

Shock Physics Papers 2013

- Abrate, S. 2013 "Interaction of underwater blasts and submerged structures", in "Dynamic Failure of Composite and Sandwich Structures", ed. S. Abrate, B. Castanlé and Y.D.S. Rajapakse, pp. 93-150, (Berlin, Springer)
- Abrosimov, S.A., Bazhulin, A.P., Voronov, V.V., Geraskin, A.A., Krasnyuk, I.K., Pashinin, P.P., Semenov, A.Y., Stuchebryukhov, I.A., Khishchenko, K.V. and Fortov, V.E. 2013 "Specific features of the behaviour of targets under negative pressures created by a picosecond laser pulse" *Quantum. Electron.* 43 246-251
- Acosta-Maeda, T.E., Scott, E.R.D., Sharma, S.K. and Misra, A.K. 2013 "The pressures and temperatures of meteorite impact: Evidence from micro-Raman mapping of mineral phases in the strongly shocked Taiban ordinary chondrite" *Amer. Mineralogist* 98 859-869
- Adushkin, V.V. and Oparin, V.N. 2013 "From the alternating-sign explosion response of rocks to the pendulum waves in stressed geomeia. 2" *J. Mining Sci.* 49 175-209
- Agisheva, U.O., Bolotnova, R.K., Buzina, V.A. and Galimzyanov, M.N. 2013 "Parametric analysis of the regimes of shock-wave action on gas-liquid media" *Fluid Dynamics* 48 151-162
- Akin, M.C. and Chau, R. 2013 "Observations on shock-induced chemistry of cyclohexane" *J. Chem. Phys.* 139 024502
- Al-Qananwah, A.K., Koplik, J. and Andreopoulos, Y. 2013 "Attenuation of shock waves propagating through nano-structured porous materials" *Phys. Fluids* 25 076102
- Albarede, F., Ballhaus, C., Blichert-Toft, J., Lee, C.-T., Marty, B., Moynier, F. and Yin, Q.-Z. 2013 "Asteroidal impacts and the origin of terrestrial and lunar volatiles" *Icarus* 222 44-52
- Alexander, C.S., Key, C.T. and Schumacher, S.C. 2013 "Dynamic response and modeling of a carbon fiber— epoxy composite subject to shock loading" *J. Appl. Phys.* 114 223515
- Algozo, A.K., Richardson, G. and Woods, P. 2013 "Subgrid numerical techniques for first principles physics-based tools" *Procedia Engng* 58 433-444
- Amadou, N., Brambrink, E., Benuzzi-Mounaix, A., Huser, G., Guyot, F., Mazevet, S., Morard, G., de Resseguier, T., Vinci, T., Myanishi, K., Ozaki, N., Kodama, R., Boehly, T., Henry, O., Raffestin, D. and Koenig, M. 2013 "Direct laser-driven ramp compression studies of iron: A first step toward the reproduction of planetary core conditions" *High Energy Density Phys.* 9 243-246

- Amigo, N., Loyola, C., Davis, S. and Gutiérrez, C. 2013 "Hypervelocity impact of copper nano-projectiles on copper" *Comput. Mater. Sci.* 68 245-254
- An, Q., Goddard, W.A., Zybin, S.V., Jaramillo-Botero, A. and Zhou, T.T. 2013 "Highly shocked PBXs at a nonplanar interface: Hot spot formation leading to detonation" *J. Phys. Chem. C* 117 26551-26561
- Ananin, A.V., Koldunov, S.A., Garanin, V.V., Sosikov, V.A. and Torunov, S.I. 2013 "Shock wave sensitivity of nitromethane mixtures with nonexplosive liquids" *Int. J. Energ. Mater. Chem. Propuls.* 12 87-94
- Anderson Jr., C.E. and Holmquist, T.J. 2013 "Application of a computational glass model to compute propagation of failure from ballistic impact of borosilicate glass targets" *Int. J. Impact Engng* 56 2-11
- Anderson Jr., C.E. and Holmquist, T.J. 2013 "Computational modeling of failure for hypervelocity impacts into glass targets" *Procedia Engng* 58 194-203
- Ando, K., Colonius, T. and Brennen, C.E. 2013 "Shock propagation in polydisperse bubbly liquids", in "Bubble Dynamics and Shock Waves", ed. C.F. Delale, pp. 141-176, (Berlin, Springer)
- Andreopoulos, Y. 2013 "Shock waves impacting composite material plates: The mutual interaction" *JOM* 65 185-202
- Andrew, J.E. 2013 "A survey of laser plasma target emissions and contamination effects" *Proc. SPIE* 8885 88850Q
- Antonov, O., Efimov, S., Yanuka, D., Kozlov, M., Gurovich, V.T. and Krasik, Y.E. 2013 "Generation of converging strong shock wave formed by microsecond timescale underwater electrical explosion of spherical wire array " *Appl. Phys. Letts* 102 124104
- Armstrong, M.R., Zaug, J.M., Goldman, N., Kuo, I.F.W., Crowhurst, J.C., Howard, W.M., Carter, J.A., Kashgarian, M., Chessner, J.M., Barbee, T.W. and Bastea, S. 2013 "Ultrafast shock initiation of exothermic chemistry in hydrogen peroxide" *J. Phys. Chem. A* 117 13051-13058
- Arnold, W. and Rottenkolber, E. 2013 "Shock-wave loading and sensitivity testing of high explosives for high-speed penetrators", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 733-744, (Lancaster, PA, Destech Publications)
- Arnold, W., Krawietz, T.R., Jordan, J.L., Sunny, G. and Koch, M. 2013 "Damage investigations and sensitivity tests of shock wave loaded PBXs", in "Proc. 44th Int. Annual Conf. of the ICT", ed. pp. paper 10, (Pfintzal, Germany, Institut für Chemische Technologie)
- Arora, V., Bagchi, S., Gupta, M., Chakera, J.A., Naik, P.A., Chaddah, P. and Gupta, P.D. 2013 "Study of strain propagation in laser irradiated silicon crystal by time-resolved diffraction of K- α X-ray probe of different photon energies" *J. Appl. Phys.* 114 023302

- Ashitkov, S.I., Komarov, P.S., Agranat, M.B., Kanel, G.I. and Fortov, V.E. 2013 "Achievement of ultimate values of the bulk and shear strengths of iron irradiated by femtosecond laser pulses" JETP Letts 98 384-388
- Asphaug, E. 2013 "Planetary science: Go and catch a falling star" Nature Geoscience 6 422-423
- Atzeni, S., Marocchino, A., Schiavi, A. and Schurtz, G. 2013 "Energy and wavelength scaling of shock-ignited inertial fusion targets" New J. Phys. 15 045004
- Aydelotte, B.B. and Thadhani, N.N. 2013 "Mechanistic aspects of impact initiated reactions in explosively consolidated metal plus aluminum powder mixtures" Mater. Sci. Engng A 570 164-171
- Bagalinov, A.B., Serdaliev, E.T., Iskakov, E.E. and Amanzholov, D.B. 2013 "Shock blasting of ore stockpiles by low-density explosive charges" J. Mining Sci. 49 926-931
- Baidakova, M.V., Kukushkina, Y.A., Sitnikova, A.A., Yagovkina, M.A., Kirilenko, D.A., Sokolov, V.V., Shestakov, M.S., Vul, A.Y., Zousman, B. and Levinson, O. 2013 "Structure of nanodiamonds prepared by laser synthesis" Phys. Solid State 55 1747-1753
- Bailey, A.M., Boruah, S., Christopher, J.J., Bennett, B.C., Shafieian, M., Cronin, D.S. and Salzar, R.S. 2013 "Injury potential of shock-induced compressive waves on human bone", in "Dynamic Behavior of Materials", ed. V. Chalivendra, B. Song and D. Casem, pp. 149-156, (Berlin, Springer)
- Barsoum, R.G.S. 2013 "Elastomeric polymers for shockwave mitigation and extreme loading conditions", in "Challenges in Mechanics of Time-Dependent Materials and Processes in Conventional and Multifunctional Materials", ed. B. Antoun, H.J. Qi, R. Hall, G.P. Tandon, H. Lu and C. Lu, pp. 1-5, (New York, Springer)
- Barton, N.R. and Rhee, M. 2013 "A multiscale strength model for tantalum over an extended range of strain rates" J. Appl. Phys. 114 123507
- Barton, P.T., Deiterding, R., Meiron, D. and Pullin, D. 2013 "Eulerian adaptive finite-difference method for high-velocity impact and penetration problems" J. Comput. Phys. 240 76-99
- Batani, D., Paleari, S., Vinci, T., Benocci, R., Shigemori, K., Hironaka, Y., Kadono, T. and Shiroshita, A. 2013 "Advances in the investigation of shock-induced reflectivity of porous carbon" Laser Particle Beams 31 457-464
- Batsanov, S.S. 2013 "Limiting shock compression of metals of ultra-close packing" Combust. Explos. Shock Waves 49 490-494
- Batsanov, S.S. and Batsanov, A.S. 2013 "Shock synthesis of single crystals" Propell. Explos. Pyrotech. 38 169-171
- Bazant, Z.P. and Caner, F.C. 2013 "Comminution of solids caused by kinetic energy of high shear strain rate, with implications for impact, shock, and shale fracturing" Proc. Nat. Acad. Sci. USA 110 19291-19294

- Baziotis, I.P., Liu, Y., DeCarli, P.S., Melosh, H.J., McSween, H.Y., Bodnar, R.J. and Taylor, L.A. 2013 "The Tissint Martian meteorite as evidence for the largest impact excavation" *Nature Commun.* 4 doi: 10.1038/ncomms2414
- Beaudet, T.D., Mattson, W.D. and Rice, B.M. 2013 "New form of polymeric nitrogen from dynamic shock simulation" *J. Chem. Phys.* 138 054503
- Becker, A., Nettelmann, N., Holst, B. and Redmer, R. 2013 "Isentropic compression of hydrogen: Probing conditions deep in planetary interiors" *Phys. Rev. B* 88 045122
- Bedair, O. 2013 "Recent developments in analysis of deteriorating stiffened panels subjected to static and explosive forces" *Multidiscipline Model. Mater. Struct.* 9 62-80
- Belashchenko, D.K. 2013 "Computer simulation of copper and silver under shock compression conditions" *Inorg. Mater.* 49 450-456
- Belashchenko, D.K. 2013 "Application of the embedded atom model to liquid mercury" *High Temp.* 51 40-48
- Belashchenko, D.K. 2013 "Impact compression of alkali metals: Computer-aided simulation" *High Temp.* 51 626-639
- Belikova, A.F., Buravova, S.N. and Petrov, E.V. 2013 "Strain localization under dynamic loading" *Tech. Phys.* 58 1152-1158
- Ben-Dor, G., Dubinsky, A. and Elperin, T. 2013 "Analytical engineering models of high speed normal impact by hard projectiles on metal shields" *Cent. Eur. J. Engng* 3 349-373
- Bertarelli, A., Berthome, E., Boccone, V., Carra, F., Cerutti, F., Charitonidis, N., Charrondiere, C., Dallochio, A., Carmona, P.F., Francon, P., Gentini, L., Guinchard, M., Mariani, N., Masi, A., dos Santos, S.D.M., Moyret, P., Peroni, L., Redaelli, S. and Scapin, M. 2013 "An experiment to test advanced materials impacted by intense proton pulses at CERN HiRadMat facility" *Nuclear Instrum. Meth. Phys. Res. B* 308 88-99
- Bethkenhagen, M., French, M. and Redmer, R. 2013 "Equation of state and phase diagram of ammonia at high pressures from ab initio simulations" *J. Chem. Phys.* 138 234504
- Bhatt, N.K., Patel, A.B., Vahora, A.Y., Vyas, P.R., Thakore, B.Y. and Jani, A.R. 2013 "Structural and vibrational properties of FeO using first principles" *Adv. Mater. Res.* 665 49-52
- Bilyk, S., Grinfeld, M. and Segletes, S. 2013 "Operational equations of state for hydrocode: Computer implementation" *Procedia Engng* 58 424-432
- Bilyk, N.A., Mikhailov, A.L., Khanin, V.P. and Mikhailov, A.S. 2013 "Effect of the shear area on the probability of an explosion of high explosives under shock-induced shear" *Combust. Explos. Shock Waves* 49 348-352

- Bina, M.H., Dehghani, F. and Salimi, M. 2013 "Effect of heat treatment on bonding interface in explosive welded copper/stainless steel" *Mater. Design* 45 504-509
- Bityurin, V.A., Dobrovolskaya, A.C. and Klyuchnikov, N.I. 2013 "The shock wave structure in a dense electronegative gas containing conductive particles" *High Temp.* 51 575-582
- Blanc, T. and Pastor, M. 2013 "A stabilized smoothed particle hydrodynamics, Taylor-Galerkin algorithm for soil dynamics problems" *Int. J. Numer. Anal. Meth. Geomech.* 37 1-30
- Bläß, U.W. 2013 "Shock-induced formation mechanism of seifertite in shergottites" *Phys. Chem. Minerals* 40 425-437
- Bolme, C.A. and Ramos, K.J. 2013 "Line-imaging velocimetry for observing spatially heterogeneous mechanical and chemical responses in PBXs during impact" *Rev. Sci. Instrum.* 84 083903
- Bordzilovskii, S.A., Karakhanov, S.M. and Khishchenko, K.V. 2013 "Measurement of the brightness temperature of shock-compressed epoxy resin" *Combust. Explos. Shock Waves* 49 121-124
- Bordzilovskii, S.A., Karakhanov, S.M., Turkin, A.I., Yunoshev, A.S. and Titov, V.M. 2013 "Phase transition in pyroxenite under shock loading" *Combust. Explos. Shock Waves* 49 367-373
- Borg, J.P. and Vogler, T.J. 2013 "Rapid compaction of granular material: Characterizing two- and three-dimensional mesoscale simulations" *Shock Waves* 23 153-176
- Borg, J.P., Maines, W.R., Nixon, M. and Chhabildas, L. 2013 "Equation of state and isentropic release of aluminum foam and fluoropolymer composites" *Procedia Engng* 58 299-308
- Borisenok, V.A., Bragynetz, V.A., Simakov, V.G., Sirotkina, A.G. and Mikhailov, A.S. 2013 "Influence of pulsed electric fields in the shock and shock wave sensitivity of some condensed explosives", in "Proc. 16th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán, J. Selesovsky and R. Matyás, pp. 67-79, (Pardubice, Czech Republic, University of Pardubice)
- Boudet, J.F. and Kellay, H. 2013 "Unstable blast shocks in dilute granular flows" *Phys. Rev. E* 87 052202
- Bourne, N. 2013 "Materials in Mechanical Extremes: Fundamentals and Applications" (Cambridge, Cambridge University Press)
- Bowling, T.J., Johnson, B.C., Melosh, H.J., Ivanov, B.A., O'Brien, D.P., Gaskell, R. and Marchi, S. 2013 "Antipodal terrains created by the Rheasilvia basin forming impact on asteroid 4 Vesta" *J. Geophys. Res.: Planets* 118 1821-1834
- Boyce, B.L., Clark, B.G., Lu, P., Carroll, J.D. and Weinberger, C.R. 2013 "The morphology of tensile failure in tantalum" *Metall. Mater. Trans. A* 44 4567-4580

- Braithwaite, C.H., Church, P.D., Claridge, R., Ottley, P.R. and Jardine, A.P. 2013 "A novel energetic material, from theory to practice", in "Proc. 16th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachman, J. Selesovsky and R. Matyas, pp. 89-103, (Pardubice, Czech Republic, University of Pardubice)
- Braithwaite, C.H., Perry, J.I., Taylor, N.E. and Jardine, A.P. 2013 "Behaviour of sand during release from a shocked state" *Appl. Phys. Letts* 103 154103
- Brandon, V., Canaud, B., Primout, M., Laffite, S. and Temporal, M. 2013 "Marginally igniting direct-drive target designs for the laser Megajoule" *Laser Particle Beams* 31 141-148
- Branicio, P.S., Nakano, A., Kalia, R.K. and Vashishta, P. 2013 "Shock loading on AlN ceramics: A large scale molecular dynamics study" *Int. J. Plast.* 51 122-131
- Brown, J.L., Alexander, C.S., Asay, J.R., Vogler, T.J. and Ding, J.L. 2013 "Extracting strength from high pressure ramp-release experiments " *J. Appl. Phys.* 114 223518
- Budovskikh, E.A., Gromov, V.E. and Romanov, D.A. 2013 "The formation mechanism providing high-adhesion properties of an electric-explosive coating on a metal basis" *Dokl. Physics* 58 82-84
- Buhl, E., Poelchau, M.H., Dresen, G. and Kenkmann, T. 2013 "Deformation of dry and wet sandstone targets during hypervelocity impact experiments, as revealed from the MEMIN Program" *Meteor. Planet. Sci.* 48 71-86
- Buhl, E., Kowitz, A., Elbeshausen, D., Sommer, F., Dresen, G., Poelchau, M.H., Reimold, W.U., Schmitt, R.T. and Kenkmann, T. 2013 "Particle size distribution and strain rate attenuation in hypervelocity impact and shock recovery experiments" *J. Struct. Geol.* 56 20-33
- Cai, Y., Zhao, F.P., An, Q., Wu, H.A., Goddard, W.A. and Luo, S.N. 2013 "Shock response of single crystal and nanocrystalline PETN: Implications to hotspot formation in energetic materials" *J. Chem. Phys.* 139 164704
- Calle M, J.C. and Rodriguez, J.P.C. 2013 "Shock behavior of functionally graded porous panels: Computational approach", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 900-909, (Lancaster, PA, Destech Publications)
- Campidelli, M., Razaqpur, A.G. and Foo, S. 2013 "Reliability-based load factors for blast design" *Canad. J. Civil Engng* 40 461-474
- Caresta, M., Langley, R.S. and Woodhouse, J. 2013 "Transient response of structures with uncertain properties to nonlinear shock loading" *J. Sound Vibration* 332 5821-5836
- Casem, D.T. and Hsieh, A.J. 2013 "Plate impact measurements of a select model poly(urethane urea) elastomer" Rep. no. ARL-TR-6482 (Aberdeen, MD, Army Reseach Laboratory)
- Causon, D.M. and Mingham, C.G. 2013 "Finite volume simulation of unsteady shock-cavitation in compressible water" *Int. J. Numer. Meth. Fluids* 72 632-649

- Cerreta, E.K., Escobedo, J.P., Rigg, P.A., Trujillo, C.P., Brown, D.W., Sisneros, T.A., Clausen, B., Lopez, M.F., Lookman, T., Bronkhorst, C.A. and Addressio, F.L. 2013 "The influence of phase and substructural evolution during dynamic loading on subsequent mechanical properties of zirconium" *Acta mater.* 61 7712-7719
- Chakravarthy, S., Gonthier, K.A. and Panchadhara, R. 2013 "Analysis of mesoscale heating by piston supported waves in granular metalized explosive" *Model. Simul. Mater. Sci. Engng* 21 055016
- Chaudhri, M.M. 2013 "Comment on 'The origins of pressure-induced phase transitions during the surface texturing of silicon using femtosecond laser irradiation'" *J. Appl. Phys.* 113 126102
- Chen, S.Y., Wu, Z.W., Liu, K.X., Li, X.J., Luo, N. and Lu, G.X. 2013 "Atomic diffusion behavior in copper-aluminum explosive welding process" *J. Appl. Phys.* 113 044901
- Chen, G., Wang, D., Liu, J., Meng, J., Liu, S. and Yang, Q. 2013 "A novel photonic Doppler velocimetry for transverse velocity measurement" *Rev. Sci. Instrum.* 84 013101
- Chen, X.D., Wu, S.X. and Zhou, J.K. 2013 "Experimental and modeling study of dynamic mechanical properties of cement paste, mortar and concrete" *Construct. Build. Mater.* 47 419-430
- Chen, H., Tang, W.H., Ran, X.W., Zhang, M.J. and Xu, Z.H. 2013 "Measurement of the Mie-Grüneisen equation of state for polyimide" *Chinese Sci. Bull.* 58 585-588
- Chen, W.D., Zhang, F. and Yang, W.M. 2013 "Simulation of spall fracture based on material point method" *Key Engng Mater.* 525 97-100
- Chen, K.M., Zheng, C.C., Yuan, Z.Z., Lu, J.Z., Ren, X.D. and Luo, X.M. 2013 "Deformation microstructures of austenitic stainless steel 2Cr13Mn9Ni4 under ultrafast strain rate by laser shock processing" *Mater. Sci. Engng A* 587 244-249
- Chen, J.Y., Liu, C.C., Dong, H.W., Shi, D.S., Zhang, Z.X. and Wang, D.J. 2013 "Dynamic properties of concrete materials under shock loading" *Construct. Build. Mater.* 39 119-123
- Chen, X.F. and Zhang, C.P. 2013 "Shock-induced chemical reaction between iron and enstatite" *Adv. Mater. Res.* 703 41-44
- Chen, Y.T., Ren, G.W., Tang, T.G. and Hu, H.B. 2013 "Experimental diagnostic of melting fragments under explosive loading (in Chinese)" *Acta Phys. Sinica* 62 116202
- Chen, L., Wang, C., Feng, C.-G., Lu, F., Lu, J.-Y., Wang, X.-F. and Guo, X. 2013 "Study on random initiation phenomenon for sympathetic detonation of explosive" *Defence Technol.* 9 224-228
- Cheng, B., Kwan, T.J.T., Wang, Y.-M. and Batha, S.H. 2013 "Scaling laws for ignition at the National Ignition Facility from first principles" *Phys. Rev. E* 88 041101

- Chiu, P.H., Olney, K.L., Higgins, A., Serge, M., Benson, D.J. and Nesterenko, V.F. 2013 "The mechanism of instability and localized reaction in the explosively driven collapse of thick walled Ni-Al laminate cylinders" *Appl. Phys. Letts* 102 241912
- Choi, Y.S., Cho, K.H. and Seo, C.E. 2013 "Resistivity of $\text{Pb}(\text{Zr}_{0.5}\text{Ti}_{0.48})\text{O}_3$ ferroelectric ceramics subjected to dynamic impact loading" *J. Korean Phys. Soc.* 63 2345-2349
- Choudhuri, D. and Gupta, Y.M. 2013 "Shock compression of aluminum single crystals to 70 GPa: Role of crystalline anisotropy" *J. Appl. Phys.* 114 153504
- Church, P., Claridge, R., Ottley, P., Lewtas, I., Harrison, N., Gould, P., Braithwaite, C. and Williamson, D. 2013 "Investigation of a nickel-aluminium reactive shaped charge liner" *Trans. ASME: J. Appl. Mech.* 80 031701
- Clayton, J.D. 2013 "Nonlinear Eulerian thermoelasticity for anisotropic crystals" *J. Mech. Phys. Solids* 61 1983-2014
- Clayton, J.D. 2013 "Mesoscale modeling of dynamic compression of boron carbide polycrystals" *Mech. Res. Commun.* 49 57-64
- Cohen, T. and Durban, D. 2013 "Hypervelocity cavity expansion in porous elastoplastic solids" *Trans. ASME: J. Appl. Mech.* 80 011017
- Colombo, M., Martinelli, P. and di Prisco, M. 2013 "Layered high-performance concrete plates interacting with granular soil under blast loads: An experimental investigation" *Eur. J. Environmental Civil Engng* 17 1002-1025
- Colorado, H.A., Navarro, A., Prikhodko, S.V., Yang, J.M., Ghoniem, N. and Gupta, V. 2013 "Ultra-high strain-rate bending of copper nanopillars with laser-generated shock waves" *J. Appl. Phys.* 114 233510
- Colvin, J. and Larsen, J. 2013 "Extreme Physics: Properties and Behavior of Matter at Extreme Conditions" (Cambridge, Cambridge University Press)
- Comley, A.J., Maddox, B.R., Rudd, R.E., Prsbrey, S.T., Hawreliak, J.A., Orlikowski, D.A., Peterson, S.C., Satcher, J.H., Elsholz, A.J., Park, H.S., Remington, B.A., Bazin, N., Foster, J.M., Graham, P., Park, N., Rosen, P.A., Rothman, S.R., Higginbotham, A., Suggit, M. and Wark, J.S. 2013 "Strength of shock-loaded single crystal tantalum [100] determined using in situ broadband X-ray Laue diffraction" *Phys. Rev. Letts* 110 115501
- Cook, A.W. 2013 "Effects of heat conduction on artificial viscosity methods for shock capturing" *J. Comput. Phys.* 255 48-52
- Cranch, G.A., Lunsford, R., Grün, J., Weaver, J., Compton, S., May, M. and Kostinski, N. 2013 "Characterization of laser-driven shock waves in solids using a fiber optic pressure probe" *Appl. Optics* 52 7791-7796
- Dai, Z.R., Crowhurst, J.C., Grant, C.D., Knight, K.B., Tang, V., Chernov, A.A., Cook, E.G., Lotscher, J.P. and Hutcheon, I.D. 2013 "Exploring high temperature phenomena related to post-detonation using an electric arc" *J. Appl. Phys.* 114 204901

- Daly, D.T., Kerby, J.D. and Austin, D.E. 2013 "Electrospray charging of minerals and ices for hypervelocity impact research" *Planet. Space Sci.* 75 182-187
- Davie, C.J. and Evans, R.G. 2013 "Symmetry of spherically converging shock waves through reflection, relating to the shock ignition fusion energy scheme" *Phys. Rev. Letts* 110 185002
- Davison, T.M., O'Brien, D.P., Ciesla, F.J. and Collins, G.S. 2013 "The early impact histories of meteorite parent bodies" *Meteor. Planet. Sci.* 48 1894-1918
- Davydov, M.N. and Kedrinskii, V.K. 2013 "Smooth particle hydrodynamics method for modeling cavitation-induced fracture of a fluid under shock-wave loading" *J. Appl. Mech. Tech. Phys.* 54 877-884
- de Meijer, R.J., Anisichkin, V.F. and van Westernen, W. 2013 "Forming the Moon from terrestrial silicate-rich material" *Chem. Geol.* 345 40-49
- Delale, C.F., Ed. 2013 "Bubble Dynamics and Shock Waves" (Berlin, Springer)
- Demaske, B.J., Zhakhovsky, V.V., Inogamov, N.A. and Oleynik, I.I. 2013 "Ultrashort shock waves in nickel induced by femtosecond laser pulses" *Phys. Rev. B* 87 054109
- Deng, C., Liu, M. and Molian, P. 2013 "Nanodiamond powder compaction via laser shockwaves: Experiments and finite element analysis" *Powder Technol.* 239 36-46
- Denny, M. 2013 "Gas gun dynamics" *Eur. J. Phys.* 34 1327-1336
- Ding, Y.-Q., Tang, W.-H., Zhang, R.-Q. and Ran, X.-W. 2013 "Determination and validation of parameters for Riedel-Hiermaier-Thoma concrete model" *Defence Sci. J.* 63 524-530
- Dobromyslov, A.V., Taluts, N.I., Kozlov, E.A., Petrovtsev, A.V. and Yusupov, D.T. 2013 "Deformation behavior of copper upon loading by spherically converging shock waves: Low-intensity loading conditions" *Phys. Metals Metallog.* 114 358-366
- Dobromyslov, A., Taluts, N. and Kozlov, E. 2013 "Phase and structure state of titanium loaded by spherically converging shock waves" *High Press. Res.* 33 124-128
- Dobromyslov, A.V., Taluts, N.I., Uksusnikov, A.N. and Kozlov, E.A. 2013 "Effect of spherically converging shock waves on phase and structural state of quenched Al-4 wt % Cu alloy" *Phys. Metals Metallog.* 114 968-976
- Dodulad, O.I. and Tcheremissine, F.G. 2013 "Computation of a shock wave structure in monatomic gas with accuracy control" *Comput. Math. Math. Phys.* 53 827-844
- Dolan, D.H., Lemke, R.W., McBride, R.D., Martin, M.R., Harding, E., Dalton, D.G., Blue, D.E. and Walker, S.S. 2013 "Tracking an imploding cylinder with photonic Doppler velocimetry" *Rev. Sci. Instrum.* 84 055102
- Dolan, D.H., Ao, T. and Seagle, C.T. 2013 "Reflectance thermometry in dynamic compression experiments" *AIP Conf. Proc.* 1552 767-770

- Dolmatov, V.Y., Vehanen, A., Myllymäki, V., Rudometkin, K.A., Panova, A.N., Korolev, K.M. and Shpadkovskaya, T.A. 2013 "Deep purification of detonation nanodiamond material" *J. Superhard Mater.* 35 408-414
- Dolmatov, V.Y., Myllymäki, V. and Vehanen, A. 2013 "A possible mechanism of nanodiamond formation during detonation synthesis" *J. Superhard Mater.* 35 143-150
- Dolmatov, V.Y., Yurev, G.S., Myllymäki, V. and Korolev, K.M. 2013 "Why detonation nanodiamonds are small" *J. Superhard Mater.* 35 77-82
- Domke, M., Sotrop, J., Rapp, S., Borger, M., Felsl, D. and Huber, H.P. 2013 "Transient temperature modeling and shock wave observation in confined laser ablation of thin molybdenum films" *Proc. SPIE* 8611 86111B
- Dreger, Z.A. and Gupta, Y.M. 2013 "High pressure-high temperature polymorphism and decomposition of PETN" *J. Phys. Chem. A* 117 5306-5313
- Drennov, O.B. 2013 "Dynamic loading of solids with a negative slope of the melting curve" *Tech. Phys.* 58 1284-1287
- Duan, Y.Y., Guo, Y.H. and Qiu, A.C. 2013 "Shock wave and particle velocities of typical metals on shock adiabats" *Plasma Sci. Technol.* 15 727-731
- Dudarev, E.F., Markov, A.B., Mayer, A.E., Bakach, G.P., Tabachenko, A.N., Kashin, O.A., Pochivalova, G.P., Skosyrskii, A.B., Kitsanov, S.A., Zhorovkov, M.F. and Yakovlev, E.V. 2013 "Spall fracture patterns for the heterophase Cu-Al-Ni alloy in ultrafine- and coarse-grained states exposed to a nanosecond relativistic high-current electron beam" *Russ. Phys. J.* 55 1451-1457
- Durand, O. and Soulard, L. 2013 "Power law and exponential ejecta size distributions from the dynamic fragmentation of shock-loaded copper and tin metals under melt conditions " *J. Appl. Phys.* 114 194902
- Durr, N., Sauer, M., Güldemesiter, N., Wünnemann, K. and Hiermaier, S. 2013 "Mesoscale investigation of shock wave effects in dry and water-saturated sandstone" *Procedia Engng* 58 289-298
- Ebert, M., Hecht, L., Deutsch, A. and Kenkmann, T. 2013 "Chemical modification of projectile residues and target material in a MEMIN cratering experiment" *Meteor. Planet. Sci.* 48 134-149
- Ebrahimi, H. and Vaziri, A. 2013 "Metallic sandwich panels subjected to multiple intense shocks" *Int. J. Solids Structures* 50 1164-1176
- Ecault, R., Berthe, L., Boustie, M., Touchard, F., Lescoute, E., Sollier, A., Mercier, P. and Benier, J. 2013 "Observation of the shock wave propagation induced by a high-power laser irradiation into an epoxy material" *J. Phys. D: Appl. Phys.* 46 235501
- Ecault, R., Boustie, M., Touchard, F., Pons, F., Berthe, L., Chocinski-Arnault, L., Ehrhart, N. and Bockenheimer, C. 2013 "A study of composite material damage induced by laser shock waves" *Composites A* 53 54-64

- El Goresy, A., Gillet, P., Miyahara, M., Ohtani, E., Ozawa, S., Beck, P. and Montagnac, G. 2013 "Shock-induced deformation of shergottites: Shock-pressures and perturbations of magmatic ages on Mars" *Geochim. Cosmochim. Acta* 101 233-262
- Elek, P., Jaramaz, S. and mickovic, D. 2013 "Modeling of explosion dynamics of explosively driven metal cylinders", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 783-794, (Lancaster, PA, Destech Publications)
- Emelianov, A.V., Eremin, A.V. and Kulikov, S.V. 2013 "On the origin of nonequilibrium radiation from iodine molecules at the shock wave front" *Tech. Phys.* 58 647-652
- Erickson, T.M., Cavosie, A.J., Moser, D.E., Barker, I.R. and Radovan, H.A. 2013 "Correlating planar microstructures in shocked zircon from the Vredefort Dome at multiple scales: Crystallographic modeling, external and internal imaging, and EBSD structural analysis" *Amer. Mineralogist* 98 53-65
- Erzar, B., Buzaud, E. and Chanal, P.-Y. 2013 "Dynamic tensile fracture of mortar at ultra-high strain rates" *J. Appl. Phys.* 114 244901
- Escobedo, J.P., Brown, E.N., Trujillo, C.P., Cerreta, E.K. and Gray III, G.T. 2013 "The effect of shock-wave profile on dynamic brittle failure" *J. Appl. Phys.* 113 103506
- Escobedo, J.P., Trujillo, C.P., Dennis-Koller, D., Cerreta, E.K. and Bronkhorst, C.A. 2013 "Influence of loading kinetics on the shock response of polycrystalline copper", in "Dynamic Behavior of Materials", ed. V. Chalivendra, B. Song and D. Casem, pp. 345-352, (Berlin, Springer)
- Escobedo, J.P., Cerreta, E.K., Dennis-Koller, D., Trujillo, C.P. and Bronkhorst, C.A. 2013 "Influence of boundary structure and near neighbor crystallographic orientation on the dynamic damage evolution during shock loading" *Philos. Mag.* 93 833-846
- Faccio, D., Rubino, E., Couairon, A., Belgiorno, F., Dalla Piazza, F. and Cacciatori, S.L. 2013 "Laser pulse propagation in relativistically time-dependent media" *Proc. SPIE* 8623 862319
- Faciu, C. and Molinari, A. 2013 "The structure of shock and interphase layers for a heat conducting Maxwellian rate-type approach to solid-solid phase transitions" *Acta Mech.* 224 1917-1941
- Fan, Y.J., Yin, K.T. and Zhu, Y.M. 2013 "Research on response of copper to micro-laser shock peening under 2D pressure model" *Key Engng Mater.* 568 37-43
- Fan, H.J. and Smeulders, D.M.J. 2013 "Shock-induced wave propagation over porous and fractured borehole zones: Theory and experiments" *J. Acoust. Soc. Amer.* 134 4792-4800
- Fang, Y., Meng, C., Zhu, W., He, D., Du, G. and Jiang, J. 2013 "Shock-induced phase transitions of α -Ce₃Al " *J. Appl. Phys.* 113 103507

- Fang, Q. and Zhang, J.H. 2013 "Three-dimensional modelling of steel fiber reinforced concrete material under intense dynamic loading" *Construct. Build. Mater.* 44 118-132
- Fang, Y., Li, Y., He, W., Lu, Y. and Li, P. 2013 "Numerical simulation of residual stresses fields of DD6 blade during laser shock processing" *Mater. Design* 43 170-176
- Fassett, C.I. and Minton, D.A. 2013 "Impact bombardment of the terrestrial planets and the early history of the Solar System" *Nature Geoscience* 6 520-524
- Feng, L.-P., Liu, F.-S., Ma, X.-J., Zhao, B.-J., Zhang, N.-C., Wang, W.-P. and Hao, B.-B. 2013 "A fiber-array probe technique for measuring the viscosity of a substance under shock compression" *Chinese Phys. B* 22 108301
- Fensin, S.J., Brandl, C., Cerreta, E.K., Gray III, G.T., Germann, T.C. and Valone, S.M. 2013 "Nanoscale plasticity at grain boundaries in fcc copper under shock loading" *JOM* 65 410-418
- Fensin, S.J., Valone, S.M., Cerreta, E.K., Escobedo-Diaz, J.P., Gray III, G.T., Kang, K. and Wang, J. 2013 "Effect of grain boundary structure on plastic deformation during shock compression using molecular dynamics" *Model. Simul. Mater. Sci. Engng* 21 015011
- Fenton, G., Grady, D. and Vogler, T.J. 2013 "Modeling thermodynamic compression states in distended materials and mixtures" *Procedia Engng* 58 724-731
- Field, J.E. and Walley, S.M. 2013 "Review of the dynamic properties of materials: History, techniques and results", in "Rock Dynamics and Applications: State of the Art", ed. J. Zhao and J. Li, pp. 3-24, (London, Taylor & Francis)
- Florando, J.N., Barton, N.R., El-Dasher, B.S., McNaney, J.M. and Kumar, M. 2013 "Analysis of deformation twinning in tantalum single crystals under shock loading conditions" *J. Appl. Phys.* 113 083522
- Folli, V. and Conti, C. 2013 "Random walk of solitary and shock waves in nonlocal disordered media" *New J. Phys.* 15 085026
- Fortov, V.E. and Mintsev, V.B. 2013 "Extreme states of matter on the Earth and in the Cosmos: Is there any chemistry beyond the megabar?" *Russ. Chem. Rev.* 82 597-614
- Foster, N.F., Wozniakiewicz, P.J., Price, M.C., Kearsley, A.T. and Burchell, M.J. 2013 "Identification by Raman spectroscopy of Mg-Fe content of olivine samples after impact at 6 km/s onto aluminium foil and aerogel: In the laboratory and in Wild-2 cometary samples" *Geochim. Cosmochim. Acta* 121 1-14
- Fovargue, D.E., Mitran, S., Smith, N.B., Sankin, G.N., Simmons, W.N. and Zhong, P. 2013 "Experimentally validated multiphysics computational model of focusing and shock wave formation in an electromagnetic lithotripter" *J. Acoust. Soc. Amer.* 134 1598-1609

- Fox, T.E., Robinson, A.P.L. and Pasley, J. 2013 "Strong shock generation by fast electron energy deposition" *Phys. Plasmas* 20 122707
- Fratanduono, D.E., Eggert, J.H., Akin, M.C., Chau, R. and Holmes, N.C. 2013 "A novel approach to Hugoniot measurements utilizing transparent crystals" *J. Appl. Phys.* 114 043518
- Fredenburg, D.A. and Thadhani, N.N. 2013 "On the applicability of the P-alpha and P-lambda models to describe the dynamic compaction response of highly heterogeneous powder mixtures" *J. Appl. Phys.* 113 043507
- Fredenburg, D.A., Koller, D.D., Rigg, P.A. and Scharff, R.J. 2013 "High-fidelity Hugoniot analysis of porous materials" *Rev. Sci. Instrum.* 84 013903
- Fredenburg, D.A. and Dennis-Koller, D. 2013 "Consolidation response of brittle particulate materials to shock loading" *Procedia Engng* 58 401-408
- Fredenburg, D.A. and Thadhani, N.N. 2013 "Predicting the shock compression response of heterogeneous powder mixtures" *J. Appl. Phys.* 113 223513
- Fukuda, D., Moriya, K., Kaneko, K., Sasaki, K., Sakamoto, R. and Hidani, K. 2013 "Numerical simulation of the fracture process in concrete resulting from deflagration phenomena" *Int. J. Fract.* 180 163-175
- Fuller, H.D., Winey, J.M. and Gupta, Y.M. 2013 "Inelastic deformation in shocked sapphire single crystals" *J. Appl. Phys.* 113 226102
- Fursa, T.V., Lyukshin, B.A. and Utsyn, G.E. 2013 "Relation between the electric response and the characteristics of elastic waves under shock excitation of heterogeneous dielectric materials with piezoelectric inclusions" *Tech. Phys.* 58 263-266
- Gagliardi, F.J., Cunningham, B.J. and Ferranti Jr., L. 2013 "Diagnostic use of digital image correlation in high-speed, explosive experiments", in "Application of Imaging Techniques to Mechanics of Materials and Structures", ed. T. Proulx, pp. 421-429, (New York, Springer)
- Gao, G.F., Yuan, S.J., Li, Y.C. and Shen, L.Y. 2013 "State equation for an advanced ferromagnetic base composite material" *Appl. Mech. Mater.* 274 451-454
- Garnier, J., Xu, G., Trillo, S. and Picozzi, A. 2013 "Incoherent dispersive shocks in the spectral evolution of random waves" *Phys. Rev. Letts* 111 113902
- Gavin, P., Chevrier, V., Ninagawa, K., Gucsik, A. and Hasegawa, S. 2013 "Experimental investigation into the effects of meteoritic impacts on the spectral properties of phyllosilicates on Mars" *J. Geophys Res.: Planets* 118 65-80
- Gay, E., Berthe, L., Buzaud, E., Boustie, M. and Arrigoni, M. 2013 "Shock adhesion test for composite bonded assembly using a high pulsed power generator" *J. Appl. Phys.* 114 013502
- Gentilini, S., Ghofraniha, N., DelRe, E. and Conti, C. 2013 "Shock waves in thermal lensing" *Phys. Rev. A* 87 053811

- George, S., Singh, R.K., Nampoore, V.P.N. and Kumar, A. 2013 "Fast imaging of the laser-blow-off plume driven shock wave: Dependence on the mass and density of the ambient gas" *Phys. Letts A* 377 391-398
- Gerasimov, S.I., Bougajev, A.V. and Erofeyev, V.I. 2013 "Shadowgraph technique and optical initiation for study of longitudinal deformation solitons", in "Proc. 16th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán, J. Selesovsky and R. Matyás, pp. 176-191, (Pardubice, Czech Republic, University of Pardubice)
- Gilev, S.D. 2013 "Electrical conductivity of copper powders under shock compression" *Combust. Explos. Shock Waves* 49 359-366
- Gill, A., Telang, A., Manneva, S.R., Qian, D., Pyoun, Y.S., Soyama, H. and Vasudevan, V.K. 2013 "Comparison of mechanisms of advanced mechanical surface treatments in nickel-based superalloy" *Mater. Sci. Engng A* 576 346-355
- Gillet, P. and El Goresy, A. 2013 "Shock events in the Solar System: The message from minerals in terrestrial planets and asteroids" *Ann. Rev. Earth Planet. Sci.* 41 257-285
- Glikson, A.Y., Uysal, I.T., Gerald, J.D.F. and Saygin, E. 2013 "Geophysical anomalies and quartz microstructures, Eastern Warburton Basin, North-east South Australia: Tectonic or impact shock metamorphic origin?" *Tectonophys.* 589 57-76
- Goel, M.D., Altenhöfer, P., Matsagar, V.A., Gupta, A.K., Mundt, C. and Marburg, S. 2013 "Shock wave interaction of aluminum metal foam: An experimental study", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 495-505, (Lancaster, PA, Destech Publications)
- Goetz, J.C. and Matous, K. 2013 "Shock analysis and optimization of two-layered cellular materials subject to pulse loading" *Int. J. Impact Engng* 57 55-69
- Goldman, N., Srinivasan, S.G., Hamel, S., Fried, L.E., Gaus, M. and Elstner, M. 2013 "Determination of a density functional tight binding model with an extended basis set and three-body repulsion for carbon under extreme pressures and temperatures" *J. Phys. Chem. C* 117 7885-7894
- Goldman, N. and Tamblyn, I. 2013 "Prebiotic chemistry within a simple impacting icy mixture" *J. Phys. Chem. A* 117 5124-5131
- Golovnev, I.F., Golovneva, E.I., Merzhievsky, I.A. and Fomin, V.M. 2013 "Defect generation as a phenomenon of structure self-organization under external loads" *Phys. Mesomech.* 16 294-302
- Golubev, V.K. 2013 "Explosion action of a thin layer of light-sensitive explosive formulations on barriers", in "Proc. 16th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán, J. Selesovsky and R. Matyás, pp. 633-645, (Pardubice, Czech Republic, University of Pardubice)
- Golyshev, A.A. and Molodets, A.M. 2013 "Electrical resistivity of plastic insulation at megabar shock pressures" *Combust. Explos. Shock Waves* 49 219-224

- Goodwin, P.M., Marshall, B.R., Stevens, G.D. and Dattelbaum, D.M. 2013 "Non-invasive timing of gas gun-launched projectiles using external surface-mounted optical fiber-Bragg grating strain gauges" *Rev. Sci. Instrum.* 84 035002
- Grady, D., Fenton, G. and Vogler, T. 2013 "Equation of state and evidence of enhanced phase transformation for the shock compression of distended compounds" *Procedia Engng* 58 110-116
- Grady, D., Fenton, G. and Vogler, T. 2013 "Equation of state and evidence of enhanced phase transformation for shock compression of distended compounds" *Int. J. Impact Engng* 56 19-26
- Grange, M.L., Nemchin, A.A. and Pidgeon, R.T. 2013 "The effect of 1.9 and 1.4 Ga impact events on 4.3 Ga zircon and phosphate from an Apollo 15 melt breccia" *J. Geophys Res.: Planets* 118 2180-2197
- Greenberg, B.A., Ivanov, M.A., Rybin, V.V., Elkina, O.A., Antonova, O.V., Patselov, A.M., Inozemtsev, A.V., Plotnikov, A.V., Voikova, A.Y. and Besshaposhnikov, Y.P. 2013 "The problem of intermixing of metals possessing no mutual solubility upon explosion welding (Cu-Ta, Fe-Ag, Al-Ta)" *Mater. Charact.* 75 51-62
- Greshake, A., Fritz, J., Bottger, U. and Goran, D. 2013 "Shear-induced ringwoodite formation in the Martian shergottite Dar al Gani 670" *Earth Planet. Sci. Letts* 375 383-394
- Grinfeld, M. 2013 "Complete operational equations of state for hydrocode" *Procedia Engng* 58 260-268
- Grinfeld, M. 2013 "Operational equations of state for modeling high rate phenomena", in "Dynamic Behavior of Materials", ed. V. Chalivendra, B. Song and D. Casem, pp. 337-344, (Berlin, Springer)
- Grivickas, P., McCluskey, M.D. and Gupta, Y.M. 2013 "Use of dynamic compression to probe semiconductor response at large strains" *Phys. Stat. Sol. B* 250 683-687
- Gromilov, S.A., S.P. Khranenko, E.Y. Semitut, I.B. Kireenko and Kinelovskii, S.A. 2013 "Producing superhard coatings by decomposition of complex salts in shaped-charge explosion" *Combust. Explos. Shock Waves* 49 238-243
- Gromov, A.A., Vorozhtsov, S.A., Komarov, V.F., Sakovich, G.V., Pautova, Y.I. and Offermann, M. 2013 "Ageing of nanodiamond powder: Physical characterization of the material" *Mater. Letts* 91 198-201
- Grujicic, M., Snipes, J.S., Ramaswami, S., Yavari, R., Runt, J., Tarter, J. and Dillon, G. 2013 "Coarse-grained molecular-level analysis of polyurea properties and shock-mitigation potential" *J. Mater. Engng Perform.* 22 1964-1981
- Grujicic, M., Snipes, J., Ramaswami, S., Galgalikar, R., Runt, J. and Tarter, J. 2013 "Molecular- and domain-level microstructure-dependent material model for nano-segregated polyurea" *Multidiscipline Model. Mater. Struct.* 9 548-578

- Gu, C.X., Shen, Z.B., Liu, H.X., Li, P., Lu, M.M., Zhang, Q. and Wang, X. 2013 "Investigation on bend displacement and surface quality induced by laser shock micro-adjustment" *Appl. Surf. Sci.* 270 281-286
- Guldemeister, N., Wunnemann, K., Durr, N. and Hiermaier, S. 2013 "Propagation of impact-induced shock waves in porous sandstone using mesoscale modeling" *Meteor. Planet. Sci.* 48 115-133
- Gulick, S.P.S., Christeson, G.L., Barton, P.J., Grieve, R.A.F., Morgan, J.V. and Urrutia-Fucugauchi, J. 2013 "Geophysical characterization of the Chicxulub impact crater" *Rev. Geophys.* 51 31-52
- Guo, X., Tao, J., Wang, W., Li, W. and Wang, C. 2013 "Effects of the inner mould material on the aluminium-316L stainless steel explosive clad pipe" *Mater. Design* 49 116-122
- Guo, W., Liu, J., Li, S., Wang, Y. and Ji, W. 2013 "Microstructural evolution and deformation mechanism of the 80 W-20Cu alloy at ultra-high strain rates under explosive loading" *Mater. Sci. Engng A* 572 36-44
- Gurrutxaga-Lerma, B., Balint, D.S., Dini, D., Eakins, D.E. and Sutton, A.P. 2013 "A dynamic discrete dislocation plasticity method for the simulation of plastic relaxation under shock loading" *Proc. R. Soc. A* 469 20130141
- Guskov, S.Y., Zmitrenko, N.V. and Sherman, V.E. 2013 "Compression and combustion of non-cryogenic targets with a solid thermonuclear fuel for inertial fusion" *J. Exper. Theor. Phys.* 116 673-679
- Guy, C. 2013 "An HLL-Rankine-Hugoniot Riemann solver for complex non-linear hyperbolic problems" *J. Comput. Phys.* 251 156-193
- Hall, T.A., Mattson, T.R., Root, S., Magyar, R.J. and Schroen, D.G. 2013 "Mesoscale simulation of mixed equations of state with application to shocked platinum-doped PMP foams" *Procedia Engng* 58 309-319
- Haines, B.M., Grinstein, F.F., Welser-Sherrill, L. and Fincke, J.R. 2013 "Simulations of material mixing in laser-driven reshock experiments" *Phys. Plasmas* 20 022309
- Haines, B.M., Grinstein, F.F., Welser-Sherrill, L., Fincke, J.R. and Doss, F.W. 2013 "Simulation ensemble for a laser-driven shear experiment" *Phys. Plasmas* 20 092301
- Hansen, B.L., Beyerlein, I.J., Bronkhorst, C.A., Cerreta, E.K. and Dennis-Koller, D. 2013 "A dislocation-based multi-rate single crystal plasticity model" *Int. J. Plast.* 44 129-146
- He, L., Sewell, T.D. and Thompson, D.L. 2013 "Molecular dynamics simulations of shock waves in cis-1,4-polybutadiene melts" *J. Appl. Phys.* 114 163517
- He, A.M., Duan, S.Q., Shao, J.L., Wang, P. and Luo, S.N. 2013 "Local and bulk melting of shocked columnar nanocrystalline copper: Dynamics, anisotropy, premelting, superheating, supercooling, and re-crystallization" *J. Chem. Phys.* 139 074502

- He, L., Tang, M.J., Zeng, M.F., Zhou, X.M., Zhu, W.J. and Liu, F.S. 2013 "First-principles calculations of optical properties of perfect and defective MgO crystals at high pressure" *Physica B* 410 137-140
- Heins, A. and Guo, C. 2013 "Shock-induced concentric rings in femtosecond laser ablation of glass" *J. Appl. Phys.* 113 223506
- Hejazialhosseini, B., Rossinelli, D. and Koumoutsakos, P. 2013 "3D shock-bubble interaction" *Phys. Fluids* 25 091105
- Hejazialhosseini, B., Rossinelli, D. and Koumoutsakos, P. 2013 "Vortex dynamics in 3D shock-bubble interaction" *Phys. Fluids* 25 110816
- Herbold, E.B. and Nesterenko, V.F. 2013 "Propagation of rarefaction pulses in discrete materials with strain-softening behavior" *Phys. Rev. Letts* 110 144101
- Hiermaier, S. 2013 "Integrated experimental-numerical characterization of geological materials under shock and impact", in "Rock Dynamics and Applications: State of the Art", ed. J. Zhao and J. Li, pp. 71-76, (London, Taylor & Francis)
- Higginbotham, A., Suggit, M.J., Bringa, E.M., Erhart, P., Hawreliak, J.A., Mogni, G., Park, N., Remington, B.A. and Wark, J.S. 2013 "Molecular dynamics simulations of shock-induced deformation twinning of a body-centered-cubic metal" *Phys. Rev. B* 88 104105
- Hogan, J.D., Spray, J.G., Rogers, R.J., Vincent, G. and Schneider, M. 2013 "Dynamic fragmentation of planetary materials: Ejecta length quantification and semi-analytical modelling" *Int. J. Impact Engng* 62 219-228
- Holzworth, K., Williams, G., Guan, Z. and Nemat-Nasser, S. 2013 "Hybrid polymer grafted nanoparticle composites for blast-Induced shock-wave mitigation", in "Challenges in Mechanics of Time-Dependent Materials and Processes in Conventional and Multifunctional Materials", ed. B. Antoun, H.J. Qi, R. Hall, G.P. Tandon, H. Lu and C. Lu, pp. 63-65, (New York, Springer)
- Hong-Chang, Z., Ru-Fang, P., Bo, J., Hua, L., Bi-Sheng, T. and Shi-Jin, C. 2013 "Transformation of [60] fullerene to a derivative C1200 by shock-compression" *Asian J. Chem.* 25 2451-2454
- Hora, H., Miley, G.H., Ghoranneviss, M. and Elahi, A.S. 2013 "Application of picosecond terawatt laser pulses for fast ignition of fusion" *Laser Particle Beams* 31 249-256
- Howard, K.T., Bailey, M.J., Berhanu, D., Bland, P.A., Cressey, G., Howard, L.E., Jeynes, C., Matthewman, R., Martins, Z., Sephton, M.A., Stolojan, V. and Verchovsky, S. 2013 "Biomass preservation in impact melt ejecta" *Nature Geoscience* 6 1018-1022
- Hu, J., Ichiyanagi, K., Takahashi, H., Koguchi, H., Akasaka, T., Kawai, N., Nozawa, S., Sato, T., Sasaki, Y.C., Adachi, S.-I. and Nakamura, K.G. 2013 "Erratum: Reversible phase transition in laser-shocked 3Y-TZP ceramics via nanosecond time-resolved X-ray diffraction" *J. Appl. Phys.* 113 039901

- Hu, Y., Liu, H.X., Wang, X., Shen, Z.B., Li, P., Gu, C.X., Gu, Y.X., Lu, M.M. and Zhang, Q. 2013 "Formation of nanostructure and nanohardness characterization on the mesoscale workpiece by a novel laser indirect shock forming method" *Rev. Sci. Instrum.* 84 045001
- Hu, X., Shen, Z., Liu, Y., Liu, T. and Wang, F. 2013 "Influence of explosive density on mechanical properties of high manganese steel explosion hardened" *J. Appl. Phys.* 114 213507
- Hu, J., Ichiyanagi, K., Doki, T., Goto, A., Eda, T., Norimatsu, K., Harada, S., Horiuchi, D., Kabasawa, Y., Hayashi, S., Uozumi, S.-I., Kawai, N., Nozawa, S., Sato, T., Adachi, S.-I. and Nakamura, K.G. 2013 "Complex structural dynamics of bismuth under laser-driven compression" *Appl. Phys. Letts* 103 161904
- Hua, C., Zhang, P.-J., Lu, X.-J., Huang, M., Dai, B. and Fu, H. 2013 "Research on the size of defects inside RDX/HMX crystal and shock sensitivity" *Propell. Explos. Pyrotech.* 38 775-780
- Huang, Z.X., Zu, X.D., Wang, Y.Z., Liu, B.B. and Xia, M. 2013 "Theoretical and experimental study of electromagnetic driving flying plate technology", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 440-448, (Lancaster, PA, Destech Publications)
- Huang, H.J., Wu, S.J., Hu, X.J., Wang, Q.S., Wang, X. and Fei, Y.W. 2013 "Shock compression of Fe-FeS mixture up to 204 GPa" *Geophys. Res. Letts* 40 687-691
- Hunter, J.W., Cartland, H.E., Sluder, P.J. and Twogood, T.E. (2013) "Vehicle for launching from a gas gun" United States patent no. 8,536,502 B2
- Huser, G., Ozaki, N., Sano, T., Sakawa, Y., Miyanishi, M., Salin, G., Asaumi, Y., Kita, M., Kondo, Y., Makatsuka, K., Uranishi, H., Yang, T., Yokoyama, N., Galmiche, D. and Kodama, R. 2013 "Hugoniot and mean ionization of laser-shocked germanium-doped plastic" *Phys. Plasmas* 20 122703
- Hwang, Y.H. 2013 "Development of a characteristic particle method for water hammer simulation" *ASCE J. Hydraulic Engng* 139 1175-1192
- Iakovlev, S., Seaton, C.T. and Sigrist, J.F. 2013 "Submerged circular cylindrical shell subjected to two consecutive shock waves: Resonance-like phenomena" *J. Fluids Structures* 42 70-87
- Ignatova, A.M. 2013 "Shock metamorphism of petrological materials: Synthetic mineral alloys" *Glass & Ceramics* 70 34-38
- Igra, O., Falcovitz, J., Houas, L. and Jourdan, G. 2013 "Review of methods to attenuate shock/blast waves" *Prog. Aerospace Sci.* 58 1-35

- Inogamov, N.A., Zhakhovsky, V.V., Petrov, Y.V., Khokhlov, V.A., Ashitkov, S.I., Migdal, K.P., Ilnitsky, D.K., Emirov, Y.N., Khishchenko, K.V., Komarov, P.S., Shepelev, V.V., Agranat, M.B., Anisimov, S.I., Oleynik, I.I. and Fortov, V.E. 2013 "Ultrashort laser-matter interaction at moderate intensities: two-temperature relaxation, foaming of stretched melt, and freezing of evolving nanostructures" Proc. SPIE 9065 906502
- Ivanov, B.A. and Melosh, H.J. 2013 "Two-dimensional numerical modeling of the Rheasilvia impact formation" J. Geophys Res.: Planets 118 1545-1557
- Iyer, K.A., Poormon, K.L., Deacon, R.M., Mehoke, D.S., Swaminathan, P.K. and Brown, R.C. 2013 "Hypervelocity impact response of Ti6Al4V and commercially pure titanium" Procedia Engng 58 127-137
- Jacques, E., Lloyd, A. and Saatcioglu, M. 2013 "Predicting reinforced concrete response to blast loads" Canad. J. Civil Engng 40 427-444
- Jain, A., Youssef, G. and Gupta, V. 2013 "Dynamic tensile strength of polyurea-bonded steel/E-glass composite joints" J. Adhes. Sci. Technol. 27 403-412
- Jang, S. and Choi, H.J. 2013 "Integrated design of blast resistance panels and materials" Compos. Struct. 102 154-163
- Jayaprakash, K.R., Vakakis, A.F. and Starosvetsky, Y. 2013 "Nonlinear resonances in a general class of granular dimers with no pre-compression" Granular Matter 15 327-347
- Jayasinghe, L.B., Thambiratnam, D.P., Perera, N. and Jayasooriya, J.H.A.R. 2013 "Computer simulation of underground blast response of pile in saturated soil" Comput. Struct. 120 86-95
- Jenkins, C.M., Ripley, R.C., Wu, C.Y., Horie, Y., Powers, K. and Wilson, W.H. 2013 "Explosively driven particle fields imaged using a high speed framing camera and particle image velocimetry" Int. J. Multiphase Flow 51 73-86
- Jensen, B.J., Owens, C.T., Ramos, K.J., Yeager, J.D., Saavedra, R.A., Iverson, A.J., Luo, S.N., Fezzaa, K. and Hooks, D.E. 2013 "Impact system for ultrafast synchrotron experiments" Rev. Sci. Instrum. 84 013904
- Jiang, G.P. and Wu, X.H. 2013 "Mechanical behavior of steel fiber-reinforced concrete investigated by one-stage light gas gun experiment" Adv. Mater. Sci. Engng doi: 10.1155/2013/945309
- Jiang, G.P., Huan, S., Hao, H., Du, Y.F. and Yao, C.J. 2013 "Performance of steel reinforced high strength concrete investigated in the gas gun experiment (in Chinese)" Acta Phys. Sinica 62 016201
- Jin, J., Znamenskaya, I.A. and Sysoev, N.N. 2013 "Two regimes of pulsed volume discharge action upon a shock wave" Tech. Phys. Letts 39 418-420

- Johnson, G.R., Chocron, S., Anderson Jr., C.E., Beissel, S.R. and Holmquist, T.J. 2013 "Effect of the third invariant on strength and failure for 10 metals", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 1117-1128, (Lancaster, PA, Destech Publications)
- Jones, D.R., Chapman, D.J. and Eakins, D.E. 2013 "A gas-gun based technique for studying the role of temperature in dynamic fracture and fragmentation" J. Appl. Phys. 114 173508
- Joshi, R.H., Patel, A.B., Bhatt, N.K., Thakore, B.Y. and Jani, A.R. 2013 "Shock Hugoniot and high pressure melting curve for CaF₂" AIP Conf. Proc. 1536 841-842
- Josset, S., Muller, O., Schmidlin, L., Pichot, V. and Spitzer, D. 2013 "Nonlinear optical properties of detonation nanodiamond in the near infrared: Effects of concentration and size distribution" Diamond Related Mater. 32 66-71
- Ju, Y.Y., Zhang, Q.M., Gong, Z.Z., Ji, G.F. and Zhou, L. 2013 "Molecular dynamics simulation of shock melting of aluminum single crystal" J. Appl. Phys. 114 093507
- Kadau, K., Cherne, F.J., Ravelo, R. and Germann, T.C. 2013 "Shock-induced phase transformations in gallium single crystals by atomistic methods" Phys. Rev. B 88 144108
- Kang, G., Cho, S.C., Coleman, A.J. and Choi, M.J. 2013 "Characterization of the shock pulse-induced cavitation bubble activities recorded by an optical fiber hydrophone" J. Acoust. Soc. Amer. 134 1139-1148
- Kapahi, A. and Udaykumar, H.S. 2013 "Dynamics of void collapse in shocked energetic materials: Physics of void-void interactions" Shock Waves 23 537-558
- Karnesky, J., Damazo, J., Chow-Yee, K., Rusinek, A. and Shepherd, J.E. 2013 "Plastic deformation due to reflected detonation" Int. J. Solids Structures 50 97-110
- Katsabanis, P.D. 2013 "Shock initiation and malfunction of commercial explosives and accessories: An approach using the critical energy fluence", in "Rock Fragmentation by Blasting", ed. P.K. Singh and A. Sinha, pp. 571-578, (London, Taylor & Francis)
- Kaya, Y. and Kahraman, N. 2013 "An investigation into the explosive welding/cladding of Grade A ship steel/AISI 316L austenitic stainless steel" Mater. Design 52 367-372
- Kazeev, M.N., Koidan, V.S., Kozlov, V.F. and Tolstov, Y.S. 2013 "Magnetic pulse welding in plane geometry" J. Appl. Mech. Tech. Phys. 54 894-899
- Kenkmann, T., Trullenque, G., Deutsch, A., Hecht, L., Ebert, M., Salge, T., Schafer, F. and Thoma, K. 2013 "Deformation and melting of steel projectiles in hypervelocity cratering experiments" Meteor. Planet. Sci. 48 150-164
- Kerley, G.I. 2013 "Calculation of release adiabat and shock impedance matching" arXiv:1306.6913

- Kerley, G.I. 2013 "The linear U_s - u_p relation in shock-wave physics" arXiv:1306.6926
- Kim, T.-H., Cha, K.-S. and Kim, T.-H. 2013 "Behavior of a pile expanded by electrical shock wave" *Marine Georesources Geotechnol.* 31 137-153
- Kim, H.I., Tian, J. and Gupta, V. 2013 "In situ measurement of solder joint strength in board-mounted chip-scale packages using a quantitative laser spallation technique" *J. Adhes. Sci. Technol.* 27 719-730
- Kim, K.H., Fried, L.E. and Yoh, J.J. 2013 "Understanding the anisotropic initiation sensitivity of shocked PETN single crystals" *Appl. Phys. Letts* 103 131912
- Kim, T.H., Cho, H., Busnaina, A., Park, J.-G. and Kim, D. 2013 "Shockwave-induced deformation of organic particles during laser shockwave cleaning" *J. Appl. Phys.* 114 063104
- Kim, I., Quevedo, H.J., Feldman, S., Bang, W., Serratto, K., McCormick, M., Aymond, F., Dyer, G., Bernstein, A.C. and Ditmire, T. 2013 "Double shock front formation in cylindrical radiative blast waves produced by laser irradiation of krypton gas" *Phys. Plasmas* 20 123101
- Kinelovskii, S.A. and Maevskii, K.K. 2013 "Model of the behavior of the mixture with different properties of the species under high dynamic loads" *J. Appl. Mech. Tech. Phys.* 54 524-530
- Kiselev, S.P. 2013 "Molecular dynamics simulation of deformation in plates on their oblique impact" *Physical Mesomechanics* 16 303-311
- Kishimura, H., Noguchi, D., Preechasupanya, W. and Matsumoto, H. 2013 "Impact fragmentation of polyurethane and polypropylene cylinder" *Physica A* 392 5574-5580
- Kleiser, G.J., Chhabildas, L.C., Reinhart, W.D. and Anderson, W.W. 2013 "Using time-resolved wave profile measurements to determine elusive phase transitions in molybdenum" *Procedia Engng* 58 617-623
- Knudson, M.D. and Desjarlais, M.P. 2013 "Adiabatic release measurements in alpha-quartz between 300 and 1200 GPa: Characterization of alpha-quartz as a shock standard in the multimegabar regime" *Phys. Rev. B* 88 184107
- Knudson, M.D. and Lemke, R.W. 2013 "Shock response of low-density silica aerogel in the multi-Mbar regime" *J. Appl. Phys.* 114 053510
- Kobayashi, T. 2013 "Radiation of light from powder materials under shock compression" *Chem. Phys. Letts* 565 35-39
- Koeman, E.C., Simonetti, A., Chen, W. and Burns, P.C. 2013 "Oxygen isotope composition of trinitite post-detonation materials" *Analyt. Chem.* 85 11913-11919
- Konyakhin, S.V., Sharonova, L.V. and Eidelman, E.D. 2013 "Labeling detonation nanodiamond suspensions using the optical methods" *Tech. Phys. Letts* 39 244-247

- Kowitz, A., Guldemeister, N., Reimold, W.U., Schmitt, R.T. and Wunnemann, K. 2013 "Diaplectic quartz glass and SiO₂ melt experimentally generated at only 5 GPa shock pressure in porous sandstone: Laboratory observations and meso-scale numerical modeling" *Earth Planet. Sci. Letts* 384 17-26
- Kowitz, A., Schmitt, R.T., Reimold, W.U. and Hornemann, U. 2013 "The first MEMIN shock recovery experiments at low shock pressure (5-12.5 GPa) with dry, porous sandstone" *Meteor. Planet. Sci.* 48 99-114
- Kozlov, M., Gurovich, V.T. and Krasik, Y.E. 2013 "Stability of imploding shocks generated by underwater electrical explosion of cylindrical wire array" *Phys. Plasmas* 20 112701
- Kramers, J.D., Andreoli, M.A.G., Atanasova, M., Belyanin, G.A., Block, D.L., Franklyn, C., Harris, C., Lekgoathi, M., Montross, C.S., Ntsoane, T., Pishedda, V., Segonyane, P., Viljoen, K.S. and Westraadt, J.E. 2013 "Unique chemistry of a diamond-bearing pebble from the Libyan Desert Glass strewnfield, SW Egypt: Evidence for a shocked comet fragment" *Earth Planet. Sci. Letts* 382 21-31
- Kraus, R.G., Stewart, S.T., Newman, M.G., Milliken, R.E. and Tosca, N.J. 2013 "Uncertainties in the shock devolatilization of hydrated minerals: A nontronite case study" *J. Geophys Res.: Planets* 118 2137-2145
- Krell, A. and Strassburger, E. 2013 "Separation and hierarchic order of key influences on the ballistic strength of opaque and transparent ceramic armor", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 1053-1064, (Lancaster, PA, Destech Publications)
- Kudasov, Y.B., Surdin, O.M., Korshunov, A.S., Pavlov, V.N., Frolova, N.V. and Kuzin, R.S. 2013 "Lattice dynamics and phase diagram of aluminum at high temperatures" *J. Exper. Theor. Phys.* 117 664-671
- Kulkov, S.N., Vorozhtsov, S.A., Komarov, V.F. and Promakhov, V.V. 2013 "Structure, phase composition, and mechanical properties of aluminum alloys produced by shock-wave compaction" *Russ. Phys. J.* 56 85-89
- Kumar, P.D., Ghosh, A., Gupta, S. and Raychaudhuri, T.K. 2013 "Study of parameters for initiation of HNS-IV by exploding copper foil at low energy", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 928-935, (Lancaster, PA, Destech Publications)
- Kumar, P., Stargel, D.S. and Shukla, A. 2013 "Response of curved carbon composite panels to shock loading", in "Dynamic Behavior of Materials", ed. V. Chalivendra, B. Song and D. Casem, pp. 365-372, (Berlin, Springer)
- Kumar, P., Stargel, D.S. and Shukla, A. 2013 "Effect of plate curvature on blast response of carbon composite panels" *Compos. Struct.* 99 19-30
- Kumar, P., Li, J., Nian, Q., Hu, Y.W. and Cheng, G.J. 2013 "Plasmonic tuning of silver nanowires by laser shock induced lateral compression" *Nanoscale* 5 6311-6317

- Kvasnytseva, V. and Wirth, R. 2013 "Micromorphology and internal structure of apographitic impact diamonds: SEM and TEM study" *Diamond Related Mater.* 32 7-16
- La Lone, B.M., Stevens, G.D., Turley, W.D., Holtkamp, D.B., Iverson, A.J., Hixson, R.S. and Veeseer, L.R. 2013 "Release path temperatures of shock-compressed tin from dynamic reflectance and radiance measurements" *J. Appl. Phys.* 114 063506
- Lacina, D. and Gupta, Y.M. 2013 "Temperature measurements and an improved equation of state for shocked liquid benzene" *J. Chem. Phys.* 138 174506
- Lafon, M., Ribeyre, X. and Schurtz, G. 2013 "Optimal conditions for shock ignition of scaled cryogenic deuterium-tritium targets" *Phys. Plasmas* 20 022708
- Lalousis, P., Hora, H., Eliezer, S., Martinez-Val, J.M., Moustazis, S., Miley, G.H. and Mourou, G. 2013 "Shock mechanisms by ultrahigh laser accelerated plasma blocks in solid density targets for fusion" *Phys. Letts A* 377 885-888
- Lane, J.M.D., Grest, G.S. and Mattsson, T.R. 2013 "Hot spot and temperature analysis of shocked hydrocarbon polymer foams using molecular dynamics simulation" *Comput. Mater. Sci.* 79 873-876
- Lappas, P.P., McCartt, A.D., Gates, S.D., Jeffries, J.B. and Hanson, R.K. 2013 "Laser measurements of bacterial endospore destruction from shock waves" *Proc. SPIE* 8923 89231C
- Lauterborn, W. and Vogel, A. 2013 "Shock wave emission by laser generated bubbles", in "Bubble Dynamics and Shock Waves", ed. C.F. Delale, pp. 67-105, (Berlin, Springer)
- Le Pape, S., Correa, A.A., Fortmann, C., Neumayer, P., Döppner, T., Davis, P., Ma, T., Divol, L., Plagemann, K.-U. and Schwegler, E. 2013 "Structure measurements of compressed liquid boron at megabar pressures" *New J. Phys.* 15 085011
- Lebensohn, R.A., Escobedo, J.P., Cerreta, E.K., Dennis-Koller, D., Bronkhorst, C.A. and Bingert, J.F. 2013 "Modeling void growth in polycrystalline materials" *Acta mater.* 61 6918-6932
- LeBlanc, J., Gardner, N. and Shukla, A. 2013 "Effect of polyurea coatings on the response of curved E-glass/vinyl ester composite panels to underwater explosive loading" *Composites B* 44 565-574
- Lee, S.J., Kim, J.H., Song, B.S. and Kim, J.H. 2013 "Coil gun electromagnetic launcher (EML) system with multi-stage electromagnetic coils" *J. Magnetism* 18 481-486
- Levesque, G., Vitello, P. and Howard, W.M. 2013 "Hot-spot contributions in shocked high explosives from mesoscale ignition models" *J. Appl. Phys.* 113 233513
- Lexow, B., Wickert, M., Thoma, K., Schäfer, F., Poelchau, M.H. and Kenkmann, T. 2013 "The extra-large light-gas gun at the Fraunhofer EML: Applications for impact cratering research" *Meteor. Planet. Sci.* 48 3-7

- Li, R.Y., Li, X.J., Yan, H.H. and Peng, J. 2013 "Experimental investigations of the controlled explosive synthesis of ultrafine alumina" *Combust. Explos. Shock Waves* 49 105-108
- Li, H., Xu, R., Kang, B., Li, J., Zhou, X., Zhang, C. and Nie, F. 2013 "Influence of crystal characteristics on the shock sensitivities of RDX, HMX, and CL-20 immersed in liquid " *J. Appl. Phys.* 113 203519
- Li, D.F., Zhang, P. and Yan, J. 2013 "Quantum molecular dynamics simulations of the thermophysical properties of shocked liquid ammonia for pressures up to 1.3 TPa" *J. Chem. Phys.* 139 134505
- Li, M.R., Zhou, G., Chu, Z., Dai, X.H., Wu, H.J. and Fan, R.Y. 2013 "Applicability of resonating valence bond wave function with quantum Monte Carlo method for modeling high pressure liquid hydrogen (in Chinese)" *Acta Phys. Sinica* 62 156101
- Li, H.Z., Xu, R., Kang, B., Li, J.S., Zhou, X.Q., Zhang, C.Y. and Nie, F.D. 2013 "Influence of crystal characteristics on the shock sensitivities of RDX, HMX, and CL-20 immersed in liquid" *J. Appl. Phys.* 113 203519
- Li, T., Hua, C. and Li, Q. 2013 "Shock sensitivity of pressed RDX-based PBXs under short-duration and high-pressure impact tests" *Propell. Explos. Pyrotech.* 38 770-774
- Li, X.C., Zhang, Y.K., Chen, J.F. and Lu, Y.L. 2013 "Effect of laser shock processing on stress corrosion cracking behaviour of AZ31 magnesium alloy at slow strain rate" *Mater. Sci. Technol.* 29 626-630
- Li, X.H., Xu, L., Cao, X.X., Meng, C.M., Wang, C.H. and Zhu, W.J. 2013 "Synthesis of CsCl-type single-phase RuSi under shock compression" *High Press. Res.* 33 8-14
- Li, T., Hua, C. and Li, Q. 2013 "Shock sensitivity of pressed PBX under short duration and high-pressure impact test", in "Proc. 44th Int. Annual Conf. of the ICT", ed. pp. paper 31, (Pfintzal, Germany, Institut für Chemische Technologie)
- Li, K.M., Hu, Y.X. and Yao, Z.Q. 2013 "Experimental study of micro dimple fabrication based on laser shock processing" *Optics Laser Technol.* 48 216-225
- Li, C., Zhang, J.C. and Wang, X.W. 2013 "Phase change and stress wave in picosecond laser-material interaction with shock wave formation" *Appl. Phys. A* 112 677-687
- Li, H. and Wang, X. 2013 "Transient response of carbon nanotubes with inhomogeneous coating under radial impact loading and magnetic field" *J. Reinf. Plast. Compos.* 32 410-419
- Li, Y.-H., Zhou, L.-C., He, W.-F., He, G.-Y., Wang, X.-D., Wang, B., Luo, S.-H. and Li, Y.-Q. 2013 "The strengthening mechanism of a nickel-based alloy after laser shock processing at high temperatures" *Sci. Technol. Adv. Mater.* 14 055010
- Liao, C.Y., Lee, S., Wung, T.S. and Chiu, M.H. 2013 "Design and analysis of a shock generator" *Propell. Explos. Pyrotech.* 38 825-830

- Liao, Y.L. and Cheng, G.J. 2013 "Controlled precipitation by thermal engineered laser shock peening and its effect on dislocation pinning: Multiscale dislocation dynamics simulation and experiments" *Acta mater.* 61 1957-1967
- Liao, S., Zheng, Z. and Yu, J. 2013 "Dynamic crushing of 2D cellular structures: Local strain field and shock wave velocity" *Int. J. Impact Engng* 57 7-16
- Lillis, R.J., Stewart, S.T. and Manga, M. 2013 "Demagnetization by basin-forming impacts on early Mars: Contributions from shock, heat, and excavation" *J. Geophys Res.: Planets* 118 1045-1062
- Lim, S. 2013 "Acceleration profile of a flat flyer driven by detonation isentrope" *Propell. Explos. Pyrotech.* 38 410-418
- Lin, P., Jia, B. and Hong, G.W. 2013 "A novel all-fiber velocity measurement system with high fringe contrast" *Proc. SPIE* 8914 89140Y
- Lindgren, P., Price, M.C., Lee, M.R. and Burchell, M.J. 2013 "Constraining the pressure threshold of impact induced calcite twinning: Implications for the deformation history of aqueously altered carbonaceous chondrite parent bodies" *Earth Planet. Sci. Letts* 384 71-80
- Ling, Y., Haselbacher, A., Balachandar, S., Najjar, F.M. and Stewart, D.S. 2013 "Shock interaction with a deformable particle: Direct numerical simulation and point-particle modeling" *J. Appl. Phys.* 113 013504
- Liu, H.X., Hu, Y., Wang, X., Shen, Z.B., Li, P., Gu, C.X., Du, D.Z. and Guo, C. 2013 "Grain refinement progress of pure titanium during laser shock forming and mechanical property characterizations with nanoindentation" *Mater. Sci. Engng A* 564 13-21
- Liu, H., Zhao, Y. and Lu, G. 2013 "Interaction of oxygen and carbon dioxide at high pressure and temperature", in "Dynamic Behavior of Materials", ed. V. Chalivendra, B. Song and D. Casem, pp. 359-364, (Berlin, Springer)
- Liu, X., Mashimo, T., Ogata, K., Kinoshita, T., Sekine, T., Zhou, X.M. and Nellis, W.J. 2013 "Anomalous elastic-plastic transition of MgO under shock compression" *J. Appl. Phys.* 114 243511
- Liu, H., Sun, G., Wang, Y., Chen, B., Tian, Q., Wang, X. and Zhang, C. 2013 "Texture evolution in shocked Ni₄₇Ti₄₄Nb₉ shape memory alloys" *Mater. Sci. Technol.* 29 1499-1502
- Liu, H., Cao, Z.K., Yao, G.C., Luo, H.J. and Zu, G.Y. 2013 "Performance of aluminum foam-steel panel sandwich composites subjected to blast loading" *Mater. Design* 47 483-488
- Liu, Y., Wang, H.-K. and Zhang, X. 2013 "A multiscale framework for high-velocity impact process with combined material point method and molecular dynamics" *Int. J. Mech. Mater. Des.* 9 127-139
- Liu, Y., Wang, D.R. and Shi, C.C. 2013 "Dynamic analysis of reinforced concrete beam under shock wave" *Appl. Mech. Mater.* 253 591-594

- Liu, H.T., Sun, G.A., Wang, Y.D., Chen, B. and Wang, X.L. 2013 "Shock-induced transformation behavior in NiTi shape memory alloy (in Chinese)" *Acta Phys. Sinica* 62 018103
- Liu, J.J., Bai, Y.N., Chen, P.W., Cui, N.F. and Yin, H. 2013 "Reaction synthesis of TiSi_2 and Ti_5Si_3 by ball-milling and shock loading and their photocatalytic activities" *J. Alloys Compounds* 555 375-380
- Liu, D.S., Liu, R.P., Wei, Y.H. and Pan, P. 2013 "Influence of carbon content on shock hardening behavior of cobalt-base hardfacing deposits" *Mater. Manuf. Processes* 28 643-649
- Liu, T.H., Gao, X., Liu, Z.H., Sun, C.K., Hao, Z.Q., Jin, G.Y. and Lin, J.Q. 2013 "Characteristics of shock wave from nanosecond laser-produced aluminum plasma in air" *Proc. SPIE* 8796 879611
- Liu, T., Fleck, N.A., Wadley, H.N.G. and Deshpande, V.S. 2013 "The impact of sand slugs against beams and plates: Coupled discrete particle/finite element simulations" *J. Mech. Phys. Solids* 61 1798-1821
- Liu, H., Shen, Z., Wang, X., Li, P., Hu, Y. and Gu, C. 2013 "A study on fabricating microdeep recessed part on copper foil using laser indirect shock forming" *Trans. ASME: J. Manuf. Sci. Engng* 135 041011
- Loiseau, J., Huneault, J. and Higgins, A.J. 2013 "Development of an explosively-driven two-stage light gas gun for high velocity impact studies", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 382-393, (Lancaster, PA, Destech Publications)
- Lu, C.H., Remington, B.A., Maddox, B.R., Kad, B., Park, H.S., Kawasaki, M., Langdon, T.G. and Meyers, M.A. 2013 "Laser compression of nanocrystalline tantalum" *Acta mater.* 61 7767-7780
- Lu, X. and Wang, B. 2013 "On the strength of angle-patterned sandwich cores under various loading conditions" *Key Engng Mater.* 535 413-417
- Lucas, M., Winey, J.M. and Gupta, Y.M. 2013 "Shock compression of pyrolytic graphite to 18 GPa: Role of orientational order" *J. Appl. Phys.* 114 093515
- Lukyanov, A.A. 2013 "Shock wave structure in anisotropic carbon fiber composites" *Mech. Solids* 48 706-715
- Luscher, D.J., Bronkhorst, C.A., Alleman, C.N. and Addessio, F.L. 2013 "A model for finite-deformation nonlinear thermomechanical response of single crystal copper under shock conditions" *J. Mech. Phys. Solids* 61 1877-1894
- Lv, J.J., Zeng, Q.X. and Li, M.Y. 2013 "Metal foil gap switch and its electrical properties" *Rev. Sci. Instrum.* 84 045101
- Lysak, V.I., Kuzmin, S.V., Krokhalev, A.V. and Grinberg, B.A. 2013 "Structure of boundaries in composite materials obtained using explosive loading" *Phys. Metals Metallog.* 114 947-952

- Ma, T., Döppner, T., Falcone, R.W., Fletcher, L., Fortmann, C., Gericke, D.O., Landen, O.L., Lee, H.J., Pak, A., Vorberger, J., Wünsch, K. and Glenzer, S.H. 2013 "X-ray scattering measurements of strong ion-ion correlations in shock-compressed aluminum" *Phys. Rev. Letts* 110 065001
- Ma, W., Zhu, W.J. and Hou, Y. 2013 "A comparative study on shock compression of nanocrystalline aluminum and copper: Shock profiles and microscopic views of plasticity" *J. Appl. Phys.* 114 163504
- Ma, W. and Lu, Y.W. 2013 "Molecular dynamics investigation of shock front in nanocrystalline copper (in Chinese)" *Acta Phys. Sinica* 62 036201
- Ma, L., Xin, J., Hu, Y. and Zheng, J.Y. 2013 "Ductile and brittle failure assessment of containment vessels subjected to internal blast loading" *Int. J. Impact Engng* 52 28-36
- Maddox, B.R., Park, H.S., Lu, C.H., Remington, B.A., Prisbrey, S., Kad, B., Luo, R. and Meyers, M.A. 2013 "Isentropic/shock compression and recovery methodology for materials using high-amplitude laser pulses" *Mater. Sci. Engng A* 578 354-361
- Magyar, R.J. and Mattson, T.R. 2013 "Mixing of equations of state for xenon-deuterium using density functional theory" *Phys. Plasmas* 20 032701
- Mahdavi, M. and Azadboni, F.K. 2013 "Isentrope parameter effect in the compression process of the fusion advanced fuel" *J. Fusion Energy* 32 88-96
- Malygin, G.A., Ogarkov, S.L. and Andriyash, A.V. 2013 "On the power-law dependence of the plastic strain rate of crystals under intense shock-wave loading" *Phys. Solid State* 55 780-786
- Malygin, G.A., Ogarkov, S.L. and Andriyash, A.V. 2013 "A dislocation kinetic model of the formation and propagation in intense shock waves in crystals" *Phys. Solid State* 55 787-795
- Malygin, G.A., Ogarkov, S.L. and Andriyash, A.V. 2013 "Two-wave structure of plastic relaxation waves in crystals under intense shock loading" *Phys. Solid State* 55 2280-2288
- Mang, C., Kontny, A., Fritz, J. and Schneider, R. 2013 "Shock experiments up to 30GPa and their consequences on microstructures and magnetic properties in pyrrhotite" *Geochem. Geophys. Geosyst.* 14 64-85
- Marchi, S., Bottke, W.F., Cohen, B.A., Wünnemann, K., Kring, D.A., McSween, H.Y., De Sanctis, M.C., O'Brien, D.P., Schenk, P., Raymond, C.A. and Russell, C.T. 2013 "High-velocity collisions from the lunar cataclysm recorded in asteroidal meteorites" *Nature Geoscience* 6 303-307, 411
- Martins, Z., Price, M.C., Goldman, N., Sephton, M.A. and Burchell, M.J. 2013 "Shock synthesis of amino acids from impacting cometary and icy planet surface analogues" *Nature Geoscience* 6 1045-1049

- Mathew, N., Picu, C.R. and Chung, P.W. 2013 "Peierls stress of dislocations in molecular crystal RDX" *J. Phys. Chem. A* 117 5326-5334
- Mayer, A.E., Khishchenko, K.V., Levashov, P.R. and Mayer, P.N. 2013 "Modeling of plasticity and fracture of metals at shock loading" *J. Appl. Phys.* 113 193508
- McCallum, S., Shoji, H. and Akiyama, H. 2013 "Development of an advanced multi-material bird-strike model using the smoothed particle hydrodynamics method" *Int. J. Crashworthiness* 18 579-596
- Meessen, J., Sanchez, F.J., Sadowsky, A., de la Torre, R., Ott, S. and de Vera, J.P. 2013 "Extremotolerance and resistance of lichens: Comparative studies on five species used in astrobiological research. 2: Secondary lichen compounds" *Origins Life Evolution Biosphere* 43 501-526
- Mendes, R., Ribeiro, J.B. and Loureiro, A. 2013 "Effect of explosive characteristics on the explosive welding of stainless steel to carbon steel in cylindrical configuration" *Mater. Design* 51 182-192
- Meshcheryakov, Y.I., Divakov, A.K., Zhigacheva, N.I. and Barakhtin, B.K. 2013 "Regimes of interscale momentum exchange in shock deformed solids" *Int. J. Impact Engng* 57 99-107
- Meshcheryakov, Y.P., Pikarevskii, A.A. and Stoyanovskii, O.I. 2013 "Effect of stiffness of shock-absorbing pads on the stresses in explosion chambers" *J. Appl. Mech. Tech. Phys.* 54 680-687
- Meyer, A.E., Khishchenko, K.V., Levashov, P.R. and Mayer, P.N. 2013 "Modeling of plasticity and fracture of metals at shock loading" *J. Appl. Phys.* 113 193508
- Miao, C., Li, G.F., Zhong, T., Yang, W.L., Yang, L. and Li, S.T. 2013 "Experimental and modeling studies of the interlayer effect on stress wave propagation of ceramic/Ti6Al4V armors" *Adv. Mater. Res.* 753 981-987
- Michel, D.T., Goncharov, V.N., Igumenshchev, I.V., Epstein, R. and Froule, D.H. 2013 "Demonstration of the improved rocket efficiency in direct-drive implosions using different ablator materials" *Phys. Rev. Letts* 111 245005
- Mihaly, J.M., Tandy, J.T., Adams, M.A. and Rosakis, A.J. 2013 "In situ diagnostics for a small-bore hypervelocity impact facility" *Int. J. Impact Engng* 62 13-26
- Mihaly, J.M., Rosakis, A.J., Adams, M.A. and Tandy, J.T. 2013 "Imaging ejecta and debris cloud behavior using laser side-lighting" *Procedia Engng* 58 363-368
- Mikhailova, G., Antonova, L., Borovitskaya, I., Krokhin, O., Majorov, A., Mikhailov, B., Nikulin, V., Silin, P. and Troitskii, A. 2013 "The shock-wave application for increasing of a critical current in composite high-temperature superconductor tapes (HTSC)" *Phys. Stat. Sol. C* 10 689-692
- Milathianiki, D., Boutet, S., Williams, G.J., Higginbotham, A., Ratner, D., Gleason, A.E., Messerschmidt, M., Seibert, M.M., Swift, D.C., Hering, P., Robinson, J., White, W.E. and Wark, J.S. 2013 "Femtosecond visualization of lattice dynamics in shock compressed matter" *Science* 342 220-223, 1316

- Militzer, B. 2013 "Ab initio investigation of a possible liquid liquid phase transition in MgSiO_3 at megabar pressures" *High Energy Density Phys.* 9 152-157
- Millett, J.C.F., Whiteman, G., Park, N.T., Case, S. and Bourne, N.K. 2013 "The role of cold work on the shock response of tantalum" *J. Appl. Phys.* 113 233502
- Milyavskii, V.V., Akopov, F.A., Ananov, S.Y., Borovkova, L.B., Borodina, T.I., Valuev, A.V., Valyano, G.E., Ziborov, V.S., Lukin, E.S., Popova, N.A. and Savinykh, S.A. 2013 "Phase transitions of partially stabilized zirconia under stepwise shock-wave loading" *High Temp.* 51 640-644
- Minnicino, M.A. 2013 "Structural dynamics of despun kinetic energy projectiles launched with composite sabots", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 428-439, (Lancaster, PA, Destech Publications)
- Miyahara, M., Ozawa, S., Ohtani, E., Kimura, M., Kubo, T., Sakai, T., Nagase, T., Nishijima, M. and Hirao, N. 2013 "Jadeite formation in shocked ordinary chondrites" *Earth Planet. Sci. Letts* 373 102-108
- Miyahara, M., Kaneko, S., Ohlani, E., Sakai, T., Nagase, T., Kayama, M., Nishido, H. and Hirao, N. 2013 "Discovery of seifertite in a shocked lunar meteorite" *Nature Commun.* 4 doi:10.1038/ncomms2733
- Mohamed, A.K. and Mostafa, H.E. 2013 "Theoretical and experimental investigation of shock wave parameters of selected compositions", in "Proc. 44th Int. Annual Conf. of the ICT", ed. pp. paper 14, (Pfintzal, Germany, Institut für Chemische Technologie)
- Molodets, A.M. and Zhuravlev, Y.N. 2013 "Equations of state of silver azide and calculation of its Hugoniot" *Combust. Explos. Shock Waves* 49 484-489
- Molodets, A.M., Shakhrai, D.V., Savinykh, A.S., Golyshev, A.A. and Kim, V.V. 2013 "Equation of state of PTFE for calculating shock compression parameters at megabar pressures" *Combust. Explos. Shock Waves* 49 731-738
- Molodets, A.M. 2013 "Temperature-time dependence of the spall strength of α -iron" *Phys. Solid State* 55 2200-2204
- Molodets, A.M., Golyshev, A.A. and Shulga, Y.M. 2013 "Polymorphic transformations in nanostructured anatase (TiO_2) under high-pressure shock compression" *Tech. Phys.* 58 1029-1033
- Morales, M.A., McMahon, J.M., Pierleoni, C. and Ceperley, D.M. 2013 "Nuclear quantum effects and nonlocal exchange-correlation functionals applied to liquid hydrogen at high pressure" *Phys. Rev. Letts* 110 065702
- Moro, E.A. and Briggs, M.E. 2013 "Simultaneous measurement of transverse speed and axial velocity from a single optical beam" *Rev. Sci. Instrum.* 84 016110
- Morris, C.J., Wilkins, P.R. and May, C.M. 2013 "Streak spectroscopy and velocimetry of electrically exploded Ni/Al laminates" *J. Appl. Phys.* 113 043304

- Mukherjee, D., Joshi, K.D. and Gupta, S.C. 2013 "High pressure equation of state and ideal compressive and tensile strength of MgO single crystal: Ab-initio calculations" *J. Appl. Phys.* 113 233504
- Murphy, M.J. and Clarke, S.A. 2013 "Ultra-high-speed imaging for explosive shocks in transparent media", in "Dynamic Behavior of Materials", ed. V. Chalivendra, B. Song and D. Casem, pp. 425-432, (Berlin, Springer)
- Nagarajan, B., Castagne, S. and Wang, Z.K. 2013 "Investigation of copper foil thinning behavior by flexible-pad laser shock forming" *Key Engng Mater.* 535 306-309
- Nagarajan, B., Castagne, S. and Wang, Z.K. 2013 "Mold-free fabrication of 3D microfeatures using laser-induced shock pressure" *Appl. Surf. Sci.* 268 529-534
- Nair, A.R., Mason, B.A., Groven, L.J., Son, S.F., Strachan, A. and Cuitino, A.M. 2013 "Micro-RVE modeling of mechanistic response in porous intermetallics subject to weak and moderate impact loading" *Int. J. Plast.* 51 1-32
- Nakamura, K., Atou, T., Niwase, K., Nakamura, K.G., Yoshimura, A., Tanimura, M., Kobayashi, K.-I. and Tachibana, M. 2013 "Transparent graphitic tiles synthesized from carbon nanowalls by shock compression and rapid quenching" *J. Appl. Phys.* 113 044313
- Nakamuta, Y. and Toh, S. 2013 "Transformation of graphite to lonsdaleite and diamond in the Goalpara ureilite directly observed by TEM" *Amer. Mineralogist* 98 574-581
- Namini, V.H., Amanifard, N., Darvizeh, A. and Mohamadi, K. 2013 "Examining a modified algorithm of smoothed particle hydrodynamics for a high velocity perforation of an aluminum beam" *Meccanica* 48 1623-1636
- Neel, C.H., Chhabildas, L.C. and Abrahams, R.A. 2013 "The shock and spall response of Kovar" *Procedia Engng* 58 117-126
- Nellis, W.J. 2013 "Wigner and Huntington: The long quest for metallic hydrogen" *High Press. Res.* 33 369-376
- Nguyen, T.T.P., Tanabe, R. and Ito, Y. 2013 "Laser-induced shock process in under-liquid regime studied by time-resolved photoelasticity imaging technique " *Appl. Phys. Letts* 102 124102
- Ning, J., Ren, H., Guo, T. and Li, P. 2013 "Dynamic response of alumina ceramics impacted by long tungsten projectile" *Int. J. Impact Engng* 62 60-74
- Nissim, N., Eliezer, S., Werdiger, M. and Perelmutter, L. 2013 "Approaching the 'cold curve' in laser-driven shock wave experiment of a matter precompressed by a partially perforated diamond anvil" *Laser Particle Beams* 31 73-79
- Nordendale, N.A., Heard, W.F., Hickman, M.A., Zhang, B. and Basu, P.K. 2013 "Cementitious material models for simulating projectile impact effects" *Comput. Mater. Sci.* 79 745-758

- Ohl, C.-D. and Ohl, S.-W. 2013 "Shock wave interaction with single bubbles and bubble clouds", in "Bubble Dynamics and Shock Waves", ed. C.F. Delale, pp. 3-32, (Berlin, Springer)
- Öhman, T. and Preeden, U. 2013 "Shock metamorphic features in quartz grains from the Saarijarvi and Soderfjarden impact structures, Finland" *Meteor. Planet. Sci.* 48 955-975
- Ohtani, E., Shibazaki, Y., Sakai, T., Mibe, K., Fukui, H., Kamada, S., Sakamaki, T., Seto, Y., Tsutsui, S. and Baron, A.Q.R. 2013 "Sound velocity of hcp iron up to core pressures" *Geophys. Res. Letts* 40 5089-5094
- Oleinik, G.S., Volkogon, V.M., Fedoran, Y.A., Avramchuk, S.K., Kravchuk, A.Y. and Kotko, A.V. 2013 "Influence of the wurtzitic boron nitride initial structural state on the formation of the granular structure of the wBN based materials. 1: Structural characteristics of particles of the initial wBN powders" *J. Superhard Mater.* 35 331-338
- Olesnitskii, T.A., Sarry, M.F. and Skidan, S.G. 2013 "Analytical calculation of the energy and pressure of a body under arbitrary compression from its experimental shock adiabat" *Tech. Phys.* 58 1800-1805
- Olevsky, E.A., Bokov, A.A., Boltachev, G.S., Volkov, N.B., Zayats, S.V., Ilyina, A.M., Nozdrin, A.A. and Pararin, S.N. 2013 "Modeling and optimization of uniaxial magnetic pulse compaction of nanopowders" *Acta Mech.* 224 3177-3195
- Onederra, I.A., Furtney, J.K., Sellers, E. and Iverson, S. 2013 "Modelling blast induced damage from a fully coupled explosive charge" *Int. J. Rock Mech. Min. Sci.* 58 73-84
- Ozbolt, J. and Riedel, W. 2013 "Modelling the response of concrete structures from strain rate effects to shock induced loading", in "Understanding the Tensile Properties of Concrete", ed. J. Weerheijm, pp. 295-340, (Cambridge, UK, Woodhead)
- Paleari, S., Batani, D., Vinci, T., Benocci, R., Shigemori, K., Hironaka, Y., Kadono, T., Shiroshita, A., Piseri, P., Bellucci, S., Mangione, A. and Aliverdiev, A. 2013 "A new target design for laser shock-compression studies of carbon reflectivity in the megabar regime" *Eur. Phys. J. D* 67 article 136
- Partom, Y. 2013 "Revisiting shock initiation modeling of homogeneous explosives" *J. Energ. Mater.* 31 127-142
- Paul, H., Litynska-Dobrzynska, L. and Prazmowski, M. 2013 "Microstructure and phase constitution near the interface of explosively welded aluminum/copper plates" *Metall. Mater. Trans. A* 44 3836-3851
- Pellouchoud, L.A. and Reed, E.J. 2013 "Optical characterization of chemistry in shocked nitromethane with time-dependent density functional theory" *J. Phys. Chem. A* 117 12288-12298

- Peng, H., Li, P., .Pei, X.Y., He, H.L., Cheng, H.P. and Qi, M.L. 2013 "Experimental study of the spatial discontinuity of dynamic damage evolution (in Chinese)" *Acta Phys. Sinica* 62 226201
- Perez, D., Luo, S.-N., Voter, A.F. and Germann, T.C. 2013 "Entropic stabilization of nanoscale voids in materials under tension" *Phys. Rev. Letts* 110 206001
- Perez, C., Chen, H., Matula, T.J., Karzova, M. and Khokhlova, V.A. 2013 "Acoustic field characterization of the duolith: Measurements and modeling of a clinical shock wave therapy device" *J. Acoust. Soc. Amer.* 134 1663-1674
- Perotti, L.E., Deiterding, R., Inaba, K., Shepherd, J. and Ortiz, M. 2013 "Elastic response of water-filled fiber composite tubes under shock wave loading" *Int. J. Solids Structures* 50 473-486
- Perton, M., Levesque, D., Monchalain, J.P., Lord, M., Smith, J.A. and .Rabin, B.H. 2013 "Laser shockwave technique for characterization of nuclear fuel plate interfaces" *AIP Conf. Proc.* 1511 345-352
- Petel, O.E., Ouellet, S., Higgins, A.J. and Frost, D.L. 2013 "The elastic-plastic behaviour of foam under shock loading" *Shock Waves* 23 55-67
- Phadnis, V.A., Kumar, P., Shukla, A., Roy, A. and Silberschmidt, V.V. 2013 "Effect of plate curvature on blast response of carbon/epoxy composite" *Key Engng Mater.* 569 41-48
- Pichot, V., Risse, B., Schnell, F., Mory, J. and Spitzer, D. 2013 "Understanding ultrafine nanodiamond formation using nanostructured explosives" *Scientific Reports* 3 doi: 10.1038/srep02159
- Piekutowski, A.J. and Poormon, K.L. 2013 "Effects of scale on the performance of Whipple shields for impact velocities ranging from 7 to 10 km/s" *Procedia Engng* 58 642-652
- Pikarevskii, A.A. and Stoyanovskii, O.I. 2013 "Effect of shielding of a part of the casing of a technological explosion chamber on its stress state" *J. Appl. Mech. Tech. Phys.* 54 337-342
- Pineau, N. 2013 "Molecular dynamics simulations of shock-compressed graphite" *J. Phys. Chem. C* 117 12778-12786
- Ping, Y., Hicks, D.G., Yaakobi, B., Coppari, F., Eggert, J. and Collins, G.W. 2013 "A platform for X-ray absorption fine structure study of dynamically compressed materials above 1 Mbar" *Rev. Sci. Instrum.* 84 123105
- Ping, Y., Coppari, F., Hicks, D.G., Yaakobi, B., Fratanduono, D.E., Hamel, S., Eggert, J.H., Rygg, J.R., Smith, R.F., Swift, D.C., Braun, D.G., Boehly, T.R. and Collins, G.W. 2013 "Solid iron compressed up to 560 GPa" *Phys. Rev. Letts* 111 065501
- Piriz, A.R., Piriz, S.A. and Tahir, N.A. 2013 "High pressure generation by hot electrons driven ablation" *Phys. Plasmas* 20 112704

- Podurets, A.M., Tkachenko, M.I., Ignatova, O.N., Lebedev, A.I., Igonin, V.V. and Raevskii, V.A. 2013 "Dislocation density in copper and tantalum subjected to shock compression depending on loading parameters and original microstructure" *Phys. Metals Metallog.* 114 440-447
- Potter, D.K. and Ahrens, T.J. 2013 "Moderate velocity oblique impact sliding: Production of shocked meteorite textures and palaeomagnetically important metallic spherules in planetary regoliths" *Meteor. Planet. Sci.* 48 656-664
- Poutiainen, M. and Heikkila, P. 2013 "Fluid inclusions in microstructures of shocked quartz from the Keurusselka impact site, Central Finland" *Meteor. Planet. Sci.* 48 1043-1049
- Powles, R.C., Marks, N.A., Lau, D.W.M., McCulloch, D.G. and McKenzie, D.R. 2013 "An energy landscape for carbon network solids" *Carbon* 63 416-422
- Price, M.C., Solschied, C., Burchell, M.J., Josse, L., Adamek, N. and Cole, M.J. 2013 "Survival of yeast spores in hypervelocity impact events up to velocities of 7.4 km/s" *Icarus* 222 263-272
- Price, M.C., Kearsley, A.T. and Burchell, M.J. 2013 "Validation of the Preston-Tonks-Wallace strength model at strain rates approaching $\sim 10^{11} \text{ s}^{-1}$ for Al-1100, tantalum and copper using hypervelocity impact crater morphologies" *Int. J. Impact Engng* 52 1-10
- Prochazka, P.P. 2013 "Deterioration of fiber-reinforced concrete plate due to explosion and change of temperature" *Key Engng Mater.* 525 185-188
- Qi, M.-L., Zhong, S., He, H.-L., Fan, D. and Zhao, L. 2013 "Effect of grain size and arrangement on dynamic damage evolution of ductile metal" *Chinese Phys. B* 22 046203
- Qiao, L., Zhang, Z.F., He, Y., Shi, A.S. and Guan, Z.W. 2013 "Mesoscale simulation on the shock compression behaviour of Al-W-binder granular metal mixtures" *Mater. Design* 47 341-349
- Qiao, J., Jaanimagi, P.A., Boni, R., Bromage, J. and Hill, E. 2013 "Measuring 8–250 ps short pulses using a high-speed streak camera on kilojoule, petawatt-class laser systems" *Rev. Sci. Instrum.* 84 073104
- Qiao, L., Zhang, Z.F., He, Y., Zhao, X.N. and Guan, Z.W. 2013 "Multiscale modelling on the shock-induced chemical reactions of multifunctional energetic structural materials" *J. Appl. Phys.* 113 173513
- Ragozina, V.I. and Ivanova, Y.E. 2013 "Effect of the medium inhomogeneity on the evolution equation of plane shock waves" *J. Appl. Mech. Tech. Phys.* 54 809-818
- Rajani, H.R.Z. and Mousavi, S.A.A.A. 2013 "On critical criteria for shifting towards plastic strain localization during explosive cladding of Inconel 625 on low-carbon steel" *Combust. Explos. Shock Waves* 49 244-253

- Rajani, H.R.Z., Mousavi, S.A.A.A. and Sani, F.M. 2013 "Comparison of corrosion behavior between fusion cladded and explosive cladded Inconel 625/plain carbon steel bimetal plates" *Mater. Design* 43 467-474
- Ramavat, V., Sarangapani, R., Reddy, S.T., Patil, R.S., Gore, G.M. and Sikder, A.K. 2013 "Studies on the tailoring of particle size and micromeritic properties of reduced shock sensitivity RDX" *Cent. Eur. J. Energ. Mater.* 10 581-592
- Ramis, R. 2013 "Hydrodynamic analysis of laser-driven cylindrical implosions" *Phys. Plasmas* 20 082705
- Rapp, L., Haberl, B., Bradby, J.E., Gamaly, E.G., Williams, J.S., Juodkasis, S. and Rode, A.V. 2013 "Selective localised modifications of silicon crystal by ultrafast laser induced micro-explosion" *Proc. SPIE* 8607 86070H
- Rauls, M. and Ravichandran, G. 2013 "Shock waves in a model particulate composite", in "Dynamic Behavior of Materials", ed. V. Chalivendra, B. Song and D. Casem, pp. 295-296, (Berlin, Springer)
- Ravelo, R., Germann, T.C., Guerrero, O., An, Q. and Holian, B.L. 2013 "Shock-induced plasticity in tantalum single crystals: Interatomic potentials and large-scale molecular-dynamics simulations" *Phys. Rev. B* 88 134101
- Razorenov, S.V., Savinykh, A.S. and Zaretsky, E.B. 2013 "Elastic-plastic deformation and fracture of shock-compressed single-crystal and polycrystalline copper near melting" *Tech. Phys.* 58 1437-1442
- Reddy, N.K., Jayaram, V., Arunan, E., Kwon, Y.B., Moon, W.J. and Reddy, K.P.J. 2013 "Investigations on high enthalpy shock wave exposed graphitic carbon nanoparticles" *Diamond Related Mater.* 35 53-57
- Reddy, K.M., Liu, P., Hirata, A., Fujita, T. and Chen, M.W. 2013 "Atomic structure of amorphous shear bands in boron carbide" *Nature Commun.* 4 doi: 10.1038/ncomms3483
- Reddy, N.K., Jayaram, V., Arunan, E., Kwon, Y.-B., Moon, W.J. and Reddy, K.P.J. 2013 "Investigations on high enthalpy shock wave exposed graphitic carbon nanoparticles" *Diamond Related Mater.* 35 53-57
- Ren, Y., Wang, F., Wang, S., Tan, C., Yu, X., Jiang, J. and Cai, H. 2013 "Mechanical response and effects of beta-to-alpha phase transformation in the strengthening Ti-10V-2-Fe-3Al during one-dimensional shock loading" *Mater. Sci. Engng A* 562 137-143
- Ren, Y., Wang, F.C., Tan, C.W., Wang, S.Y., Yu, X.D., Jiang, J.W. and Cai, H.N. 2013 "Effect of shock-induced martensite transformation on the postshock mechanical response of metastable beta titanium alloys" *J. Alloys Compounds* 578 547-552
- Ren, Y., Wang, F.C., Tan, C.W., Wang, S.Y., Yu, X.D., Jiang, J.W., Ma, H.L. and Cai, H.N. 2013 "Shock-induced mechanical response and spall fracture behavior of an extra-low interstitial grade Ti6Al4V alloy" *Mater. Sci. Engng A* 578 247-255

- Ren, X.D., Ruan, L., Yuan, S.Q., Ren, N.F., Zheng, L.M., Zhan, Q.B., Zhou, J.Z., Yang, H.M., Wang, Y. and Dai, F.Z. 2013 "Dislocation polymorphism transformation of 6061-T651 aluminum alloy processed by laser shock processing: Effect of tempering at the elevated temperatures" *Mater. Sci. Engng A* 578 96-102
- Rider, W.J., Love, E., Scovazzi, G. and Weirs, V.G. 2013 "A high resolution Lagrangian method using nonlinear hybridization and hyperviscosity" *Comput. Fluids* 83(S1) 25-32
- Riedel, W. and Forquin, P. 2013 "Modelling the response of concrete structures to dynamic loading", in "Understanding the Tensile Properties of Concrete", ed. J. Weerheijm, pp. 125-142, (Cambridge, UK, Woodhead)
- Rivera-Rivera, L.A., Sewell, T.D. and Thompson, D.L. 2013 "Post-shock relaxation in crystalline nitromethane" *J. Chem. Phys.* 138 084512
- Robey, H.F., Moody, J.D., Celliers, P.M., Ross, J.S., Ralph, J., Le Pape, S., Hopkins, L.B., Parham, T., Sater, J., Mapoles, E.R., Holunga, D.M., Walters, C.E., Haid, B.J., Koziowski, B.J., Dylla-Spears, R.J., Krauter, K.G., Frieders, G., Ross, G., Bowers, M.W., Strozzi, D.J., Yoxall, B.E., Hamza, A.V., Dzenitis, B., Bhandarkar, S.D., Young, B., Van Wonterghem, B.M., Atherton, L.J., Landen, O.L., Edwards, M.J. and Boehly, T.R. 2013 "Measurement of high-pressure shock waves in cryogenic deuterium-lithium ice layered capsule implosions on NIF" *Phys. Rev. Letts* 111 065003
- Rodriguez, V., Saurel, R., Jourdan, G. and Houas, L. 2013 "Solid-particle jet formation under shock-wave acceleration" *Phys. Rev. E* 88 063011
- Rodriguez, G., Sandberg, R.L., Jackson, S.I., Dattelbaum, D.M., Vincent, S.W., McCulloch, Q., Martinez, R.M., Gilbertson, S.M. and Udd, E. 2013 "Fiber Bragg grating sensing of detonation and shock experiments at Los Alamos National Laboratory" *Proc. SPIE* 8722 872204
- Root, S., Cochrane, K.R., Carpenter, J.H. and Mattson, T.R. 2013 "Carbon dioxide shock and reshock equation of state data to 8 Mbar: Experiments and simulations" *Phys. Rev. B* 87 224102
- Root, S., Haill, T.A., Lane, J.M.D., Thompson, A.P., Grest, G.S., Schroen, D.G. and Mattsson, T.R. 2013 "Shock compression of hydrocarbon foam to 200 GPa: Experiments, atomistic simulations, and mesoscale hydrodynamic modeling" *J. Appl. Phys.* 114 103502
- Roy, S., Jiang, N., Stauffer, H.U., Schmidt, J.B., Kulatilaka, W.D., Meyer, T.R., Bunker, C.E. and Gord, J.R. 2013 "Spatially and temporally resolved temperature and shock-speed measurements behind a laser-induced blast wave of energetic nanoparticles" *J. Appl. Phys.* 113 184310
- Ruestes, C.J., Bringa, E.M., Stukowski, A., Nieva, J.F.R., Bertolino, G., Tang, Y. and Meyers, M.A. 2013 "Atomistic simulation of the mechanical response of a nanoporous bcc metal" *Scripta mater.* 68 817-820

- Rushchitsky, J.J. and Sinchilo, S.V. 2013 "On two-dimensional nonlinear wave equations for the Murnaghan model" *Int. Appl. Mech.* 49 512-520
- Russell, P.S., Grant, J.A., Williams, K.K., Carter, L.M., Garry, W.B. and Daubar, I.J. 2013 "Ground penetrating radar geologic field studies of the ejecta of Barringer Meteorite Crater, Arizona, as a planetary analog" *J. Geophys. Res.: Planets* 118 1915-1933
- Rybin, V.V., Ushanova, E.A. and Zolotarevskii, N.Y. 2013 "Features of misoriented structures in a copper-copper bilayer plate obtained by explosive welding" *Tech. Phys.* 58 1304-1312
- Saiz, F., Borrajo-Pelaez, R. and Gamero-Castaño, M. 2013 "The influence of the projectile's velocity and diameter on the amorphization of silicon by electrospayed nanodroplets" *J. Appl. Phys.* 114 034304
- Sambasivan, S., Kapahi, A. and Udaykumar, H.S. 2013 "Simulation of high speed impact, penetration and fragmentation problems on locally refined Cartesian grids" *J. Comput. Phys.* 235 334-370
- Savinykh, A.S., Kanel, G.I., Razorenov, S.V. and Romyantsev, V.I. 2013 "Evolution of shock waves in SiC ceramic" *Tech. Phys.* 58 973-977
- Scherbatiuk, K., Pope, D., Fowler, J. and Fang, J. 2013 "Effect of silty-sand compressibility on transferred velocity from impulsive blast loading", in "Design Against Blast: Load Definition and Structural Response", ed. S. Syngellakis, pp. 109-119, (Southampton, UK, WIT Press)
- Schimizza, B., Son, S.F., Goel, R., Vechart, A.P. and Young, L. 2013 "An experimental and numerical study of blast induced shock wave mitigation in sandwich structures" *Appl. Acoustics* 74 1-9
- Schmieder, M. and Buchner, E. 2013 "Shatter cones in Opalinuston concretions of the Steinheim Basin (SW Germany) (in German)" *Z. deutsch. Gesellsch. Geowissensch.* 164 503-513
- Schulze, P.A., Dang, N.C., Bolme, C.A., Brown, K.E., McGrane, S.D. and Moore, D.S. 2013 "Shock Hugoniot equations of state for binary ideal (toluene/fluorobenzene) and nonideal (ethanol/water) liquid mixtures" *J. Phys. Chem. A* 117 6158-6163
- Seagle, C.T., Davis, J.-P., Martin, M.R. and Hanshaw, H.L. 2013 "Shock-ramp compression: Ramp compression of shock-melted tin" *Appl. Phys. Letts* 102 244104
- Seagle, C.T., Cottrell, E., Fei, Y.W., Hummer, D.R. and Prakapenka, V.B. 2013 "Electrical and thermal transport properties of iron and iron-silicon alloy at high pressure" *Geophys. Res. Letts* 40 5377-5381
- Semenov, Y.A. and Wu, G.X. 2013 "Asymmetric impact between liquid and solid wedges" *Proc. R. Soc. A* 469 20120203

- Sen, S. and Aksoy, I.G. 2013 "An application of explosive metal forming in military field: The relationship between shaped charge jet formation and thickness variation along liner length of conical copper liner" Arab. J. Sci. Engng 38 3551-3562
- Seuthe, T., Grehn, M., Mermillod-Blondin, A., Bonse, J. and Eberstein, M. 2013 "Compositional dependent response of silica-based glasses to femtosecond laser pulse irradiation" Proc. SPIE 8885 88850M
- Shafer, D., Toker, G.R., Gurovich, V.T., Gleizer, S. and Krasik, Y.E. 2013 "Peculiarity of convergence of shock wave generated by underwater electrical explosion of ring-shaped wire" Phys. Plasmas 20 052702
- Shan, T.R., Wixom, R.R., Mattsson, A.E. and Thompson, A.P. 2013 "Atomistic simulation of orientation dependence in shock-induced initiation of PETN" J. Phys. Chem. B 117 928-936
- Shang, W., Wei, H., Li, Z., Yi, R., Zhu, T., Song, T., Huang, C. and Wang, J. 2013 "Instantaneous X-ray radiation energy from laser produced polystyrene plasmas for shock ignition conditions" Phys. Plasmas 20 102702
- Shao, J.-L., Wang, P., He, A.-M., Duan, S.-Q. and Qin, C.-S. 2013 "Atomistic simulations of shock-induced microjet from a grooved aluminium surface" J. Appl. Phys. 113 153501
- Shao, J.-L., Wang, P., He, A.-M., Duan, S.-Q. and Qin, C.-S. 2013 "Molecular dynamics study on the failure modes of aluminium under decaying shock loading" J. Appl. Phys. 113 163507
- Shao, J.-L., Wang, P., He, A.-M., Zhang, R. and Qin, C.-S. 2013 "Spall strength of aluminium single crystals under high strain rates: Molecular dynamics study" J. Appl. Phys. 114 173501
- Shao, J.L., Wang, P., He, A.M., Qin, C.S., Xin, J.T. and Gu, Y.Q. 2013 "Microscopic simulation on the dynamic failure of metal aluminum under triangular wave loading (in Chinese)" Acta Phys. Sinica 62 076201
- Sharma, A.D., Sharma, A.K. and Thakur, N. 2013 "Explosively generated shock wave processing of metal powders by instrumented detonics" AIP Conf. Proc. 1536 1169-1170
- Sharma, A.D., Sharma, A.K. and Thakur, N. 2013 "Effect of explosive contact and non-contact shock-processing on structure, microstructure and mechanical characteristics of aluminum" Appl. Phys. A 111 783-789
- Shatskii, I.P. and Perepichka, V.V. 2013 "Shock-wave propagation in an elastic rod with a viscoplastic external resistance" J. Appl. Mech. Tech. Phys. 54 1016-1020

- Shaw, C.S.J. and Walton, E. 2013 "Thermal modeling of shock melts in Martian meteorites: Implications for preserving Martian atmospheric signatures and crystallization of high-pressure minerals from shock melts" *Meteor. Planet. Sci.* 48 758-770
- Shcherbakov, I.P. and Chmel, A.E. 2013 "Study of damage initiation in SiO₂ glass and ceramics by fractoluminescence and acoustic emission techniques" *Glass Phys. Chem.* 39 527-532
- Shen, C.J., Yu, T.X. and Lu, G. 2013 "Double shock mode in graded cellular rod under impact" *Int. J. Solids Structures* 50 217-233
- Shen, Z.B., Gu, C.X., Liu, H.X., Wang, X. and Hu, Y. 2013 "Fabricating three-dimensional array features on metallic foil surface using overlapping laser shock embossing" *Optics Lasers Engng* 51 973-977
- Shigemori, K., Hironaka, Y., Nagamoto, H., Fujioka, S., Sunahara, A., Kadono, T., Azechi, H. and Shimizu, K. 2013 "Extremely high-pressure generation and compression with laser implosion plasmas " *Appl. Phys. Letts* 102 183501
- Shojaei, A., Voyiadjis, G.Z. and Tan, P.J. 2013 "Viscoplastic constitutive theory for brittle to ductile damage in polycrystalline materials under dynamic loading" *Int. J. Plast.* 48 125-151
- Shu, H., Fu, S.Z., Huang, X.G., Dong, J.Q., Fang, Z.H., Wang, T., Ye, J.J., Xie, Z.Y., Guo, J. and Zhou, H.Z. 2013 "A joint diagnostic system for laser-driven shock wave experiments" *Eur. Phys. J. Appl. Phys.* 62 31001
- Shukla, M., Sawant, S., Agrawal, A., Kashyap, Y. and Roy, T. 2013 "Laser produced thin metallic planar mini-flyer generation using fiber optic plate" *Laser Particle Beams* 31 289-300
- Siaulys, N., Gallais, L. and Melninkaitis, A. 2013 "Application of time-resolved digital holographic microscopy to study femtosecond damage process in thin films" *Proc. SPIE* 8885 88851A
- Sidorov, N.S., Palnichenko, A.V., Shakhrai, D.B., Avdonin, V.V., Vyaselev, O.M. and Khasanov, S.S. 2013 "Superconductivity of Mg/MgO interface formed by shock-wave pressure" *Physica C* 488 18-24
- Sitalakshmi, B., Vudayagiri, A., Sreedhar, S. and Viswanathan, N.K. 2013 "On-axis time-resolved spatial characterization of shock-induced refractive fringes in liquid water" *J. Opt. Soc. Amer. B* 30 2206-2214

- Smalyuk, V.A., Atherton, L.J., Benedetti, L.R., Bionta, R., Bleuel, D., Bond, E., Bradley, D.K., Caggiano, J., Callahan, D.A., Casey, D.T., Celliers, P.M., Cerjan, C.J., Clark, D., Dewald, E.L., Dixit, S.N., Döppner, T., Edgell, D.H., Edwards, M.J., Frenje, J., Gatu-Johnson, M., Glebov, V.Y., Glenn, S., Glenzer, S.H., Grim, G., Haan, S.W., Hammel, B.A., Hartouni, E.P., Hatarik, R., Hatchett, S., Hicks, D.G., Hsing, W.W., Izumi, N., Jones, O.S., Key, M.H., Khan, S.F., Kilkenny, J.D., Kline, J.L., Knauer, J., Kyrala, G.A., Landen, O.L., Le Pape, S., Lindl, J.D., Ma, T., MacGowan, B.J., Mackinnon, A.J., MacPhee, A.G., McNaney, J., Meezan, N.B., Moody, J.D., Moore, A., Moran, M., Moses, E.I., Pak, A., Parham, T., Park, H.-S., Patel, P.K., Petrasso, R., Ralph, J.E., Regan, S.P., Remington, B.A., Robey, H.F., Ross, J.S., Spears, B.K., Springer, P.T., Suter, L.J., Tommasini, R., Town, R.P., Weber, S.V. and Widmann, K. 2013 "Performance of high-convergence, layered DT implosions with extended-duration pulses at the National Ignition Facility" *Phys. Rev. Letts* 111 215001
- Smith, R.F., Bolme, C.A., Erskine, D.J., Celliers, P.M., Ali, S., Eggert, J.H., Brygoo, S.L., Hammel, B.D., Wang, J. and Collins, G.W. 2013 "Heterogeneous flow and brittle failure in shock-compressed silicon" *J. Appl. Phys.* 114 133504
- Smith, R.F., Eggert, J.H., Swift, D.C., Wang, J., Duffy, T.S., Braun, D.G., Rudd, R.E., Reisman, D.B., Davis, J.-P., Knudson, M.D. and Collins, G.W. 2013 "Time-dependence of the alpha to epsilon phase transformation in iron" *J. Appl. Phys.* 114 223507
- Smith, N.B. and Zhong, P. 2013 "A heuristic model of stone comminution in shock wave lithotripsy" *J. Acoust. Soc. Amer.* 134 1548-1558
- Sokolova, T.S., Dorogokupets, P.I. and Litasov, K.D. 2013 "Self-consistent pressure scales based on the equations of state for ruby, diamond, MgO, B2-NaCl, as well as gold, platinum, and other metals to 4 Mbar and 3000 K" *Russ. Geol. Geophys.* 54 181-199
- Song, M. and Ge, S.R. 2013 "Dynamic response of composite shell under axial explosion impact load in tunnel" *Thin-Walled Structures* 67 49-62
- Sousa-Martins, J., Kakogiannis, D., Coghe, F., Reymen, B. and Teixeira-Dias, F. 2013 "Behaviour of sandwich structures with cork compound cores subjected to blast waves" *Engng Struct.* 46 140-146
- Stickle, A.M. and Schultz, P.H. 2013 "Investigating pressure magnitudes at depth for oblique impacts into layered targets: Applications to terrestrial impacts in sedimentary targets" *Meteor. Planet. Sci.* 48 1638-1650
- Su, S., Li, J., Kundrát, V., Abbot, A.M. and Ye, H. 2013 "Hydrogen-terminated detonation nanodiamond: Impedance spectroscopy and thermal stability studies" *J. Appl. Phys.* 113 023707

- Sun, W., Li, X.J. and Hokamoto, K. 2013 "Preparation of nano- Al_2O_3 dispersion strengthened coating via coating-substrate co-sintering and underwater shock wave compaction" *Ceram. Int.* 39 3939-3945
- Surkaev, A.L. and Usachev, V.I. 2013 "Experimental study of the pressure field of an electric explosion of plane ring foil" *Tech. Phys. Letts* 39 741-743
- Szlufarska, I., Ramesh, K.T. and Warner, D.H. 2013 "Simulating mechanical behavior of ceramics under extreme conditions" *Ann. Rev. Mater. Res.* 43 131-156
- Takashima, Y., Ohata, M., Tagawa, T., Minami, F., Simoens, B., Lefebvre, M.H., Nickell, R.E., Koide, K., Kitamura, R., Hayashi, K. and Asahina, J.K. 2013 "Damage caused by dynamic/cyclic loading of a detonation chamber" *Trans. ASME: J. Pressure Vessel Technol.* 135 041404
- Tan, Y., Yu, Y., Dai, C., Jin, K., Wang, Q., Hu, J. and Tan, H. 2013 "Hugoniot and sound velocity measurements of bismuth in the range of 11–70 GPa" *J. Appl. Phys.* 113 093509
- Tan, Y., Yu, Y.Y., Dai, C.D., Yu, J.D., Wang, Q.S. and Tan, H. 2013 "Release melting of bismuth (in Chinese)" *Acta Phys. Sinica* 62 036401
- Tang, Y.Z., Bringa, E.M. and Meyers, M.A. 2013 "Inverse Hall-Petch relationship in nanocrystalline tantalum" *Mater. Sci. Engng A* 580 414-426
- Tao, W.J., Huan, S., Huang, F.L. and Jiang, G.P. 2013 "Shock initiation of explosives investigated with small partition experiment and numerical simulation" *Acta Mech. Solida Sinica* 26 353-361
- Teowee, G. and Papillon, B. 2013 "Measurement of borehole pressure during blasting", in "Rock Fragmentation by Blasting", ed. P.K. Singh and A. Sinha, pp. 599-604, (London, Taylor & Francis)
- Thomas, C.W. and Asimow, P.D. 2013 "Preheated shock experiments in the molten $\text{CaAl}_2\text{Si}_2\text{O}_8$ - $\text{CaFeSi}_2\text{O}_6$ - $\text{CaMgSi}_2\text{O}_6$ ternary: A test for linear mixing of liquid volumes at high pressure and temperature" *J. Geophys. Res.: Solid Earth* 118 3354-3365
- Thomas, C.W. and Asimow, P.D. 2013 "Direct shock compression experiments on premolten forsterite and progress toward a consistent high-pressure equation of state for CaO - MgO - Al_2O_3 - SiO_2 - FeO liquids" *J. Geophys. Res.: Solid Earth* 118 5738-5752
- Tian, J., Kim, H.I. and Gupta, V. 2013 "Measurement of solder joint strength in freestanding chip-scale packages using a quantitative laser spallation technique" *J. Adhes. Sci. Technol.* 27 835-842
- Tornabene, L.L., Osinski, G.R., McEwen, A.S., Wray, J.J., Craig, M.A., Sapers, H.M. and Christensen, P.R. 2013 "An impact origin for hydrated silicates on Mars: A synthesis" *J. Geophys. Res.: Planets* 118 994-1012

- Torunov, S.I., Kulish, M.I., Mochalova, V.M., Utkin, A.V. and Yakushev, V.V. 2013 "Experimental study of the relief of the front of steady detonation in liquid high explosives" *Russ. J. Phys. Chem. B* 7 759-764
- Tranter, R.S. and Lynch, P.T. 2013 "A miniature high repetition rate shock tube" *Rev. Sci. Instrum.* 84 094102
- Treadway, S.K. and Lloyd, A.N. 2013 "A novel technique for high-velocity launch of an impactor for initiating shock-to-detonation in high explosives" *Procedia Engng* 58 550-559
- Trofimov, V.S. 2013 "On the nature of shock-induced ultradeep penetration of matter into solids" *Int. J. Self-Propag. High-Temp. Synth.* 22 125-128
- Trofimov, E. and Vainchtein, A. 2013 "Erratum: Shocks versus kinks in a discrete model of displacing phase transitions" *Continuum Mech. Thermodyn.* 25 107-108
- Tryggvason, G. and Dabiri, S. 2013 "Direct numerical simulation of shock propagation in bubbly liquids", in "Bubble Dynamics and Shock Waves", ed. C.F. Delale, pp. 177-203, (Berlin, Springer)
- Tschauner, O., Luo, S.N., Chen, Y.J., McDowell, A., Knight, J. and Clark, S.M. 2013 "Shock synthesis of lanthanum-III-pernitride" *High Press. Res.* 33 202-207
- Tucker, R.J.F., Olson, M. and Morelli, G.L. 2013 "Characterization of polarizing splitter optics in extreme environments" *Proc. SPIE* 8599 859922
- Turley, W.D., Stevens, G.D., Capelle, G.A., Grover, M., Holtkamp, D.B., LaLone, B.M. and Veaser, L.R. 2013 "Luminescence from edge fracture in shocked lithium fluoride crystals" *J. Appl. Phys.* 113 133506
- Turo, D. and Umnova, O. 2013 "Influence of Forchheimer's nonlinearity and transient effects on pulse propagation in air saturated rigid granular materials" *J. Acoust. Soc. Amer.* 134 4763-4774
- Ulrich, S., Upadhyaya, N., van Opheusden, B. and Vitelli, V. 2013 "Shear shocks in fragile networks" *Proc. Nat. Acad. Sci. USA* 110 20929-20934
- Urbánek, M., Masek, B., Hronek, P. and Nesvadba, P. 2013 "The use of explosive energy for joining advanced high strength low alloy steels" *J. Mater. Engng Perform.* 22 748-752
- Vahora, A.Y., Chaudhari, P., Bhatt, N.K., Thakore, B.Y. and Jani, A.R. 2013 "Phase transition and shock Hugoniot of MgO using tight-binding model" *AIP Conf. Proc.* 1536 421-422
- Valentini, P., Tump, P.A., Zhang, C. and Schwartzentruber, T.E. 2013 "Molecular dynamics simulations of shock waves in mixtures of noble gases" *J. Thermophys. Heat Transfer* 27 226-234
- Vallet, A., Ribeyre, X. and Tikhonchuk, V. 2013 "Finite Mach number spherical shock wave, application to shock ignition" *Phys. Plasmas* 20 082702

- van den Wildenburg, S., van Loo, R. and van Hecke, M. 2013 "Shock waves in weakly compressed granular media" *Phys. Rev. Letts* 111 218003
- Vasconcelos, M.A.R., Crosta, A.P., Reimold, W.U., Goes, A.M., Kenkmann, T. and Poelchau, M.H. 2013 "The Serra da Cangalha impact structure, Brazil: Geological, stratigraphic and petrographic aspects of a recently confirmed impact structure" *J. South Amer. Earth Sci.* 45 316-330
- Vasileva, E.S., Kidalov, S.V., Sokolov, V.V., Klimov, G.G. and Ji, P. 2013 "Properties of copper-detonation nanodiamond composites obtained by spray drying" *Tech. Phys. Letts* 39 137-139
- Vasu, K., Matte, H.S.S.R., Shirodkar, S.N., Jayaram, V., Reddy, K.P.J., Waghmare, U.V. and Rao, C.N.R. 2013 "Effect of high-temperature shock-wave compression on few-layer MoS₂, WS₂ and MoSe₂" *Chem. Phys. Letts* 582 105-109
- Vasyukov, V.A., Glybin, A.M., Duday, P.V., Dudin, V.I., Zimenkov, A.A., Ivanov, V.A., Ivanovskiy, A.V., Kraev, A.I., Kuzyaev, A.I., Nadezhin, S.S., Petrukhin, A.A., Skobelev, A.N., Tyupanova, O.A., Atchison, W.L., Griego, J.R., Holtkamp, D.B., Kaul, A.M., Reinovsky, R.E., Rodriguez, G., Tabaka, L.J., Rousculp, C.L., Stone, J.B., Oro, D.M., Salazar, M., Payton, J.R. and Westley, D.T. 2013 "Rheology studies of aluminum with the use of explosive magnetic generators" *Dokl. Physics* 58 20-23
- Vaughan, W.M., Head, J.W., Wilson, L. and Hess, P.C. 2013 "Geology and petrology of enormous volumes of impact melt on the Moon: A case study of the Orientale basin impact melt sea" *Icarus* 223 749-765
- Vincent, L., Poncelet, M., Roux, S., Hild, F. and Farcage, D. 2013 "Experimental facility for high cycle thermal fatigue tests using laser shocks" *Procedia Engng* 66 669-675
- Volkova, E.I., Jones, I.A., Brooks, R., Zhu, Y. and Bichoutskaia, E. 2013 "Mesoscale modelling of shock wave propagation in a SiC/Al nanocomposite reinforced with WS₂-inorganic fullerene nanoparticles" *Compos. Struct.* 96 601-605
- Walker, J.D., Chocron, S., Durda, D.D., Grosch, D.J., Movshovitz, N., Richardson, D.C. and Asphaug, E. 2013 "Momentum enhancement from aluminum striking granite and the scale size effect" *Int. J. Impact Engng* 56 12-18
- Wallis, J., Wickramasinghe, N.C., Wallis, D.H., Miyake, N., Wallis, M.K., Hoover, R.B., Samaranyake, A., Wickramaratne, K. and Oldroyd, A. 2013 "Physical, chemical and mineral properties of the Polonnaruwa stones" *Proc. SPIE* 8865 886508
- Walton, E.L. 2013 "Shock metamorphism of Elephant Moraine A79001: Implications for olivine-ringwoodite transformation and the complex thermal history of heavily shocked Martian meteorites" *Geochim. Cosmochim. Acta* 107 299-315
- Wan, H., Bai, S., Li, S., Mo, J., Zhao, S. and Song, Z. 2013 "Shielding performances of the designed hybrid laminates impacted by hypervelocity flyer" *Mater. Design* 52 422-428

- Wang, Y., He, H. and Wang, L. 2013 "Critical damage evolution model for spall failure of ductile metals" *Mech. Mater.* 56 131-141
- Wang, X., Matula, T.J., Ma, Y., Liu, Z., Tu, J., Guo, X. and Zhang, D. 2013 "Finite element modeling of acoustic wave propagation and energy deposition in bone during extracorporeal shock wave treatment" *J. Appl. Phys.* 113 244901
- Wang, E., Wright, J. and Shukla, A. 2013 "Fluid structure interaction during shock loading in a compressible fluid", in "Dynamic Behavior of Materials", ed. V. Chalivendra, B. Song and D. Casem, pp. 395-407, (Berlin, Springer)
- Wang, C., Long, Y., Tian, M.F., He, X.T. and Zhang, P. 2013 "Equations of state and transport properties of warm dense beryllium: A quantum molecular dynamics study" *Phys. Rev. E* 87 043105
- Wang, Z.M., Xu, C.L. and Liu, C.H. 2013 "Surface modification and intrinsic green fluorescence emission of a detonation nanodiamond" *J. Mater. Chem. C* 1 6630-6636
- Wang, J.X., Yang, R., Jiang, L., Wang, X.X. and Zhou, N. 2013 "Study on the effect of temperature rise on grain refining during fabrication of nanocrystalline copper under explosive loading" *Appl. Phys. A* 113 771-777
- Wang, G.J., Luo, B.Q., Zhang, X.P., Zhao, J.H., Sun, C.W., Tan, F.L., Chong, T., Mo, J.J., Wu, G. and Tao, Y.H. 2013 "A 4 MA, 500 ns pulsed power generator CQ-4 for characterization of material behaviors under ramp wave loading" *Rev. Sci. Instrum.* 84 015117
- Wang, J., Smith, R.F., Eggert, J.H., Braun, D.G., Boehly, T.R., Patterson, J.R., Celliers, P.M., Jeanloz, R., Collins, G.W. and Duffy, T.S. 2013 "Ramp compression of iron to 273 GPa" *J. Appl. Phys.* 114 023513
- Wang, X., Xia, W.G., Wu, X.Q., Wei, Y.P. and Huang, C.G. 2013 "Microstructure and mechanical properties of an austenite NiTi shape memory alloy treated with laser induced shock" *Mater. Sci. Engng A* 578 1-5
- Wang, B., Chen, W., Li, J., Liu, Z. and Zhu, X. 2013 "Microstructure and formation of melting zone in the interface of Ti/NiCr explosive cladding bar" *Mater. Design* 47 74-79
- Wang, J. and Zhou, N. 2013 "Damage mechanism and anti-penetration performance of explosively welded plates impacted by projectiles with different shapes" *Mater. Design* 49 966-973
- Wang, Z., Feng, S., Shi, G.P., Shen, Q. and Zhang, L.M. 2013 "The application of Ti/Al₂O₃ composite in W-Mo-Al system wave impedance graded lier plate" *J. Phys.: Conf. Ser.* 419 012043
- Wang, W., Zhang, D., Lu, F.Y., Wang, S.C. and Tang, F.J. 2013 "Experimental study and numerical simulation of the damage mode of a square reinforced concrete slab under close-in explosion" *Engng Failure Anal.* 27 41-51

- Wang, W.T., Zhang, N., Wang, M.W., He, Y.H., Yang, J.J. and Zhu, X.N. 2013 "Shock pressure in femtosecond laser ablation of solid target (in Chinese)" *Acta Phys. Sinica* 62 170601
- Wang, W.T., Zhang, N., Wang, M.W., He, Y.H., Yang, J.J. and Zhu, X.N. 2013 "Shock temperature of femtosecond laser ablation of solid target (in Chinese)" *Acta Phys. Sinica* 62 210601
- Wang, L.L., Yang, L.M. and Ding, Y.Y. 2013 "On the energy conservation and critical velocities for the propagation of a 'steady-shock' wave in a bar made of cellular material" *Acta Mech. Sinica* 29 420-428
- Wang, G.X., Xiong, Y.P. and Tang, W.Z. 2013 "A novel heavy-weight shock test machine for simulating underwater explosive shock environment: Mathematical modeling and mechanism analysis" *Int. J. Mech. Sci.* 77 239-248
- Wang, Z.Y., Liang, X., Fallah, A.S., .Liu, G.h., Louca, L.A. and Wang, L.Z. 2013 "A novel efficient method to evaluate the dynamic response of laminated plates subjected to underwater shock" *J. Sound Vibration* 332 5618-5634
- Wang, W., Zhang, D., Lu, F.-Y., Tang, F.-J. and Wang, S.-C. 2013 "Pressure-impulse diagram with multiple failure modes of one-way reinforced concrete slab under blast loading using SDOF method" *J. Central South Univ.* 20 510-519
- Wang, H.R., Ye, Y., Yang, Q.G., Li, M., Xiao, S.L. and Li, Z.R. 2013 "Transient X-ray diffraction to measure the dynamic response of shocked lithium fluoride single crystal" *Proc. SPIE* 8911 89110E
- Wang, K., xiao, S.-f., .Liu, M., Deng, H.-Q., Zhu, W.-J. and Hu, W.-Y. 2013 "Shock waves propagation and phase transition in single crystal iron under ramp compression: Large-scale parallel NEMD simulations" *Procedia Engng* 61 122-129
- Ward, A.J., Nance, R.P., Cogar, J.R., MacFarlane, J.J., Reinhart, W.D., Thornhill, T.F., Grun, J., Lunsford, R. and Moore, W.K. 2013 "Shock physics analysis to support optical signature prediction in hypervelocity impacts" *Procedia Engng* 58 634-641
- Wei, Y.-P., Wei, B.-C., Wang, X., Xu, G.-Y., Li, L., Wu, X.-Q., Song, H.-W. and Huang, C.-G. 2013 "A novel microscale plastic deformation feature on a bulk metallic glass surface under laser shock peening" *Chinese Phys. Letts* 30 036201
- Wei, X.F., Han, Y., Liu, L. and Long, X.P. 2013 "Preparation of C-60 by detonation of a mixture of TNT and graphite" *Mod. Phys. Letts B* 27 1250004
- Wei, X., de Vaucorbeil, A., Tran, P. and Espinosa, H.D. 2013 "A new rate-dependent unidirectional composite model: Application to panels subjected to underwater blast" *J. Mech. Phys. Solids* 61 1305-1318
- Wei, X., Tran, P., de Vaucorbeil, A., Ramaswamy, R.B., Latourte, F. and Espinosa, H.D. 2013 "Three-dimensional numerical modeling of composite panels subjected to underwater blast" *J. Mech. Phys. Solids* 61 1319-1336

- Weinwurm, M., Bland, S.N. and Chittenden, J.P. 2013 "Metal liner-driven quasi-isentropic compression of deuterium" *Phys. Plasmas* 20 092701
- Welser-Sherrill, L., Fincke, J., Doss, F., Loomis, E., Flippo, K., Offermann, D., Keiter, P., Haines, B. and Grinstein, F. 2013 "Two laser-driven mix experiments to study reshock and shear" *High Energy Density Phys.* 9 496-499
- Wen, Y.S., Xue, X.G., Zhou, X.Q., Guo, F., Long, X.P., Zhou, Y., Li, H.Z. and Zhang, C.Y. 2013 "Twin induced sensitivity enhancement of HMX versus shock: A molecular reactive force field simulation" *J. Phys. Chem. C* 117 24368-24374
- Werneyer, K.D., Terblanche, C.J. and Majiet, F. 2013 "Improved streak mask design", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 853-859, (Lancaster, PA, Destech Publications)
- Whelchel, R.L., Kennedy, G.B., Dwivedi, S.K., Sanders Jr., T.H. and Thadhani, N.N. 2013 "Spall behavior of rolled aluminum 5083-H116 plate" *J. Appl. Phys.* 113 233506
- White, S., Nersisyan, G., Kettle, B., Dzeizainis, T.W.J., McKeever, K., Lewis, C.L.S., Otten, A., Siegenthaler, K., Kraus, D., Roth, M., White, T., Gregori, G., Gericke, D.O., Baggott, R., Chapman, D.A., Wunsch, K., Vorberger, J. and Riley, D. 2013 "X-ray scattering from warm dense iron" *High Energy Density Phys.* 9 573-577
- Wielewski, E., Appleby-Thomas, G.J., Hazell, P.J. and Hameed, A. 2013 "An experimental investigation into the micro-mechanics of spall initiation and propagation in Ti6Al4V during shock loading" *Mater. Sci. Engng A* 578 331-339
- Williams, C.L., Chen, C.Q., Ramesh, K.T. and Dandekar, D.P. 2013 "The effects of cold rolling on the microstructural and spall response of 1100 aluminum" *J. Appl. Phys.* 114 093502
- Winey, J.M. and Gupta, Y.M. 2013 "Shock-compressed graphite to diamond transformation on nanosecond time scales" *Phys. Rev. B* 87 174104
- Winter, R.E., Cotton, M., Harris, E.J., Chapman, D.J., Eakins, D. and McShane, G. 2013 "Plate-impact loading of cellular structures formed by selective laser melting", in "Structures Under Shock and Impact XII", ed. G. Schleyer and C.A. Brebbia, pp. 145-156, (Southampton, UK, WITPress)
- Wisniewski, A. and Zochowski, P. 2013 "A constitutive model for the nanocomposite NANOS-BA steel used for light armored vehicles protection", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 1134-1145, (Lancaster, PA, Destech Publications)

- Wittke, J.H., Weaver, J.C., Bunch, T.E., Kennett, J.P., Kennett, D.J., Moore, A.M.T., Hillman, G.C., Tankersley, K.B., Goodyear, A.C., Moore, C.R., Daniel, I.R., Ray, J.H., Lopinot, N.H., Ferraro, D., Israde-Alcantara, I., Bischoff, J.L., DeCarli, P.S., Hermes, R.E., Kloosterman, J.B., Revay, Z., Howard, G.A., Kimbel, D.R., Kletetschka, G., Nabelek, L., Lipo, C.P., Sakai, S., West, A. and Firestone, R.B. 2013 "Evidence for deposition of 10 million tonnes of impact spherules across four continents 12,800 years ago" *Proc. Nat. Acad. Sci. USA* 110 E2080-E2097
- Wu, X.Q., Tan, Q.M. and Huang, C.H. 2013 "Geometrical scaling law for laser shock processing" *J. Appl. Phys.* 114 043105
- Wu, L.Z., Shen, R.Q., Xu, J., Ye, Y.H. and Hu, Y. 2013 "Research on velocity of thin aluminum flyers formed by laser ablation" *Proc. SPIE* 8796 87960G
- Wynn, T.A., Bhattacharyya, D., Hammon, D.L., Misra, A. and Mara, N.A. 2013 "Large strain deformation of bimodal layer thickness copper/niobium nanolamellar composites" *Mater. Sci. Engng A* 564 213-217
- Xiang, M., Hu, H. and Chen, J. 2013 "Spalling and melting in nanocrystalline lead under shock loading: Molecular dynamics studies " *J. Appl. Phys.* 113 144312
- Xiang, M., Hu, H., Chen, J. and Long, Y. 2013 "Molecular dynamics simulations of micro-spallation of single crystal lead" *Model. Simul. Mater. Sci. Engng* 21 055005
- Xiang, M., Hu, H., Chen, J. and Liao, Y. 2013 "Molecular dynamics studies of thermal dissipation during shock induced spalling" *J. Appl. Phys.* 114 123509
- Xiong, Y., He, T.T., Guo, Z.Q., He, H.Y., Ren, F.Z. and Volinsky, A.A. 2013 "Effects of laser shock processing on surface microstructure and mechanical properties of ultrafine-grained high carbon steel" *Mater. Sci. Engng A* 570 82-86
- Xiong, Y., He, T., Guo, Z., He, H., Ren, F. and Volinsky, A.A. 2013 "Effects of laser shock processing on surface microstructure and mechanical properties of ultrafine-grained high carbon steel" *Mater. Sci. Engng A* 570 82-86
- Xu, S.L., Liu, Y.G., Huang, J.Y. and Xi, D.Y. 2013 "Dynamic response of rock-pair subjected to impact loading", in "Rock Dynamics and Applications: State of the Art", ed. J. Zhao and J. Li, pp. 193-198, (London, Taylor & Francis)
- Xu, Z., Cui, J., Yu, H. and Li, C. 2013 "Research on the impact velocity of magnetic impulse welding of pipe fitting" *Mater. Design* 49 736-745
- Xue, K., Li, F.F. and Bai, C.H. 2013 "Explosively driven fragmentation of granular materials" *Eur. Phys. J. E* 36 doi: 10.1140/epje/i2013-13095-x
- Yadegari, M., Ebrahimi, A.R. and Karami, A. 2013 "Effect of heat treatment on interface microstructure and bond strength in explosively welded Ti/304L stainless steel clad" *Mater. Sci. Technol.* 29 69-75
- Yakub, E.S. 2013 "Ionic model for highly compressed solid hydrogen" *Low Temp. Phys.* 39 417-422

- Yang, S.Y., Liu, X., Cao, D.F., Mei, H., Lei, Z.T. and Liu, L.S. 2013 "A study on propagation characteristic of one-dimensional stress wave in functionally graded armor composites" *J. Phys.: Conf. Ser.* 419 012046
- Yankovskii, B.D. and Milyavskii, V.V. 2013 "Calculation of the detonation velocity of porous water-containing RDX-based charges" *Russ. J. Phys. Chem. B* 7 142-148
- Yano, T., Kanagawa, T., Watanabe, M. and Fujikawa, S. 2013 "Nonlinear wave propagation in bubbly liquids", in "Bubble Dynamics and Shock Waves", ed. C.F. Delale, pp. 107-140, (Berlin, Springer)
- Yao, H.B., Zhou, Z.S., Tong, Y.Q., Ping, J., Li, L.W., Han, M. and Zhang, Y.K. 2013 "Measurement of the average strain rate of thin aluminum deformation under laser shock" *Opt. Engng* 52 054302
- Ye, Y.X., Feng, Y.Y., Hua, X.J. and Lian, Z.C. 2013 "Experimental research on laser shock forming metal foils with femtosecond laser" *Appl. Surf. Sci.* 285 600-606
- Yelisseyev, A., Meng, G.S., Afanasyev, V., Pokhilenko, N., Pustovarov, V., Isakova, A., Lin, Z.A. and Lin, H.Q. 2013 "Optical properties of impact diamonds from the Popigai astrobleme" *Diamond Related Mater.* 37 8-16
- Yep, S.J., Belof, J.L., Orlikowski, D.A. and Nguyen, J.H. 2013 "Fabrication and application of high impedance graded density impactors in light gas gun experiments" *Rev. Sci. Instrum.* 84 103909
- Young, K.E., van Soest, M.C., Hodges, K.V., Watson, E.B., Adams, B.A. and Lee, P. 2013 "Impact thermochronology and the age of Haughton impact structure, Canada" *Geophys. Res. Letts* 40 3836-3840
- Youssef, G. and Gupta, V. 2013 "Resonance in polyurea-based multilayer structures subjected to laser-generated stress waves" *Exper. Mech.* 53 145-154
- Youssef, G., Crum, R., Prikhodko, S.V., Seif, D., Po, G., Ghoniem, N., Kodambaka, S. and Gupta, V. 2013 "The influence of laser-induced nanosecond rise-time stress waves on the microstructure and surface chemical activity of single crystal copper nanopillars" *J. Appl. Phys.* 113 084309
- Yu, J., Yen, C.-F., Chen, C.C.T. and Nansteel, M. 2013 "Experimental characterization and modeling of the 2024-T3 aluminum alloy under close-in blast loading", in "Dynamic Behavior of Materials", ed. V. Chalivendra, B. Song and D. Casem, pp. 353-358, (Berlin, Springer)
- Yuan, F.P. and Prakash, V. 2013 "Plate impact experiments to investigate shock-induced inelasticity in Westerly granite" *Int. J. Rock Mech. Min. Sci.* 60 277-287
- Yue, X., Feng, X. and Lippold, J.C. 2013 "Strength increase in the coarse-grained heat-affected zone of a high-strength, blast-resistant steel after post-weld heat treatment" *Mater. Sci. Engng A* 585 149-154
- Yue, Z.W., Yang, L.Y. and Wang, Y.B. 2013 "Experimental study of crack propagation in PMMA material with double holes under the directional controlled blasting" *Fatigue Fract. Engng Mater. Struct.* 36 827-833

- Yue, Z., Johnson, B.C., Minton, D.A., Melosh, H.J., Di, K., Hu, W. and Liu, Y. 2013 "Projectile remnants in central peaks of lunar impact craters" *Nature Geoscience* 6 435-437
- Yunoshev, A.S., Rafeichik, S.I., Plastinin, A.V. and Silvestrov, V.V. 2013 "New applications of emulsion explosives" *Combust. Explos. Shock Waves* 49 225-230
- Yurtseven, H. and Desticioglu, M. 2013 "Critical behaviour of the heat capacity near the alpha-beta phase transition in quartz" *High Temp. Mater. Processes* 32 189-194
- Zaretsky, E.B. and Kanel, G.I. 2013 "Response of copper to shock-wave loading at temperatures up to the melting point" *J. Appl. Phys.* 114 083511
- Zaretsky, E.B. 2013 "High temperature impact response of 998 alumina" *J. Appl. Phys.* 114 183518
- Zaug, J.M., Carter, J.A., Bastea, S., Armstrong, M.R., Crowhurst, J.C. and Fried, L.E. 2013 "Experimental measurement of speeds of sound in dense supercritical carbon monoxide and development of a high-pressure, high-temperature equation of state" *J. Phys. Chem. B* 117 5675-5682
- Zeldovich, V.I., Kheifets, A.E., Frolova, N.Y., Muzyrya, A.K. and Simonov, A.Y. 2013 "Formation of martensite in austenitic steel upon loading by quasi-spherical converging shock waves" *Phys. Metals Metallog.* 114 1031-1037
- Zhai, Z.G., Si, T., Zou, L.Y. and Luo, X.S. 2013 "Jet formation in shock-heavy gas bubble interaction" *Acta Mech. Sinica* 29 24-35
- Zhang, R.F., Germann, T.C., Wang, J., Liu, X.-Y. and Beyerlein, I.J. 2013 "Role of interface structure on the plastic response of Cu.Nb nanolaminates under shock compression: Non-equilibrium molecular dynamics simulations" *Scripta mater.* 68 114-117
- Zhang, N.C., Liu, F.S., Peng, X.J., Zhang, M.J. and Chen, J.X. 2013 "Light emission properties of sapphire under shock loading in the stress range of 40-120 GPa" *Science China Phys. Mech. Astron.* 56 562-567
- Zhang, X.F., Shi, A.S., Qiao, L., Zhang, J., Zhang, Y.G. and Guan, Z.W. 2013 "Experimental study on impact-initiated characters of multifunctional energetic structural materials" *J. Appl. Phys.* 113 083508
- Zhang, F., He, H., Liu, G., Liu, Y., Yu, Y. and Wang, Y. 2013 "Failure behavior of $\text{Pb}(\text{Zr}_{0.95}\text{Ti}_{0.05})\text{O}_3$ ferroelectric ceramics under shock compression" *J. Appl. Phys.* 113 183501
- Zhang, Y.-G., Zhang, X.-F., He, Y. and Qiao, L. 2013 "Detonation wave propagation in shaped charges with large wave-shaper", in "Proc. 27th Int. Symp. on Ballistics", ed. M. Wickert and M. Salk, pp. 770-782, (Lancaster, PA, Destech Publications)

- Zhang, X.F., Qiao, L., Shi, A.S., Zhang, J. and Zhang, Y.G. 2013 "Thermodynamic analysis of the shock compaction of tungsten/copper granular mixture based on the mesoscale simulation" *Appl. Mech. Mater.* 275 2261-2265
- Zhang, P.L., Gong, Z.Z., Ji, G.F., Wang, Q.S., Song, Z.F., Cao, Y. and Wang, X. 2013 "Shock compression of the new 47Zr45Ti5Al3V alloys up to 200 GPa" *Chinese Phys. Letts* 30 066401
- Zhang, W.G., Ye, Y.C., He, L.J., Li, P.J., Feng, X. and Novikov, L.S. 2013 "Dynamic response and microstructure control of aluminum-scandium binary alloy under high-speed impact" *Mater. Sci. Engng A* 578 35-45
- Zhang, J.Y., Sha, Z.D., Branicio, P.S., Zhang, Y.W., Sorkin, V., Pei, Q.X. and Srolovitz, D.J. 2013 "Superplastic nanocrystalline ceramics at room temperature and high strain rates" *Scripta mater.* 69 525-528
- Zhang, N.C., Liu, F.S., Wang, W.P., Sun, Y.Y., Liu, Q.J., Peng, X.J. and Chen, J.X. 2013 "Shock-induced optical emission and high-pressure phase transformation of sapphire" *Physica B* 429 90-94
- Zhang, L.-H., Sun, L.-J. and Ma, X.-H. 2013 "Research on the deformation characteristic of the sheet by oblique angle laser shock" *Laser Phys.* 23 036001
- Zhang, K., He, L., Peng, Q., Wu, C. and Chen, G. 2013 "Adhesion behavior of thermal barrier coating on nickel alloy in the bullet shock testing" *Phys. Procedia* 50 139-144
- Zhang, L.H., Sun, L.J. and Ma, X.H. 2013 "Research on the deformation characteristic of the sheet by oblique angle laser shock" *Laser Physics* 23 036001
- Zhao, F.P., An, Q., Li, B., Wu, H.A., Goddard III, W.A. and Luo, S.N. 2013 "Shock response of a model structured nanofoam of copper" *J. Appl. Phys.* 113 063516
- Zhao, B.-J., Liu, F.-S., Zhang, N.-C., Feng, L.-P., Wang, W.-P. and Zhang, M.-J. 2013 "A high-spectral-resolution laser Raman system and its application in shock-compressed benzene" *Chinese Phys. Letts* 30 030701
- Zhao, Y., Liu, H. and Lu, G. 2013 "Equation of state of explosive detonation products", in "Dynamic Behavior of Materials", ed. V. Chalivendra, B. Song and D. Casem, pp. 259-266, (Berlin, Springer)
- Zhao, F.P., Wu, H.A. and Luo, S.N. 2013 "Microstructure effects on shock response of copper nanofoams" *J. Appl. Phys.* 114 073501
- Zhao, J.P. 2013 "Response characteristics of concrete with blasting wave" *Research J. Chem. Environment* 17 27-35
- Zhao, B.J., Liu, F.S., Wang, W.P., Zhang, N.C., Feng, L.P., Zhang, M.J. and Xue, X.D. 2013 "High resolution laser transient spectroscopic technology under two-stage light gas-gun loading condition and stability study of shocked benzene" *Spectroscopy Spectral Anal.* 33 2603-2606

- Zhao, J., Pi, S.H., Hong, G.W., Zhao, D. and Jia, B. 2013 "Compact all-fiber interferometer system for shock acceleration measurement" Proc. SPIE 8914 891419
- Zheng, X.X., Curtis, A.D., Shaw, W.L. and Dlott, D.D. 2013 "Shock initiation of nano-aluminum plus Teflon: Time-resolved emission studies" J. Phys. Chem. C 117 4866-4875
- Zheng, C., Sun, S., Song, L.B., Zhang, G.F., Luan, Y.G., Ji, Z. and Zhang, J.H. 2013 "Dynamic fracture characteristics of $\text{Fe}_{78}\text{Si}_9\text{B}_{13}$ metallic glass subjected to laser shock loading" Appl. Surf. Sci. 286 121-125
- Zheng, C., Sun, S., Zhang, G.F., Song, L.B. and Ji, Z. 2013 "Effect of confining overlay in micro scale laser bulge forming" Appl. Surf. Sci. 285 477-482
- Zheng, J.G. and Lee, T.S. 2013 "A high-resolution method for compressible two-fluid flows and simulation of three-dimensional shock-bubble interactions" Int. J. Numer. Meth. Fluids 72 206-230
- Zheng, Z., Yu, J., Wang, C., Liao, S. and Liu, Y. 2013 "Dynamic crushing of cellular materials: A unified framework of plastic shock wave models" Int. J. Impact Engng 53 29-43
- Zhilyaev, P.A., Norman, G.E., Saitov, I.M. and Stegailov, V.V. 2013 "Application of the density-functional theory to calculation of the reflectivity from shocked xenon" Dokl. Physics 58 277-281
- Zhokhov, P.A. and Zheltikov, A.M. 2013 "Attosecond shock waves" Phys. Rev. Letts 110 183903
- Zhou, N., Wang, J.-X. and Yang, R. 2013 "Study on the anti-penetration performance of two-layer explosively welded plates impacted by a spherical projectile" Combust. Explos. Shock Waves 49 374-381
- Zhou, Q., Chen, P.W., Ma, D.Z. and Dai, K.D. 2013 "A model used for Hugoniot prediction of material at high-temperature along isobaric path" J. Appl. Phys. 114 023509
- Zhou, L., Zhang, Q.M., Li, G.F. and Gong, Z.Z. 2013 "First principle study for the melting properties of fcc aluminum" Key Engng Mater. 535 342-345
- Zhou, Q., Chen, P.W. and Ma, D.Z. 2013 "Tungsten-copper composite fabricated by hot-shock consolidation" Mater. Sci. Forum 749 372-377
- Zhou, L.C., Li, Y.H., He, W.F., He, G.Y., Nie, X.F., Chen, D.L., Lai, Z.L. and An, Z.B. 2013 "Deforming TC6 titanium alloys at ultrahigh strain rates during multiple laser shock peening" Mater. Sci. Engng A 578 181-186
- Zhou, H.Y., Beppu, M., Ma, G.W. and Zhao, Z.Y. 2013 "In-structure shock of underground structures: A revisit with experimental investigation" Engng Struct. 56 1620-1630

- Zhou, J.Y., Liu, J.X., Li, S.K. and Bai, X. 2013 "Deformation mechanism of high purity tungsten by CVD subjected to explosion loading (in Chinese)" *Rare Metal Mater. Engng* 42 80-83
- Zhyrovetsky, V., Kovalyuk, B., Mocharskyi, V., Nikiforov, Y., Onisimchuk, V., Popovych, D. and Serednytski, A. 2013 "Modification of structure and luminescence of ZnO nanopowder by the laser shock-wave treatment" *Phys. Stat. Sol. C* 10 1288-1291
- Zuev, Y.N., Sagaradze, V.V., Pecherkina, N.L., Kabanova, I.I., Svyatov, I.L., Bondarchuk, S.V. and Belyaev, D.V. 2013 "Phase and structural transformations in uranium and uranium-niobium alloy upon severe deformation and heat treatments" *Phys. Metals Metallog.* 114 1123-1154
- Zuo, L.S., Zhang, X.Q., Chen, L.S., She, J.P., Li, H. and Chen, W. 2013 "Simulation of laser shock wave propagation and dispersion in SHPB" *Adv. Mater. Res.* 681 105-109