mag. Letts* 75 291-300
- 1997, Jyoti, G., Joshi, K.D., Gupta, S.C., Sikka, S.K., Dey, G.K. and Banerjee, S. "α to ω transition in shock compressed zirconium: A study on crystallographic aspects" *Bull. Mater. Sci.* 20 623-635

- 1997, Kalantar, D.H., Key, M.H., Da Silva, L.B., Glendinning, S.G., Remington, B.A., Rothenberg, J.E., Weber, F., Weber, S.V., Wolfrum, E., Kim, N.S., Neely, D., Zhang, J., Wark, J.S., Demir, A., Lin, J., Smith, R., Tallents, G.J., Lewis, C.L.S., MacPhee, A., Warwick, J. and Knauer, J.P. "Measurements of direct drive laser imprint in thin foils by radiography using an X-ray laser backlighter" *Phys. Plasmas* 4 1985-1993
- 1997, Kameda, M., Ichihara, M., Okunitani, H. and Matsumoto, Y. "Transient pressure wave phenomena in a highly viscous liquid containing gas bubbles", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 917-921, publ. Canberra, Australia, Panther Publishing
- 1997, Kanel, G.I., Razorenov, S.V., Bogatch, A., Utkin, A.V. and Grady, D.E. "Simulation of spall fracture of aluminum and magnesium over a wide range of load duration and temperature" *Int. J. Impact Engng* 20 467-478
- 1997, Karni, S. and Canic, S. "Computations of slowly moving shocks" *J. Comput. Phys.* 136 132-139
- 1997, Kats, A.V. and Kontorovich, V.M. "Hamiltonian description of the motion of discontinuity surfaces" *Low Temp. Phys.* 23 89-95
- 1997, Kechin, V.V. "On thermodynamics of fusion at high pressures" *Russ. J. Phys. Chem.* 71 323-326
- 1997, Kedrinskii, V.K. "The role of cavitation effects in the mechanisms of destruction and explosive processes" *Shock Waves* 7 63-76
- 1997, Kedrinskii, V.K. "Wave processes and structure dynamics in inhomogeneous media under pulsed loading" *J. Appl. Mech. Tech. Phys.* 38 598-624
- 1997, Kedrinskii, V.K., Besov, A.S. and Gutnik, I.E. "Inversion of the two-phase state of a liquid under impact loading" *Phys. Doklady* 42 87-89
- 1997, Kezuka, H., Kikuchi, M., Ohshima, E., Hikosaka, H. and Syono, Y. "Characterization of grain structure in shocked YBCO particles" *Physica C* 282-287 521-522
- 1997, Khasainov, B.A., Ermolaev, B.S., Presles, H.N. and Vidal, P. "On the effect of grain size on shock sensitivity of heterogeneous high explosives" *Shock Waves* 7 89-105
- 1997, Khishchenko, K.V. "Temperature and heat capacity of polymethyl methacrylate behind the front of strong shock waves" *High Temp.* 35 991-994
- 1997, Kimura, E. and Oyumi, Y. "Sensitivities of azide polymer propellants in fast cook-off, card gap and bullet impact tests" *J. Energ. Mater.* 15 163-178

- 1997, Kimura, J.-I., Arisawa, H. and Shimidzu, T. "Propellants response to cookoff, bullet impact, and spall impact monitored by pressure in a closed vessel", in "Proc. 28th Int. Ann. Conf. of the Institut für Chemische Technologie", paper 3, publ. Karlsruhe, Germany, Institut für Chemische Technologie
- 1997, Kitagawa, K. and Yasuhara, M. "On flow resistance of porous elastic body interacting with shock wave", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 959-963, publ. Canberra, Australia, Panther Publishing
- 1997, Knight, E.Y., Hamilton, M.F., Ilinskii, Y.A. and Zabolotskaya, E.A. "On Rayleigh wave nonlinearity and analytical approximation of the shock formation distance" J. Acoust. Soc. Amer. 102 2529-2535
- 1997, Knowles, J.K., Winfree, N.A. and Ahrens, T.J. "Dynamically induced phase transitions and the modeling of comminution in brittle solids" Math. Mech. Solids 2 99-116
- 1997, Kobayashi, T., Tashiro, S., Sekine, T. and Sato, T. "Phase transformation of turbostratic boron nitride by shock compression" Chem. Mater. 9 233-236
- 1997, Kodama, T., Takayama, K., Nagayasu, N., Uenohara, H. and Takahashi, N. "Revascularization therapy for acute cerebral embolism by the impact of a liquid jet generated by the interaction of a gas bubble with an underwater shock wave", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 773-778, publ. Canberra, Australia, Panther Publishing
- 1997, Koeberl, C., Masaitis, M., Shafranovsky, G.I., Gilmour, I., Langenhorst, F. and Schrauder, M. "Diamonds from the Popigai impact structure, Russia" Geology 25 967-970
- 1997, Kolesnikov, A.V., Lebedev, A.V., Nabatov, S.S. and Dremin, A.N. "Phase formation in the shock loaded GeO<sub>2</sub>-SiO<sub>2</sub> system" Chem. Phys. Rep. 16 2043-2051
- 1997, Kolikov, V.A., Rutberg, P.G., Budin, A.V., Makarevitch, I.P. and Bogomaz, A.A. "Hypervelocity electric discharge accelerator" IEEE Trans. Magnetics 33 305-309
- 1997, Komissarova, I.I., Ostrovskaya, G.V., Filippov, V.N. and Shedova, E.N. "Generation of shock waves in water and in air by CO<sub>2</sub> laser radiation focused on the free surface of a liquid" Tech. Phys. 42 247-249
- 1997, Kondo, K. "Magnetic response of powders to shock loading and fabrication of nanocrystalline magnets", in "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Loading", ed. L. Davison, Y. Horie and M. Shahinpoor, pp. 309-330, publ. New York, Springer

- 1997, Konotop, V.V., Salerno, M. and Takeno, S. "Shock waves in a chain in two-level atoms with exchange and dipole-dipole interactions" *Phys. Rev. E* 56 7240-7245
- 1997, Korobkin, A.A. "Asymptotic theory of liquid-solid impact" *Philos. Trans. R. Soc. Lond. A* 355 507-522
- 1997, Korzhuev, M.A. "Precipitation of mobile copper from  $\text{Cu}_{2-x}\text{Se}$  samples under impact loading" *Tech. Phys. Letts* 23 196-197
- 1997, Kosing, O.E. and Skews, B.W. "The use of liquid shock wave for metal forming", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 805-810, publ. Canberra, Australia, Panther Publishing
- 1997, Kostin, V.V., Fortov, V.E., Krasnyuk, I.K., Kunizhev, B.I. and Temrokov, A.I. "Investigation of shock wave and destruction processes under conditions of high velocity impact and laser stimulation of a target of organic material" *High Temp.* 35 949-954
- 1997, Kostin, V.V. and Andreev, N.E. "Shock compression of solid targets by ultrashort laser pulses" *Proc. SPIE* 3093 374-380
- 1997, Kostin, V.V. and Krasnyuk, I.K. "Laser-induced destruction of metal targets" *Bull. Russ. Acad. Sci.: Physics* 61 1061-1065
- 1997, Kovalev, V.G. and Kosenkov, V.M. "Dynamic contact interaction of elastoplastic cylinders under a shock load" *Mech. Solids* 32 84-92
- 1997, Kozlov, E.A., Elkin, V.M., Litvinov, B.V., Kovalenko, G.V., Bondarchuk, G.G., Teplov, V.A., Degtyarev, M.V., Chashukhina, T.I. and Voronova, L.M. "Melting and evaporation of 12Kh18N10T austenitic steel in spherical stress waves" *Phys. Metals Metallog.* 83 184-191
- 1997, Kozlov, E.A., Timofeeva, L.F., Filin, V.M. and Bulkin, V.I. "Influence of spherically converging stress waves on the distribution of helium defects in a delta plutonium-gallium alloy sphere" *Phys. Metals Metallog.* 84 421-424
- 1997, Kozlov, E.A., Zhugin, Y.N., Litvinov, B.V., Kovalenko, G.V., Nazarov, M.A. and Badyukov, D.D. "Physical and chemical transformations in the Saratov chondrite exposed to spherical shock waves" *Phys. Doklady* 42 128-131
- 1997, Kozlov, E.A., Zhugin, Y.N., Litvinov, B.V., Sazonova, L.A., Viganina, M.F. and Orlov, R.Y. "Phase transformations of wollastonite in spherical stress waves" *Phys. Doklady* 42 366-370
- 1997, Krasnyuk, I.K., Pashinin, P.P., Semenov, A.Y. and Charakhchyan, A.A. "Mechanism of deuterium heating in cone-shaped targets exposed to laser irradiation" *Phys. Doklady* 42 241-243
- 1997, Kremer, G.M. and Müller, I. "Shock thickness in monatomic gases" *Meccanica* 32 295-299

- 1997, Krivets, V.V., Osipov, A.I., Ryazin, A.P. and Uvarov, A.V. "Investigation of the fractal characteristics of the radiation behind a strong shock wave front in an instability regime" *Tech. Phys.* 42 130-133
- 1997, Kruger, M.B., Nguyen, J.H., Li, Y.M., Caldwell, W.A., Manghnani, M.H. and Jeanloz, R. "Equation of state of alpha-Si<sub>3</sub>N<sub>4</sub>" *Phys. Rev. B* 55 3456-3460
- 1997, Kruger, M.B., Nguyen, J.H., Caldwell, W. and Jeanloz, R. "Equation of state of MgAl<sub>2</sub>O<sub>4</sub> spinel to 65 GPa" *Phys. Rev. B* 56 1-4
- 1997, Kuchhal, P., Kumar, R. and Dass, N. "Temperature-dependent equation of state of condensed matter" *J. Phys.: Condens. Matter* 9 2987-2998
- 1997, Kunz, J., Falter, M. and Jessberger, E.K. "Shocked meteorites: Argon-40/argon-39 evidence for multiple impacts" *Meteor. Planet. Sci.* 32 647-650
- 1997, Kushwah, S.S., Kumar, P. and Shanker, J. "Pressure dependence of thermal expansivity of MgO at high temperatures" *J. Phys. Chem. Solids* 58 1439-1442
- 1997, Kuzenkova, M.A., Oleinik, G.S., Danilenko, N.V. and Fesenko, I.P. "The influence of shock pretreatment of AlN powder on structural transformations in sintering of it" *Powder Metall. Metal Ceramics* 36 542-547
- 1997, Lach, E., Uggowitz, P. and Rondot, F. "Hardening of nitrogen alloyed steels by shock waves" *J. Phys. IV France Colloq.* 7(C3) 547-552
- 1997, Lagutov, Y.P., Gvozdeva, L.G., Sharov, Y.L. and Sherbak, N.B. "Experimental investigation of gas percolation through porous compressible material under the effect of shock wave" *Physica A* 241 111-117
- 1997, Larikov, L.N., Belyakova, M.N., Zholud, V.V., Mazanko, V.F. and Divinski, S.V. "The rhenium impact on the mass transfer in Mo-Re single crystals under shock loading", in "Proc. Int. Symp. on Rhenium and Rhenium Alloys", ed. B.D. Bryskin, pp. 775-780, publ. Warrendale, Pennsylvania, Minerals, Metals and Materials Society
- 1997, Larikov, L.N., Belyakova, M.N., Zholud, V.V. and Divinski, S.V. "Structure evolution in molybdenum-rhenium single crystals under pulsing load", in "Proc. Int. Symp. on Rhenium and Rhenium Alloys", ed. B.D. Bryskin, pp. 781-787, publ. Warrendale, Pennsylvania, Minerals, Metals and Materials Society
- 1997, Lawson, W.S., Rambo, P.W. and Larson, D.J. "One-dimensional simulations of ultrashort intense laser pulses on solid-density targets" *Phys. Plasmas* 4 788-795
- 1997, Lebedev, A.N., Fortov, V.E. and Skvortsov, V.A. "Thermonuclear fusion under high-velocity cluster impact" *Int. J. Impact Engng* 20 511-515
- 1997, Lebo, I.G., Nikishin, V.V., Rozanov, V.B. and tishkin, V.F. "On the effect of boundary conditions on the instability growth at a contact surface in passage of a shock wave" *Bull Lebedev Phys. Inst.* (1) 40-47

- 1997, Leduc, P.R. and Bao, G. "Thermal softening of a particle-modified tungsten-based composite under adiabatic compression" *Int. J. Solids Structures* 34 1563-1581
- 1997, Lee, M., Longoria, R.G. and Wilson, D.E. "Ballistic waves in high-speed water entry" *J. Fluids Structures* 11 819-844
- 1997, Lee, Y.-P., Karng, S.W., Jeon, J.-S. and Kwak, H.-Y. "Shock pulse from a sonoluminescing gas bubble" *J. Phys. Soc. Jpn* 66 2537-2540
- 1997, Lee, I. and Finnegan, S.A. "Prediction of shock response of pyrotechnic mixtures from thermal analysis" *J. Therm. Anal.* 50 707-717
- 1997, Lehner, T. "Numerical simulation of radiation-driven targets for light-ion inertial confinement fusion: Comment" *Laser Particle Beams* 15 471-472
- 1997, Leiper, G.A. "Shock front curvature in condensed explosives", in "Proc. 28th Int. Ann. Conf. of the Institut für Chemische Technologie", paper 88, publ. Karlsruhe, Germany, Institut für Chemische Technologie
- 1997, Lenosky, T.J., Kress, J.D., Collins, L.A. and Kwon, I. "Molecular-dynamics modeling of shock-compressed liquid hydrogen" *Phys. Rev. B* 55 11907-11910
- 1997, Lenosky, T.J., Kress, J.D. and Collins, L.A. "Molecular-dynamics modeling of the Hugoniot of shocked liquid deuterium" *Phys. Rev. B* 56 5164-5169
- 1997, Levedahl, W.K. and Lindl, J.D. "Energy scaling of inertial confinement fusion targets for ignition and high gain" *Nuclear Fusion* 37 165-173
- 1997, Lewis, B.B. "An analysis tool for piezoelectric gages" *Shock Waves* 7 147-150
- 1997, Li, Z.-R., Cheng, X.-F., Zhou, Y.-Z., Tan, X.-X. and Ma, R.-C. "Dynamic measurement of diffuse reflectivity" *Proc. SPIE* 2869 611-615
- 1997, Li, Z.-Y., Zhu, W.-H., Zhou, G.-Q., Guo, D.-H. and Wu, H.-X. "Experimental study of the effects of PMMA confinement on laser-induced shock waves (in Chinese)" *Chinese J. Lasers* A24 118-122
- 1997, Li, Z.-Y., Zhu, W.-H., Cheng, J.-Y., Guo, D.-H. and Wu, H.-X. "Experimental study of high-power pulsed laser induced shock waves in aluminum targets (in Chinese)" *Chinese J. Lasers* A24 259-262
- 1997, Lin, E.E., Dubitskii, G.A., Zyulkova, T.V., Mazanov, V.A., Sirenko, A.V. and Sukharenko, V.I. "On the feasibility of doping of ultrafine diamonds in a detonation wave" *Chem. Phys. Rep.* 16 555-557
- 1997, Lin, E.E. "Shock induced growth of crystals in a porous medium of diamond nanoparticles" *Chem. Phys. Rep.* 16 2241-2244
- 1997, Lindemüth, I.R., Ekdahl, C.A., Fowler, C.M., Reinovsky, R.E., Younger, S.M., Chernyshev, V.K., Mokhov, V.N. and Pavlovskii, A.I. "US/Russian collaboration in high energy density physics using high explosive pulsed power: Ultrahigh current experiments, ultrahigh magnetic field applications, and progress towards thermonuclear fusion" *IEEE Trans. Plasma Sci.* 25 1357-1372

- 1997, Lisitsyn, I.V., Muraki, T. and Akiyama, H. "Wire induced flashover as a source of shock waves for destruction of solid materials" *Jpn. J. Appl. Phys.* 36 1258-1263
- 1997, Lisitsyn, I.V., Muraki, T. and Akiyama, H. "Features of shock wave formation in a wire induced surface flashover" *Appl. Phys. Letts* 70 1676-1678
- 1997, Lisitsyn, I.V., Muraki, T. and Akiyama, H. "Mechanism of shock waves generation and material destruction in a wire induced surface flashover" *Physica B* 239 6-8
- 1997, Litz, C.J. "Laser Doppler vibrometer: Application to DOE/Taguchi methodologies to pyroshock response spectra" *Shock Vibration* 4 115-123
- 1997, Liu, K. and Tanimura, S. "Numerical analysis for dynamic stress concentration in a rectangular block due to impact" *Int. J. Impact Engng* 19 653-666
- 1997, Liu, C. and Ahrens, T.J. "Stress wave attenuation in shock-damaged rock" *J. Geophys. Res.* 102 5243-5250
- 1997, Liu, J., Yang, T., He, H., Tan, H., Zhang, J., Zheng, X. and Xu, K. "Study on crystalline MgO catalyst treated by shock waves" *J. Mater. Sci. Letts* 16 927-929
- 1997, Lo, Y.L., Sirkis, J.S. and Fourney, W.L. "In-fiber Doppler velocimeter for velocity measurements of moving surfaces" *Exper. Mech.* 37 328-332
- 1997, Lo, Y.L., Sirkis, J.S. and Fourney, W.L. "Development of an optical fiber strain sensor for explosively generated stress wave propagation applications" *Fragblast* 1 471-486
- 1997, Loret, B., Simões, F.M.F. and Martins, J.A.C. "Growth and decay of acceleration waves in non-associative elastic-plastic fluid-saturated porous media" *Int. J. Solids Structures* 34 1583-1608
- 1997, Loshmanov, L.P., Nechaeva, O.A. and Rudnev, V.D. "Yield point of a tube of zirconium-1% niobium alloy in shock loading" *Russian Metallurgy* (4)105-107
- 1997, Lu, F.K., Zhang, X. and Liu, X. "Visualization of confined shock-bubble interaction", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1001-1006, publ. Canberra, Australia, Panther Publishing
- 1997, Mahdieh, M.H. and Hall, T.A. "Optical reflectivity of dense plasmas produced by laser driven shock waves" *J. Phys. D: Appl. Phys.* 38 588-592
- 1997, Makov, Y.N. and Rudenko, O.V. "Evolution of disturbances on a nonlinear shock wave front forming in a dissipative medium" *Acoust. Phys.* 43 220-223
- 1997, Makov, Y.N. "Universal automodeling solution to the Khokhlov-Zabolotskaya equation for waves with shock fronts" *Acoust. Phys.* 43 722-727
- 1997, Malaise, F., Tranchet, J.-Y. and Collombet, F. "Behaviour modelling of two aluminas in divergent spherical pyrotechnical experiments" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 681-686



- 1997, Mamalis, A.G., Kotsis, I., Pantazopoulos, G., Enisz, M., Szalay, A. and Manolakos, D.E. "The effect of heat treatment on explosively compacted Y-Ba-K-Cu-O superconductive powders" *Physica C* 280 289-296
- 1997, Maranda, A., Nowaczewski, J., Trzcinski, W.A., Wierzchon, T. and Rudnicki, J. "On some problems of the explosive hardening of steel", in "Proc 23rd Int. Pyrotechnics Seminar", ed. T. Yoshida and N. Kubota, pp. 500-508, publ. Chicago, IIT Research Institute
- 1997, Marquis, F.D.S. and Chen, Y.J. "High-strain, high-strain-rate deformation behavior of tantalum and tantalum-tungsten based alloys" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 441-446
- 1997, Mashimo, T., Kaetsu, M. and Uchino, M. "Measurements of Hugoniot compression curve of LiF single crystal by the inclined mirror method" *Proc. SPIE* 2869 594-596
- 1997, Mashimo, T. and Uchino, M. "Heterogeneous free-surface profile of B<sub>4</sub>C polycrystal under shock compression" *J. Appl. Phys.* 81 7064-7066
- 1997, Mashimo, T., Tashiro, S., Nishida, M., Miyahara, K. and Eto, E. "B1 type and WC type phase bulk bodies of tantalum nitride prepared by shock and static compression" *Physica B* 239 13-15
- 1997, Mashimo, T., Huang, X. and Tashiro, S. "Non-equilibrium W-Cu system alloy powder and bulk body prepared by mechanical alloying and shock compression" *J. Mater. Sci. Letts* 16 1051-1054
- 1997, Masugata, K. "Hypervelocity acceleration by a pulsed coil gun using traveling magnetic field" *IEEE Trans. Magnetics* 33 4434-4438
- 1997, Matsui, M. and Anderson, O.L. "The case for a body-centered-cubic phase for iron at inner core conditions" *Phys. Earth Planet. Inter.* 107 55-62
- 1997, McCoy, R.W. and Sun, C.T. "Fluid-structure interaction analysis of a thick-section composite cylinder subjected to underwater blast loading" *Compos. Struct.* 37 45-56
- 1997, McKay, C.P. and Borucki, W.J. "Organic synthesis in experimental impact shocks" *Science* 276 390-392
- 1997, Miao, W., Wu, Y., Zhou, H., Han, W. and Ru, F. "Low-temperature sintering of AlN ceramics with shock wave treated powder" *Mater. Letts* 30 411-414
- 1997, Mikhalyuk, A.V. and Zakharov, V.V. "Dissipation of dynamic-loading energy in quasi-elastic deformation processes in rocks" *J. Appl. Mech. Tech. Phys.* 38 312-318
- 1997, Miller, G.H. "The composition of jets", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1257-1262, publ. Canberra, Australia, Panther Publishing

- 1997, Miller, P.J. and Lindfors, A.J. "Shock loading and reactive flow modeling studies of void induced AP/Al/HTPB propellant", in "Proc. 1997 JANNAF Propulsion Systems Hazards Subcommittee Meeting. Vol. 1", ed. D.L. Becker, pp. 207-211, publ. Columbia, MD, Chemical Propulsion Information Agency
- 1997, Millett, J.C.F., Bourne, N.K. and Rosenberg, Z. "Shear stress measurements in copper, iron, and mild steel under shock loading conditions" J. Appl. Phys. 81 2579-2583
- 1997, Mineev, V.N. and Mineev, A.V. "Viscosity of metals under shock-loading conditions" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 583-585
- 1997, Molodets, A.M. and Molodets, M.A. "Temperature dependence of the Grüneisen function of chemical elements" Chem. Phys. Rep. 16 917-923
- 1997, Molodets, A.M. "Helmholtz free energy and thermodynamics of shock compressed solids" Chem. Phys. Rep. 16 1695-1707
- 1997, Molodets, A.M. and Fomichev, A.Y. "Kinetic peculiarities of spallation attended by a phase transition in a metastable material" Chem. Phys. Rep. 16 2079-2090
- 1997, Molodets, A.M. "Equation of state for solid chemical elements" Physics Doklady 42 173-175
- 1997, Mond, M., Rutkevich, I. and Toffin, E. "Stability of ionizing shock waves in monotonic gases" Phys. Rev. E 56 5968-5978
- 1997, Mori, Y. and Nagayama, K. "New inclined prism method of determining shock Hugoniot for condensed media in 1 GPa pressure region", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1239-1243, publ. Canberra, Australia, Panther Publishing
- 1997, Morris, J.P. and Monaghan, J.J. "A switch to reduce SPH viscosity" J. Comput. Phys. 136 41-50
- 1997, Morrissey, M.M. and Chouet, B.A. "Numerical investigations of geologic shock waves", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 33-39, publ. Canberra, Australia, Panther Publishing
- 1997, Mortimer, B.J.P. and Skews, B.W. "A self focusing electromagnetic liquid shock wave generator", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 785-788, publ. Canberra, Australia, Panther Publishing
- 1997, Mortimer, B.J.P. "Liquid wave focusing and the production of pulsed jets", PhD thesis, Univ. of Witwatersrand, South Africa

- 1997, Moseler, M., Nordiek, J. and Haberland, H. "Reduction of the reflected pressure wave in the molecular dynamics simulation of energetic particle-solid collisions" *Phys. Rev. B* 56 15439-15445
- 1997, Moser, D.E. "Dating the shock wave and thermal imprint of the giant Vredefort impact, South Africa" *Geology* 25 7-10
- 1997, Murata, K., Takahashi, K. and Kato, Y. "Measurement of underwater shock wave by fluoropolymer sensor", in "Proc 23rd Int. Pyrotechnics Seminar", ed. T. Yoshida and N. Kubota, pp. 548-560, publ. Chicago, IIT Research Institute
- 1997, Murphy, M.J. and Lassila, D.H. "Modeling and evaluation of HE driven shock effects in copper with the MTS model" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 655-661
- 1997, Murphy, J.R., Kitov, I.O., Rimer, N., Adushkin, V.V. and Barker, B.W. "Seismic characteristics of cavity decoupled explosions in limestone: An analysis of Soviet high explosive test data" *J. Geophys. Res.* 102 27393-27405
- 1997, Murr, L.E., Meyers, M.A., Niou, C.-S., Chen, Y.J., Pappu, S. and Kennedy, C. "Shock-induced deformation twinning in tantalum" *Acta mater.* 45 157-175
- 1997, Nabatov, S.S., Lebedev, A.V. and Nabatova, A.V. "Electrical signals in shock compression of the Sn+S system" *Combust. Explos. Shock Waves* 33 243-245
- 1997, Nabatov, S.S. "Electric phenomena in inorganic materials undergoing phase transitions and chemical conversion initiated by shock waves" *Chem. Phys. Rep.* 16 1709-1718
- 1997, Nabatov, S.S., Breusov, O.N., Lebedev, A.V., Pershin, S.V. and Tatsiy, V.F. "Synthesis of titanium disilicide induced by the shock wave effect" *Phys. Chem. Mater. Treat.* 31 399-402
- 1997, Nagayama, K. "Cold potential energy function for solids based on the theoretical models for Grüneisen parameter" *J. Phys. Chem. Solids* 58 271-279
- 1997, Nagayasu, N., Hashizume, T., Onodera, O., Takayama, K. and Hayakawa, S. "Holographic interferometric observation of underwater shock waves created by the explosion of mild detonating fuses and microgram explosives", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1367-1371, publ. Canberra, Australia, Panther Publishing
- 1997, Nahme, H. and Lach, E. "Dynamic behavior of high strength armor steels" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 373-378
- 1997, Naimark, O. "Structural transitions in ensembles of defects as mechanisms of failure and plastic instability under impact loading", in "Advances in Fracture Research", ed. B.L. Karihaloo, Y.-W. Mai, M.I. Ripley and R.O. Ritchie, pp. 2795-2806, publ. Oxford, Pergamon

- 1997, Nakahara, M. and Nagayama, K. "Shock wave generation in water by the laser-evaporated metal film deposited on the optical fibre output end surface", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 801-804, publ. Canberra, Australia, Panther Publishing
- 1997, Nakamura, M., Uchino, M. and Mashimo, T. "Measurement of shock waves in non-metals with a VISAR system" Proc. SPIE 2869 1065-1069
- 1997, Nakazawa, S., Watanabe, S., Kato, M., Iijima, Y., Kobayashi, T. and Sekine, T. "Hugoniot equation of state of basalt" Planet. Space Sci. 45 1489-1492
- 1997, Nellis, W.J. "Solids, Dynamic high-pressure effects in", in "Encyclopedia of Applied Physics. Vol. 18", ed. G.L. Trigg, pp. 541-554, publ. New York, VCH Publishers Inc.
- 1997, Nellis, W.J., Moriarty, J.A., Mitchell, A.C. and Holmes, N.C. "Equation of state of beryllium at shock pressure of 0.4-1.1 TPa" J. Appl. Phys. 82 2225-2227
- 1997, Nellis, W.J., Holmes, N.C., Mitchell, A.C., Hamilton, D.C. and Nicol, M. "Equation of state and electrical conductivity of 'synthetic Uranus', a mixture of water, ammonia, and isopropanol, at shock pressure up to 200 GPa" J. Chem. Phys. 107 9096-9100
- 1997, Nerenberg, J., Nemes, J.A., Frost, D.L. and Makris, A. "Blast wave loading of polymeric foam", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 91-96, publ. Canberra, Australia, Panther Publishing
- 1997, Nesterenko, V.F., Mayers, M.A., LaSalvia, J.C., Bondar, M.P., Chen, Y.J. and Lukyanov, Y.L. "Shear localization and recrystallization in high-strain, high-strain-rate deformation of tantalum" Mater. Sci. Engng A 229 23-41
- 1997, Nikitin, V.F. and Smirnov, N.N. "Generation of an electromagnetic field in the nonsymmetric rails and protective armature of a railgun under an increasing current pulse" J. Appl. Mech. Tech. Phys. 38 8-17
- 1997, Novikov, S.A. and Shokov, V.I. "Elimination of jets formed by the interaction of detonation waves" Combust. Explos. Shock Waves 33 482-486
- 1997, Olsen, R.E., Porter, J.L., Chandler, G.A., Fehl, D.L., Jobe, D.O., Leeper, R.J., Matzen, M.K., McGum, J.S., Noack, D.D., Ruggles, L.E., Sawyer, P., Torres, J.A., Vargas, M., Zagar, D.M., Kornblum, H.N., Orzechowski, T.J., Phillion, D.W., Suter, L.J., Thiessen, A.R. and Wallace, R.J. "Inertial confinement fusion ablator physics experiments on Saturn and Nova" Phys. Plasmas 4 1818-1824
- 1997, Olson, R.E. and MacFarlane, J.J. "Numerical simulation of radiation-driven targets for light-ion inertial confinement fusion" Laser Particle Beams 15 461-470

- 1997, Omelchenko, A.V. and Uskov, V.N. "Geometry of optimal shock-wave systems" J. Appl. Mech. Tech. Phys. 38 679-684
- 1997, Ostashev, V.E. and Fortov, V.E. "Summary of HEDRC-IVTAN railgun investigations" IEEE Trans. Magnetics 33 589-593
- 1997, Ostrovskaya, G.V. and Shedova, E.N. "Optical study of shock and acoustic waves excited at absorption of pulsed CO<sub>2</sub> laser radiation by water" Bull. Russ. Acad. Sci.: Physics 61 1047-1055
- 1997, Page, N.W., Killen, P.D. and Charleson, S.W. "Shock waves in powders: Some aspects of particle mechanics at low shock strengths", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 15-25, publ. Canberra, Australia, Panther Publishing
- 1997, Paisley, D.L. and Stahl, D.B. "One dimensional plate launch techniques and associated diagnostics" Proc. SPIE 2869 576-580
- 1997, Paisley, D.L. and Stahl, D.B. "Optical techniques for determining dynamic material properties" Proc. SPIE 2869 581-584
- 1997, Pandey, R.B. and Beckleheimer, J.L. "A lattice gas approach to shock propagation in a clay-like deformable porous medium" Physica A 243 243-261
- 1997, Pangilinan, G.I. and Gupta, Y.M. "Temperature determination in shocked condensed materials using Raman scattering" Appl. Phys. Letts 70 967-969
- 1997, Pangilinan, G.I. and Gupta, Y.M. "Use of time-resolved Raman scattering to determine temperatures in shocked carbon tetrachloride" J. Appl. Phys. 81 6662-6669
- 1997, Pawley, C.J., Gerber, K., Lehmborg, R.H., McLean, E.A., Mostovych, A.N., Obenschain, S.P., Sethian, J.D., Serlin, V., Stamper, J.A., Sullivan, C.A., Bodner, S.E., Colombant, D., Dahlburg, J.P., Schmitt, A.J., Gardner, J.H., Brown, C., Seely, J.F., Lehecka, T., Aglitsky, Y., Deniz, A.V., Chan, Y., Metzler, N. and Klapisch, K. "Measurements of laser-imprinted perturbations and Rayleigh-Taylor growth with the Nike KrF laser" Phys. Plasmas 4 1969-1977
- 1997, Pei, D.R., Guo, Y.X., Ma, D.K. and Huang, H.Z. "Evaluation on bonding strength of titanium stainless steel cladding bar (in Chinese)" Rare Metal Mater. Engng 26(5) 51-53
- 1997, Peikrishvili, A., Japaridze, L., Chikhradze, N. and Chikviladze, Z. "New experimental method for consolidation some refractory and nonmetallic powders" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 67-72
- 1997, Persad, C., Prabhu, G., White, G., Yeoh, A. and Eliezer, Z. "Characterization of hypervelocity gouge craters in rail conductors" IEEE Trans. Magnetics 33 401-405
- 1997, Peterson, E., Hörz, F. and Chang, S. "Modification of amino acids at shock pressures of 3.5 to 32 GPa" Geochim. Cosmochim. Acta 61 3937-3950

- 1997, Petushkov, V.G. and Grishaenko, A.I. "Calculation of the stress-strain state of a solid exposed to local explosive loading" *Combust. Explos. Shock Waves* 33 705-712
- 1997, Peyre, P., Fabbro, R. and Berthe, L. "Laser shock processing to improve mechanical properties of metallic materials", in "Surface Treatment: Computer Methods and Experimental Measurements", pp. 267-276, publ. Southampton, UK, Computer Mechanics Publications
- 1997, Peyre, P., Berthe, L., Fabbro, R., Schepereel, X. and Bartnicki, E. "Laser shock processing of materials: Characterization and application of the process" *Proc. SPIE* 3097 558-567
- 1997, Piechór, K. "The shock wave structure by model equations of capillarity" *Arch. Mech.* 49 767-790
- 1997, Pierazzo, E., Vickery, A.M. and Melosh, H.J. "A reevaluation of impact melt production" *Icarus* 127 408-423
- 1997, Podurets, A.M. and Kutsar, A.R. "Measurement of shock residual temperature in steel with the help of phase transitions in zirconium and titanium" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 283-287
- 1997, Pokropivny, V.V., Skorokhod, V.V. and Pokropivny, A.V. "Adhesive phenomena at the alpha-Fe interface during nanoindentation, stretch and shock" *Model. Simul. Mater. Sci. Engng* 5 579-594
- 1997, Pokropivny, V.C. and Skorokhod, S.F. "Simulation of interparticle interfaces approaching each other. 4: The adhesion-oscillation effect under inelastic shock and stretching of nanoparticles (in Russian)" *Metallofiz. Noveish. Tekhnol.* 19(7) 58-62
- 1997, Pokropivnyi, V.V., Skorokhod, V.V., Pokropivnyi, A.V. and Krasnikov, Y.G. "Simulation of impact-induced generation of hypersonic phonons and the resonance principle of activation of the compaction of nanopowders" *Tech. Phys. Letts* 23 489-492
- 1997, Ponsonnaille, J.P. and Hérel, P.L. "Soft recovery device for shocked brittle materials" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 289-294
- 1997, Prat, C., Maeno, K., Autric, M., Asanuma, H. and Du, H. "Optical diagnostics of laser-induced compression wave in composite material" *Proc. SPIE* 3092 647-650
- 1997, Pribaturin, N.A., Mikhailov, A.G., Vagner, V.A. and Bragin, V.I. "Physical principles of disintegration of the material of highly argillaceous placer deposits by shock wave" *J. Mining Sci.* 33 592-597
- 1997, Prinse, W.C., Cheng, L.K., Verbeek, H.J., Bruinsma, A.J.A. and Steen, A.C. van d. "Application of velocity interferometer to high speed phenomena" *Proc. SPIE* 2869 1042-1049

- 1997, Prinse, W., van Esveld, R., Oostdam, R., Bouma, R. and van der Steen, A. "Comparison of gap test and shock initiation by flyer impact", in "Proc. 28th Int. Ann. Conf. of the Institut für Chemische Technologie", paper 128, publ. Karlsruhe, Germany, Institut für Chemische Technologie
- 1997, Prümmer, R. "Explosive compaction in materials science" Metall 51 333-335
- 1997, Psakhie, S.G., Zolnikov, K.P. and Saraev, D.Y. "Local structural instability and formation of hot spots in materials under mechanical loading" Combust. Explos. Shock Waves 33 246-249
- 1997, Qi, L.F. and Sinnott, S.B. "Polymerization via cluster solid surface impacts: Molecular dynamics simulations" J. Phys. Chem. B 101 6883-6890
- 1997, Rabe, T., Pruemmer, R. and Waesche, R. "Explosive compaction of nanosized TiN powders" Mater. Sci. Forum 235-238 285-290
- 1997, Radic, V.N. "Welding by explosion a specific shapes of metal parts", in "Theory and Practice of Energetic Materials. 2", ed. C.-G. Feng, Y.-X. Ou and Q.-X. Zeng, pp. 608-613, publ. Beijing, China, The Publishing House of the Ordnance Industry
- 1997, Raftenberg, M.N. "Close-in blast loading of a steel disc: Sensitivity to steel strength modeling" Int. J. Impact Engng 20 651-662
- 1997, Ravindran, R. "Strong shock approximation in the new theory of shock dynamics" Quart. J. Mech. Appl. Math. 50 251-259
- 1997, Razorenov, S.V., Bogach, A.A. and Kanel, G.I. "The effect of heat treatment and polymorphic transformations on the dynamic strength of steel 40Kh" Phys. Metals Metallog. 83 100-103
- 1997, Reisman, G.E. and Brennen, C.E. "Shock wave measurements in cloud cavitation", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 989-994, publ. Canberra, Australia, Panther Publishing
- 1997, Remington, B.A., Kane, J., Drake, R.P., Glendinning, S.G., Estabrook, K., London, R., Castor, J., Wallace, R.J., Arnett, D., Liang, E., McCray, R., Rubenchik, A. and Frysell, B. "Supernova hydrodynamics experiments on the Nova laser" Phys. Plasmas 4 1994-2003
- 1997, Richman, R.H. and MaNaughton, W.P. "A metallurgical approach to improved cavitation-erosion resistance" J. Mater. Engng Perform. 6 633-641
- 1997, Roessig, K.M. "Impact initiation of tritonal and PBX-N109" Proc. SPIE 2869 764-772
- 1997, Rogers, F.J. and Young, D.A. "Validation of the activity expansion method with ultrahigh pressure shock equations of state" Phys. Rev. E 56 5876-5883

- 1997, Rogue, X., Rodriguez, G., Haas, J.-F. and Saurel, R. "Shock-induced fluidization of a dense bed of particles", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 965-970, publ. Canberra, Australia, Panther Publishing
- 1997, Romain, J.P. and Auroux, E. "Acceleration-deceleration process of thin foils confined in water and submitted to laser-driven shocks" J. Appl. Phys. 82 1367-1373
- 1997, Romain, J.P. and Auroux, E. "Acceleration of water confined metallic foils by laser generated shock waves", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1235-1238, publ. Canberra, Australia, Panther Publishing
- 1997, Rose, D.A. and Martens, C.C. "Coherent ultrafast vibrational excitation of molecules in localized shock fronts" J. Phys. Chem. A 101 4613-4620
- 1997, Rossmannith, H.P., Uenishi, K. and Kouzniak, N. "Blast wave propagation in a rock mass. 1: Monolithic medium" Fragblast 1 317-360
- 1997, Rozanov, V.B. and Rumyantseva, M.A. "Carbon equation of state for the conditions of shock compression at pressures of about 1Mbar for graphite-like and diamond-like phases" Bull Lebedev Phys. Inst. (3) 7-20
- 1997, Rubin, A.E., Scott, E.R.D. and Keil, K. "Shock metamorphism of enstatite chondrites" Geochim. Cosmochim. Acta 61 847-858
- 1997, Rubin, A.E. "The Hadley Rille enstatite chondrite and its agglutinate-like rim: Impact melting during accretion to the Moon" Meteor. Planet. Sci. 32 135-141
- 1997, Rushchitskii, Y.Y. "Nonlinear waves in solid mixtures: Review" Int. Appl. Mech. 33 1-34
- 1997, Rutkevich, I., Zaretsky, E. and Mond, M. "Thermodynamic properties and stability of shock waves in metals" J. Appl. Phys. 81 7228-7241
- 1997, Sanchez, J.C., Murr, L.E. and Staudhammer, K.P. "Effect of grain size and pressure on twinning and microbanding in oblique shock loading of copper rods" Acta mater. 45 3223-3235
- 1997, Sano, Y., Miyamoto, I. and Arathoon, P. "Unsteady plane smooth wave fronts of combined growing-attenuating type" J. Appl. Phys. 82 1100-1112
- 1997, Sano, Y. "Shock jump equations for unsteady wave fronts" J. Appl. Phys. 82 5382-5390
- 1997, Sano, T., Obinata, A., Hegishi, N., Suginami, K. and Takeishi, H. "Effects of temperature rise on dynamic powder compaction" J. Mater. Process. Technol. 67 19-23



- 1997, Sasoh, A., Hirakata, S., Maemura, J. and Takayama, K. "Fluid dynamic processes of diaphragm rupturing by a conically-nosed projectile", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1337-1342, publ. Canberra, Australia, Panther Publishing
- 1997, Schedin, S., Gren, P.O. and Wåhlin, A.O. "Shock waves in an elliptical cavity with varying height" *Shock Waves* 7 343-350
- 1997, Schepereel, X., Peyre, P., Fabbro, R., Lederer, G. and Celati, N. "Modifications of mechanical and electrochemical properties of stainless steel surfaces by laser shock processing" *Proc. SPIE* 3097 546-557
- 1997, Schepereel, X., Peyre, P., Fabbro, R., Lederer, G. and Celati, N. "Modification of electrochemical properties of stainless steel by laser shock processing", in "Surface Treatment: Computer Methods and Experimental Measurements", pp. 83-92, publ. Southampton, UK, Computer Mechanics Publications
- 1997, Schmidt, S.C., Moore, D.S. and Shaw, M.S. "Coherent anti-Stokes Raman spectroscopy of shock-compressed liquid carbon monoxide-oxygen and nitrogen-oxygen mixtures" *J. Chem. Phys.* 107 325-336
- 1997, Scott, N.H. and Hayes, M. "Constant amplitude acceleration waves in a prestrained incompressible isotropic elastic solid" *Math. Mech. Solids* 2 291-295
- 1997, Segal, D. and Bransky, I. "A method for determining crack initiation in shock impacted metals" *Meas. Sci. Technol.* 8 833-835
- 1997, Segletes, S.B. "Elastic behavior of an atomic lattice under large volumetric strains: The quasi-harmonic idealization", ARL-TR-1357, Army Research Laboratory, Aberdeen Proving Ground
- 1997, Segletes, S.B. "Regarding the frequency-based equation of state of Segletes", ARL-TR-1403, Army Research Laboratory, Aberdeen Proving Ground
- 1997, Sekine, T., Kobayashi, T. and Nameki, H. "Effects of deviatoric stress and radial strain on the shock-induced diffusionless transformation in boron nitride" *J. Appl. Phys.* 81 527-529
- 1997, Sekine, T. and Kobayashi, T. "Shock compression of 6H polytype SiC to 160 GPa" *Phys. Rev. B* 55 8034-8037
- 1997, Sekine, T. "Shock synthesis of materials", in "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Loading", ed. L. Davison, Y. Horie and M. Shahinpoor, pp. 289-308, publ. New York, Springer
- 1997, Sekine, T. "Shock wave chemical synthesis" *Eur. J. Solid State Inorg. Chem.* 34 823-833

- 1997, Sekine, T., Fatyanov, O.V., Kobayashi, T., Ootani, H. and Suzuki, I. "Shock compression of single crystal titanium carbide to 200 GPa", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1201-1204, publ. Canberra, Australia, Panther Publishing
- 1997, Seyedolali, A., Krinsley, D.H., Boggs, S., O'Hara, P.F., Dypvik, H. and Goles, G.G. "Provenance interpretation of quartz by scanning electron microscope-cathodoluminescence fabric analysis" *Geology* 25 787-790
- 1997, Sharp, T.G., Lingemann, C.M., Dupas, C. and Stöffler, D. "Natural occurrence of MgSiO<sub>3</sub>-ilmenite and evidence for MgSiO<sub>3</sub>-perovskite in a shocked L chondrite" *Science* 277 352-355
- 1997, Sharpe, G.J. "Linear stability of idealized detonations" *Proc. R. Soc. Lond. A* 453 2603-2625
- 1997, Sheffield, S.A., Gustavsen, R.L. and Anderson, M.U. "Shock loading of porous high explosives", in "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Loading", ed. L. Davison, Y. Horie and M. Shahinpoor, pp. 23-61, publ. New York, Springer
- 1997, Sheffield, S.A. "Anomalies between water Hugoniot and universal EOS", Los Alamos, New Mexico
- 1997, Sher, E.N. "Taking into account the dynamics in description of fracture of brittle media by an explosion of a cord charge" *J. Appl. Mech. Tech. Phys.* 38 484-492
- 1997, Shi, H.H., Field, J.E. and Pickles, C.S.J. "High-speed liquid impact onto solid targets with different surface geometries", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1229-1233, publ. Canberra, Australia, Panther Publishing
- 1997, Shih, C.J., Nesterenko, V.F. and Meyers, M.A. "Shear localization and comminution of granular and fragmented silicon carbide" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 577-582
- 1997, Shin, Y.S. and Chisum, J.E. "Modeling and simulation of underwater shock problems using a coupled Lagrangian-Eulerian analysis approach" *Shock Vibration* 4 1-10
- 1997, Shlenskii, O.F., Lyasnikova, N.N. and Sheryshev, M.A. "Prediction of the short-term strength of polymer materials based on equations of state" *Mech. Compos. Mater.* 33 185-188

- 1997, Shorokhov, E.V., Greenberg, B.A., Boyarshinova, T.S., Sudareva, S.V., Buzanov, V.I., Antonova, O.V. and Panova, E.V. "Shock-wave synthesis of intermetallic compounds  $Ti_3Al$ ,  $TiAl$  and analysis of heterophase structure formation" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 7-12
- 1997, Shorokhov, E.V., Greenberg, B.A., Sudareva, S.V., Avtonova, O.V., Boyarshinova, T.S. and Romanov, E.P. "An analysis of heterophase structures of  $Ti_3Al$  and  $TiAl$  intermetallics synthesized by the method of the spherical shock wave action" Mater. Sci. Engng A 239-240 688-693
- 1997, Shorokhov, Y.V., Litvinov, B.V., Buzanov, V.N., Denisenko, A.A., Yermakov, A.Y., Greenberg, B.A. and Kryukov, P.V. "Formation of metastable phases in condensed matter by shockwave loading and 100 MJ ballistic facility: Results and perspectives" Mater. Sci. Forum 235-238 279-284
- 1997, Shorokhov, E.V., Greenberg, B.A., Boyarshinova, T.S., Sudareva, S.V., Buzanova, V.I., Panova, E.V. and Romanov, E.P. "Analysis of heterophase structure of titanium aluminides prepared by the spherical shockwave method. 1: X-ray diffraction and scanning microscopy" Phys. Metals Metallog. 83 428-434
- 1997, Short, M. and Quirk, J.J. "On the nonlinear stability and detonability limit of a detonation wave for a model three-step chain-branching reaction" J. Fluid Mech. 339 89-119
- 1997, Shu, C.W. and Zeng, Y.N. "High-order essentially non-oscillatory scheme for viscoelasticity with fading memory" Quart. Appl. Math. 55 459-484
- 1997, Shvetsov, G.A., Maly, V.J., Anisimov, A.G., Stankevich, S.V., Solovov, A.V. and Teslenko, T.S. "Erosion of explosively compacted Mo/Cu electrodes in high-current arc discharges" IEEE Trans. Magnetics 33 410-412
- 1997, Siano, S. and Pini, R. "Analysis of blast waves induced by Q-switched Nd:YAG laser photodisruption of absorbing targets" Optics Commun. 135 279-284
- 1997, Sidorov, A.F. "Two-dimensional processes of the unbounded unshocked compression of a gas" J. Appl. Math. Mech. 61 787-796
- 1997, Sidorov, A.F. "Energy cumulation in two-dimensional processes of shock-free gas compression" Phys. Doklady 42 56-59
- 1997, Sierakowski, R.L. "Strain rate effects in composites" Appl. Mech. Rev. 50 741-761
- 1997, Sierakowski, R.L. and Chaturvedi, S.K. "Dynamic Loading and Characterisation of Fiber-Reinforced Composites", publ. New York, John Wiley
- 1997, Simpson, R.L., Urtiew, P.A., Ornellas, D.L., Moody, G.L., Scribner, K.J. and Hoffman, D.M. "CL-20 performance exceeds that of HMX and its sensitivity is moderate" Propell. Explos. Pyrotech. 22 249-255
- 1997, Sindhu, S. and Menon, C.S. "Higher order elastic constants and generalised Grüneisen parameters of elastic waves and low temperature thermal expansion of dysprosium" J. Phys. Chem. Solids 58 2001-2006

- 1997, Sindhu, S. and Menon, C.S. "Higher order elastic constants and generalised Grüneisen parameters of elastic waves and low temperature thermal expansion of titanium" *J. Solid State Chem.* 129 53-59
- 1997, Sindhu, S. and Menon, C.S. "Higher order elastic constants and second pressure derivatives of zirconium" *Indian J. Pure Appl. Phys.* 35 476-478
- 1997, Sinogeikin, S.V., Bass, J.D., Kavner, A. and Jeanloz, R. "Elasticity of natural majorite and ringwoodite from the Catherwood meteorite" *Geophys. Res. Letts* 24 3265-3268
- 1997, Sivakumar, K., Satya Prasad, K., Balakrishna Bhat, T. and Ramakrishnan, P. "Microstructural characteristics of shock consolidated 2124 Al alloy composites" *J. Mater. Sci.* 32 5271-5278
- 1997, Skews, B.W., Glick, G., Doyle, G.K. and Lamond, P.W. "Use of high-speed visualisation for the study of shock wave interactions with deformable porous materials" *Proc. SPIE* 2869 558-565
- 1997, Smeulders, D.M.J., van Dongen, M.E.H. and Wisse, C.J. "Acoustic slow wave transition in air-saturated porous media", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 905-910, publ. Canberra, Australia, Panther Publishing
- 1997, Smoller, J. and Temple, B. "General relativistic shock waves that extend the Oppenheimer-Snyder model" *Arch. Ration. Mech. Anal.* 138 239-277
- 1997, Sobolev, V.V., Taran, Y.N. and Gubenko, S.I. "Shock wave use for diamond synthesis" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 73-75
- 1997, Sobolev, V. and Hogset Hove, I. "Phenomenon of spiral vortex formation over the shock wave front" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 127-129
- 1997, Sorenson, D.S., Carpenter, B., King, N.S.P., Morgan, D., Obst, A.W., Platts, D., Rodriguez, P., Roberts, J., Stelts, M., Stokes, J., Taylor, N., Veaser, L., Frogget, B.C., Malone, R.M., Tunnell, T.W., Westley, D.T., Broste, W.B. and Flurer, R. "Ejecta experiments at the Pegasus pulsed power facility", in "Proc. 11th IEEE Int. Pulsed Power Conference. Vol. 2", pp. 1387-1392, publ. Piscataway, New Jersey, Institute of Electrical and Electronic Engineers
- 1997, Spesivtsev, B. and Gribin, S. "Deposit of shock wave generation mechanism into size effect" *Proc. SPIE* 2966 386-391
- 1997, Staudhammer, K.P. "Enhanced diffusion in shock activated Be-Al interfaces" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 361-366
- 1997, Stepovik, A.P. "Effect of rolling conditions on the damage of aluminum alloys and copper under subsequent dynamic loading" *Phys. Metals Metallog.* 84 639-641

- 1997, Sudareva, S.V., Antonova, O.V., Boyarshinova, T.S., Greenberg, B.A., Romanov, E.P. and Shorokhov, E.B. "Analysis of heterophase structures of titanium aluminides prepared by the spherical shock wave method. 2: Electron microscopic study of the TiAl structure" *Phys. Metals Metallog.* 83 633-639
- 1997, Sugiura, H., Ikeda, A.R., Kondo, K. and Yamadaya, T. "Densified silica glass after shock compression" *J. Appl. Phys.* 81 1651-1655
- 1997, Sugiyama, M. "Theoretical study on the formation and propagation of shock waves in crystalline solids at finite temperatures", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1251-1256, publ. Canberra, Australia, Panther Publishing
- 1997, Sun, C.-W., Zhuang, S.-M. and Wang, C.-Y. "Calculation of shock initiation of explosives impacted by the laser-driven flyer (in Chinese)" *High Power Laser Particle Beams* 9 471-476
- 1997, Sun, C., Zhao, F., Wen, S. and Li, Q. "High velocity metal flyer driven by strong detonation", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1263-1267, publ. Canberra, Australia, Panther Publishing
- 1997, Surov, V.S. "Decay of an arbitrary discontinuity in Rakhmatulin's one-velocity model of a dispersed medium" *Combust. Explos. Shock Waves* 33 121-124
- 1997, Surov, V.S. "Interaction of pressure waves with an inhomogeneous shield of foam" *High Temp.* 35 21-26
- 1997, Syono, Y. "Structure change and chemical reaction during the short time interval of shock process" *Eur. J. Solid State Inorg. Chem.* 34 835-846
- 1997, Syrunin, M.A., Fedorenko, A.G. and Ivanov, A.G. "Dynamic strength of fiber glass shells" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 517-521
- 1997, Syrunin, M.A., Fedorenko, A.G. and Ivanov, A.G. "Dynamic strength of cylindrical fiberglass shells under multiple explosive loading" *Combust. Explos. Shock Waves* 33 713-717
- 1997, Szewczak, E., Paszula, J., Leonov, A.V. and Matyja, H. "Explosive consolidation of mechanically alloyed Ti-Al alloys" *Mater. Sci. Engng A* 226-228 115-118
- 1997, Takada, H., Fujimaki, D. and Tsuboi, T. "Measurement of strong shock pressure" *Shock Vibration* 4 403-409
- 1997, Takano, Y., Hayashi, K. and Goto, T. "A computational procedure for interactions of shock waves with solid materials in liquid", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1039-1044, publ. Canberra, Australia, Panther Publishing

- 1997, Takayama, K. and Kodama, T. "Medical applications of underwater shock waves", in "Proc 23rd Int. Pyrotechnics Seminar", ed. T. Yoshida and N. Kubota, pp. 890-901, publ. Chicago, IIT Research Institute
- 1997, Tamagawa, M. and Akamatsu, T. "Mechanism of damage for two living tissue cells by plane shock wave in water: Mathematical model of two cells", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 767-772, publ. Canberra, Australia, Panther Publishing
- 1997, Tanaka, S., Hokamoto, K., Fujita, M. and Itoh, S. "Development of high temperature shock compression system for consolidating powders by the use of underwater shock-wave assembly" *Physica B* 239 16-18
- 1997, Tanaka, K. "Numerical analysis of shock compression of heterogeneous medium including air bubble", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1216-1218, publ. Canberra, Australia, Panther Publishing
- 1997, Tang, Z.P. and Gupta, Y.M. "Phase transition in cadmium sulfide single crystals shocked along the c axis" *J. Appl. Phys.* 81 7203-7212
- 1997, Tang, W. and Zhang, R. "Thermomechanical response of aluminum to pulsed electron beam" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 623-628
- 1997, Tang, Z.P., Horie, Y. and Psakhie, S.G. "Discrete meso-element modeling of shock processes in powders", in "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Loading", ed. L. Davison, Y. Horie and M. Shahinpoor, pp. 143-175, publ. New York, Springer
- 1997, Tarasov, M.D., Tolshmyakov, A.I., Kuznetsov, F.O., Petrushkin, O.N., Petushkov, V.S., Savelev, Y.A., Tarakanov, M.Y. and Tilkunov, V.A. "Detonation and shock wave front temperature measurement by two-wave pyrometer based on optical fibers" *Proc. SPIE* 2869 894-899
- 1997, Tarver, C.M., Breithaupt, R.D. and Kury, J.W. "Detonation waves in pentaerythritol tetranitrate" *J. Appl. Phys.* 81 7193-7202
- 1997, Tarver, C.M., Kury, J.W. and Breithaupt, R.D. "Detonation waves in triaminotrinitrobenzene" *J. Appl. Phys.* 82 3771-2782
- 1997, Tarzhanov, V.I., Zhugin, Y.N. and Krupnikov, K.K. "Electrical conductivity of PTFE under shock-wave loading and rarefaction" *J. Appl. Mech. Tech. Phys.* 38 826-832
- 1997, Tas, G., Franken, J., Hambir, S.A., Hare, D.E. and Dlott, D.D. "Ultrafast Raman spectroscopy of shock fronts in molecular solids" *Phys. Rev. Letts* 78 4585-4588

- 1997, Tas, G., Hambir, S.A., Franken, J., Hare, D.E. and Dlott, D.D. "Coherent Raman spectroscopy of nanoshocks" *J. Appl. Phys.* 82 1080-1087
- 1997, Tchijov, V., Keller, J., Rodríguez-Romo, S. and Nagornov, O. "Kinetics of phase transitions by shock-wave loading in ice" *J. Phys. Chem. B* 101 6215-6218
- 1997, Temporal, M., Atzeni, S., Batani, D., Koenig, M., Benuzzi, A. and Faral, B. "Numerical simulations for the design of absolute equation-of-state measurements by laser-driven shock waves" *Nuovo Cimento D* 19 1839-1851
- 1997, Thadhani, N.N., Graham, R.A., Royal, T., Dunbar, E., Anderson, M.U. and Holman, G.T. "Shock-induced chemical reactions in titanium-silicon powder mixtures of different morphologies: Time-resolved pressure measurements and materials analysis" *J. Appl. Phys.* 82 1113-1128
- 1997, Thadhani, N.N. and Aizawa, T. "Materials issues in shock-compression-induced chemical reactions in porous solids", in "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Loading", ed. L. Davison, Y. Horie and M. Shahinpoor, pp. 257-287, publ. New York, Springer
- 1997, Thakur, A.M., Thadhani, N.N. and Schwarz, R.B. "Shock-induced martensitic transformations in near-equiatomic NiTi alloys" *Metall. Mater. Trans. A* 28 1445-1455
- 1997, Thaumaturgo, C. and da Costa, A.M. "Shock-waves on polymer composites" *J. Mater. Sci. Letts* 16 1480-1482
- 1997, Thissell, W.R., Zurek, A.K., Tonks, D.L. and Hixson, R. "Quantification of damage evolution of ductile fracture in spallation of copper", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1245-1250, publ. Canberra, Australia, Panther Publishing
- 1997, Tokiwa-Yamamoto, A., Adachi, S., Kikuchi, M., Fukuoka, A., Tanabe, K. and Syono, Y. "Shock-loading effects on superconductivity of  $\text{HfBa}_2\text{CuO}_y$ " *Physica C* 291 90-96
- 1997, Tomoshige, R., Murayama, A., Matsushita, T., Imamura, K. and Chiba, A. "Underwater shock compaction of high performance TiN/TiB<sub>2</sub> composites produced by combustion synthesis", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 1219-1224, publ. Canberra, Australia, Panther Publishing
- 1997, Tompkins, M.W., Anderson, M.A., Feng, Q., Zhang, J. and Kim, K. "Study of a transaugmented two-stage small circular-bore railgun for injection of hypervelocity hydrogen pellets as a fusion reactor refueling mechanism" *IEEE Trans. Magnetics* 33 609-612
- 1997, Tong, W. "Pressure shear stress wave analysis in plate impact experiments" *Int. J. Impact Engng* 19 147-164

- 1997, Tong, W. and Ravichandran, G. "Recent developments in modeling shock compression of porous materials", in "High-Pressure Shock Compression of Solids IV: Response of Highly Porous Solids to Shock Loading", ed. L. Davison, Y. Horie and M. Shahinpoor, pp. 177-203, publ. New York, Springer
- 1997, Tonks, D.L., Thissell, W.R., Zurek, A.K. and Hixson, R. "Quantitative analysis of damage clustering and void linking for spallation modeling in tantalum" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 841-846
- 1997, Trebinski, R. and Trzcinski, W.A. "Modelling of the process of criving a cylindrical tube by the detonation products described by the JWL equation of state" J. Tech. Phys. 38 783-797
- 1997, Trécant-Viana, M., Le Neel, T., Canto-Nicolazo, C., Champion, E., Leroy, M. and Daculsi, G. "Dynamic compaction of biomaterials" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 3-6
- 1997, Trofimov, V.S. and Trofimov, O.V. "Calculations of equilibrium temperature along generalized Hugoniot" Chem. Phys. Rep. 16 1685-1693
- 1997, Trunin, R.F. "Accelerating devices to investigate substance compression in shock waves" Int. J. Impact Engng 20 801-804
- 1997, Trunin, R.F. "Comparison of the laboratory data on the compressibility of materials with the results obtained during underground nuclear explosions" High Temp. 35 888-895
- 1997, Tsintsadze, L.N. and Nishikawa, K. "Radiative relativistic shock adiabat" Phys. Plasmas 4 841-845
- 1997, Tsukinovsky, D., Zaretsky, E. and Rutkevich, I. "Material behavior of plane polyurethane-polyurethane impact with velocities from 10 to 400 m/sec" J. Phys. IV France Colloq. C3 (EURODYMAT 97) 7 335-339
- 1997, Turgutlu, A. and Akyurt, M. "Refining of a setting-up mechanism for impact welding" Arab. J. Sci. Engng 22 95-103
- 1997, Turgutlu, A. and Akyurt, M. "Spot welding of foils by water jets" Arab. J. Sci. Engng 22 143-148
- 1997, Uchino, M., Kaetsu, M. and Mashimo, T. "Shock wave measurements of solids using the long-pulsed laser" Proc. SPIE 2869 597-601
- 1997, Uchino, M. and Mashimo, T. "Construction of long-pulsed lasers and the application to shock-wave measurements of solids" Mem. Fac. Engng Kumamoto Univ. 42(2) 67-76
- 1997, Uglov, A.A., Uglov, S.A. and Kulik, A.N. "Hardening and failure of wedge-shaped specimens of uranium and its alloys with molybdenum and zirconium under explosion loading" Phys. Chem. Mater. Treat. 31 570-573
- 1997, Urlin, V.D., Mochalov, M.A. and Mikhailova, O.L. "Quasi-isentropic compression of liquid argon up to 500 GPa" J. Exper. Theor. Phys. 84 1145-1148



- 1997, Utkin, A.V. "Determination of the constants of spall-fracture kinetics of materials using experimental data" J. Appl. Mech. Tech. Phys. 38 952-960
- 1997, Uvarov, A.I., Zeldovich, V.I., Rinkevich, O.S. and Gavrilov, I.N. "Structure and mechanical properties of austenitic steels strengthened by shock-wave treatment and aging. II: Strengthening by combined treatment" Phys. Metals Metallog. 83 199-206
- 1997, Velikodnyi, V.Y. and Bityurin, V.A. "The effect of translational nonequilibrium on the kinetics of physicochemical conversions in the shock wave front" Chem. Phys. Rep. 16 1521-1531
- 1997, Velikodnyi, V.Y. and Bityurin, V.A. "The structure of a shock wave with allowance for physicochemical transformations" Phys. Doklady 42 6-9
- 1997, Vlasov, P.A., Karasevich, Y.K. and Smirnov, V.N. "Investigation of the kinetics of thermionic emission processes involving iron clusters in shock waves" High Temp. 35 198-206
- 1997, Vlodyarchik, E. and Trebinski, R. "Transformations of graphite and boron nitride in shock waves" Shock Waves 7 231-248
- 1997, von Engelhardt, W. "Suevite breccia of the Ries impact crater, Germany: Petrography, chemistry and shock metamorphism of crystalline rock clasts" Meteoritics 32 545-554
- 1997, Voskoboinikov, I.M. and Tolstov, I.K. "Luminosity of shock waves in acetonitrile" Chem. Phys. Rep. 16 911-916
- 1997, Voskoboinikov, I.M. "Optical transparency of some amines and saturated hydrocarbons estimated behind shock waves at pressures of up to 20 GPa" Chem. Phys. Rep. 16 507-514
- 1997, Vostretsov, A.G., Kulakov, G.I., Yakovitskaya, G.E., Markov, V.A., Timonenkov, Y.A. and Britkov, N.A. "Recording of electromagnetic radiation upon fracturing of rocks using a digital computer-controlled measuring system" J. Appl. Mech. Tech. Phys. 38 151-153
- 1997, Vreeland Jr., T., Montilla, K.L. and Mutz, A.H. "Shock wave initiation of the  $Ti_5Si_3$  reaction in elemental powders" J. Appl. Phys. 82 2840-2844
- 1997, Vreeland Jr., T. "Thermodynamic assessment for shock wave synthesis of transition metal silicides" Scripta mater. 38 337-340
- 1997, Vrel, D., Petitet, J.P., Huang, X.S. and Mashimo, T. "Synthesis of ruthenium oxide high pressure phases by shock compression" Physica B 239 9-12
- 1997, Walker, F.E. "Support growing for a new kinetics of shock-induced processes", in "Proc. 16th Symp. on Explosives and Pyrotechnics", paper 2, publ. Oaks, PA, Franklin Applied Physics
- 1997, Wang, Z.-P. "Void-containing nonlinear materials subject to high-rate loading" J. Appl. Phys. 81 7213-7227

- 1997, Wang, Z.-P. "Spall study in mild steel" *Trans. ASME: J. Engng Mater. Technol.* 119 374-379
- 1997, Wang, L., Feng, C. and Han, C. "Experimental study of characteristics of B-KNO<sub>3</sub> initiated by shock impact", in "Proc 23rd Int. Pyrotechnics Seminar", ed. T. Yoshida and N. Kubota, pp. 947-957, publ. Chicago, IIT Research Institute
- 1997, Wang, Y.-H. and Hu, S.-Q. "The study of the initiation capability of the heterogeneous explosive under the weakened shock pulse", in "Theory and Practice of Energetic Materials. 2", ed. C.-G. Feng, Y.-X. Ou and Q.-X. Zeng, pp. 452-455, publ. Beijing, China, The Publishing House of the Ordnance Industry
- 1997, Watt, R.G., Wilson, D.C., Chrien, R.E., Hollis, R.V., Gobby, P.L., Mason, R.J., Kopp, R.A., Lerche, R.A., Kalantar, D.H., MacGowan, B., Nelson, M.B., Phillips, T., McKenty, P.W. and Willi, O. "Foam-buffered spherical implosions at 527 nm" *Phys. Plasmas* 4 1379-1384
- 1997, Weber, S.V., Glendinning, S.G., Kalantar, D.H., Key, M.H., Remington, B.A., Rothenberg, J.E., Wolfrum, E., Verdon, C.P. and Knauer, J.P. "Simulations of laser imprint for Nova experiments and for ignition capsules" *Phys. Plasmas* 4 1978-1984
- 1997, Werdiger, M., Eliezer, S., Henis, Z., Arad, B., Horovitz, Y., Shpitalnik, R. and Maman, S. "Off-axis holography of laser-induced shock wave targets" *Appl. Phys. Letts* 71 211-212
- 1997, Williams, P.R., Williams, P.M. and Brown, S.W.J. "A technique for studying liquid jets by cavitation bubble collapse under shockwaves, near a free surface" *J. Non-Newton. Fluid Mech.* 72 101-110
- 1997, Williams, Q. and Knittle, E. "Constraints on core chemistry from the pressure dependence of the bulk modulus" *Phys. Earth Planet. Inter.* 100 49-59
- 1997, Winey, J.M. and Gupta, Y.M. "Shock-induced chemical changes in neat nitromethane: Use of time-resolved Raman spectroscopy" *J. Phys. Chem. B* 101 10733-10743
- 1997, Winey, J.M. and Gupta, Y.M. "UV-visible absorption spectroscopy to examine shock-induced decomposition in neat nitromethane" *J. Phys. Chem. A* 101 9333-9340
- 1997, Wisse, C.J., van Dongen, M.E.H. and Smeulders, D.M.J. "Shock-induced bulk and surface waves in porous media", in "Proc. 21st Int. Symp. on Shock Waves", ed. A.F.P. Houwing, R.R. Boyce, P.M. Danehy, M. Hannemann, J.J. Kurtz, T.J. McIntyre, S.J. McMahon, D.J. Mee, A. Paull, R.J. Sandemann and H. Tanno, pp. 911-916, publ. Canberra, Australia, Panther Publishing
- 1997, Woolsey, N.C. and Wark, J.S. "Modeling of time resolved X-ray diffraction from laser shocked crystals" *J. Appl. Phys.* 81 3023-3037
- 1997, Xia, C.-Q. and Jin, Z.-P. "Interfacial reaction in the tantalum-steel explosion weld composite at 1053 K" *J. Central South Univ. Technol.* 4 5-8

- 1997, Xu, K., He, H.-L., Tuan, H. and Lyu, T.-T. "Simple method of decreasing the shock temperature of solid specimens and application of this method to the phase transformation of anatase" *Combust. Explos. Shock Waves* 33 487-490
- 1997, Xue, Z.-Q., Xu, G.-G., Wang, T.-Z. and Liu, Y.-J. "Use of JWL equation of state", in "Theory and Practice of Energetic Materials. 2", ed. C.-G. Feng, Y.-X. Ou and Q.-X. Zeng, pp. 474-477, publ. Beijing, China, The Publishing House of the Ordnance Industry
- 1997, Yaakobi, B., Marshall, F.J., Bradley, D.K., Delettrez, J.A., Craxton, R.S. and Epstein, R. "Signatures of target performance and mixing in titanium-doped, laser-driven target implosions" *Phys. Plasmas* 4 3021-3030
- 1997, Yakovlev, I.V., Pai, V.V. and Kuzmin, G.E. "Investigation of shock-wave characteristics of porous multi-component materials under explosive loading by undisturbing electromagnetic method" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 323-328
- 1997, Yakusheva, T.I. and Yakushev, V.V. "Electric conductivity changes in polyvinylidene fluoride films impacted by a shock wave" *Chem. Phys. Rep.* 16 1471-1478
- 1997, Yang, Y., Gould, R.D., Horie, Y. and Iyer, K.R. "Shock-induced chemical reactions in a Ni/Al powder mixture" *Appl. Phys. Letts* 70 3365-3367
- 1997, Yee, H.C. "Explicit and implicit multidimensional compact high-resolution shock-capturing methods: Formulation" *J. Comput. Phys.* 131 216-232
- 1997, Yen, B.K., Aizawa, T., Kihara, J. and Sakakibara, N. "Reaction synthesis of refractory disilicides by mechanical alloying and shock reactive synthesis techniques" *Mater. Sci. Engng A* 239 515-521
- 1997, Yu, Q.-P., He, M.-Z. and Zhou, Y.-H. "Grain refinement in a copper alloy by shaped charge explosion" *Scripta mater.* 37 37-44
- 1997, Yuan, V.W., Asay, B.W., Boat, R., Bowman, J.D., Funk, D.J., Hixson, R., Hull, L., Laabs, G., London, R. and Morgan, G.L. "Dynamic temperature and velocity measurements using neutron resonance spectroscopy", in "Proc. Int. Conf. on Nuclear Data for Science and Technology", ed. G. Reffo, A. Ventura and C. Grandi, pp. 1723-1727, publ. Bologna, Italy, Physical Society of Italy
- 1997, Zaretsky, E., Igra, O., Zhuk, A.Z. and Lash, A.A. "Deformation modes in fiberglass under weak impact" *J. Reinf. Plast. Compos.* 16 321-331
- 1997, Zaretsky, E. "Pulse X-ray diffraction study of shock compressed NaCl" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 329-334
- 1997, Zaslanko, I.S., Petrov, Y.P. and Smirnov, V.N. "Thermal decomposition of nitromethane in shock waves: The effect of pressure and collision partners" *Kinetics Catalysis* 38 321-324

- 1997, Ze, F., Langer, S.H., Kauffman, R.L., Kilkenny, J.D., Landen, O., Ress, D., Rosen, M.D., Suter, L.J., Wallace, R.J. and Wiedwald, J.D. "A comparative study of X-ray emission from laser spots in laser-heated hohlraums relative to spots on simple disk targets" *Phys. Plasmas* 4 778-787
- 1997, Zhang, Q. and Sohn, S.-I. "Nonlinear theory of unstable fluid mixing driven by shock wave" *Phys. fluids* 9 1106-1124
- 1997, Zhang, R.Q., Wang, C.H., Zhao, G.M. and Zeng, X.W. "Dynamic yield strength and spall strength of alumina short fiber reinforced Al109 cast aluminium alloy" *J. Phys. IV France* 7(C3) 1063-1066
- 1997, Zhang, Y.K. and Zhang, S.Y. "Study of visual inspection and control methods of effectiveness of laser shock-processing" *Appl. Phys. A: Mater. Sci. Process.* 65 419-423
- 1997, Zhang, T.-J., Zhang, D.-Y. and Ding, X. "Plastic deformation characteristic of Ta-W alloy at shock loading (in Chinese)" *Rare Met. Mater. Engng* 26(2) 12-17
- 1997, Zhang, Y.-K., Zhang, S.-Y., Zhang, X.-R., Cai, L., Yang, J.-C. and Ren, N.-F. "Investigation of the surface qualities of laser shock-processed zones and the effect in fatigue life of aluminum alloy" *Surf. Coat. Technol.* 92 104-109
- 1997, Zhang, Y.K., Zhang, S.Y., Yu, C.Y., Tang, Y.X., Zhang, H., Wu, H.X., Guo, D.H., Wang, S.B., Xia, X.P., Chen, M.S. and Dai, Y.S. "Laser shock processing for fatigue and fracture resistance" *Science China E* 40 170-177
- 1997, Zhang, Y.X. and Bauer, S.H. "Modeling the decomposition of nitromethane induced by shock heating" *J. Phys. Chem. B* 101 8717-8726
- 1997, Zhong, P., Cocks, F.H., Cionta, I. and Preminger, G.M. "Controlled, forced collapse of cavitation bubbles for improved stone fragmentation during shock wave lithotripsy" *J. Urology* 158 2323-2328
- 1997, Zhou, M. and Clifton, R.J. "Dynamic ductile rupture under conditions of plane strain" *Int. J. Impact Engng* 19 189-206
- 1997, Zhou, M. and Clifton, R.J. "Dynamic constitutive and failure behavior of a two-phase tungsten composite" *Trans. ASME: J. Appl. Mech.* 64 487-494
- 1997, Zhu, W.-B., Li, Z.-Y., Zhou, G.-Q. and Liu, Z.-H. "Effects of black paint in laser induced shock waves on surface of confined targets (in Chinese)" *High Power Laser Particle Beams* 9 458-462
- 1997, Zhuk, A.Z., Borodina, T.I., Fortov, V.E., Lash, A.A. and Valiano, G.E. "Shock metamorphism of the graphite quasimonocrystal" *High Press. Res.* 15 245-254
- 1997, Zurek, A.K., Thissell, W.R., Tonks, D.L., Hixson, R. and Addessio, F. "Quantification of damage evolution for a micromechanical model of ductile fracture in spallation of tantalum" *J. Phys. IV France Colloq. C3 (EURODYMAT 97)* 7 903-908