

## Shock Physics Papers 2016

- Abbas, S.H., Jang, J.-K., Lee, J.-R. and Kim, Z. 2016 "Development of an FPGA-based multipoint laser pyroshock measurement system for explosive bolts" Rev. Sci. Instrum. 87 073302
- Adushkin, V.V. and Oparin, V.N. 2016 "From the alternating-sign explosion response of rocks to the pendulum waves in stressed geomedia. 4" J. Mining Sci. 52 1-35
- Agarwal, G. and Dongare, A.M. 2016 "Shock wave propagation and spall failure in single crystal magnesium at atomic scales" J. Appl. Phys. 119 145901
- Ageev, E.I., Kudryashov, S.I., Nikonorov, N.V., Nuryev, R.K., Petrov, A.A., Samokhvalov, A.A. and Veiko, V.P. 2016 "Non-contact ultrasonic acquisition of femtosecond laser-driven ablative Mbar-level shock waves on titanium alloy surface" Appl. Phys. Letts 108 084106
- Ageev, E.I., Bychenkov, V.Y., Ionin, A.A., Kudryashov, S.I., Petrov, A.A., Samokhvalov, A.A. and Veiko, V.P. 2016 "Double-pulse femtosecond laser peening of aluminum alloy AA5038: Effect of inter-pulse delay on transient optical plume emission and final surface micro-hardness" Appl. Phys. Letts 109 211902
- Agrawal, V., Peralta, P., Li, Y. and Oswald, J. 2016 "A pressure-transferable coarse-grained potential for modeling the shock Hugoniot of polyethylene" J. Chem. Phys. 145 104903
- Ahn, D.H., Kim, W., Kang, M., Park, L.J., Lee, S. and Kim, H.S. 2016 "Corrigendum to 'Plastic deformation and microstructural evolution during the shock consolidation of ultrafine copper powders'" Mater. Sci. Engng A 654 379-380
- Akin, M.C., Fratanduono, D.E. and Chau, R. 2016 "The Hugoniot and chemistry of ablator plastic below 100 GPa" J. Appl. Phys. 119 045901
- Akin, M.C. and Chau, R. 2016 "The suitability of Loctite 326 for thermal emission measurements" J. Dyn. Behav. Mater. 2 421-424
- Alexander, C.S., Ding, J.L. and Asay, J.R. 2016 "Experimental characterization and constitutive modeling of the mechanical behavior of molybdenum under electromagnetically applied compression-shear ramp loading" J. Appl. Phys. 119 105901
- Alexeyeva, L.A. and Kaishybaeva, G.K. 2016 "Transport solutions of the Lamé equations and shock elastic waves" Comput. Math. Math. Phys. 56 1343-1354
- Amadou, N., de Resseguier, T., Brambrink, E., Vinci, T., Benuzzi-Mounaix, A., Huser, G., Morard, G., Guyot, F., Miyanishi, K., Ozaki, N., Kodama, R. and Koenig, M. 2016 "Kinetics of the iron  $\alpha$ - $\epsilon$  phase transition at high-strain rates: Experiment and model" Phys. Rev. B 93 214208
- Amani, H. and Soltanieh, M. 2016 "Intermetallic phase formation in explosively welded aluminum/copper bimetals" Metall. Mater. Trans. B 47 2524-2534

- Ananев, С.Ю., Долгобородов, А.Ю., Ширяй, А.А. и Янковский, Б.Д. 2016 "Shock initiation of exothermic reactions in mechanically activated mixtures" J. Phys.: Conf. Ser. 774 012069
- Anastacio, A.C., Kucera, J. and Pachman, J. 2016 "Acceleration of polymer bonded powder metal liner", in "Proc. 19th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán and J. Selesovsky, pp. 433-438, (Pardubice, Czech Republic, University of Pardubice)
- Andriyash, A.V., Astashkin, M.V., Baranov, V.K., Golubinskii, A.G., Irinichev, D.A., Kondratev, A.N., Kuratov, S.E., Mazanov, V.A., Rogozkin, D.B., Stepushkin, S.N. and Khatunkin, V.Y. 2016 "Optoheterodyne Doppler measurements of the ballistic expansion of the products of the shock wave-induced surface destruction: Experiment and theory" J. Exper. Theor. Phys. 122 970-983
- Anisichkin, V.F. 2016 "On the mechanism of the detonation of organic high explosives" Russ. J. Phys. Chem. B 10 451-455
- Anon. 2016 "On the jubilee of Academician V.E. Fortov" High Temp. 54 1-4
- Apazidis, N. 2016 "Numerical investigation of shock induced bubble collapse in water" Phys. Fluids 28 046101
- Appleby-Thomas, G., Hameed, A., Fitzmaurice, B., Painter, J. and Wood, D. 2016 "On the selection of tissue simulants for ballistic testing", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 2367-2377, (Lancaster, PA, DesTech)
- Appleby-Thomas, G.J., Wood, D.C., Hameed, A., Painter, J., Le-Seelleur, V. and Fitzmaurice, B.C. 2016 "Investigation of the high-strain rate (shock and ballistic) response of the elastomeric tissue simulant Perma-Gel" Int. J. Impact Engng 94 74-82
- Arasuna, A., Okuno, M., Chen, L., Mashimo, T., Okudera, H., Mizukami, T. and Arai, S. 2016 "Shock-wave compression of silica gel as a model material for comets" Phys. Chem. Minerals 43 493-502
- Arora, H. and Eftaxiopoulou, T. 2016 "Physical models: Organ models for primary blast", in "Blast Injury Science and Engineering: A Guide for Clinicians and Researchers", ed. A.M.J. Bull, J. Clasper and P.F. Mahoney, pp. 155-159, (Berlin, Springer)
- Asay, J.R., Chhabildas, L.C., Lawrence, R.J. and Sweeney, M.A. 2016 "Impactful Times: Memories of 60 Years of Shock Wave Research at Sandia National Laboratories" (Berlin, Springer)
- Ashitkov, S.I., Komarov, P.S., Ovchinnikov, A.V., Struleva, E.V. and Agranat, M.B. 2016 "Strength of liquid tin at extremely high strain rates under a femtosecond laser action" JETP Letts 103 544-548

- Asimow, P.D., Lin, C., Bindi, L., Ma, C., Tschauner, D., Hollister, L.S. and Steinhardt, P.J. 2016 "Shock synthesis of quasicrystals with implications for their origin in asteroid collisions" Proc. Nat. Acad. Sci. USA 113 7077-7081
- Atroshenko, S. 2016 "Metals dynamic recrystallization up to nanocrystalline size induced shock loading" AIP Conf. Proc. 1748 030005
- Aune, V., Fagerholt, E., Hauge, K.O., Langseth, M. and Børvik, T. 2016 "Experimental study on the response of thin aluminium and steel plates subjected to airblast loading" Int. J. Impact Engng 90 106-121
- Avachat, S. and Zhou, M. 2016 "High-speed digital imaging and computational modeling of hybrid metal-composite plates subjected to water-based impulsive loading" Exper. Mech. 56 545-567
- Avachat, S. and Zhou, M. 2016 "Compressive response of sandwich plates to water-based impulsive loading" Int. J. Impact Engng 93 196-210
- Avdellidou, C., Price, M.C., Delbo, M., Ioannidis, P. and Cole, M.J. 2016 "Survival of the impactor during hypervelocity collisions. 1: An analogue for low porosity targets" Mon. Not. R. Astron. Soc. 456 2957-2965
- Aydogan, E., Anderoglu, O., Maloy, S.A., Livescu, V., Gray III, G.T., Perez-Bergquist, S. and Williams, D.J. 2016 "Effect of shock loading on the microstructure, mechanical properties and grain boundary characteristics of HT-9 ferritic/martensitic steels" Mater. Sci. Engng A 651 75-82
- Babaei, H., Mostofi, T.M., Alitavoli, M. and Darvizeh, A. 2016 "Empirical modelling for prediction of large deformation of clamped circular plates in gas detonation forming process" Exper. Techniq. 40 1485-1494
- Babrauskas, V. 2016 "Explosions of ammonium nitrate fertilizer in storage or transportation are preventable accidents" J. Hazard. Mater. 304 134-149
- Bai, W., Diebold, G.J., Wynn, C.M., Haupt, R.W. and Doherty, J.H. 2016 "A numerical study of shock waves generated through laser ablation of explosives" J. Appl. Phys. 120 194903
- Bai, J.S., Wang, X., Pei, X.Y., Wang, Y., Yu, Y.Y., Shen, Q., Luo, G.Q., Dai, C.D., Tan, H., Zhang, L.M. and Wu, Q. 2016 "An improved impactor design for eliminating spallation in high-impedance flyers during hypervelocity launch" Exper. Mech. 56 1661-1664
- Bajic, Z., Bogdanov, J., Dimitrijevic, R. and Jeremic, R. 2016 "Investigation of scaled distance influence on shockwave overpressure for plastic explosive PPE-01", in "Proc. 19th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán and J. Selesovsky, pp. 391-396, (Pardubice, Czech Republic, University of Pardubice)
- Balagansky, I.A. and Stepanov, A.A. 2016 "Numerical simulation of Composition B high explosive charge desensitization in gap test assembly after loading by precursor wave" Shock Waves 26 109-115

- Bang, B.H., Ahn, C.S., Kim, D.Y., Lee, J.G., Kim, H.M., Jeong, J.T., Yoon, W.S., Al-Deyab, S.S., Yoo, J.H., Yoon, S.S. and Yarin, A.L. 2016 "Breakup process of cylindrical viscous liquid specimens after a strong explosion in the core" *Phys. Fluids* 28 094105
- Banishev, A.A., Shaw, W.L., Bassett, W.P. and Dlott, D.D. 2016 "High-speed laser-launched flyer impacts studied with ultrafast photography and velocimetry" *J. Dyn. Behav. Mater.* 2 194-206
- Banluscan, K. and Strachan, A. 2016 "Shockwave energy dissipation in metal-organic framework MOF-5" *J. Phys. Chem. C* 120 12463-12471
- Bannikova, I.A., Uvarov, S.V., Zubareva, A.N., Utkin, A.V. and Naimark, O.B. 2016 "Experimental study of mechanical properties of liquids under shock wave loading" *J. Phys.: Conf. Ser.* 774 012051
- Baranov, V.K., Georgievskaya, A.B., Guk, D.E., Zamyslov, D.N., Makarov, S.A., Meshkov, E.E. and Stepushkin, S.N. 2016 "A compact laboratory device for accelerating thin strikers" *Tech. Phys. Letts* 42 826-828
- Barenbaum, A.A. and Shpekin, M.I. 2016 "To the development of the mechanism of interaction of galactic comets with the terrestrial planets" *J. Phys.: Conf. Ser.* 774 012096
- Barney, B.L., Pratt, S.N. and Austin, D.E. 2016 "Survivability of bare, individual *Bacillus subtilis* spores to high-velocity surface impact: Implications for microbial transfer through Space" *Planet. Space Sci.* 125 20-26
- Barsoum, R.G. 2016 "Phase transformations in glass associated with hypervelocity impact and implications in constitutive modeling", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 1004-1010, (Lancaster, PA, DesTech)
- Barsoum, R.G., Dudit, P.J., Qadri, S. and Ferrando, W. 2016 "Polymorphic activity generated in sodalime glass at hypervelocity impact", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 2477-2487, (Lancaster, PA, DesTech)
- Bassett, W.P. and Dlott, D.D. 2016 "High dynamic range emission measurements of shocked energetic materials: HMX" *J. Appl. Phys.* 119 225103
- Bassett, W.P. and Dlott, D.D. 2016 "Shock initiation of explosives: Temperature spikes and growth spurts" *Appl. Phys. Letts* 109 091903
- Bassett, W.P. and Dlott, D.D. 2016 "Multichannel emission spectrometer for high dynamic range optical pyrometry of shock-driven materials" *Rev. Sci. Instrum.* 87 103107
- Basturk, S.B., Tanoglu, M., Cankaya, M.A. and Egilmez, O.O. 2016 "Dynamic behavior predictions of fiber-metal laminate/aluminum foam sandwiches under various explosive weights" *J. Sandwich Structures Materials* 18 321-342

- Bayandin, Y.V., Saveleva, N.V. and Naimark, O.B. 2016 "Numerical simulation of dynamic failure and multi spall fracture in metals" J. Phys.: Conf. Ser. 774 012063
- Beckvermit, J., Harman, T., Wight, C. and Berzins, M. 2016 "Packing configurations of PBX-9501 cylinders to reduce the probability of a deflagration to detonation transition (DDT)" Propell. Explos. Pyrotech. 41 1070-1078
- Belikova, A.F., Buravova, S.N., Petrov, E.V., Sachkova, N.V. and Shchukin, A.S. 2016 "Finely striped structure at the edges of localized deformation bands" Russ. J. Phys. Chem. B 10 444-450
- Belov, N., Yugov, N., Kopanitsa, D., Kopanitsa, G., Yugov, A., Kaparulin, S., Plyaskin, A., Kalichkina, A. and Ustinov, A. 2016 "Calculation of reinforced concrete frame strength under a simultaneous static cross-section load and a column lateral impact" AIP Conf. Proc. 1698 040007
- Benedetti, L.R., Holder, J.P., Perkins, M., Brown, C.G., Anderson, C.S., Allen, F.V., Petre, R.B., Hargrove, D., Glenn, S.M., Simanovskaia, N., Bradley, D.K. and Bell, P. 2016 "Advances in X-ray framing cameras at the National Ignition Facility to improve quantitative precision in X-ray imaging" Rev. Sci. Instrum. 87 023511
- Benedetti, L.R., Trosseille, C., Holder, J.P., Piston, K., Hargrove, D., Bradley, D.K., Bell, P., Raimbourg, J., Prat, M., Pickworth, L.A. and Khan, S.F. 2016 "A comparison of 'flat fielding' techniques for X-ray framing cameras" Rev. Sci. Instrum. 87 11D622
- Benstead, J., Moore, A.S., Ahmed, M.F., Morton, J., Guymer, T.M., Soufli, R., Pardini, T., Hibbard, R.L., Bailey, C.B., Bell, P.M., Hau-Riege, S., Bedzyk, M., Shoup, M.J., Reagan, S., Agliata, T., Jungquist, R., Schmidt, D.W., Kot, L.B., Garbett, W.J., Rubery, M.S., Skidmore, J.W., Gullikson, E. and Salmassi, F. 2016 "A new streaked soft X-ray imager for the National Ignition Facility" Rev. Sci. Instrum. 87 055110
- Berger, S., Ben-Dor, G. and Sadot, O. 2016 "Experimental and numerical investigation of shock wave attenuation by dynamic barriers" Trans. ASME: J. Fluids Engng 138 031103
- Bermbach, T., Teich, M. and Gebbeken, N. 2016 "Experimental investigation of energy dissipation mechanisms in laminated safety glass for combined blast-temperature loading scenarios" Glass Struct. Engng 1 331-350
- Berres, S. and Castaneda, P. 2016 "Identification of shock profile solutions for bidisperse suspensions" Bull. Brazil. Math. Soc. 47 105-115
- Bhaumik, S., Kumaraswamy, A. and Guruprasad, S. 2016 "Enhancement of seal life through carbon composite back-up rings under shock loading conditions in defence applications" Defence Technol. 12 39-45

- Bischoff, A.J., Arabi-Hashemi, A., Ehrhardt, M., Lorenz, P., Zimmer, K. and Mayr, S.G. 2016 "Shock wave induced martensitic transformations and morphology changes in iron-palladium ferromagnetic shape memory alloy thin films" *Appl. Phys. Letts* 108 151901
- Bogdanov, K.V., Osipov, V.Y., Zhukovskaya, M.V., Jentgens, C., Treussart, F., Hayashi, T., Takai, K., Fedorov, A.V. and Baranov, A.V. 2016 "Size-dependent Raman and SiV-center luminescence in polycrystalline nanodiamonds produced by shock wave synthesis" *RSC Advances* 6 51783-51790
- Bogdanova, Y.A., Gubin, S.A., Victorov, S.B. and Anikeev, A.A. 2016 "Application of a theoretical model of state equation for calculation of N<sub>2</sub>, O<sub>2</sub>, and CO<sub>2</sub> shock adiabatic curves" *Russ. Phys. J.* 59 190-196
- Bolis, R.M., Morard, G., Vinci, T., Ravasio, A., Bambrink, E., Guaguaglini, M., Koenig, M., Musella, R., Remus, F., Bouchet, J., Ozaki, N., Miyanishi, K., Sekine, T., Sakawa, Y., Sano, T., Kodama, R., Guyot, F. and Benuzzi-Mounaix, A. 2016 "Decaying shock studies of phase transitions in MgO-SiO<sub>2</sub> systems: Implications for the super-Earths' interiors" *Geophys. Res. Letts* 43 9475-9483
- Bondar, M.P., Karpov, E.V. and Lukyanov, Y.L. 2016 "Bonds between metals and nanocomposites created by explosion welding" *J. Appl. Mech. Tech. Phys.* 57 777-783
- Bondar, M.P. and Dmitriev, A.I. 2016 "Plastic deformation in mesocomposite materials under dynamic loading as applied to their joining with metals" *Phys. Mesomech.* 19 420-429
- Bordzilovskii, S.A., Karakhanov, S.M., Merzhievskii, L.A. and Voronin, M.S. 2016 "Temperature measurements for shocked PMMA, epoxy resin, and PTFE and their equations of state" *J. Appl. Phys.* 120 135903
- Borin, P., Cremonese, G., Bruno, M. and Marzari, F. 2016 "Asymmetries in the dust flux at Mercury" *Icarus* 264 220-226
- Borisov, S.P. and Kudryavtsev, A.N. 2016 "Linear and nonlinear effects in detonation wave structure formation" *J. Phys.: Conf. Ser.* 722 012022
- Borodin, E.N. and Mayer, A.E. 2016 "Theoretical interpretation of abnormal ultrafine-grained material deformation dynamics" *Model. Simul. Mater. Sci. Engng* 24 025013
- Botros, K.K., Geerligs, J., Rothwell, B. and Robinson, T. 2016 "Measurements of decompression wave speed in pure carbon dioxide and comparison with predictions by equation of state" *Trans. ASME: J. Pressure Vessel Technol.* 138 031302
- Bourasseau, E., Pineau, N., Maillet, J.B. and Dubois, V. 2016 "Calculation of the shock temperature of moderately porous graphites" *Carbon* 103 464-472
- Bourne, N.K. 2016 "On the shock response of polymers to extreme loading" *J. Dyn. Behav. Mater.* 2 33-42

- Braithwaite, C.H., Kirk, S.S., Jardine, A.P. and Field, J.E. 2016 "Overview of geological materials research at the Cavendish Laboratory", in "Rock Dynamics: From Research to Engineering", ed. H. Li, J. Li, Q. Zhang and J. Zhao, pp. 99-104, (London, Taylor & Francis)
- Braun, C.A., Schumaker, M., Rice, J. and Borg, J.P. 2016 "Comparison of static and dynamic powder compaction: Experiment and simulation" Trans. ASME: J. Engng Mater. Technol. 138 011003
- Breeze, J. and Carr, D.J. 2016 "Physical models: Tissue simulants", in "Blast Injury Science and Engineering: A Guide for Clinicians and Researchers", ed. A.M.J. Bull, J. Clasper and P.F. Mahoney, pp. 145-153, (Berlin, Springer)
- Bronkhorst, C.A., Gray III, G.T., Addessio, F.L., Livescu, V., Bourne, N.K., McDonald, S.A. and Withers, P.J. 2016 "Response and representation of ductile damage under varying shock loading conditions in tantalum" J. Appl. Phys. 119 085103
- Brown, K.A. 2016 "Blast loading of cells", in "Blast Injury Science and Engineering: A Guide for Clinicians and Researchers", ed. A.M.J. Bull, J. Clasper and P.F. Mahoney, pp. 57-70, (Berlin, Springer)
- Bruckner, A.P. and Knowlen, C. 2016 "The ram accelerator: Review of experimental research activities in the US", in "Hypervelocity Launchers", ed. F. Seiler and O. Igla, pp. 79-109, (Berlin, Springer)
- Bull, A.M.J. 2016 "Biomechanics in blast", in "Blast Injury Science and Engineering: A Guide for Clinicians and Researchers", ed. A.M.J. Bull, J. Clasper and P.F. Mahoney, pp. 17-31, (Berlin, Springer)
- Buravova, S.N., Petrov, E.V. and Alymov, M.I. 2016 "Chemical transformations in the zone of spall damageability" Dokl. Physics 61 309-312
- Buravova, S.N., Petrov, E.V. and Shchukin, A.S. 2016 "Specific features of the transformation of spall cracks to localized shear bands" Combust. Explos. Shock Waves 52 613-620
- Buzyurkin, A.E., Kraus, E.I. and Lukyanov, Y.L. 2016 "The fabrication of boron carbide compacts by explosive consolidation" J. Phys.: Conf. Ser. 774 012067
- Cavosie, A.J., Montalvo, P.E., Timms, N.E. and Reddy, S.M. 2016 "Nanoscale deformation twinning in xenotime, a new shocked mineral, from the Santa Fe impact structure, New Mexico, USA" Geology 44 803-806
- Cawkwell, M.J., Luscher, D.J., Addessio, F.L. and Ramos, K.J. 2016 "Equations of state for the  $\alpha$  and  $\gamma$  polymorphs of RDX" J. Appl. Phys. 119 185106
- Chakravarthy, S. and Gonthier, K.A. 2016 "Analysis of microstructure-dependent shock dissipation and hot-spot formation in granular metalized explosive" J. Appl. Phys. 120 024901
- Chandra, B.P., Parganiha, S., Chandra, V.K., Jha, P., Sonwane, V.D. and Baghel, R.N. 2016 "Mechanoluminescence excited by hypervelocity impact of a projectile on a target coated with ZnS:Mn phosphor" J. Luminescence 180 151-157

- Chen, P.-W., Liu, H., Zhang, S., Chen, A. and Guo, B. 2016 "Full-field 3D deformation measurement of thin metal plates subjected to underwater shock loading", in "Advancement of Optical Methods in Experimental Mechanics", ed. H. Jin, S. Yoshida, L. Lamberti and M.-T. Lin, pp. 217-223, (New York, Springer)
- Chen, Y., Ren, G., Tang, T., Li, Q. and Hu, H. 2016 "Experimental study of micro-spalling fragmentation from melted lead" Shock Waves 26 221-225
- Chen, H., Palmer, N., Dayton, M., Carpenter, A., Schneider, M.B., Bell, P.M., Bradley, D.K., Claus, L.D., Fang, L., Hilsabeck, T., Hohenberger, M., Jones, O.S., Kilkenny, J.D., Kimmel, M.W., Robertson, G., Rochau, G., Sanchez, M.O., Stahoviak, J.W., Trotter, D.C. and Porter, J.L. 2016 "A high-speed two-frame, 1-2 ns gated X-ray CMOS imager used as a hohlraum diagnostic on the National Ignition Facility" Rev. Sci. Instrum. 87 11E203
- Chen, Y.M., Shen, X.R., Wu, Q., Geng, H.Y., Yan, X.Z., Wang, Y.X. and Wang, Z.W. 2016 "Compression and phase diagram of lithium hydrides at elevated pressures and temperatures by first-principles calculation" J. Phys. D: Appl. Phys. 49 355305
- Chen, Y.T., Hong, R.K., Chen, H.Y. and Ren, G.W. 2016 "Experimental investigation of ejecta on melted tin sample under shock loading (in Chinese)" Acta Phys. Sinica 65 026201
- Chen, D.W., Wang, P., Sun, H.Q. and Yu, X.J. 2016 "Loading characteristics and dynamic behaviors of the plane tin flying layer driven by detonation collision (in Chinese)" Acta Phys. Sinica 65 024701
- Chen, K., Yu, Y., Zhang, Z. and Shi, S.-Q. 2016 "Shock-induced time-dependent strength behavior in amorphous alloys from a microscopic view" Scripta mater. 120 62-66
- Chen, S., Daehn, G.S., Vivek, A., Liu, B., Hansen, S.R., Huang, J. and Lin, S. 2016 "Interfacial microstructures and mechanical property of vaporizing foil actuator welding of aluminum alloy to steel" Mater. Sci. Engng A 659 12-21
- Chen, Y., Chen, F., Du, Z.P., Zhang, W. and Hua, H.X. 2016 "Influence of solid rubber coating on the response of floating structure to underwater shock wave" Trans. ASME: J. Offshore Mech. Arctic Engng 138 061302
- Chen, L., Pi, Z.-D., Li, D.-Y., Yang, K. and Wu, J.-Y. 2016 "Shock initiation of the CL-20-based explosive C-1 measured with embedded electromagnetic particle velocity gauges" Propell. Explos. Pyrotech. 41 1060-1069
- Chen, L., Fang, Q., Zhang, L., Zhang, Y. and Chen, W. 2016 "Numerical investigation of a water barrier against blast loadings" Engng Struct. 111 199-216
- Cheng, Y.F., Yan, S.L., Ma, H.H., Shen, Z.W. and Liu, R. 2016 "A new type of functional chemical sensitizer MgH<sub>2</sub> for improving pressure desensitization resistance of emulsion explosives" Shock Waves 26 213-219

- Cheng, B., Kwan, T.J.T., Wang, Y.M., Yi, S.A., Batha, S.H. and Wysocki, F.J. 2016 "Effects of preheat and mix on the fuel adiabat of an imploding capsule" *Phys. Plasmas* 23 120702
- Chennamsetty, A.R.K., LeBlanc, J., Abotula, S., Parrikar, P.N. and Shukla, A. 2016 "Dynamic response of Hastelloy X plates under oblique shocks: Experimental and numerical studies" *Int. J. Impact Engng* 92 75-88
- Cherniaev, A. and Telichev, I. 2016 "Experimental and numerical study of hypervelocity impact damage in composite materials fabricated by filament winding" *Int. J. Impact Engng* 98 19-33
- Cherukara, M.J., Germann, T.C., Kober, E.M. and Strachan, A. 2016 "Shock loading of granular nickel/aluminum composites. 2: Shock-induced chemistry" *J. Phys. Chem. C* 120 6804-6813
- Chiang, A., Dreger, D.S., Ford, S.R., Walter, W.R. and Yoo, S.H. 2016 "Moment tensor analysis of very shallow sources" *Bull. Seismol. Soc. Amer.* 106 2436-2449
- Chocron, S., Barnette, D.D., Holmquist, T.J., Anderson, C.E., Bigger, R.P. and Moore, T.Z. 2016 "Damage threshold of borosilicate glass under plate impact" *J. Dyn. Behav. Mater.* 2 167-180
- Choi, J.H. and Kim, D.K. 2016 "Crack and shock propagation through the interlayer in sodalime glass under detonation loading" *Int. J. Appl. Glass Sci.* 7 104-117
- Choudhury, K., Singh, R.K., Narayan, S., Srivastava, A. and Kumar, A. 2016 "Time resolved interferometric study of the plasma plume induced shock wave in confined geometry: Two-dimensional mapping of the ambient and plasma density" *Phys. Plasmas* 23 042108
- Clark, D.S., Weber, C.R., Milovich, J.L., Salmonson, J.D., Kritch, A.L., Haan, S.W., Hammel, B.A., Hinkel, D.E., Hurricane, O.A., Jones, O.S., Marinak, M.M., Patel, P.K., Robey, H.F., Sepke, S.M. and Edwards, M.J. 2016 "Three-dimensional simulations of Lowfoot and Highfoot implosion experiments on the National Ignition Facility" *Phys. Plasmas* 23 056302
- Clavin, P. and Searby, G. 2016 "Combustion Waves and Fronts in Flows: Flames, Shocks, Detonations, Ablation Fronts and Explosion of Stars" (Cambridge, Cambridge University Press)
- Clayton, J.D. 2016 "Dimensional analysis and extended hydrodynamic theory applied to long-rod penetration of ceramics" *Defence Technol.* 12 334-342
- Cochrane, K.R., Lemke, R.W., Riford, Z. and Carpenter, J.H. 2016 "Magnetically launched flyer plate technique for probing electrical conductivity of compressed copper" *J. Appl. Phys.* 119 105902
- Codina, R., Ambrosini, D. and de Borbon, F. 2016 "Alternatives to prevent the failure of reinforced concrete members under close-in blast loadings" *Engng Failure Anal.* 60 96-106

- Codina, R., Ambrosini, D. and de Borbon, F. 2016 "Experimental and numerical study of a reinforced concrete member under a close-in blast loading" Engng Struct. 127 145-158
- Colaïtis, A., Ribeyre, X., Le Bel, E., Duchateau, G., Nicolai, P. and Tikonchuk, V. 2016 "Influence of laser induced hot electrons on the threshold for shock ignition of fusion reactions" Phys. Plasmas 23 072703
- Coleman, K., Agarwal, G. and Dongare, A.M. 2016 "Dynamic evolution of defect structures during spall failure of nanocrystalline aluminum" MRS Advances 1 3853-3858
- Colin-Lalu, P., Recoules, V., Salin, G., Plisson, T., Brambrink, E., Vinci, T., Bolis, R. and Huser, G. 2016 "Dissociation along the principal Hugoniot of the Laser Mégajoule ablator material" Phys. Rev. E 94 023204
- Colombo, M., Martinelli, P. and di Prisco, M. 2016 "On the blast resistance of high performance tunnel segments" Mater. Struct. 49 117-131
- Cook, M.T., Auxier, J.D., Giminaro, A.V., Molgaard, J.J., Knowles, J.R. and Hall, H.L. 2016 "A comparison of gamma spectra from trinitite versus irradiated synthetic nuclear melt glass" J. Radioanalyt. Nuclear Chem. 307 259-267
- Crouch, I.G. (2016) "The Science of Armour Materials."
- Crowhurst, J.C., Armstrong, M.R., Gates, S.D., Zaug, J.M., Radousky, H.B. and Teslich, N.E. 2016 "Yielding of tantalum at strain rates up to  $10^9$  s<sup>-1</sup>" Appl. Phys. Letts 109 094102
- Dai, F.Z., Zhou, J.Z., Lu, J.Z. and Luo, X.M. 2016 "A technique to decrease surface roughness in overlapping laser shock peening" Appl. Surf. Sci. 370 501-507
- Dai, F., Guo, L., Xu, N.W., Fan, Y.L., Xu, J. and Jiang, P. 2016 "Improvement of microseismic location based on an anisotropic velocity model (in Chinese)" Chinese J. Geophys. 59 3291-3301
- Daly, R.T. and Schultz, P.H. 2016 "Delivering a projectile component to the Vestan regolith" Icarus 264 9-19
- Danel, J.-F., Kazandjian, L. and Piron, R. 2016 "Equation of state of warm dense deuterium and its isotopes from density-functional theory molecular dynamics" Phys. Rev. E 93 043210
- Davey, K. and Darvizeh, R. 2016 "Neglected transport equations: Extended Rankine-Hugoniot conditions and J-integrals for fracture" Continuum Mech. Thermodyn. 28 1525-1552
- Davis, B., Condon, J. and Muller, P. 2016 "An instrumented 81mm mortar target platform for dynamic engagements of high energy laser weapons", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 324-335, (Lancaster, PA, DesTech)

- Davis, P., Doppner, T., Rygg, J.R., Fortmann, C., Divol, L., Pak, A., Fletcher, L., Becker, A., Holst, B., Sperling, P., Redmer, R., Desjarlais, M.P., Celliers, P., Collins, G.W., Landen, O.L., Falcone, R.W. and Glenzer, S.H. 2016 "X-ray scattering measurements of dissociation-induced metallization of dynamically compressed deuterium" *Nature Commun.* 7 doi: 10.1038/ncomms11189
- Davis, J.-P., Knudson, M.D., Shulenburger, L. and Crockett, S.D. 2016 "Mechanical and optical response of [100] lithium fluoride to multi-megabar dynamic pressures" *J. Appl. Phys.* 120 165901
- Davis, M.J. 2016 "Laser-shock-induced spall and the intrinsic strength of glass" *Int. J. Appl. Glass Sci.* 7 364-373
- de la Cruz, R., Galvis, J., Juajibioy, J.C. and Rendon, L. 2016 "Delta shock wave for a 3 x 3 hyperbolic system of conservation laws" *Bull. Brazil. Math. Soc.* 47 277-290
- de Rességuier, T., Roland, C., Prudhomme, G., Lescoute, E., Loison, D. and Mercier, P. 2016 "Influence of edge conditions on material ejection from periodic grooves in laser shock-loaded tin" *J. Appl. Phys.* 119 185108
- Dean, S.W., De Lucia, F.C. and Gottfried, J.L. 2016 "Characterization of laser-driven flyer plates", in "Proc. 19th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán and J. Selesovsky, pp. 90-99, (Pardubice, Czech Republic, University of Pardubice)
- Del Linz, P., Fan, S.C. and Lee, C.K. 2016 "Modeling of combined impact and blast loading on reinforced concrete slabs" *Latin Amer. J. Solids Structures* 13 2266-2282
- Del Linz, P., Wang, Y., Hooper, P.A., Arora, H., Smith, D., Pascoe, L., Cormie, D., Blackman, B.R.K. and Dear, J.P. 2016 "Determining material response for polyvinylbutyral (PVB) in blast loading situations" *Exper. Mech.* 56 1501-1517
- Delgado, A., Cordova, S., Lopez, I., Nemir, D. and Shafirovich, E. 2016 "Mechanically activated combustion synthesis and shockwave consolidation of magnesium silicide" *J. Alloys Compounds* 658 422-429
- Denoeud, A., Ozaki, N., Benuzzi-Mounaix, A., Uranishi, H., Kondo, Y., Kodama, R., Brambrink, E., Ravasio, A., Bocoum, M., Boudenne, J.M., Harmand, M., Guyot, F., Mazevet, S., Riley, D., Makita, M., Sano, T., Sakawa, Y., Inubushi, Y., Gregori, G., Koenig, M. and Morard, G. 2016 "Dynamic X-ray diffraction observation of shocked solid iron up to 170 GPa" *Proc. Nat. Acad. Sci. USA* 113 7745-7749
- Diegelmann, F., Hickel, S. and Adams, N.A. 2016 "Shock Mach number influence on reaction wave types and mixing in reactive shock-bubble interaction" *Combust. Flame* 174 85-99
- Ding, Y.Y., Wang, S.L., Zhao, K., Zheng, Z.J., Yang, L.M. and Yu, J.L. 2016 "Blast alleviation of cellular sacrificial cladding: A nonlinear plastic shock model" *Int. J. Appl. Mech.* 8 1650057

- Ding, C., Ngo, T., Mendis, P., Lumantama, R. and Zobec, M. 2016 "Dynamic response of double skin façades under blast loads" Engng Struct. 123 155-165
- Dolmatov, V.Y. 2016 "Assessment of applicability of explosive charges for synthesis of detonation nanodiamonds" J. Superhard Mater. 38 373-376
- Donaldson, W.R., Katz, J., Huff, R., Hill, E.M., Kelly, J.H., Kwiatkowski, J., Brannon, R.B. and Boni, R. 2016 "A picosecond beam-timing system for the OMEGA laser" Rev. Sci. Instrum. 87 053511
- Dong, Q. and Hu, B. 2016 "Dynamic behavior of carbon fiber explosion containment vessels" Trans. ASME: J. Pressure Vessel Technol. 138 011202
- Dong, Q., Wang, P., Yi, C. and Hu, B. 2016 "Dynamic failure behavior of cylindrical glass fiber composite shells subjected to internal blast loading" Trans. ASME: J. Pressure Vessel Technol. 138 060901
- Dorgarten, H.W., Otremba, H. and Padberg, R. 2016 "Sandwich-cladding: Protection measure against contact detonations" Transport Research Procedia 14 1403-1412
- Doss, F.W., Flippo, K.A., Capelli, D., Cardenas, T., DeVolder, B., Kline, J., Kot, L., Kurien, S., Loomis, E., Merritt, E.C., Perry, T., Schmidt, D. and Di Stefano, C. 2016 "Increasing shot and data collection rates of the Shock/Shear experiment at the National Ignition Facility" J. Phys.: Conf. Ser. 717 012059
- Doss, F.W., Flippo, K.A. and Merritt, E.C. 2016 "Observation and analysis of emergent coherent structures in a high-energy-density shock-driven planar mixing layer experiment" Phys. Rev. E 94 023101
- Driver, K.P. and Militzer, B. 2016 "First-principles equation of state calculations of warm dense nitrogen" Phys. Rev. B 93 064101
- Du, J.-P., Wang, Y.-J., Lo, Y.-C., Wan, L. and Ogata, S. 2016 "Mechanism transition and strong temperature dependence of dislocation nucleation from grain boundaries: An accelerated molecular dynamics study" Phys. Rev. B 94 104110
- Duan, W.-S., Zhang, Z.-B. and Yang, L. 2016 "Shock wave in a one-dimensional granular chain under Hertz contact" Phys. Rev. E 94 052906
- Dubois, V. and Pineau, N. 2016 "New developments of the CARTE thermochemical code: A two-phase equation of state for nanocarbons" J. Appl. Phys. 119 015903
- Dubovitskii, V.A. and Nesterenko, D.A. 2016 "Calculation of the composition of detonation products and optimization of dynamic characteristics for mixed explosives" Russ. Chem. Bull. 65 2411-2414
- Durand, O., Soulard, L., Bourasseau, E. and Filippini, G. 2016 "Investigation of the static and dynamic fragmentation of metallic liquid sheets induced by random surface fluctuations" J. Appl. Phys. 120 045306

- Dustin, M.K., Koeman, E.C., Simonetti, A., Torrano, Z. and Burns, P.C. 2016 "Comparative investigation between in situ laser ablation versus bulk sample (solution mode) inductively coupled plasma mass spectrometry (ICP-MS) analysis of trinitite post-detonation materials" *Appl. Spectroscopy* 70 1446-1455
- E, J.C., Huang, J.Y., Bie, B.X., Sun, T., Fezzaa, K., Xiao, X.H., Sun, W. and Luo, S.N. 2016 "Deformation and fracture of explosion-welded titanium/aluminum plates: A synchrotron-based study" *Mater. Sci. Engng A* 674 308-317
- Ebel, A.A. and Mayer, A.E. 2016 "Molecular dynamic investigations of the shock pulses interaction with nanostructured free surface of a target" *J. Phys.: Conf. Ser.* 774 012060
- Ebrahimi, H., Ghosh, R., Mahdi, E., Nayeb-Hashemi, H. and Vaziri, A. 2016 "Honeycomb sandwich panels subjected to combined shock and projectile impact" *Int. J. Impact Engng* 95 1-11
- Ecault, R., Touchard, F., Boustie, M., Berthe, L. and Dominguez, N. 2016 "Numerical modeling of laser-induced shock experiments for the development of the adhesion test for bonded composite materials" *Compos. Struct.* 152 382-394
- Eckner, R., Reichel, B., Savinykh, A.S., Kruger, L., Razorenov, S.V. and Garkushin, G.V. 2016 "Microstructure of CrMnNi cast steel after explosive-driven flyer-plate impact at room temperature and below" *Metall. Mater. Trans. A* 47 75-83
- Eckner, R., Kruger, L., Ullrich, C., Rafaja, D., Schlothauer, T. and Heide, G. 2016 "Microstructure and mechanical properties after shock wave loading of cast CrMnNi TRIP steel" *Metall. Mater. Trans. A* 47 4922-4932
- Efremov, V.P., Ivanov, M.F., Kiverin, A.D. and Yakovenko, I.S. 2016 "Shock-wave processes evolution in fused quartz under intense energy action" *J. Phys.: Conf. Ser.* 774 012119
- Eitel, M., Gilder, S.A., Spray, J., Thompson, L. and Pohl, J. 2016 "A paleomagnetic and rock magnetic study of the Manicouagan impact structure: Implications for crater formation and geodynamo effects" *J. Geophys. Res.: Solid Earth* 121 436-454
- Ekstrom, J., Rempling, R. and Plos, M. 2016 "Spalling in concrete subjected to shock wave blast" *Engng Struct.* 122 72-82
- Elbeih, A., Mohamed, M.M. and Wafy, T. 2016 "Sensitivity and detonation characteristics of selected nitramines bonded by Sylgard binder" *Propell. Explos. Pyrotech.* 41 1044-1049
- Eliezer, S., Ravid, A., Henis, Z., Nissim, N. and Val, J.M.M. 2016 "Laser-induced fusion detonation wave" *Laser Particle Beams* 34 343-351
- Enache, C., Trana, E., Rotariu, T., Rotariu, A., Tiganescu, V.T. and Zecheru, T. 2016 "Numerical simulation and experimental tests on explosively-induced water jet phenomena" *Propell. Explos. Pyrotech.* 41 1020-1028

- Erickson, T.M., Cavosie, A.J., Pearce, M.A., Timms, N.E. and Reddy, S.M. 2016 "Empirical constraints on shock features in monazite using shocked zircon inclusions" *Geology* 44 635-638
- Ershov, A.P., Kashkarov, A.O., Pruell, E.R., Satonkina, N.P., Silvestrov, V.V., Yunoshev, A.S. and Plastinin, A.V. 2016 "Nonideal detonation regimes in low density explosives" *J. Appl. Phys.* 119 075903
- Ershov, A.P., Kashkarov, A.O. and Pruell, E.R. 2016 "Initiation of PETN detonation by an impactor and a high-enthalpy gas flow" *Combust. Explos. Shock Waves* 52 96-101
- Erzar, B., Pontiroli, C. and Buzaud, E. 2016 "Shock characterization of an ultra-high strength concrete" *EPJ Special Topics* 225 355-361
- Fan, D., Huang, J.W., Zeng, X.L., Li, Y., E, J.C., Huang, J.Y., Sun, T., Fezzaa, K., Wang, Z. and Luo, S.N. 2016 "Simultaneous, single-pulse, synchrotron X-ray imaging and diffraction under gas gun loading" *Rev. Sci. Instrum.* 87 053903
- Fan, W., Zhu, B., Xi, T., Li, G., Lu, F., Wu, Y.C., Han, D. and Gu, Y.Q. 2016 "Experiment research on dynamic response of copper film at high strain rate by chirped pulse spectral interferometry (in Chinese)" *Acta Phys. Sinica* 65 150602
- Fan, Z., Liu, Y. and Xu, P. 2016 "Blast resistance of metallic sandwich panels subjected to proximity underwater explosion" *Int. J. Impact Engng* 93 128-135
- Farbaniec, L., Williams, C.L., Kecske, L., Ramesh, K.T. and Becker, R. 2016 "Microstructural effects on the spall properties of ECAE-processed AZ31B magnesium alloy" *Int. J. Impact Engng* 98 34-41
- Fazio, A., D'Orazio, M., Cordier, C. and Folco, L. 2016 "Target-projectile interaction during impact melting at Kamil Crater, Egypt" *Geochim. Cosmochim. Acta* 180 33-50
- Fedorov, A.V., Mikhailov, A.L., Finyushin, S.A., Kalashnikov, D.A., Chudakov, E.A., Butusov, E.I. and Gnudov, I.S. 2016 "Detection of the multiple spallation parameters and the internal structure of a particle cloud during shock-wave loading of a metal" *J. Exper. Theor. Phys.* 122 685-688
- Fedorov, A.V., Mikhailov, A.L., Antonyuk, L.K. and Shmelev, I.V. 2016 "Experimental study of the stripping breakup of droplets and jets after their ejection from a liquid surface" *Combust. Explos. Shock Waves* 52 476-481
- Fedorov, A.V., Mikhailov, A.L., Finyushin, S.A., Kalashnikov, D.A., Chudakov, E.A., Butusov, E.I. and Gnudov, I.S. 2016 "Recording the particle velocity spectrum at the time the shock wave reaches the surface of liquids of different viscosities" *Combust. Explos. Shock Waves* 52 482-487
- Fei, Y.W., Murphy, C., Shibasaki, Y., Shahar, A. and Huang, H.J. 2016 "Thermal equation of state of hcp-iron: Constraint on the density deficit of Earth's solid inner core" *Geophys. Res. Letts* 43 6837-6843

- Feng, X., Chang, J. and Lu, Y. 2016 "Experimental research on HEL and failure properties of alumina under impact loading", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 2013-2017, (Lancaster, PA, DesTech)
- Feng, X.-W., Chang, J.-Z. and Lu, Y.-G. 2016 "Experimental research on HEL and failure properties of alumina under impact loading" Defence Technol. 12 272-276
- Feng, X.W., Li, J.C., Wang, H.B. and Chang, J.Z. 2016 "Mesomechanism of elastic precursor decay in alumina under plate impact loading (in Chinese)" Acta Phys. Sinica 65 166201
- Fensin, S.J., Jones, D.R., Walker, E.K., Farrow, A., Imhoff, S.D., Clarke, K., Trujillo, C.P., Martinez, D.T., Gray III, G.T. and Cerreta, E.K. 2016 "The effect of distribution of second phase on dynamic damage" J. Appl. Phys. 120 085901
- Ferrara, L., Caverzan, A., Nahum, L. and Peled, A. 2016 "‘Collapsible’ lightweight aggregate concrete. 2: Characterization under static and dynamic loadings" Mater. Struct. 49 1747-1760
- Florando, J.N., El-Dasher, B.S., Chen, C., Swift, D.C., Barton, N.R., McNaney, J.M., Ramesh, K.T., Hemker, k.J. and Kumar, M. 2016 "Effect of strain rate and dislocation density on the twinning behavior in tantalum" AIP Advances 6 045120
- Foadian, F., Soltanieh, M., Adeli, M. and Etminanbakhsh, M. 2016 "The kinetics of TiAl<sub>3</sub> Formation in explosively welded Ti-Al multilayers during heat treatment" Metall. Mater. Trans. B 47 2931-2937
- Fomin, N.A. 2016 "How the term ‘shock waves’ came into being" J. Engng Phys. Thermophys. 89 1047-1065
- Fontenot, R.S., Allison, S.W., Lynch, K.J., Hollerman, W.A. and Sabri, F. 2016 "Mechanical, spectral, and luminescence properties of ZnS:Mn doped PDMS" J. Luminescence 170 194-199
- Fortov, V.E. 2016 "Extreme States of Matter: High Energy Density Physics" (Berlin, Springer)
- Fortov, V.E. 2016 "High-power lasers in high-energy density physics", in "Extreme States of Matter: High-Energy Density Physics (Second Edition)", ed. pp. 167-275, (Berlin, Springer)
- Fotouhi-Far, F., Bashiri, H., Hamadanian, M. and Keshavarz, M.H. 2016 "A new method for assessment of performing mechanical works of energetic compounds by the cylinder test" Z. anorg. allgem. Chem. 642 1086-1090
- Fousson, E., Ritter, A. and Arnold, T. 2016 "High safety and reliability electric detonator" Propell. Explos. Pyrotech. 41 870-874

- Fratanduono, D.E., Celliers, P.M., Braun, D.G., Sterne, P.A., Hamel, S., Shamp, A., Zurek, E., Wu, K.J., Lazicki, A.E., Millot, M. and Collins, G.W. 2016 "Equation of state, adiabatic sound speed, and Grüneisen coefficient of boron carbide along the principal Hugoniot to 700 GPa" Phys. Rev. B 94 184107
- Gambino, J.R., Kapila, A.K. and Schwendeman, D.W. 2016 "{Herring, 2016 #40512}" Combust. Theory Model. 20 1088-1117
- Gao, P., Xu, Y., Zhang, Y. and Wang, S. 2016 "Study on numerical simulation of initiation effect of kinetic energy block to covered explosive", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 1543-1552, (Lancaster, PA, DesTech)
- Gao, W., Li, J., Li, Y., Yu, J. and Zhang, X. 2016 "Explosion characteristics of nano-PMMA particles" Combust. Explos. Shock Waves 52 117-123
- Gao, C., Zhang, S., Kang, W., Wang, C., Zhang, P. and He, X.T. 2016 "Validity boundary of orbital-free molecular dynamics method corresponding to thermal ionization of shell structure" Phys. Rev. B 94 205115
- Garcia, A., Buelna, X., Popov, E. and Eloranta, J. 2016 "Time-resolved study of laser initiated shock wave propagation in superfluid  $^4\text{He}$ " J. Chem. Phys. 145 124504
- Garkushin, G.V., Kanel, G.I., Savinykh, A.S. and Razorenov, S.V. 2016 "Influence of impurities on the resistance to spall fracture of aluminum near the melting temperature" Int. J. Fract. 197 185-188
- Garkushin, G.V., Naumova, N.S., Atroshenko, S.A. and Razorenov, S.V. 2016 "Influence of the reversible  $\alpha$ - $\epsilon$  phase transition and preliminary shock compression on the spall strength of Armco iron" Tech. Phys. 61 84-90
- Gavasheli, Y.O., Komarov, P.S., Ashitkov, S.I., Savintsev, A.P. and Agranat, M.B. 2016 "Investigation of a sodium chloride damage region by femtosecond laser" Dokl. Physics 61 577-578
- Gerasimov, Y.V. and Maslov, A.G. 2016 "Equation of state for hydrogen-like materials with high energy densities" J. Phys.: Conf. Ser. 731 012006
- Gerasimov, M.V., Dikov, Y.P. and Yakovlev, O.i. 2016 "New experimental evidence on cluster-type vaporization of feldspars" Petrology 24 49-74
- Gilev, S.D. and Prokopev, V.S. 2016 "Electrical resistance of copper under shock compression: Experimental data" Combust. Explos. Shock Waves 52 107-116
- Girard, F. 2016 "Review of laser produced multi-keV X-ray sources from metallic foils, cylinders with liner, and low density aerogels" Phys. Plasmas 23 040501
- Glazova, E.G., Konstantinov, A.Y., Kochetov, A.V. and Krylov, S.V. 2016 "Explosive loading of deformable gas-permeable axisymmetric structural elements" J. Appl. Mech. Tech. Phys. 57 866-872
- Glikson, A., Hickman, A. and Crossley, R. 2016 "Evidence for a shock-metamorphic breccia within a buried impact crater, Lake Raeside, Yilgarn Craton, Western Australia" Austral. J. Earth Sci. 63 99-109

- Gloc, M., Wachowski, M., Plocinski, T. and Kurzydlowski, K.J. 2016 "Microstructural and microanalysis investigations of bond titanium grade1/low alloy steel st52-3N obtained by explosive welding" *J. Alloys Compounds* 671 446-451
- Gojani, A.B., Ohtani, K., Takayama, K. and Hosseini, S.H.R. 2016 "Shock Hugoniot and equations of states of water, castor oil, and aqueous solutions of sodium chloride, sucrose and gelatin" *Shock Waves* 26 63-68
- Gorfain, J.E., Key, C.T. and Alexander, C.S. 2016 "Application of a computational glass model to the shock response of sodalime glass" *J. Dyn. Behav. Mater.* 2 283-305
- Gornostaeva, T.A., Mokhov, A.V., Kartashov, P.M. and Bogatikov, O.A. 2016 "Condensate glasses from the Zhamanshin crater. 1: Irghizites" *Petrology* 24 1-20
- Gozzani, G., Drdlova, M., Prchar, V. and Popovic, M. 2016 "Characteristics of glass-based energy absorbers exposed to the blast load" *Procedia Engng* 151 149-156
- Greeff, C.W. 2016 "A model for phase transitions under dynamic compression" *J. Dyn. Behav. Mater.* 2 452-459
- Greenberg, B.A., Ivanov, M.A., Pushkin, M.S., Inozemtsev, A.V., Patselov, A.M., Tankeyev, A.P., Kuzmin, S.V. and Lysak, V.I. 2016 "Formation of intermetallic compounds during explosive welding" *Metall. Mater. Trans. A* 47 5461-5473
- Gregor, M.C., Boni, R., Sorce, A., Kendrick, J., McCoy, C.A., Polsin, D.N., Boehly, T.R., Celliers, P.M., Collins, G.W., Fratanduono, D.E., Eggert, J.H. and Millot, M. 2016 "Absolute calibration of the OMEGA streaked optical pyrometer for temperature measurements of compressed materials" *Rev. Sci. Instrum.* 87 114903
- Grujicic, M., Snipes, J.S. and Ramaswami, S. 2016 "The effect of fused-silica pre-shocking on its devitrification propensity and ballistic resistance: An all-atom molecular-level analysis" *J. Mater. Sci.* 51 3500-3512
- Grujicic, M., Ramaswami, S., Snipes, J.S., Yavari, R. and Dudit, P. 2016 "Experimental and computational investigations of the potential improvement in helmet blast-protection through the use of a polyurea-based external coating" *Multidiscipline Model. Mater. Struct.* 12 33-72
- Grujicic, M., Snipes, J.S. and Ramaswami, S. 2016 "A computational analysis of the utility of chemical reactions within protective structures in mitigating shockwave-impact effects" *Multidiscipline Model. Mater. Struct.* 12 438-472
- Grun, J., Cranch, G.A., Lunsford, R., Compton, S., Walton, O.R., Weaver, J., Dunlop, W. and Fournier, K.B. 2016 "Scaled experiments of explosions in cavities" *J. Appl. Phys.* 119 184903
- Gryaznov, V.K., Iosilevskiy, I.L. and Fortov, V.E. 2016 "Thermodynamics of hydrogen and helium plasmas in megabar and multi-megabar pressure range under strong shock and isentropic compression" *Plasma Phys. Controlled Fusion* 58 014012

- Gupta, S., Matos, H., LeBlanc, J.M. and Shukla, A. 2016 "Shock initiated instabilities in underwater cylindrical structures" *J. Mech. Phys. Solids* 95 188-212
- Gurrutxaga-Lerma, B. 2016 "The role of the mobility law of dislocations in the plastic response of shock loaded pure metals" *Model. Simul. Mater. Sci. Engng* 24 065006
- Hahn, E.N., Zhao, S., Bringa, M. and Meyers, M.A. 2016 "Supersonic dislocation bursts in silicon" *Scientific Reports* 6 doi: 10.1038/srep26977
- Hamann, C., Luther, R., Ebert, M., Hecht, L., Deutsch, A., Wünnemann, K., Schaffer, S., Osterholz, J. and Lexow, B. 2016 "Correlating laser-generated melts with impact-generated melts: An integrated thermodynamic-petrologic approach" *Geophys. Res. Letts* 43 10602-10610
- Hamers, M.F., Pennock, g.M., Herwegh, M. and Drury, M.R. 2016 "Distinction between amorphous and healed planar deformation features in shocked quartz using composite color scanning electron microscope cathodoluminescence (SEM-CL) imaging" *Meteor. Planet. Sci.* 51 1914-1931
- Hansen, C. and Pak, R.Y.S. 2016 "Centrifuge characterization of buried, explosive-induced soil ejecta kinematics and crater morphology" *J. Dyn. Behav. Mater.* 2 306-325
- Hao, L., Li, J., Liu, W.D., Yan, R. and Ren, C. 2016 "Simulation of stimulated Brillouin scattering and stimulated Raman scattering in shock ignition" *Phys. Plasmas* 23 042702
- Hao, H., Hao, Y.F., Li, J. and Chen, W.S. 2016 "Review of the current practices in blast-resistant analysis and design of concrete structures" *Adv. Struct. Engng* 19 1193-1223
- Harriss, K.H. and Burchell, M.J. 2016 "A study of the observed shift in the peak position of olivine Raman spectra as a result of shock induced by hypervelocity impacts" *Meteor. Planet. Sci.* 51 1289-1300
- Hasan, M.A. and Nemat-Nasser, S. 2016 "Universal relations for solitary waves in granular crystals under shocks with finite rise and decay times" *Phys. Rev. E* 93 042905
- He, A.-M., Wang, P. and Shao, J.-L. 2016 "Statistically heterogeneous size distribution of ejecta from shock-loaded copper with a wedged surface groove" *Model. Simul. Mater. Sci. Engng* 24 025002
- He, Z.H., Chen, J., Wu, Q. and Ji, G.F. 2016 "Special catalytic effects of intermediate-water for rapid shock initiation of beta-HMX" *RSC Advances* 6 93103-93110
- Hedayati, R. and Sadighi, M. 2016 "Bird Strike: An Experimental, Theoretical and Numerical Investigation" (Amsterdam, The Netherlands, Elsevier)
- Helle, M.H., Gordon, D.F., Kaganovich, D., Chen, Y., Palastro, J.P. and Ting, A. 2016 "Laser-accelerated ions from a shock-compressed gas foil" *Phys. Rev. Letts* 117 165001

- Heyden, S., Ortiz, M. and Fortunelli, A. 2016 "All-atom molecular dynamics simulations of multiphase segregated polyurea under quasistatic, adiabatic, uniaxial compression" *Polymer* 106 100-108
- Holder, J.P., Benedetti, L.R. and Bradley, D.K. 2016 "Characterization of X-ray framing cameras for the National Ignition Facility using single photon pulse height analysis" *Rev. Sci. Instrum.* 87 11D618
- Holmquist, T.J., Bradley, J., Dwivedi, A. and Casem, D. 2016 "The response of PMMA subjected to large strains, high strain rates, high pressures, a range in temperatures, and variations in the intermediate principal stress" *EPJ Special Topics* 225 343-354
- Homae, T., Sugiyama, Y., Wakabayashi, K., Matsumura, T. and Nakayama, Y. 2016 "Water and sand for blast pressure mitigation around a subsurface magazine" *Sci. Technol. Energ. Mater.* 77 18-21
- Hong, Y., Sarntinoranont, M., Subhash, G., Canchi, S. and King, M.A. 2016 "Localized tissue surrogate deformation due to controlled single bubble cavitation" *Exper. Mech.* 56 97-109
- Hong, S. and Kang, T.H.K. 2016 "Dynamic strength properties of concrete and reinforcing steel subject to extreme loads" *ACI Struct. J.* 113 983-995
- Hosoya, N., Nagata, M., Kajiwara, I. and Umino, R. 2016 "Nanosecond laser-induced plasma shock wave in air for non-contact vibration tests" *Exper. Mech.* 56 1305-1311
- Hosseini, S.H.R., Kaiho, K. and Takayama, K. 2016 "Response of ocean bottom dwellers exposed to underwater shock waves" *Shock Waves* 26 69-74
- Hu, S.X., Collins, L.A., Goncharov, V.N., Kress, J.D., McCrory, R.L. and Skupsky, S. 2016 "First-principles investigations on ionization and thermal conductivity of polystyrene for inertial confinement fusion applications" *Phys. Plasmas* 23 042704
- Hu, S.X., Michel, D.T., Davis, A.K., Betti, R., Radha, P.B., Campbell, E.M., Froula, D.H. and Stoeckl, C. 2016 "Understanding the effects of laser imprint on plastic-target implosions on OMEGA" *Phys. Plasmas* 23 102701
- Hu, S.X., Militzer, B., Collins, L.A., Driver, K.P. and Kress, J.D. 2016 "First-principles prediction of the softening of the silicon shock Hugoniot curve" *Phys. Rev. B* 94 094109
- Huang, X.G., Yuan, X.H., Chen, Z.A., Liu, F.S. and Bai, W.M. 2016 "Hugoniot equation of state of olivine and its geodynamic implications" *Science China Earth Sci.* 59 619-625
- Huang, K., Rammohan, A.V., Kureemun, U., Teo, W.S., Tran, L.Q.N. and Lee, H.P. 2016 "Shock wave impact behavior of flax fiber reinforced polymer composites" *Composites B* 102 78-85

- Huang, W., Zhang, W., Ye, N., Gao, Y.B. and Ren, P. 2016 "Dynamic response and failure of PVC foam core metallic sandwich subjected to underwater impulsive loading" Composites B 97 226-238
- Huang, W., Jia, B., Zhang, W., Huang, X., Li, D. and Ren, P. 2016 "Dynamic failure of clamped metallic circular plates subjected to underwater impulsive loads" Int. J. Impact Engng 94 96-108
- Huo, W.Y., Li, Z., Chen, Y.-H., Xie, X., Lan, K., Liu, J., Ren, G., Li, Y., Liu, Y., Jiang, X., Yang, D., Li, S., Guo, L., Zhang, H., Hou, L., Du, H., Peng, X., Xu, T., Li, C., Zhan, X., Yuan, G., Zhang, H., Jiang, B., Huang, L., Du, K., Zhao, R., Li, P., Wang, W., Su, J., Ding, Y., He, X.-T. and Zhang, W. 2016 "First investigation on the radiation field of the spherical hohlraum" Phys. Rev. Letts 117 025002
- Hussain, T., Liu, Y., Huang, F.L. and Duan, Z.P. 2016 "Ignition and growth modeling of shock initiation of different particle size formulations of PBXC03 explosive" J. Energ. Mater. 34 38-48
- Hussain, T., Yan, L., Huang, F.L. and Li, Y. 2016 "Desensitization by pre-shocking in heterogeneous explosives and its numerical modelling" Cent. Eur. J. Energ. Mater. 13 357-379
- Igra, O. and Seiler, F., Eds. 2016 "Experimental Methods of Shock Wave Research" (Berlin, Springer)
- Igra, O. and Houas, L. 2016 "Shock tubes", in "Experimental Methods of Shock Wave Research", ed. O. Igra and F. Seiler, pp. 3-52, (Berlin, Springer)
- Igumenshchev, I.V., Goncharov, V.N., Marshall, F.J., Knauer, J.P., Campbell, E.M., Forrest, C.J., Froula, D.H., Glebov, V.Y., McCrory, R.L., Regan, S.P., Sangster, T.C., Skupsky, S. and Stoeckl, C. 2016 "Three-dimensional modeling of direct-drive cryogenic implosions on OMEGA" Phys. Plasmas 23 052702
- Iqbal, N., Tripathi, M., Parthasarathy, S., Kumarb, D. and Roy, P.K. 2016 "Polyurea coatings for enhanced blast-mitigation: A review" RSC Advances 6 109706-109717
- Jaidann, M., Abou-Rachid, H., Bouamoul, A. and Brisson, J. 2016 "Novel approach to make Hugoniot predictions: Quantum mechanics/molecular dynamics calculations" Int. J. Energ. Mater. Chem. Propuls. 15 89-111
- Jajam, K.C. and Sottos, N.R. 2016 "Energy absorption behavior of polyurea under laser-induced dynamic mixed-mode loading" J. Dyn. Behav. Mater. 2 379-390
- Jarrott, L.C., Wei, M.S., McGuffey, C., Solodov, A.A., Theobald, W., Qiao, B., Stoeckl, C., Betti, R., chen, H., Delettrez, J., Döppner, T., Giraldez, E.M., Glebov, V.Y., Habara, H., Iwawaki, T., Key, M.H., Luo, R.W., Marshall, F.J., McLean, H.S., Mileham, C., Patel, P.K., Santos, J.J., Sawada, H., Stephens, R.B., Yabuuchi, T. and Beg, F.N. 2016 "Visualizing fast electron energy transport into laser-compressed high-density fast-ignition targets" Nature Physics 12 499-504

- Jiang, T., Yu, Y., He, H., Li, Y., Huan, Q. and Wu, J. 2016 "Macroscopic shock plasticity of brittle material through designed void patterns" *J. Appl. Phys.* 119 095905
- Jiang, X.X., Chen, G.Y., Cheng, X.L., Li, Y.T. and Guo, F. 2016 "Phase transition and chemical decomposition of liquid oxygen and nitrogen mixture under high pressures" *J. Phys. Chem. C* 120 13366-13374
- Jiang, S., Sewell, T.D. and Thompson, D.L. 2016 "Molecular dynamics simulations of shock wave propagation through the crystal-melt interface of (100)-oriented nitromethane" *J. Phys. Chem. C* 120 22989-23000
- Jin, Z., Yin, C., Chen, Y. and Hua, H. 2016 "Graded effects of metallic foam cores for spherical sandwich shells subjected to close-in underwater explosion" *Int. J. Impact Engng* 94 23-35
- Johnson, B.C., Collins, G.S., Minton, D.A., Bowling, T.J., Simonson, b.M. and Zuber, M.T. 2016 "Spherule layers, crater scaling laws, and the population of ancient terrestrial impactors" *Icarus* 271 350-359
- Jones, D.R., Fensin, S.J., Dippo, O., Beal, R.A., Livescu, V., Martinez, D.T., Trujillo, C.P., Florando, J.N., Kumar, M. and Gray III, G.T. 2016 "Spall fracture in additive manufactured Ti6Al4V" *J. Appl. Phys.* 120 135902
- Jordan, J., Montaigne, D., Neel, C., Sunny, G. and Molek, C. 2016 "Shock and high strain rate characterization of HTPB with varying plasticizer", in "Dynamic Behavior of Materials", ed. B. Song, L. Lamberson, D. Casem and J. Kimberley, pp. 39-42, (New York, Springer)
- Jordan, J.L., Montaigne, D., Gould, P., Neel, C., Sunny, G. and Molek, C. 2016 "High strain rate and shock properties of hydroxyl-terminated polybutadiene (HTPB) with varying amounts of plasticizer" *J. Dyn. Behav. Mater.* 2 91-100
- Jordan, J.L., Casem, D. and Zellner, M. 2016 "Shock Response of PMMA" *J. Dyn. Behav. Mater.* 2 372-278
- Kadatskiy, M.A. and Khishchenko, K.V. 2016 "Shock compressibility of iron calculated in the framework of quantum-statistical models with different ionic parts" *J. Phys.: Conf. Ser.* 774 012005
- Kader, M.A., Islam, M.A., Hazell, P.J., Escobedo, J.p., Saadatfar, M., Brown, A.D. and Appleby-Thomas, G.J. 2016 "Modelling and characterization of cell collapse in aluminium foams during dynamic loading" *Int. J. Impact Engng* 96 78-88
- Kalenskii, A.V., Ananeva, M.V., Zvekov, A.A. and Zykov, I.Y. 2016 "Paradox of small particles in the pulsed laser initiation of explosive decomposition of energetic materials" *Combust. Explos. Shock Waves* 52 234-240
- Kanel, G.I., Razorenov, S.V. and Garkushin, G.V. 2016 "Rate and temperature dependences of the yield stress of commercial titanium under conditions of shock-wave loading" *J. Appl. Phys.* 119 185903

- Kanel, G.I., Garkushin, G.V. and Razorenov, S.V. 2016 "Temperature-rate dependences of the flow stress and the resistance to fracture of a VT6 titanium alloy under shock loading at a temperature of 20 and 600°C" Tech. Phys. 61 1229-1236
- Kanel, G.I., Razorenov, S.V., Garkushin, G.V., Pavlenko, A.V. and Malyugina, S.N. 2016 "Change of the kinetics of shock-wave deformation and fracture of VT1-0 titanium as a result of annealing" Phys. Solid State 58 1191-1198
- Kanel, G.I., Savinykh, A.S. and Razorenov, S.V. 2016 "Anomalous compressibility of quartz glass within the tensile stress domain and at elevated temperatures" High Temp. 54 662-666
- Kanel, G.I., Savinykh, A.S., Garkushin, G.V., Razorenov, S.V., Ashitkov, S.I. and Zaretsky, E.B. 2016 "Peculiarities of evolutions of elastic-plastic shock compression waves in different materials" J. Phys.: Conf. Ser. 774 012048
- Kang, M.J. and Vasseur, A.F. 2016 "Criteria on contractions for entropic discontinuities of systems of conservation laws" Arch. Ration. Mech. Anal. 222 343-391
- Kang, X.W., Chen, L., Chen, J. and Sheng, Z.M. 2016 "Femtosecond laser ablation of an aluminum target in air (in Chinese)" Acta Phys. Sinica 65 055204
- Karakhanov, S.M., Plastinin, A.V., Bordzilovskii, D.S. and Bordzilovskii, S.A. 2016 "Time of hot-spot formation in shock compression of microballoons in a condensed medium" Combust. Explos. Shock Waves 52 350-357
- Karasiev, V.V., Calderin, L. and Trickey, S.B. 2016 "Importance of finite-temperature exchange correlation for warm dense matter calculations" Phys. Rev. E 93 063207
- Karinski, Y.S., Feldgun, V.R., Racah, E. and Yankelevsky, D.Z. 2016 "The Mach stem phenomenon for shaped obstacles buried in soil" Adv. Engng Software 101 98-105
- Kartashov, P.M., Gornostaeva, T.A., Mokhov, A.V. and Bogatikov, O.A. 2016 "The natural high-pressure phase of cubic CdSe in impact glass from Zhamanshin crater" Dokl. Earth Sci. 467 412-414
- Karunaratne, A. 2016 "Biological tissue response to blast", in "Blast Injury Science and Engineering: A Guide for Clinicians and Researchers", ed. A.M.J. Bull, J. Clasper and P.F. Mahoney, pp. 71-84, (Berlin, Springer)
- Kassoy, D.R. 2016 "The Zeldovich spontaneous reaction wave propagation concept in the fast/modest heating limits" J. Fluid Mech. 791 439-463
- Kazanskiy, N.L. and Poletayev, S.D. 2016 "Numerical simulation of the ablation of thin molybdenum films under laser irradiation" Tech. Phys. 61 1279-1285
- Kelly, S.C. and Thadhani, N.N. 2016 "Shock compression response of highly reactive Ni + Al multilayered thin foils" J. Appl. Phys. 119 095903

- Kelly, M., Arora, H., Worley, A., Kaye, M., Del Linz, P., Hooper, P.A. and Dear, J.P. 2016 "Sandwich panel cores for blast applications: Materials and graded density" Exper. Mech. 56 523-544
- Kemp, A.J. and Divol, L. 2016 "What is the surface temperature of a solid irradiated by a Petawatt laser?" Phys. Plasmas 23 090703
- Kenkmann, T. 2016 "Dynamics of impact cratering", in "Rock Dynamics: From Research to Engineering", ed. H. Li, J. Li, Q. Zhang and J. Zhao, pp. 37-48, (London, Taylor & Francis)
- Khabirov, S.V. 2016 "Gas pressure equalization in a porous medium filling a pipe with a closed end under shock loading" J. Appl. Mech. Tech. Phys. 57 989-996
- Khan, M., Shahzad, N., Xiong, C., Zhao, T.K., Li, T., Siddique, F., Ali, N., Shahzad, M., Ullah, H. and Rakha, S.A. 2016 "Dispersion behavior and the influences of ball milling technique on functionalization of detonated nano-diamonds" Diamond Related Mater. 61 32-40
- Khan, S.F., MacLaren, S.A., Salmonson, J.D., Ma, T., Kyrala, G.A., Pino, J.E., Rygg, J.R., Field, J.E., Tommasini, R., Ralph, J.E., Turnbull, D.P., Mackinnon, A.J., Baker, K.L., Benedetti, L.R., Bradley, D.K., Celliers, P.M., Dewald, E.L., Dittrich, T.R., Hopkins, L.B., Izumi, N., Kervin, M.L., Kline, J.L., Nagel, S.R., Pak, A. and Tipton, R.E. 2016 "Symmetry tuning of a near one-dimensional 2-shock platform for code validation at the National Ignition Facility" Phys. Plasmas 23 042708
- Khanolkar, G.R., Rauls, M.B., Kelly, J.P., Graeve, O.A., Hodge, A.M. and Eliasson, V. 2016 "Shock wave response of iron-based in situ metallic glass matrix composites" Scientific Reports 7 doi: 10.1038/srep22568
- Khishchenko, K.V. 2016 "Equation of state for titanium at high energy densities" J. Phys.: Conf. Ser. 774 012001
- Kim, B., Park, J. and Yoh, J.J. 2016 "Analysis on shock attenuation in gap test configuration for characterizing energetic material" J. Appl. Phys. 119 145902
- Kim, S., Miller, C., Horie, Y., Molek, C., Welle, E. and Zhou, M. 2016 "Computational prediction of probabilistic ignition threshold of pressed granular HMX under shock loading" J. Appl. Phys. 120 115902
- Kinelovskii, S.A. and Maevskii, K.K. 2016 "Estimation of the thermodynamic parameters of a shock-wave action on high-porosity heterogeneous materials" Tech. Phys. 61 1244-1249
- Kinelovskii, S.A. and Maevskii, K.K. 2016 "Modeling shock loading of multicomponent materials including bismuth" High Temp. 54 675-681
- Kis, V.K., Shumilova, T. and Masaitis, V. 2016 "HRTEM study of Popigai impact diamond: Heterogeneous diamond nanostructures in native amorphous carbon matrix" Phys. Chem. Minerals 43 661-670

- Kishimura, H., Hamada, S., Aruga, A. and Matsumoto, H. 2016 "Effect of shock compression on optical and structural properties of Eu<sub>2</sub>O<sub>3</sub> and Y<sub>2</sub>O<sub>3</sub>:Eu<sup>3+</sup> powders" *J. Appl. Phys.* 119 205111
- Kisters, T., Kuder, J. and Nau, S. 2016 "Autonomous gauge for blast impulse determination close to explosive charges" *Shock Waves* 26 117-127
- Kitov, I.O., Bobrov, D.I., Ovchinnikov, V.M. and Rozhkov, M.V. 2016 "The Chelyabinsk Meteorite as a multiple source of acoustic and seismic waves" *Dokl. Earth Sci.* 468 507-510
- Kittell, K.E. and Yarrington, C.D. 2016 "A physically-based Mie-Grüneisen equation of state to determine hot spot temperature distributions" *Combust. Theory Model.* 20 941-957
- Kobayashi, T. 2016 "Shock-wave-induced luminescence of phosphor powders" *Chem. Phys. Letts* 643 43-46
- Kobylkin, I.F. 2016 "Detonation propagation in thin explosive layers with inert partitions" *Combust. Explos. Shock Waves* 52 102-106
- Kochanov, A.N. and Odintsev, V.N. 2016 "Wave prefractioning of solid rocks under blasting" *J. Mining Sci.* 52 1080-1089
- Kohno, Y., Mori, K., Hiyoshi, R.I., Takahashi, O. and Ueda, K. 2016 "Molecular dynamics and first-principles studies of structural change in TATB in crystalline state under high pressure: Comparison of hydrogen bond systems of TATB versus DATB" *Chem. Phys.* 472 163-172
- Kolobov, Y.R., Manokhin, S.S., Kolobova, A.Y., Kudymova, Y.E., Betekhtin, V.I., Golyshev, A.A., Molodets, A.M. and Andrievskii, R.A. 2016 "Shock-wave-induced grain refinement and phase state modification in coarse-grained and nanocrystalline titanium" *Tech. Phys. Letts* 42 959-962
- Kolpakov, V.I., Savenkov, G.G., Rudometkin, K.A. and Grigorev, A.Y. 2016 "Numerical simulation of the formation of compact strikers from low-sphericity linings" *Tech. Phys.* 61 1141-1145
- Koohbor, B., Kidane, A. and Lu, W.Y. 2016 "Dynamic flow response of rigid polymer foam subjected to direct impact", in "Dynamic Behavior of Materials", ed. B. Song, L. Lamberson, D. Casem and J. Kimberley, pp. 163-170, (New York, Springer)
- Kotomin, A.A., Dushenok, S.A., Kozlov, A.S., Barannik, D.A., Shirokova, N.P. and Illyushin, M.A. 2016 "Critical detonation diameters of highly dispersed energetic substances" *Russ. J. Appl. Chem.* 89 793-799
- Krasyuk, I.K., Semenov, A.Y., Stuchebryukhov, I.A. and Khishchenko, K.V. 2016 "Experimental verification of the ablation pressure dependence upon the laser intensity at pulsed irradiation of metals" *J. Phys.: Conf. Ser.* 774 012110

- Krasyuk, I.K., Pashinin, P.P., Semenov, A.Y., Khishchenko, K.V. and Fortov, V.E. 2016 "Study of extreme states of matter at high energy densities and high strain rates with powerful lasers" *Laser Physics* 26 094001
- Kraus, D., Ravasio, A., Gauthier, M., Gericke, D.O., Vorberger, J., Frydrych, S., Helfrich, J., Fletcher, L.B., Schaumann, G., Nagler, B., Barbrel, B., Bachmann, B., Gamboa, E.J., Gode, S., Granados, E., Gregori, G., Lee, H.J., Neumayer, P., Schumaker, W., Döppner, T., Falcone, R.W., Glenzer, S.H. and Roth, M. 2016 "Nanosecond formation of diamond and lonsdaleite by shock compression of graphite" *Nature Commun.* 7 doi:10.1038/ncomms10970
- Kraus, R.G., Davis, J.-P., Seagle, C.T., Fratanduono, D.E., Swift, D.C., Brown, J.L. and Eggert, J.H. 2016 "Dynamic compression of copper to over 450 GPa: A high-pressure standard" *Phys. Rev. B* 93 134105
- Kritchler, A.L., Hinkel, D.E., Callahan, D.A., Hurricane, O.A., Clark, D., Casey, D.T., Dewald, E.L., Dittrich, T.R., Döppner, T., Garcia, M.A.B., Haan, S., Hopkins, L.F.B., Jones, O., Landen, O., Ma, T., Meezan, N., Milovich, J.L., Pak, A.E., Park, H.-S., Patel, P.K., Ralph, J., Robey, H.F., Salmonson, J.D., Sepke, S., Spears, B., Springer, P.T., Thomas, C.A., Celliers, P.M. and Edwards, M.J. 2016 "Integrated modeling of cryogenic layered Highfoot experiments at the NIF" *Phys. Plasmas* 23 052709
- Kritchler, A.L., Doeppner, T., Swift, D., Hawreliak, J., Nilsen, J., Hammer, J., Bachmann, B., Collins, G., Landen, O., Keane, C., Glenzer, S., Rothman, S., Chapman, D., Kraus, D. and Falcone, R.W. 2016 "Shock Hugoniot measurements of CH at Gbar pressures at the NIF" *J. Phys.: Conf. Ser.* 688 012055
- Kroonblawd, M.P., Sewell, T.D. and Maillet, J.-B. 2016 "Characteristics of energy exchange between inter- and intramolecular degrees of freedom in crystalline TATB with implications for coarse-grained simulations of shock waves in polyatomic molecular crystals" *J. Chem. Phys.* 144 064501
- Kroonblawd, M.P. and Sewell, T.D. 2016 "Anisotropic relaxation of idealized hot spots in crystalline TATB" *J. Phys. Chem. C* 120 17214-17223
- Krupka, M. 2016 "Challenges in testing of energetic materials", in "Proc. 19th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán and J. Selesovsky, pp. 28-41, (Pardubice, Czech Republic, University of Pardubice)
- Kubota, S., Saburi, T., Wada, Y. and Nagayama, K. 2016 "Analysis and prediction of initial state dependence for C-J state using unified EOS" *Sci. Technol. Energ. Mater.* 77 23-27
- Kucera, J., Nesvadba, P., Kunzel, M., Anastacio, A.C. and Pachman, J. 2016 "Measurement of impact velocity of cladding metal by photonic Doppler velocimetry (PDV)", in "Proc. 19th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán and J. Selesovsky, pp. 706-710, (Pardubice, Czech Republic, University of Pardubice)

- Kulikov, S.V., Chervonnaya, N.A. and Ternovaya, O.N. 2016 "Statistical simulation of the flow of vibrationally preexcited hydrogen in a shock tube and the possibility of physical detonation" Tech. Phys. 61 1162-1167
- Kulikovskii, A.G. and Chugainova, A.P. 2016 "Study of discontinuities in solutions of the Prandtl-Reuss elastoplasticity equations" Comput. Math. Math. Phys. 56 637-649
- Kulikovskii, A.G. and Chugainova, A.P. 2016 "Study of discontinuities in solutions of the Prandtl-Reuss elastoplasticity equations" Comput. Math. Math. Phys. 56 637-649
- Kumar, P.D., Gupta, S., Bahadur, B., Kumar, S. and Agarwal, A. 2016 "Investigation on the use of PETN-based sheet explosive in hardening and welding", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 1724-1733, (Lancaster, PA, DesTech)
- Kvasnytsya, V., Wirth, R., Piazolo, S., Jacob, D.E. and Trimby, P. 2016 "Surface morphology and structural types of natural impact apographitic diamonds" J. Superhard Mater. 38 71-84
- Laffite, S., Bourgade, J.L., Caillaud, T., Delettrez, J.A., Frenje, J.A., Girard, F., Glebov, V.Y., Joshi, T., Landoas, O., Legay, G., Lemaire, S., Mancini, R.C., Marshall, F.J., Masse, L., Masson-Laborde, P.E., Michel, D.T., Phillippe, F., Reverdin, C., Seka, W. and Tassin, V. 2016 "Time history prediction of direct-drive implosions on the Omega facility" Phys. Plasmas 23 012706
- Lai, H.W., Wang, Z.J., Yang, L.M. and Wang, L.L. 2016 "Analysis of nonlinear spherical waves propagation for concretes", in "Rock Dynamics: From Research to Engineering", ed. H. Li, J. Li, Q. Zhang and J. Zhao, pp. 49-56, (London, Taylor & Francis)
- Lane, J.M.D., Foiles, S.M., Lim, H. and Brown, J.L. 2016 "Strain-rate dependence of ramp-wave evolution and strength in tantalum" Phys. Rev. B 94 064301
- Lanier, N.E., Kline, J.L. and Morton, J. 2016 "Using VISAR to assess the M-band isotropy in hohlraums" Rev. Sci. Instrum. 87 11D621
- Lanin, S.N., Rychkova, S.A., Vinogradov, A.E., Lanina, K.S., Obrezkov, O.N. and Nesterenko, P.N. 2016 "Investigation of adsorption of phenols on detonation nanodiamonds using liquid column chromatography" Diamond Related Mater. 64 49-56
- LeBlanc, J., Shillings, C., Gauch, E., Livolsi, F. and Shukla, A. 2016 "Near field underwater explosion response of polyurea coated composite plates" Exper. Mech. 56 569-581

- Lemke, R.W., Dolan, D.H., Dalton, D.G., Brown, J.I., Tomlinson, K., Robertson, G.R., Knudson, M.D., Harding, E., Mattsson, A.E., Carpenter, J.H., Drake, R.R., Cochrane, K., Blue, B.E., Robinson, A.C. and Mattsson, T.R. 2016 "Probing off-Hugoniot states in tantalum, copper, and aluminum to 1000 GPa compression with magnetically driven liner implosions" *J. Appl. Phys.* 119 015904
- Leng, D., Wang, X., Liu, G. and Sun, L. 2016 "Impulse absorption by horizontal magnetic granular chain" *AIP Advances* 6 025321
- Leriche, D., Tosello, R. and Troia, F. 2016 "Evaluation of the effect of an explosive charge close to a steel structure plate", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 1301-1313, (Lancaster, PA, DesTech)
- Li, J.-P., Chen, H., Zhang, S.-Z., Zhang, X.-Y. and Yu, H.-R. 2016 "A gasdynamic gun driven by gaseous detonation" *Rev. Sci. Instrum.* 87 015112
- Li, H., Li, J., Zhang, Q. and Zhao, J., Eds. 2016 "Rock Dynamics: From Research to Engineering" (London, Taylor & Francis)
- Li, Y.-H., Zhao, Y., Li, X.-M., Zhang, Z.-G., Ye, X.-P., Zhong, J., Cai, L.-C. and Zhang, L. 2016 "In situ measurement of the particle size distribution of the fragmentation product of laser-shock-melted aluminum using in-line picosecond holography" *AIP Advances* 6 025208
- Li, Z.-G., Cheng, Y., Chen, Q.-F. and Chen, X.-R. 2016 "Equation of state and transport properties of warm dense helium via quantum molecular dynamics simulations" *Phys. Plasmas* 23 052701
- Li, Z.-G., Chen, Q.-F., Gu, Y.-J., Zheng, J. and Chen, X.-R. 2016 "Measurements of the principal Hugoniots of dense gaseous deuterium–helium mixtures: Combined multi-channel optical pyrometry, velocity interferometry, and streak optical pyrometry measurements" *AIP Advances* 6 105309
- Li, X.-D., Liu, Y., Liu, S.-W., Li, Z.-Y., Zhou, G.-Y. and Li, H. 2016 "Influence of deposited energy on shock wave induced by underwater pulsed current discharge" *Phys. Plasmas* 23 103104
- Li, Z., Zhang, S., Wang, C., Kang, W. and Zhang, P. 2016 "First-principles calculations of K-shell X-ray absorption spectra for warm dense nitrogen" *Phys. Plasmas* 23 053304
- Li, C.Y., Wang, C., Li, Y.S., Li, D.F., Li, Z. and Zhang, P. 2016 "Quantum molecular dynamics simulations of equation of state of warm dense ethane" *Phys. Plasmas* 23 092706
- Li, J., Wu, C.Q. and Hao, H. 2016 "Spallation of reinforced concrete slabs under contact explosion", in "Proc. Second Asian Conf. on Defence Technology", ed. pp. 42-45, (New York, IEEE)
- Li, F., Zhang, Y.G., Liu, J.R., Zhang, L. and Fang, S.H. 2016 "The dynamical response characteristics of elastic-plastic coal under dynamic load" *J. Natural Gas Sci. Engng* 29 497-505

- Li, J., Wu, C.Q., Hao, H., Wang, Z.Q. and Su, Y. 2016 "Experimental investigation of ultra-high performance concrete slabs under contact explosions" Int. J. Impact Engng 93 62-75
- Li, X.D., Miao, C.Y., Wang, Q.F. and Geng, Z.G. 2016 "Antiknock performance of interlayered high-damping-rubber blast door under thermobaric shock wave" Shock Vibration 2420893
- Li, Y., Liu, F., Ma, X. and Zhang, M. 2016 "Research on viscosity of metal at high pressure" Shock Waves 26 759-770
- Li, Y., Jiang, C.L., Wang, Z.C. and Luo, P.G. 2016 "Experimental study on reaction characteristics of PTFE/Ti/W energetic materials under explosive loading" Materials 9 doi: 10.3390/ma9110936
- Li, C., Li, B., Huang, J.Y., Ma, H.H., Zhu, M.H., Zhu, J. and Luo, S.N. 2016 "Spall damage of a mild carbon steel: Effects of peak stress, strain rate and pulse duration" Mater. Sci. Engng A 660 139-147
- Li, Q.-J., Li, J., Shan, Z.-W. and Ma, E. 2016 "Surface rebound of relativistic dislocations directly and efficiently initiates deformation twinning" Phys. Rev. Letts 117 165501
- Li, J., Wu, C., Hao, H., Wang, Z. and Su, Y. 2016 "Experimental investigation of ultra-high performance concrete slabs under contact explosions" Int. J. Impact Engng 93 62-75
- Li, F., Zhang, Y., Liu, J., Zhang, L. and Fang, S. 2016 "The dynamical response characteristics of elastic-plastic coal under dynamic load" J. Natural Gas Sci. Engng 29 497-505
- Liang, M.Z., Li, X.Y. and Lu, F.Y. 2016 "Improved method used to investigate the dynamic shear failure of AISI 1045 steel cylinder under blast loading" Int. J. Appl. Mech. 8 1650003
- Lieberman, E.J., Lebensohn, R.A., Menasche, D.B., Bronkhorst, C.A. and Rollett, A.D. 2016 "Microstructural effects on damage evolution in shocked copper polycrystals" Acta mater. 116 270-280
- Lim, H., Battaile, C.C., Brown, J.L. and Weinberger, C.R. 2016 "Physically-based strength model of tantalum incorporating effects of temperature, strain rate and pressure" Model. Simul. Mater. Sci. Engng 24 055018
- Lin, E.E., Mikhailov, A.L. and Khvorostin, V.N. 2016 "A solid-phase mechanism of shock-wave formation of dust particles of heavy metals" Tech. Phys. Letts 42 804-805
- Liu, H., Fu, J. and Ning, J. 2016 "Experimental study on the dynamic mechanical properties of reinforced concrete under shock loading" Acta Mech. Solida Sinica 29 22-30
- Liu, Z.X., Zhang, Q.M. and Ju, Y.Y. 2016 "Thermodynamics analysis of aluminum plasma transition induced by hypervelocity impact" Phys. Plasmas 23 022112

- Liu, S. 2016 "Ballistic range", in "Hypervelocity Launchers", ed. F. Seiler and O. Iggra, pp. 23-52, (Berlin, Springer)
- Liu, Y.R., Duan, Z.P., Zhang, Z.Y., Qu, Z.C. and Huang, F.L. 2016 "A mesoscopic reaction rate model for shock initiation of multi-component PBX explosives" J. Hazard. Mater. 317 44-51
- Liu, M.L., Su, Z.Q., Zhang, Q.M. and Long, R.R. 2016 "Modeling hypervelocity-impact-induced shock waves for characterizing orbital debris-produced damage" Trans. ASME: J. Appl. Mech. 83 081010
- Liu, H.T., Zhou, P., Li, H.J., Li, A.Y. and Dou, Y.S. 2016 "DFTB-MD simulation of shocked water cluster" Adv. Engng Res. 80 302-305
- Liu, X., Mashimo, T., Kawai, N., Sekine, T., Zeng, Z.Y. and Zhou, X.M. 2016 "Phase transition and equation of state of paratellurite ( $\text{TeO}_2$ ) under high pressure" Mater. Res. Express 3 076206
- Liu, Y., Hussain, T., Huang, F.L. and Duan, Z.P. 2016 "Influence of small change of porosity on shock initiation of an HMX/TATB/Viton explosive and ignition and growth modeling" J. Energ. Mater. 34 246-259
- Liu, W.J., Hou, S.C., Ma, Q.P. and Wang, P.L. 2016 "Using silver as a surrogate for plutonium: An experimental study of the explosive silver aerosol source term" Aerosol Sci. Technol. 50 857-869
- Liu, B.Q., Song, J.M., Zhang, W.B., Luo, W., Wang, Y., Xia, Y.H., Zong, H.H., Gao, G.F. and Sun, G.A. 2016 "Inelastic neutron scattering and ab initio studies of RDX (in Chinese)" Acta Phys. Sinica 65 045802
- Liu, H., Song, H., Zhang, Q., Zhang, G. and Zhao, Y. 2016 "Validation for equation of state in wide regime: Copper as prototype" Matter Radiation Extremes 1 123-131
- Liverts, M. and Apazidis, N. 2016 "Limiting temperatures of spherical shock wave implosion" Phys. Rev. Letts 116 014501
- Long, Y. and Chen, J. 2016 "Theoretical study of the reaction kinetics and the detonation wave profile for TATB" J. Appl. Phys. 120 185902
- Long, Y. and Chen, J. 2016 "The force-field derivation and application of explosive/additive interfaces" Model. Simul. Mater. Sci. Engng 24 075013
- Lu, W.Y. 2016 "Novel protection mechanism of blast and impact waves by using nanoporous materials", in "Dynamic Behavior of Materials", ed. B. Song, L. Lamberson, D. Casem and J. Kimberley, pp. 177-183, (New York, Springer)
- Lu, L., Li, X., Zhou, J., Chen, G.D. and Yun, D. 2016 "Numerical simulation of shock response and dynamic fracture of a concrete dam subjected to impact load" Earth Sci. Res. J. 20 M1-M6
- Lu, L., Li, C., Wang, W.H., Zhu, M.H., Gong, X.L. and Luo, S.N. 2016 "Ductile fracture of bulk metallic glass  $\text{Zr}_{50}\text{Cu}_{40}\text{Al}_{10}$  under high strain-rate loading" Mater. Sci. Engng A 651 848-853

- Lu, J.P., Lochert, I.J., Daniel, M.A. and Franson, M.D. 2016 "Shock sensitivity studies for PBXN-109" *Propell. Explos. Pyrotech.* 41 562-571
- Lukes, P., Fernández, F., Gutiérrez-Aceves, J., Fernández, E., Alvarez, U.M., Sunka, P. and Loske, A.M. 2016 "Tandem shock waves in medicine and biology: A review of potential applications and successes" *Shock Waves* 26 1-23
- Luo, H.Y., Xu, T.G., Wang, X.M. and Lu, H.B. 2016 "Interaction of shock wave with granular materials", in "Dynamic Behavior of Materials", ed. B. Song, L. Lamberson, D. Casem and J. Kimberley, pp. 35-43, (New York, Springer)
- Luo, H., Jiang, S., Nakmali, D.U., Gan, R.Z. and Lu, H. 2016 "Mechanical properties of a human eardrum at high strain rates after exposure to blast waves" *J. Dyn. Behav. Mater.* 2 59-73
- Luscher, D.J., Mayeur, J.R., Mourad, H.M., Hunter, A. and Kenamond, M.A. 2016 "Coupling continuum dislocation transport with crystal plasticity for application to shock loading conditions" *Int. J. Plast.* 76 111-129
- Ma, Z.X., Huang, J., Shi, A.H., Hu, H.Y., Li, Y. and Liu, S. 2016 "Analysis technique for ejecta cloud temperature using atomic spectrum" *Int. J. Impact Engng* 91 25-33
- Mabssout, M., Herreros, M.I. and Idder, H. 2016 "Predicting dynamic fracture in viscoplastic materials using Taylor-SPH" *Int. J. Impact Engng* 87 95-107
- MacDonald, M.J., Vorberger, J., Gamboa, E.J., Drake, R.P., Glenzer, S.H. and Fletcher, L.B. 2016 "Calculation of Debye-Scherrer diffraction patterns from highly stressed polycrystalline materials" *J. Appl. Phys.* 119 215902
- MacDonald, M.J., Keiter, P.A., Montgomery, D.S., Scott, H.A., Biener, M.M. and Fein, J.R. 2016 "Spatially resolved density and ionization measurements of shocked foams using X-ray fluorescence" *J. Appl. Phys.* 120 125901
- Mackenchery, K., Valisetty, R.R., Namburu, R.R., Stukowski, A., Rajendran, A.M. and Dongare, A.M. 2016 "Dislocation evolution and peak spall strengths in single crystal and nanocrystalline copper" *J. Appl. Phys.* 119 044301
- MacPhee, A.G., Dymoke-Bradshaw, A.K.L., Hares, J.D., Hassett, J., Hatch, B.W., Meadowcroft, A.L., Bell, P.M., Bradley, D.K., Datte, P.S., Landen, O.L., Palmer, N.E., Piston, K.W., Rekow, V.V., Hilsabeck, T.J. and Kilkenny, J.D. 2016 "Improving the off-axis spatial resolution and dynamic range of the NIF X-ray streak cameras" *Rev. Sci. Instrum.* 87 11E202
- Maeda, S., Kanno, S., Yoshiki, I. and Obara, T. 2016 "Experimental study on acceleration of projectile by a gaseous detonation-driven gas gun using a light gas" *Sci. Technol. Energ. Mater.* 77 79-85
- Maejkovskii, K.K. and Kinelovskii, S.A. 2016 "Thermodynamic parameters of heterogeneous materials under shock-wave loading in presentation of equilibrium model" *J. Phys.: Conf. Ser.* 774 012010

- Mahi, F.T. and Dilthey, U. 2016 "Joining of metals", in "Reference Module in Materials Science and Materials Engineering", ed. pp. doi: 10.1016/B978-0-12-803581-8.03785-1, (Amsterdam, Elsevier)
- Maiden, M.D., Lowman, N.K., Anderson, D.V., Schubert, M.E. and Hoefer, M.A. 2016 "Observation of dispersive shock waves, solitons, and their interactions in viscous fluid conduits" Phys. Rev. Letts 116 174501
- Makhov, M.N. 2016 "Heat of explosion and acceleration ability of explosive-inorganic oxidizer mixtures" Russ. J. Phys. Chem. B 10 55-61
- Malashenko, V.V. 2016 "Dynamic interaction of edge dislocations with point defects and prismatic dislocation loops at high-strain-rate deformation of crystals" Phys. Solid State 58 2045-2049
- Malashenko, V.V. 2016 "The dry friction effect under high-strain-rate plastic deformation of solid solutions" Tech. Phys. Letts 42 1022-1023
- Managadze, G.G., Engel, M.H., Getty, S., Wurz, P., Brinckerhoff, W.B., Shokolov, A.G., Sholin, G.V., Terentev, S.A., Chumikov, A.E., Skalkin, A.S., Blank, V.D., Prokhorov, V.M., Managadze, N.G. and Luchnikov, K.A. 2016 "Excess of L-alanine in amino acids synthesized in a plasma torch generated by a hypervelocity meteorite impact reproduced in the laboratory" Planet. Space Sci. 131 70-78
- Marshall, F.J., Radha, P.B., Bonino, M.J., Delettrez, J.A., Epstein, R., Glebov, V.Y., Harding, D.R., Stoeckl, C., Frenje, J.A., Johnson, M.G., Séguin, F.H., Sio, H., Zylstra, A. and Giraldez, E. 2016 "Polar-direct-drive experiments with contoured-shell targets on OMEGA" Phys. Plasmas 23 012711
- Mashimo, T., Liu, X., Kodama, M., Zaretsky, E., Katayama, M. and Nagayama, K. 2016 "Effect of shear strength on Hugoniot-compression curve and the equation of state of tungsten" J. Appl. Phys. 119 035904
- Mason, B.P., Whittaker, M., Hemmer, J., Arora, S., Harper, A., Alnemrat, S., McEachen, A., Helmy, S., de Alaniz, J.R. and Hooper, J.P. 2016 "A temperature-mapping molecular sensor for polyurethane-based elastomers" Appl. Phys. Letts 108 041906
- Masouros, S. and Pope, D.J. 2016 "Behaviour of materials in blast", in "Blast Injury Science and Engineering: A Guide for Clinicians and Researchers", ed. A.M.J. Bull, J. Clasper and P.F. Mahoney, pp. 33-55, (Berlin, Springer)
- Mastilovic, S. 2016 "Molecular-dynamics simulations of the nanoscale Taylor test under extreme loading conditions" Math. Mech. Solids 21 326-338
- Matsagar, V.A. 2016 "Comparative performance of composite sandwich panels and non-composite panels under blast loading" Mater. Struct. 49 611-629
- Maugin, G.A. 2016 "Duhem on hydrodynamics and elasticity" Solid Mech. Applic. 223 107-127

- Mayer, A.E. and Ebel, A.A. 2016 "Influence of free surface nanorelief on the rear spallation threshold: Molecular-dynamics investigation" *J. Appl. Phys.* 120 165903
- Mayer, A.E. 2016 "Continuum model of tensile fracture of pure aluminum and D16 alloy and its application to the shock wave problems" *J. Phys.: Conf. Ser.* 774 012061
- Mayer, A.E., Atroshenko, S.A. and Borodin, E.N. 2016 "Experimental and numerical investigations of the scale levels in spall fracture of D16 aluminum" *Mater. Phys. Mech.* 26 23-25
- Mayeur, J.R., Mourad, H.M., Luscher, D.J., Hunter, A. and Kenamond, M.A. 2016 "Numerical implementation of a crystal plasticity model with dislocation transport for high strain rate applications" *Model. Simul. Mater. Sci. Engng* 24 045013
- McConnell, J.R. and Su, H. 2016 "Design of cellular composite sandwich panels for maximum blast resistance via energy absorption" *Appl. Compos. Mater.* 23 375-396
- McCoy, C.A., Gregor, M.C., Polsin, D.N., Fratanduono, D.e., Celliers, P.M., Boehly, T.R. and Meyerhofer, D.D. 2016 "Shock-wave equation-of-state measurements in fused silica up to 1600 GPa" *J. Appl. Phys.* 119 215901
- McCoy, C.A., Gregor, M.C., Polsin, D.N., Fratanduono, D.E., Celliers, P.M., Boehly, T.R. and Meyerhofer, D.D. 2016 "Measurements of the sound velocity of shock-compressed liquid silica to 1100 GPa" *J. Appl. Phys.* 120 235901
- McDermott, K.H., Price, M.C., Cole, M. and Burchell, M.J. 2016 "Survivability of copper projectiles during hypervelocity impacts in porous ice: A laboratory investigation of the survivability of projectiles impacting comets or other bodies" *Icarus* 268 102-117
- McDonald, B., Bornstein, H. and Orifici, A.C. 2016 "Characterisation of armour properties for the prediction of rupture in localised blast loading", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 1135-1146, (Lancaster, PA, DesTech)
- McNesby, K.L., Homan, B.E., Benjamin, R.A., Boyle, V.M., Densmore, J.M. and Biss, M.M. 2016 "Quantitative imaging of explosions with high-speed cameras" *Rev. Sci. Instrum.* 87 051301
- Medvedev, A.B. 2016 "Equation of state of silicon dioxide with allowance for evaporation, dissociation, and ionization" *Combust. Explos. Shock Waves* 52 463-475
- Mehta, Y., Jackson, T.L., Zhang, J. and Balachandar, S. 2016 "Numerical investigation of shock interaction with one-dimensional transverse array of particles in air" *J. Appl. Phys.* 119 104901

- Menasche, D.B., Lind, J., Li, S.F., Kenesei, P., Bingert, J.F., Lienert, U. and Suter, R.M. 2016 "Shock induced damage in copper: A before and after, three-dimensional study" *J. Appl. Phys.* 119 154902
- Meng, S.J., Huang, Z.C., Ning, J.M., Hu, Q.Y., Ye, F., Qin, Y., Xu, Z.P. and Xu, R.K. 2016 "Shock X-ray emission image measurement in Z-pinch dynamic hohlraum (in Chinese)" *Acta Phys. Sinica* 65 075201
- Meyer, C.S. 2016 "Ballistic perforation of double reinforced concrete as a function of energy", in "Dynamic Behavior of Materials", ed. B. Song, L. Lamberson, D. Casem and J. Kimberley, pp. 205-211, (New York, Springer)
- Miao, Z. and Xin, Y. 2016 "Application of quantification of uncertainties method in detonation simulation to Steven test" *Procedia Engng* 157 382-386
- Micallef, K., Fallah, A.S., Curtis, P.T. and Louca, L.A. 2016 "On the dynamic plastic response of steel membranes subjected to localised blast loading" *Int. J. Impact Engng* 89 25-37
- Mikaelian, K.O. 2016 "Oscillations of a standing shock wave generated by the Richtmyer-Meshkov instability" *Phys. Rev. Fluids* 1 033601
- Mikhaylyuk, A.V., Koshkin, D.S., Gubskii, K.L. and Kuznetsov, A.P. 2016 "Line-imaging VISAR for laser-driven equations of state experiments" *J. Phys.: Conf. Ser.* 774 012057
- Millett, J.C.F., Lowe, M.R., Appleby-Thomas, G. and Roberts, A. 2016 "The mechanical and optical response of PCTFE to one-dimensional shock loading" *Metall. Mater. Trans. A* 47 697-705
- Millett, J.C.F., Brown, E.N., Gray III, G.T., Bourne, N.K., Wood, D.C. and Appleby-Thomas, G. 2016 "The effects of changing chemistry on the shock response of basic polymers" *J. Dyn. Behav. Mater.* 2 326-336
- Millot, M. 2016 "Identifying and discriminating phase transitions along decaying shocks with line imaging Doppler interferometric velocimetry and streaked optical pyrometry" *Phys. Plasmas* 23 014503
- Minakov, D.V. and Levashov, P.R. 2016 "Thermodynamic properties of LiD under compression with different pseudopotentials for lithium" *Comput. Mater. Sci.* 114 128-134
- Mirova, O.A., Kotelnikov, A.L., Golub, V.V., Bazhenova, T.V. and Parshikov, A.N. 2016 "Effect of the expansion velocity of material of a sand protective screen on the attenuation of a shock wave reflected from this screen" *High Temp.* 54 716-721
- Mirova, O.A., Kotelnikov, A.L., Golub, V.V. and Bazhenova, T.V. 2016 "Protecting shield influence on pressure decrease at shock wave interaction with the wall" *High Temp.* 54 905-906
- Mitchell, S.J., Pandolfi, A. and Ortiz, M. 2016 "Effect of brittle fracture in a metaconcrete slab under shock loading" *ASCE J. Engng Mech.* 142 04016010

- Mitrofanov, V.V. and Titov, V.M. 2016 "On mixing of the products of detonation of composite explosives in the chemical reaction region" Combust. Explos. Shock Waves 52 587-592
- Mo, M.Z., Shen, X., Chen, Z., Li, R.K., Dunning, M., Sokolowski-Tinten, K., Zheng, Q., Weathersby, S.P., Reid, A.H., Coffee, R., Makasyuk, I., Edtrom, S., McCormick, D., Jobe, K., Hast, C., Glenzer, S.H. and Wang, X. 2016 "Single-shot mega-electronvolt ultrafast electron diffraction for structure dynamic studies of warm dense matter" Rev. Sci. Instrum. 87 11D810
- Mochalova, V.M. and Utkin, A.V. 2016 "Stabilization of unstable detonation waves in mixtures of nitromethane with inert diluents" Combust. Explos. Shock Waves 52 241-247
- Mohammadzadeh, M., Gonzalez-Avila, S.R., Wan, Y.C., Wang, X., Zheng, H. and Ohl, C.D. 2016 "Photoacoustic shock wave emission and cavitation from structured optical fiber tips" Appl. Phys. Letts 108 024101
- Molodets, A.M., Golyshev, A.A., Savinykh, A.S. and Kim, V.V. 2016 "Shock-wave studies of anomalous compressibility of glassy carbon" J. Exper. Theor. Phys. 122 289-297
- Molodets, A.M., Golyshev, A.A. and Shakhray, D.V. 2016 "High-pressure high-temperature equations of state of shocked bcc vanadium" J. Phys.: Conf. Ser. 774 012008
- Monber, A.W. 2016 "The response of geomaterials to high-speed liquid drop impact" Int. J. Impact Engng 89 83-101
- Monteux, J. and Arkani-Hamed, J. 2016 "Scaling laws of impact induced shock pressure and particle velocity in planetary mantle" Icarus 264 246-256
- Montgomery, W., Bromiley, G.D. and Sephton, M.A. 2016 "The nature of organic records in impact excavated rocks on Mars" Scientific Reports 6 doi: 10.1038/srep30947
- Moore, A.S., Benstead, J., Ahmed, M.F., Morton, J., Guymer, T.M., Soufli, R., Pardini, T., Hibbard, R.L., Bailey, C.G., Bell, P.M., Hau-Riege, S., Bedzyk, M., Shoup III, M.J., Regan, S.P., Agliata, T., Jungquist, R., Schmidt, D.W., Kot, L.B., Garbett, W.J., Rubery, M.S., Skidmore, J.W., Gullikson, E. and Salmassi, F. 2016 "Two-color spatial and temporal temperature measurements using a streaked soft X-ray imager" Rev. Sci. Instrum. 87 11E313
- Moore, A.S., Prisbrey, S., Baker, K.L., Celliers, P.M., Fry, J., Dittrich, T.R., Wu, K.J.J., Kervin, M.L., Schoff, M.E., Farrell, M., Nikroo, A. and Hurricane, O.A. 2016 "Off-Hugoniot characterization of alternative inertial confinement fusion ablator materials" J. Phys.: Conf. Ser. 717 012038

- Moore, A.S., Prisbrey, S., Baker, K.L., Celliers, P.M., Fry, J., Dittrich, T.R., Wu, K.J.J., Kervin, M.L., Schoff, M.E., Farrell, M., Nikroo, A. and Hurricane, O.A. 2016 "A simulation-based and analytic analysis of the off-Hugoniot response of alternative inertial confinement fusion ablator materials" High Energy Density Phys. 20 23-28
- Morgan, J.V., Gulick, S.P.S., Bralower, T., Chenot, E., Christeson, G., Claeys, P., Cockell, C., Collins, G.S., Coolen, M.J.L., Ferrière, L., Gebhardt, C., Goto, K., Jones, H., Kring, D.A., Le Ber, E., Lofi, J., Long, X., Lowery, C., Mellett, C., Ocampo-Torres, R., Osinski, G.R., Perez-Cruz, L., Pickersgill, A., Poelchau, M., Rae, A., Rasmussen, C., Rebolledo-Vieyra, M., Riller, U., Sato, H., Schmitt, D.R., Smit, J., Tikoo, S., Tomioka, N., Urrutia-Fucugauchi, J., Whalen, M., Wittmann, A., Yamaguchi, K.E. and Zylberman, W. 2016 "The formation of peak rings in large impact craters" Science 354 878-882
- Mori, Y., Nishimura, Y., Hanayama, R., Nakayama, S., Ishii, K., Kitagawa, Y., Sekine, T., Sato, N., Kurita, T., Kawashima, T., Kan, H., Komeda, O., Nishi, T., Azuma, H., Hioki, T., Motohiro, T., Sunahara, A., Sentoku, Y. and Miura, E. 2016 "Fast heating of imploded core with counterbeam configuration" Phys. Rev. Letts 117 055001
- Morris, C.L., Brown, E.N., Agee, C., Bernert, T., Bourke, M.A.M., Burkett, M.W., Buttler, W.T., Byler, D.D., Chen, C.F., Clarke, A.J., Cooley, J.C., Gibbs, P.J., Imhoff, S.D., Jones, R., Kwiatkowski, K., Mariam, F.G., Merrill, F.E., Murray, M.M., Olinger, C.T., Oro, D.M., Nedrow, P., Saunders, A., Terrones, G., Trouw, F., Tupa, D., Vogan, W., Winkler, B., Wang, Z. and Zellner, M.B. 2016 "New developments in proton radiography at the Los Alamos Neutron Science Center (LANSCE)" Exper. Mech. 56 111-120
- Muftakhednova, R.F., Grokhovsky, V.I., Kozlov, E.A., Khomskaya, I.V. and Yakovlev, G.A. 2016 "Phase transformation  $\alpha \rightarrow \epsilon$  in meteoritic iron-nickel alloy under shock-wave loading" Tech. Phys. 61 1830-1834
- Murzov, S.A., Sergeev, A.V., Dyachkov, S.A., Egorova, M.S., Parshikov, A.N. and Zhakhovsky, V.V. 2016 "Detonation initiation in a model of explosive: Comparative atomistic and hydrodynamics simulations" J. Phys.: Conf. Ser. 774 012077
- Nagaki, K., Kadono, T., Sakaiya, T., Kondo, T., Kurosawa, K., Hironaka, Y., Shigemori, K. and Arakawa, M. 2016 "Recovery of entire shocked samples in a range of pressure from similar to 100 GPa to Hugoniot elastic limit" Meteor. Planet. Sci. 51 1153-1162
- Nagayama, K. 2016 "Formulation of the Rice-Walsh equation of state based on shock Hugoniot data for porous metals" J. Appl. Phys. 119 195901

- Nagler, B., Schropp, A., Galtier, E.C., Arnold, B., Brown, S.B., Fry, A., Gleason, A., Granados, E., Hashim, A., Hastings, J.B., Samberg, D., Selboth, F., Tavella, F., Xing, Z., Lee, H.J. and Schroer, C.G. 2016 "The phase-contrast imaging instrument at the matter in extreme conditions endstation at LCLS" *Rev. Sci. Instrum.* 87 103701
- Nakamura, Y., Takeuchi, H., Nakamura, S., Takahashi, Y. and Torihara, O. 2016 "Developments of the dynamic removal method for concrete pile head using the charge holder producing horizontal fracture plane" *Sci. Technol. Energ. Mater.* 77 28-33
- Nam, J.W., Yoon, I.S. and Yi, S.T. 2016 "Numerical evaluation of FRP composite retrofitted reinforced concrete wall subjected to blast load" *Computers & Concrete* 17 215-225
- Nam, J., Shinohara, Y., Atou, T., Kim, H. and Kim, G. 2016 "Comparative assessment of failure characteristics on fiber-reinforced cementitious composite panels under high-velocity impact" *Composites B* 99 83-97
- Narkis, J., Rahman, H.U., Ney, P., Desjarlais, M.P., Wessel, F.J., Conti, F., Valenzuela, J.C. and Beg, F.N. 2016 "Shock formation in neon, argon, krypton, and xenon on deuterium gas puff implosion" *Phys. Plasmas* 23 122706
- Natalia, S., Yuriy, B. and Oleg, N. 2016 "Simulation of the deformation behavior and spall failure of an aluminum alloy under shock-wave loading" *AIP Conf. Proc.* 1785 040058
- Navarro, P.F., Benson, D.J. and Nesterenko, V.F. 2016 "Multiple scales of shock waves in dissipative laminate materials" *Phys. Rev. E* 94 033002
- Nayak, B. and Menon, S.V.G. 2016 "Explicit accounting of electronic effects on the Hugoniot of porous materials" *J. Appl. Phys.* 119 125901
- Nazarian, A. and Presser, C. 2016 "Thermal signature measurements for ammonium nitrate/fuel mixtures by laser heating" *Thermochim. Acta* 623 120-135
- Nelson, A.O., Dee, R., Gudipati, M.S., Horányi, M., James, D., Kempf, S., Munsat, T., Sternovsky, Z. and Ulibarri, Z. 2016 "New experimental capability to investigate the hypervelocity micrometeoroid bombardment of cryogenic surfaces" *Rev. Sci. Instrum.* 87 024502
- Neogi, A. and Mitra, N. 2016 "Shock-induced phase transition of water: Molecular dynamics investigation" *Phys. Fluids* 28 027104
- Neogi, A. and Mitra, N. 2016 "Shock compression of PVC" *J. Appl. Phys.* 119 165903
- Nian, W.M., Subramaniam, K.V.L. and Andreopoulos, Y. 2016 "Experimental investigation on blast response of cellular concrete" *Int. J. Impact Engng* 96 105-115

- Nilsen, J., Bachmann, B., Zimmerman, G.B., Hatarik, R., Döppner, T., Swift, D., Hawreliak, J., Collins, G.W., Falcone, R.W., Glenzer, S.H., Kraus, D., Landen, O.L. and Kritcher, A.L. 2016 "Using neutrons to measure keV temperatures in highly compressed plastic at multi-Gbar pressures" *High Energy Density Phys.* 21 20-26
- Nisoli, C., Zong, H.X., Niezgoda, S.R., Brown, D.W. and Lookman, T. 2016 "Long-time behavior of the  $\omega$  to  $\alpha$  transition in shocked zirconium: Interplay of nucleation and plastic deformation" *Acta mater.* 108 138-142
- Nitishinskiy, M., Efimov, S., Antonov, O., Yanuka, D., Gurovich, V.T., Bernshtam, V., Fisher, V. and Krasik, Y.E. 2016 "Converging shock wave focusing and interaction with a target" *Phys. Plasmas* 23 042705
- Nitishinskiy, M., Efimov, S., Yanuka, D., Gurovich, V.T. and Krasik, Y.E. 2016 "Addressing the problem of uniform converging spherical shock wave in water" *Phys. Plasmas* 23 103507
- Niwa, Y., Sato, T., Ichiyanagi, K., Takahashi, K. and Kimura, M. 2016 "Time-resolved observation of structural change of copper induced by laser shock using synchrotron radiation with dispersive XAFS" *High Press. Res.* 36 471-478
- Nurick, G.N., Mahoi, S. and Langdon, G.S. 2016 "The response of plates subjected to loading arising from the detonation of different shapes of plastic explosive" *Int. J. Impact Engng* 89 102-113
- Ogorodnikov, V.A., Mikhailov, A.L., Sasik, V.S., Erunov, S.V., Syrunin, M.A., Fedorov, A.V., Nevmerzhitskii, N.V., Kulakov, E.V., Kleshchevnikov, O.A., Antipov, M.V., Yurtov, I.V., Rudnev, A.V., Chapaev, A.V., Pupkov, A.S. and Senkovskii, E.D. 2016 "Effect of a gas on the ejection of particles from the free surface of a sample subjected to a shock wave with various intensities" *J. Exper. Theor. Phys.* 123 357-362
- Ogorodnikov, V.A., Yukhimchuk, A.A., Mochalov, M.A., Andramanov, A.V., Baurin, A.Y., Blikov, A.O., Boitsov, I.E., Erunov, S.V., Maksimkin, I.P., Malkov, I.L., Pupkov, A.S. and Shevnin, E.V. 2016 "Influence of hydrogen on the strength and ductility of 30KhGSA and EI659 steels in quasistatic and shock-loading tests" *J. Appl. Mech. Tech. Phys.* 57 859-865
- Opie, S., Gautam, S., Fortin, E., Lynch, J., Peralta, P. and Loomis, E. 2016 "Behaviour of rippled shocks from ablatively-driven Richtmyer-Meshkov in metals accounting for strength" *J. Phys.: Conf. Ser.* 717 012075
- Orth, C.D. 2016 "Spallation as a dominant source of pusher-fuel and hot-spot mix in inertial confinement fusion capsules" *Phys. Plasmas* 23 022706
- Osinski, G.R. and Ferrière, L. 2016 "Shatter cones: (Mis)understood?" *Science Advances* 2 e1600616

- Ozaki, N., Nellis, W.J., Mashimo, T., Ramzan, M., Ahuja, R., Kaewmaraya, T., Kimura, T., Knudson, M., Miyanishi, K., Sakawa, Y., Sano, T. and Kodama, R. 2016 "Dynamic compression of dense oxide (Gd<sub>3</sub>Ga<sub>5</sub>O<sub>12</sub>) from 0.4 to 2.6 TPa: Universal Hugoniot of fluid metals" *Scientific Reports* 6 doi: 10.1038/srep26000
- Pachman, J., Künzel, M., Kubát, K., Selesovsky, J., Marsálek, R., Pospisil, M., Kubicek, M. and Prokes, A. 2016 "OPTIMEX: Measurement of detonation front curvature with a passive fiber optical system" *Central Eur. J. Energ. Mater.* 13 807-820
- Pacold, J.I., Lukens, W.W., Booth, C.H., Shuh, D.K., Knight, K.B., Eppich, G.R. and Holliday, K.S. 2016 "Chemical speciation of uranium, iron, and plutonium in melt glass from nuclear weapons testing" *J. Appl. Phys.* 119 195102
- Palmas, P., Botzanowski, T., Guerain, M., Forzy, A., Bruneton, E. and Delrio, G. 2016 "Size determination of porosity inclusions in an organic solid material by H-1 NMR diffusion and SEM-FIB experiments: The TATB case" *J. Phys. Chem. B* 120 4152-4159
- Palnichenko, A.V., Vyaselev, O.M., Mazilkin, A.A. and Khasanov, S.S. 2016 "Superconductivity in Al/Al<sub>2</sub>O<sub>3</sub> interface" *Physica C* 525 65-71
- Pan, H., Wu, Z.H. and Hu, X.M. 2016 "Characteristic method to infer the high-pressure sound speed in a nonsymmetric impact and release experiment (in Chinese)" *Acta Phys. Sinica* 65 116201
- Pan, J., Zhang, X., He, Y., Deng, Q. and Guan, Z. 2016 "Theoretical and experimental study on detonation wave propagation in cylindrical high explosive charges with a wave-shaper" *Central Eur. J. Energ. Mater.* 13 659-677
- Panova, A.M., Bogatyreva, G.P., Zabuga, V.Y., Tsapyuk, G.G., Serga, M.A. and Byeda, O.A. 2016 "Effect of metal impurities on the oxidation of various carbon forms in products of detonation diamond synthesis" *J. Superhard Mater.* 38 85-90
- Patton, H.J. 2016 "A physical basis for M-s-yield scaling in hard rock and implications for late-time damage of the source medium" *Geophys. J. Int.* 206 191-204
- Peng, X., Zhu, W., Chen, L., Deng, X. and Wei, Y. 2016 "Molecular dynamics simulations of void coalescence in monocrystalline copper under loading and unloading" *J. Appl. Phys.* 119 165901
- Pereira, L.F., Weerheijm, J. and Sluys, L.J. 2016 "A new rate-dependent stress-based nonlocal damage model to simulate dynamic tensile failure of quasi-brittle materials" *Int. J. Impact Engng* 94 83-95
- Perry, J.I., Braithwaite, C.H., Taylor, N.E., Pullen, A.D. and Jardine, A.P. 2016 "The significance of grain morphology, moisture, and strain rate on the rapid compaction of silica sands" *Appl. Phys. Letts* 109 174103

- Pickworth, L.A., Hammel, B.A., Smalyuk, V.A., MacPhee, A.G., Scott, H.A., Robey, H.F., Landen, O.L., Barrios, M.A., Regan, S.P., Schneider, M.B., Hoppe, M., Kohut, T., Holunga, D., Walters, C., Haid, B. and Dayton, M. 2016 "Measurement of hydrodynamic growth near peak velocity in an inertial confinement fusion capsule implosion using a self-radiography technique" Phys. Rev. Letts 117 035001
- Pietrek, A. and Kenkmann, T. 2016 "Ries Bunte Breccia revisited: Indications for the presence of water in Itzing and Otting drill cores and implications for the emplacement process" Meteor. Planet. Sci. 51 1203-1222
- Pikuz, T.A., Faenov, A.Y., Ozaki, N., Hartley, N.J., Albertazzi, B., Matsuoka, T., Takahashi, K., Habara, H., Tange, Y., Matsuyama, S., Yamauchi, K., Ochante, R., Sueda, K., Sakata, O., Sekine, T., Sato, T., Umeda, Y., Inubashi, Y., Yabuuchi, T., Togashi, T., Katayama, T., Yabashi, M., Harmand, M., Morard, G., Koenig, M., Zhakhovsky, V., Inogamov, N., Safronova, A.S., Stafford, A., Skobelev, I.Y., Pikuz, S.A., Okuchi, T., Seto, Y., Tanaka, K.A., Ishikawa, T. and Kodama, R. 2016 "Indirect monitoring shot-to-shot shock waves strength reproducibility during pump-probe experiments" J. Appl. Phys. 120 035901
- Ping, Y. and Coppari, F. 2016 "Laser shock XAFS studies at OMEGA facility" High Press. Res. 36 303-314
- Pinto, M. and Shukla, A. 2016 "Shock-Initiated buckling of carbon/epoxy composite tubes at subcritical pressures" Exper. Mech. 56 583-594
- Piriz, A.R., Sun, Y.B. and Tahir, N.A. 2016 "Hydrodynamic growth and decay of planar shock waves" Phys. Plasmas 23 032704
- Piriz, A.R., Sun, Y.B. and Tahir, N.A. 2016 "Entropy shaping by shock decay" Phys. Plasmas 23 112704
- Pishdast, M., Majd, A.E. and Tehrani, M.K. 2016 "The influence of plasma shielding effect on laser-ablated copper samples: A focus on signal-to-background ratio and plasma expansion" Laser Particle Beams 34 493-505
- Plaksin, I., Mendes, R., Rodrigues, L., Plaksin, S. and Campos, J. 2016 "Characterization of detonation performance and shock reactivity of PBX-materials with use of multi-channel optical analyzer", in "Proc. 19th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán and J. Selesovsky, pp. 253-264, (Pardubice, Czech Republic, University of Pardubice)
- Plohr, J.Y.N. and Plohr, B.J. 2016 "Numerical simulation of systems of shear bands in ductile metal with inclusions" AIP Advances 6 025008
- Ponga, M., Ramabathiran, A.A., Bhattacharya, K. and Ortiz, M. 2016 "Dynamic behavior of nano-voids in magnesium under hydrostatic tensile stress" Model. Simul. Mater. Sci. Engng 24 065003

- Pope, D.J. and Masouros, S. 2016 "Computational methods in continuum mechanics", in "Blast Injury Science and Engineering: A Guide for Clinicians and Researchers", ed. A.M.J. Bull, J. Clasper and P.F. Mahoney, pp. 199-217, (Berlin, Springer)
- Popel, S.I., Golub, A.P., Lisin, E.A., Izvekova, Y.N., Atamaniuk, B., Dolnikov, G.G., Zakharov, A.V. and Zelenyi, L.M. 2016 "Impacts of fast meteoroids and the separation of dust particles from the surface of the Moon" JETP Letts 103 563-567
- Popova, T.V., Mayer, A.E. and Khishchenko, K.V. 2016 "Two-dimensional modeling of high-velocity impingement of PMMA plates" J. Phys.: Conf. Ser. 774 012066
- Prasanthi, T.N., Sudha, C. and Saroja, S. 2016 "Effect of alloying elements on interdiffusion phenomena in explosive clads of 304LSS/Ti-5Ta-2Nb alloy" J. Mater. Sci. 51 5290-5304
- Prime, M.B., Buttler, W.T., Sjue, S.K., Jensen, B.J., Mariam, G.F., Oro, D.M., Pack, C.L., Stone, J.B., Tupa, D. and Vogan-McNeil, W. 2016 "Using Richtmyer-Meshkov instabilities to estimate metal strength at very high rates", in "Dynamic Behavior of Materials", ed. B. Song, L. Lamberson, D. Casem and J. Kimberley, pp. 191-197, (New York, Springer)
- Proud, W.G. 2016 "The fundamentals of blast physics", in "Blast Injury Science and Engineering: A Guide for Clinicians and Researchers", ed. A.M.J. Bull, J. Clasper and P.F. Mahoney, pp. 3-16, (Berlin, Springer)
- Putzar, R. and Schaefer, F. 2016 "Concept for a new light-gas gun type hypervelocity accelerator" Int. J. Impact Engng 88 118-124
- Qu, Y.D., Zhang, W.J., Kong, X.Q. and Zhao, X. 2016 "Theoretical investigation of calculating temperatures in the combining zone of copper/iron composite plate jointed by explosive welding" Phys. Metals Metallog. 117 260-266
- Radchenko, P.A., Radchenko, A.V., Batuev, S.P. and Tukaev, A.M. 2016 "Research of fracture of materials and structures under shock-wave loadings by means of the program complex EFES" J. Phys.: Conf. Ser. 774 012064
- Ragozina, V.E. and Dudko, O.V. 2016 "Propagation of converging spherical deformation waves in a heteromodular elastic medium" J. Appl. Mech. Tech. Phys. 57 701-708
- Rahnamoun, A. and van Duin, A.C.T. 2016 "Study of ice cluster impacts on amorphous silica using the ReaxFF reactive force field molecular dynamics simulation method" J. Appl. Phys. 119 095901
- Rao, P.T., Gonthier, K.A. and Chakravarthy, S. 2016 "Compaction shock dissipation in low density granular explosive" J. Appl. Phys. 119 224904
- Reed, B.C. 2016 "The Manhattan project and related nuclear research" Amer. J. Phys. 84 734-745

- Regan, S.P., Goncharov, V.N., Igumenshchev, I.V., Sangster, T.C., Betti, R., Bose, A., Boehly, T.R., Bonino, M.J., Campbell, E.M., Cao, D., Collins, T.J.B., Craxton, R.S., Davis, A.K., Delettrez, J.A., Edgell, D.H., Epstein, R., Forrest, C.J., Frenje, J.A., Froula, D.H., Johnson, M.G., Glebov, V.Y., Harding, D.R., Hohenberger, M., Hu, S.X., Jacobs-Perkins, D., Janezic, R., Karasik, M., Keck, R.L., Kelly, J.H., Kessler, T.J., Knauer, J.P., Kosc, T.Z., Loucks, S.J., Marozas, J.A., Marshall, F.J., McCrory, R.L., McKenty, P.W., Meyerhofer, D.D., Michel, D.T., Myatt, J.F., Obenschain, S.P., Petrasso, R.D., Radha, P.B., Rice, B., Rosenberg, M.J., Schmitt, A.J., Schmitt, M.J., Seka, W., Shmayda, W.T., Shoup, M.J., Shvydky, A., Skupsky, S., Solodov, A.A., Stoeckl, C., Theobald, W., Ulreich, J., Wittman, M.D., Woo, K.M., Yaakobi, B. and Zuegel, J.D. 2016 "Demonstration of fuel hot-spot pressure in excess of 50 Gbar for direct-drive, layered deuterium-tritium implosions on OMEGA" *Phys. Rev. Letts* 117 025001
- Ren, G.W., Zhang, S.W., Fan, C. and Chen, Y.T. 2016 "Influence of prestress on shock behavior of polycrystalline iron via atomistic simulations (in Chinese)" *Acta Phys. Sinica* 65 196203
- Ren, X.D., Zhou, W.F., Ren, Y.P., Xu, S.D., Liu, F.F., Yuan, S.Q., Ren, N.F. and Huang, J.J. 2016 "Dislocation evolution and properties enhancement of GH2036 by laser shock processing: Dislocation dynamics simulation and experiment" *Mater. Sci. Engng A* 654 184-192
- Resnyansky, A.D. 2016 "Two-zone Hugoniot for porous materials" *Phys. Rev. B* 93 054103
- Rice, B.M. and Byrd, E.F.C. 2016 "Theoretical study of shocked formic acid: Born-Oppenheimer MD calculations of the shock Hugoniot and early-stage chemistry" *J. Phys. Chem. B* 120 1711-1719
- Rigby, S.E., Fay, S.D., Clarke, S.D., Tyas, A., Reay, J.J., Warren, J.A., Gant, M. and Elgy, I. 2016 "Measuring spatial pressure distribution from explosives buried in dry Leighton Buzzard sand" *Int. J. Impact Engng* 96 89-104
- Rijensky, O. and Rittel, D. 2016 "Polyurea coated aluminum plates under hydrodynamic loading: Does side matter?" *Int. J. Impact Engng* 98 1-12
- Robey, H.F., Celliers, P.M., Moody, J.D., Sater, J., Parham, T., Kozioziemski, B., Dylia-Spears, R., Ross, J.S., LePape, S., Ralph, J.E., Hohenberger, M., Dewald, E.L., Hopkins, L.B., Kroll, J.J., Yoxall, B.E., Hamza, A.V., Boehly, T.R., Nikroo, A., Landen, O.L. and Edwards, M.J. 2016 "Advances in shock timing experiments on the National Ignition Facility" *J. Phys.: Conf. Ser.* 688 012092
- Roger, E., Loret, B. and Calvel, J.P. 2016 "Detonation of small charges buried in cohesionless soil", in "Experimental and Applied Mechanics", ed. C. Sciammarella, J. Considine and P. Gloeckner, pp. 107-114, (New York, Springer)

- Rosch, R., Trosseille, C., Caillaud, T., Allouche, V., Bourgade, J.L., Briat, M., Brunel, P., Burillo, M., Casner, A., Depierreux, S., Gontier, D., Jadaud, J.P., Le Breton, J.P., Llavador, P., Louplas, B., Miquel, J.L., Oudot, G., Perez, S., Raimbourg, J., Rousseau, A., Rousseaux, C., Rubbelijnck, C., Stemmler, P., Troussel, P., Ulmer, J.I., Wrobel, R., Beauvais, P., Pallet, M. and Prevot, V. 2016 "First set of gated X-ray imaging diagnostics for the Laser Megajoule facility" *Rev. Sci. Instrum.* 87 033706
- Rosenberg, Z. and Dekel, E. 2016 "Terminal Ballistics (Second Edition)" (Berlin, Springer)
- Rotariu, A.N., Dima, C., Traha, E., Enache, C., Timplaru, F. and Matache, L.C. 2016 "Uninstrumented measurement method for granular porous media blast mitigation assessment" *Exper. Techniq.* 40 993-1003
- Rotariu, A., Bucur, F., Toader, G., Lupoae, M., Sava, A.C., Somoag, P. and Matei, M.C. 2016 "Experimental study on polyurea coating effects on deformation of metallic plates subjected to air blast loads" *Materiale Plastice* 53 670-674
- Rotariu, A.-N., Dima, C., Trana, E., Enache, C., Timplaru, F. and Matache, L.-C. 2016 "Uninstrumented measurement method for granular porous media blast mitigation assessment" *Exper. Techniq.* 40 993-1003
- Roth, M.J., Chen, J.S., Danielson, K.T. and Slawson, T.R. 2016 "Hydrodynamic meshfree method for high-rate solid dynamics using a Rankine-Hugoniot enhancement in a Riemann-SCNI framework" *Int. J. Numer. Meth. Engng* 108 1525-1549
- Roy, S.K., Pena, M., Hixson, R.S., Trabia, M., O'Toole, B., Becker, S., Daykin, E., Jennings, R., Matthes, M. and Walling, M. 2016 "Use of a multiplexed photonic Doppler velocimetry (MPDV) system to study plastic deformation of metallic steel plates in high velocity impact", in "Fracture, Fatigue, Failure and Damage Evolution", ed. A.M. Beese, A.T. Zehnder and S. Xia, pp. 253-260, (New York, Springer)
- Rozumek, D. and Marciniak, Z. 2016 "Fatigue tests of bimetal zirconium-steel made by explosive welding" *Procedia Engng* 160 137-142
- Ruan, D., Kariem, M.A. and Crouch, I.G. 2016 "High strain rate and specialised testing", in "The Science of Armour Materials", ed. I.G. Crouch, pp. 581-637, (Cambridge, UK, Woodhead)
- Ruan, L.Q., Ezaki, S., Masahiro, F., Shen, S. and Kawamura, Y. 2016 "Forming of magnesium alloy by underwater shock wave" *J. Magnesium Alloys* 4 27-29
- Rutherford, M.E., Chapman, D.J., White, T.G., Drakopoulos, M., Rack, A. and Eakins, D.E. 2016 "Evaluating scintillator performance in time-resolved hard X-ray studies at synchrotron light sources" *J. Synchrotron Radiation* 23 685-693

- Ryan, S., Thaler, S. and Kandanaarachchi, S. 2016 "Machine learning methods for predicting the outcome of hypervelocity impact events" *Expert Syst. Applications* 45 23-39
- Rybakov, A.P. 2016 "Mixed explosives and determination of their detonation parameters" *Propell. Explos. Pyrotech.* 41 371-376
- Sadighi-Bonabi, R. and Gheshlaghi, M. 2016 "Laser induced sonofusion: A new road toward thermonuclear reactions" *AIP Advances* 6 035218
- Sadovskii, V.M. and Sadovskaya, O.V. 2016 "Analyzing the deformation of a porous medium with account for the collapse of pores" *J. Appl. Mech. Tech. Phys.* 57 808-818
- Salasnich, L. 2016 "Shock waves in quasi one-dimensional Bose-Einstein condensate" *Eur. Phys. J. Plus* 131 doi: 10.1140/epjp/i2016-16066-x
- Sasaki, T., Takahashi, K., Kudo, T., Kikuchi, T., Aso, T., Harada, N., Fujioka, S. and Horioka, K. 2016 "Study on exploding wire compression for evaluating electrical conductivity in warm-dense diamond-like-carbon" *J. Phys.: Conf. Ser.* 688 012102
- Sasoh, A. 2016 "Laser focusing", in "Experimental Methods of Shock Wave Research", ed. O. Iggra and F. Seiler, pp. 99-108, (Berlin, Springer)
- Sater, J.D., Espinosa-Loza, F., Kozioziemski, B., Mapoles, E.R., Dylla-Spears, R., Pipes, J.W. and Walters, C.F. 2016 "Technique for forming solid deuterium and deuterium-tritium layers for shock timing experiments at the National Ignition Facility" *Fusion Sci. Technol.* 70 191-195
- Satonkina, N.P. and Rubtsov, I.A. 2016 "Electrical conductivity distribution during detonation of a TATB-based explosive" *Tech. Phys.* 61 142-145
- Satonkina, N.P. 2016 "Correlation of electrical conductivity in the detonation of condensed explosives with their carbon content" *Combust. Explos. Shock Waves* 52 488-492
- Savenkov, G.G., Morozov, V.A. and Lukin, A.A. 2016 "Electrical explosion of a conductor in energy accumulating phase change materials with nanosized semiconducting additions" *Tech. Phys. Letts* 42 1110-1113
- Savinykh, A.S., Kanel, G.I., Cherepanov, I.A. and Razorenov, S.V. 2016 "Dissipative processes under the shock compression of glass" *Tech. Phys.* 61 388-394
- Sawada, H., Lee, S., Shiroto, T., Nagamoto, H., Arikawa, Y., Nishimura, H., Ueda, T., Shigemori, K., Sunahara, A., Ohnishi, N., Beg, F.N., Theobald, W., Pérez, F., Patel, P.K. and Fujioka, S. 2016 "Flash X-ray radiography of laser-driven solid sphere compression for fast ignition" *Appl. Phys. Letts* 108 254101
- Schaller, M.F., Fung, M.K., Wright, J.D., Katz, M.E. and Kent, D.V. 2016 "Impact ejecta at the Paleocene-Eocene boundary" *Science* 354 225-229

- Schleh, D., Li, G.J. and Liu, D.S. 2016 "Response of material under blast loading", in "Dynamic Behavior of Materials", ed. B. Song, L. Lamberson, D. Casem and J. Kimberley, pp. 185-190, (New York, Springer)
- Schlothauer, T., Schimpf, C., Schwarz, M.R., Heide, G. and Kroke, E. 2016 "The role of decompression and micro-jetting in shock wave synthesis experiments" *J. Phys.: Conf. Ser.* 774 012053
- Schmit, P.F., Velikovich, A.L., McBride, R.D. and Robertson, G.K. 2016 "Controlling Rayleigh-Taylor instabilities in magnetically-driven solid metal shells by means of a dynamic screw pinch" *Phys. Rev. Letts* 117 205001
- Schöttler, M., French, M., Cebulla, D. and Redmer, R. 2016 "Free energy model for solid high-pressure phases of carbon" *J. Phys.: Condens. Matter* 28 145401
- Seagle, C.T., Reinhart, W.D., Lopez, A.J., Hickman, R.J. and Thornhill, T.F. 2016 "High precision Hugoniot measurements on statically pre-compressed fluid helium" *J. Appl. Phys.* 120 125902
- Seagle, C.T., Davis, J.-P. and Knudson, M.D. 2016 "Mechanical response of lithium fluoride under off-principal dynamic shock-ramp loading" *J. Appl. Phys.* 120 165902
- Seiler, F. and Iggra, O., Eds. 2016 "Hypervelocity Launchers" (Berlin, Springer)
- Seiler, F., Smeets, G., Patz, G., Srulijes, J., Mathieu, G., Sauerwein, B. and Striby, J.-L. 2016 "Experiments on supersonic and superdetonative combustion at ISL's ram accelerator RAMAC 30", in "Hypervelocity Launchers", ed. F. Seiler and O. Iggra, pp. 111-147, (Berlin, Springer)
- Seisson, G., Prudhomme, G., Frugier, P.-A., Hébert, D., Lescoute, E., Sollier, A., Videau, L., Mercier, P., Boustie, M. and Berthe, L. 2016 "Dynamic fragmentation of graphite under laser-driven shocks: Identification of four damage regimes" *Int. J. Impact Engng* 91 68-79
- Sekine, T. 2016 "Experimental methods of shock wave research for solids", in "Hypervelocity Launchers", ed. F. Seiler and O. Iggra, pp. 55-76, (Berlin, Springer)
- Sekine, T., Ozaki, N., Miyanishi, K., Asaumi, Y., Kimura, T., Albertazzi, B., Sato, Y., Sakawa, Y., Sano, T., Sugita, S., Matsui, T. and Kodama, R. 2016 "Shock compression response of forsterite above 250 GPa" *Science Advances* 2 e1600157
- Selesovsky, J., Pachman, J. and Künzel, M. 2016 "Numerical simulation of explosively driven aluminum flyer acceleration", in "Proc. 19th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán and J. Selesovsky, pp. 896-902, (Pardubice, Czech Republic, University of Pardubice)
- Sembian, S., Liverts, M., Tillmark, N. and Apazidis, N. 2016 "Plane shock wave interaction with a cylindrical water column" *Phys. Fluids* 28 056102
- Sembian, S., Liverts, M. and Apazidis, N. 2016 "Attenuation of strong external blast by foam barriers" *Phys. Fluids* 28 096105

- Semenko, R., Faria, L.M., Kasimov, A.R. and Ermolaev, B.S. 2016 "Set-valued solutions for non-ideal detonation" *Shock Waves* 26 141-160
- Shafiq, M. and Subhash, G. 2016 "An extended Mohr-Coulomb model for fracture strength of intact brittle materials under ultrahigh pressures" *J. Amer. Ceram. Soc.* 99 627-630
- Shafiq, M. and Subhash, G. 2016 "Dynamic deformation characteristics of zirconium diboride-silicon carbide under multi-axial confinement" *Int. J. Impact Engng* 91 158-169
- Shahzamanian, M.M. 2016 "Implementation of a rate dependent tensile failure model for brittle materials in ABAQUS" *Int. J. Impact Engng* 97 127-147
- Shakhry, D.V., Avdonin, V.V. and Palnichenko, A.V. 2016 "Superconductivity of Cu/CuO<sub>x</sub> interface formed by shock-wave pressure" *J. Phys.: Conf. Ser.* 774 012054
- Shan, T.R., Wixom, R.R. and Thompson, A.P. 2016 "Extended asymmetric hot region formation due to shockwave interactions following void collapse in shocked high explosive" *Phys. Rev. B* 94 054308
- Sharkov, M.D., Boiko, M.E., Boiko, A.M., Borovikov, V.A., Grigorev, M.N. and Konnikov, S.G. 2016 "X-ray studies of the domain formation in rocks under blasting" *Phys. Solid State* 58 2331-2334
- Shen, Y., Jester, S.B., Qi, T. and Reed, E.J. 2016 "Nanosecond homogeneous nucleation and crystal growth in shock-compressed SiO<sub>2</sub>" *Nature Mater.* 15 60-65
- Shen, C. 2016 "The Riemann problem for the pressureless Euler system with the Coulomb-like friction term" *IMA J. Appl. Math.* 81 76-99
- Shen, Y. and Reed, E.J. 2016 "Quantum nuclear effects in stishovite crystallization in shock-compressed fused silica" *J. Phys. Chem. C* 120 17759-17766
- Shi, J.W., Luo, X.B., Li, J.M. and Jiang, J.W. 2016 "Investigation on penetration model of shaped charge jet in water" *Mod. Phys. Letts B* 30 1550268
- Shi, Z.Q., Shi, Y.J., Wang, K. and Jia, S.L. 2016 "Experimental investigation on the energy deposition and morphology of the electrical explosion of copper wire in vacuum" *Phys. Plasmas* 23 032707
- Shigemori, K., Yamamoto, T., Hironaka, Y., Kawashima, T., Hattori, S., Nagamoto, H., Kato, H., Sato, N., Watari, T. and Takagi, M. 2016 "Converging shock generation with cone target filled with low density foam" *J. Phys.: Conf. Ser.* 717 012050
- Shimamura, K., Misawa, M., Ohmura, S., Shimojo, F., Kalia, R.K., Nakano, A. and Vashishta, P. 2016 "Crystalline anisotropy of shock-induced phenomena: Omnidirectional multiscale shock technique" *Appl. Phys. Letts* 108 071901
- Shmorgan, V.G., Bogdanov, A.I. and Gurevich, L.M. 2016 "Evolution of the structure of local regions of fused metal in explosion-welded nickel-aluminum composites under heat treatment" *Metal Sci. Heat Treatment* 57 684-689

- Shui, M., Chu, G.-B., Zhu, B., He, W.-H., Xi, T., Fan, W., Xin, J.-T. and Gu, Y.-Q. 2016 "Hypervelocity launching of flyers at the SG-III prototype laser facility" *J. Appl. Phys.* 119 035903
- Shukla, A., Rajapakse, Y.D.S. and LeBlanc, J. 2016 "Composite materials subjected to extreme conditions" *Exper. Mech.* 56 521-522
- Shurshalov, L.V., Charakhchyan, A.A. and Khishchenko, K.V. 2016 "Shock loading of graphite between water layers: Numerical experiments" *J. Phys.: Conf. Ser.* 774 012013
- Sichani, M.M. and Spearot, D.E. 2016 "A molecular dynamics study of dislocation density generation and plastic relaxation during shock of single crystal copper" *J. Appl. Phys.* 120 045902
- Silverstein, R. and Eliezer, D. 2016 "Influences of hydrogen and textural anisotropy on the microstructure and mechanical properties of duplex stainless steel at high strain rate ( $\sim 10^5 \text{ s}^{-1}$ )" *J. Mater. Sci.* 51 10442-10451
- Silverstein, R. and Eliezer, D. 2016 "Hydrogen trapping energy levels and hydrogen diffusion at high and low strain rates ( $\sim 10^5 \text{ s}^{-1}$  and  $10^{-7} \text{ s}^{-1}$ ) in lean duplex stainless steel" *Mater. Sci. Engng A* 674 419-427
- Silvestrov, V.V., Bordzilovskii, S.A., Gulevich, M.A., Karakhanov, S.M., Pai, V.V. and Plastinin, A.V. 2016 "Temperature measurements of a shock-compressed emulsion matrix" *Combust. Explos. Shock Waves* 52 248-254
- Silvestrov, V.V., Plastinin, A.V. and Yunoshev, A.S. 2016 "Loading of an emulsion by high-velocity plate impact" *Combust. Explos. Shock Waves* 52 358-362
- Simpson, R., Danly, C., Glebov, V.Y., Hurlbut, C., Merrill, F.E., Volegov, P.L. and Wilde, C. 2016 "Solid polystyrene and deuterated polystyrene light output response to fast neutrons" *Rev. Sci. Instrum.* 87 043513
- Siviour, C.R. and Jordan, J.L. 2016 "High strain rate mechanics of polymers: A review" *J. Dyn. Behav. Mater.* 2 15-32
- Smirnov, A., Morozov, A. and Pivina, T. 2016 "Experimental determination and calculation estimation for throwing-action of high explosive", in "Proc. 19th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán and J. Selesovsky, pp. 42-55, (Pardubice, Czech Republic, University of Pardubice)
- Smirnov, E.B., Kostitsin, O.V., Koval, A.V. and Akhlyustin, I.A. 2016 "Model of non-ideal detonation of condensed high explosives" *J. Phys.: Conf. Ser.* 774 012076
- Smith, J.A., Lacy, J.M., Levesque, D., Monchal, J.P. and Lord, M. 2016 "Use of the Hugoniot elastic limit in laser shockwave experiments to relate velocity measurements" *AIP Conf. Proc.* 1706 080005
- Sollier, A., Bouyer, V., Hébert, P. and Doucet, M. 2016 "A novel method for the measurement of the von Neumann spike in detonating high explosives" *J. Appl. Phys.* 119 245902

- Song, W.-D., Lv, Y.-T., Li, J.-Q., Wang, C. and Ning, J.-G. 2016 "Influence of impact conditions on plasma generation during hypervelocity impact by aluminum projectile" *Phys. Plasmas* 23 073506
- Song, H., Cui, J., Simonyi, A., Johnson, C.E., Hubler, G.K., DePalma, R.G. and Gu, Z. 2016 "Linking blast physics of biological outcomes in mild traumatic brain injury: Narrative review and preliminary report of an open-field blast model" *Behav. Brain Res.* doi: 10.1016/j.bbr.2016.08.037
- Song, P., Cai, L.-C., Tao, T.-J., Yuan, S., Chen, H., Huang, J., Zhao, X.-W. and Wang, X.-J. 2016 "Melting along the Hugoniot and solid phase transition for tin via sound velocity measurements" *J. Appl. Phys.* 120 195101
- Song, W., Lv, Y., Li, J., Wang, C. and Ning, J. 2016 "Influence of impact conditions on plasma generation during hypervelocity impact by aluminum projectile" *Phys. Plasmas* 23 073506
- Song, J., Bai, J. and Zhou, Y. 2016 "Intraluminal bubble dynamics induced by lithotripsy shock wave" *J. Phys. D: Appl. Phys.* 49 485401
- Song, K.P., Ren, F.D., Zhang, S.H. and Shi, W.J. 2016 "Theoretical insights into the stabilities, detonation performance, and electrostatic potentials of cocrystals containing alpha- or beta-HMX and TATB, FOX-7, NTO, or DMF in various molar ratios" *J. Molec. Modeling* 22 doi: 10.1007/s00894-016-3111-0
- Sorescu, D.C. and Rice, B.M. 2016 "RDX compression,  $\alpha \rightarrow \gamma$  phase transition, and shock Hugoniot calculations from density-functional-theory-based molecular dynamics simulations" *J. Phys. Chem. C* 120 19547-19557
- Specht, P.E., Weihs, T.P. and Thadhani, N.N. 2016 "Interfacial effects on the dispersion and dissipation of shock waves in nickel/aluminum multilayer composites" *J. Dyn. Behav. Mater.* 2 500-510
- Spiller, K., Packer, J.A., Seica, M.V. and Yankelevsky, D.Z. 2016 "Prediction of annealed glass window response to blast loading" *Int. J. Impact Engng* 88 189-200
- Sridharan, P., Jackson, T.L., Zhang, J., Balachandar, S. and Thakur, S. 2016 "Shock interaction with deformable particles using a constrained interface reinitialization scheme" *J. Appl. Phys.* 119 064904
- Stan, C.A., Willmott, P.R., Stone, H.A., Koglin, J.E., Liang, M., Aquila, A.L., Robinson, J.S., Gumerlock, K.L., Blaj, G., Sierra, R.G., Boutet, S., Guillet, S.A.H., Curtis, R.H., Vetter, S.L., Loos, H., Turner, J.L. and Decker, F.J. 2016 "Negative pressures and spallation in water drops subjected to nanosecond shock waves" *J. Phys. Chem. Letts* 7 2055-2062
- Stavrou, E., Lobanov, S., Dong, H.F., Oganov, A.R., Prakapenka, V.B., Konopkova, Z. and Goncharov, A.F. 2016 "Synthesis of ultra-incompressible spa-hybridized carbon nitride with 1:1 stoichiometry" *Chem. Mater.* 28 6925-6933

- Stehlík, S., Glatzel, T., Pichot, V., Pawlak, R., Meyer, E., Spitzer, D. and Rezek, B. 2016  
 "Water interaction with hydrogenated and oxidized detonation nanodiamonds:  
 Microscopic and spectroscopic analyses" Diamond Related Mater. 63 97-102
- Sterne, P.A., Benedict, L.X., Hamel, S., Correa, A.A., Milovich, J.L., Marinak, M.M.,  
 Celliers, P.M. and Fratanduono, D.E. 2016 "Equations of state for ablator  
 materials in inertial confinement fusion simulations" J. Phys.: Conf. Ser. 717  
 012082
- Stewart, D.S., Hernández, A. and Lee, K. 2016 "Modeling reaction histories to study  
 chemical pathways in condensed phase detonation" J. Appl. Phys. 119 095902
- Stoeckl, C., Boni, R., Ehrne, F., Forrest, C.J., Glebov, V.Y., Katz, J., Lonobile, D.J.,  
 Magoon, J., Regan, S.P., Shoup, M.J., Sorce, A., Sorce, C., Sangster, T.C. and  
 Weiner, D. 2016 "Neutron temporal diagnostic for high-yield deuterium-tritium  
 cryogenic implosions on OMEGA" Rev. Sci. Instrum. 87 053501
- Strickson, O. and Artacho, E. 2016 "Ab initio calculation of the shock Hugoniot of bulk  
 silicon" Phys. Rev. B 93 094107
- Stroujkova, A., Carnevale, M. and Vorobiev, O. 2016 "Cavity radius scaling for  
 underground explosions in hard rock" Bull. Seismol. Soc. Amer. 106 2500-2510
- Su, Y. and Meguid, S.A. 2016 "Multiphysics modeling and characterization of  
 explosively loaded aluminum blocks" Acta Mech. 227 707-720
- Sun, H., Kang, D., Dai, J., Ma, W., Zhou, L. and Zeng, J. 2016 "First-principles study on  
 equation of states and electronic structures of shock compressed argon up to  
 warm dense regime" J. Chem. Phys. 144 124503
- Sun, M.N. 2016 "The exact Riemann solutions to the generalized Chaplygin gas  
 equations with friction" Commun. Nonlinear Sci. Numer. Simul. 36 342-353
- Sun, Y.L., Li, Q.M., McDonald, S.A. and Withers, P.J. 2016 "Determination of the  
 constitutive relation and critical condition for the shock compression of cellular  
 solids" Mech. Mater. 99 26-36
- Sun, D.D., Lin, X.B., Zhang, Z.H. and Gu, N. 2016 "Impact of shock-induced lipid  
 nanobubble collapse on a phospholipid membrane" J. Phys. Chem. C 120  
 18803-18810
- Sun, H.Q., Wang, P., Chen, D.W. and Ma, D.J. 2016 "A new method to analyze the  
 velocity spectrograms of photonic Doppler velocimetry (in Chinese)" Acta Phys.  
 Sinica 65 104702
- Surh, M.P., Benedict, L.X. and Sadigh, B. 2016 "Magnetostuctural transition kinetics in  
 shocked iron" Phys. Rev. Letts 117 085701
- Svetsov, V.V. and Shuvalov, V.V. 2016 "Silicate impact-vapor condensate on the  
 Moon: Theoretical estimates versus geochemical data" Geochim. Cosmochim.  
 Acta 173 50-63

- Swinburne, T.D., Glavicic, M.G., Rahman, K.H., Jones, n.G., Coakley, J., Eakins, D.E., White, T.G., Tong, V., Milathianaki, D., Williams, G.J., Rugg, D., Sutton, A.P. and Dye, D. 2016 "Picosecond dynamics of a shock-driven displacive phase transformation in zirconium" *Phys. Rev. B* 93 144119
- Syal, M.B., Owen, J.M. and Miller, P.L. 2016 "Deflection by kinetic impact: Sensitivity to asteroid properties" *Icarus* 269 50-61
- Sychev, A.I. 2016 "Effect of the initial pressure of multicomponent bubble media on the characteristics of detonation waves" *Tech. Phys.* 61 654-658
- Takata, T., Enoki, M., Chivavibul, P., Matsui, A. and Kobayashi, Y. 2016 "Effect of confinement layer on laser ablation and cavitation bubble during laser shock peening" *Mater. Trans.* 57 1776-1783
- Tan, Y.M., Cervantes, O., Nam, S.-W., Molitoris, J.D. and Hooper, J.P. 2016 "Dynamic fragmentation of cellular, ice-templated alumina scaffolds" *J. Appl. Phys.* 119 024901
- Tan, L., Xia, L.-H., Wu, Q.-J., Xu, S. and Liu, D.-B. 2016 "Detonation characteristics of ammonium nitrate and activated fertilizer mixtures" *Combust. Explos. Shock Waves* 52 335-341
- Tang, E.L., Wu, J., Wang, M., Zhang, L.J., Xiang, S.H., Xia, J., Liu, S.H., He, L.P., Han, Y.F., Xu, M.Y., Zhang, S. and Yuan, J.F. 2016 "Damage characteristics of the logical chip module due to plasma created by hypervelocity impacts" *Plasma Sci. Technol.* 18 412-416
- Tang, E.L., Xu, M.Y., Zhang, Q.M., Liu, S.H., Wang, M., Xiang, S.H., Xia, J., He, L.P., Han, Y.F., Zhang, L.J., Zhang, S., Yuan, J.F. and Wu, J. 2016 "Research on the ionization degree of the plasma generated by 2A12 aluminum target during hypervelocity impact" *IEEE Trans. Plasma Sci.* 44 1333-1340
- Tang, S.H., Cao, X.X., He, L. and Zhu, W.J. 2016 "Effects of vacancy point defects and phase transitions on optical properties of shocked Al<sub>2</sub>O<sub>3</sub> (in Chinese)" *Acta Phys. Sinica* 65 146201
- Tavakol, M., Mahnama, M. and Naghdabadi, R. 2016 "Shock wave sintering of Al/SiC metal matrix nano-composites: A molecular dynamics study" *Comput. Mater. Sci.* 125 255-262
- Ten, K.A., Pruell, E.R., Kashkarov, A.O., Rubtsov, I.A., Shechtman, L.I., Zhulanov, V.V., Tolochko, B.P., Rykovanov, G.N., Muzyrya, A.K., Smirnov, E.B., Stolbikov, M.Y. and Prosvirnin, K.M. 2016 "Detection of microparticles in dynamic processes" *J. Phys.: Conf. Ser.* 774 012070
- Thiery, T., Le Doussal, P. and Wiese, K.J. 2016 "Universal correlations between shocks in the ground state of elastic interfaces in disordered media" *Phys. Rev. E* 94 012100

- Thomas, S.A., Vesser, L.R., Turley, W.D. and Hixson, R.S. 2016 "Comparisons of CTH simulations with measured wave profiles for simple flyer plate experiments" *J. Dyn. Behav. Mater.* 2 365-371
- Thompson, E.C., Chidester, B.A., Fischer, R.A., Myers, G.I., Heinz, D.L., Prakapenka, V.B. and Campbell, A.J. 2016 "Equation of state of pyrite to 80 GPa and 2400 K" *Amer. Mineralogist* 101 1046-1051
- Tobin, J.D. and Hargather, M.J. 2016 "Quantitative schlieren measurement of explosively-driven shock wave density, temperature, and pressure profiles" *Propell. Explos. Pyrotech.* 41 1050-1059
- Tomioka, N., Miyahara, M. and Ito, M. 2016 "Discovery of natural MgSiO<sub>3</sub> tetragonal garnet in a shocked chondritic meteorite" *Science Advances* 2 e1501725
- Tonge, A.L. and Ramesh, K.T. 2016 "Multi-scale defect interactions in high-rate brittle material failure. 1: Model formulation and application to ALON" *J. Mech. Phys. Solids* 86 117-149
- Tonge, A.L. and Ramesh, K.T. 2016 "Multi-scale defect interactions in high-rate brittle material failure. 2: Application to design of protection materials" *J. Mech. Phys. Solids* 86 237-258
- Tully, B., Hawker, N. and Ventikos, Y. 2016 "Modeling asymmetric cavity collapse with plasma equations of state" *Phys. Rev. E* 93 053105
- Turley, W.D., Stevens, G.D., Hixson, R.S., Cerreta, E.K., Daykin, E.P., Graeve, O.A., La Lone, B.M., Novitskaya, E., Perez, C., Rigg, P.A. and Veeser, L.R. 2016 "Explosive-induced shock damage in copper and recompression of the damaged region" *J. Appl. Phys.* 120 085904
- Turneaure, S.J., Sinclair, N. and Gupta, Y.M. 2016 "Real-time examination of atomistic mechanisms during shock-induced structural transformation in silicon" *Phys. Rev. Letts* 117 045502
- Tyshevsky, R.V., Sharia, O. and Kyklja, M.M. 2016 "Molecular theory of detonation initiation: Insight from first principles modeling of the decomposition mechanisms of organic nitro energetic materials" *Molecules* 21 doi: 10.3390/molecules21020236
- Uribe, F.J. 2016 "Shock waves: The Maxwell-Cattaneo case" *Phys. Rev. E* 93 033110
- Vesenjak, M., Hokamoto, K., Matsumoto, S., Marumo, Y. and Ren, Z. 2016 "Uni-directional porous metal fabricated by rolling of copper sheet and explosive compaction" *Mater. Letts* 170 39-43
- Vettegren, V.I., Shcherbakov, I.P., Mamalimov, R.I. and Kulik, V.B. 2016 "Structural changes in a heterogeneous solid (granite) under shock wave action" *Phys. Solid State* 58 699-702
- Vettegren, V.I., Kuksenko, V.S. and Shcherbakov, I.P. 2016 "The mechanism and dynamics of rock fracture upon mechanical impact and electric discharge" *Phys. Solid Earth* 52 754-769

- Vettegren, V.I., Shcherbakov, I.P. and Mamalimov, R.I. 2016 "Nanosecond dynamics of destruction of an inhomogeneous solid (granite) induced by an impact on its surface" Phys. Solid State 58 2335-2338
- Viau, C. and Doudak, G. 2016 "Investigating the behavior of light-frame wood stud walls subjected to severe blast loading" ASCE J. Struct. Engng 142 04016138
- Viau, C. and Doudak, G. 2016 "Investigating the behaviour of typical and designed wall-to-floor connections in light-frame wood stud wall structures subjected to blast loading" Canad. J. Civil Engng 43 doi: 10.1139/cjce-2015-0452
- Vilquin, A., Boudet, J.F. and Kellay, H. 2016 "Structure of velocity distributions in shock waves in granular gases with extension to molecular gases" Phys. Rev. E 94 022905
- Waisman, E.M., Reisman, D.B., Stoltzfus, B.S., Stygar, W.A., Cuneo, M.E., Haill, T.A., Davis, J.-P., Brown, J.L., Seagle, C.T. and Spielman, R.B. 2016 "Optimization of current waveform tailoring for magnetically driven isentropic compression experiments" Rev. Sci. Instrum. 87 063906
- Walley, S.M. and Field, J.E. 2016 "Elastic wave propagation in materials", in "Reference Module in Materials Science and Materials Engineering", ed. pp. doi: 10.1016/B978-0-12-803581-8.02945-3, (Amsterdam, Elsevier)
- Walton, E.L., Sharp, T.G. and Hu, J.P. 2016 "Frictional melting processes and the generation of shock veins in terrestrial impact structures: Evidence from the Steen River impact structure, Alberta, Canada" Geochim. Cosmochim. Acta 180 256-270
- Wang, Y.-P., Liu, F.-S., Liu, Q.-J. and Zhao, N.-C. 2016 "Raman spectra of liquid nitromethane under single shocked conditions" Chinese J. Chem. Phys. 29 161-166
- Wang, G., Chen, X., Cai, J., Zhang, X., Chong, T., Luo, B., Zhao, J., Sun, C., Tan, F., Liu, C. and Wu, G. 2016 "A high current pulsed power generator CQ-3-MMAF with co-axial cable transmitting energy for material dynamics experiments" Rev. Sci. Instrum. 87 065110
- Wang, L., Cai, Y., He, A.M. and Luo, S.N. 2016 "Second yield via dislocation-induced premelting in copper" Phys. Rev. B 93 174106
- Wang, K. and Jacobsen, S.B. 2016 "Potassium isotopic evidence for a high-energy giant impact origin of the Moon" Nature 538 487-490
- Wang, W., Wang, G., Liu, B., Li, L. and Yang, X. 2016 "Modeling for compression of field-reversed configurations by an imploding liner" Phys. Plasmas 23 112706
- Wang, J., Coppari, F., Smith, R.F., Eggert, J.H., Lazicki, A.E., Fratanduono, D.E., Rygg, J.R., Boehly, T.R., Collins, G.W. and Duffy, T.S. 2016 "X-ray diffraction of molybdenum under ramp compression to 1 TPa" Phys. Rev. B 94 104102
- Wang, H.F., Xiao, J.G., Zheng, Y.F. and Yu, Q.B. 2016 "Failure and ejection behavior of concrete materials under internal blast" Shock Vibration 8409532

- Wang, Y.H., Zhai, X.M., Lee, S.C. and Wang, W. 2016 "Responses of curved steel-concrete-steel sandwich shells subjected to blast loading" *Thin-Walled Structures* 108 185-192
- Wang, N., Peng, J.H., Pang, A.M., Hu, J.J. and He, T.S. 2016 "Study on the anisotropic response of condensed-phase RDX under repeated stress wave loading via ReaxFF molecular dynamics simulation" *J. Molec. Modeling* 22 doi: 10.1007/s00894-016-3093-y
- Wang, X.J., Wu, Y.Q., Huang, F.L., Jiao, T. and Clifton, R.J. 2016 "Mesoscale thermal-mechanical analysis of impacted granular and polymer-bonded explosives" *Mech. Mater.* 99 68-78
- Wang, B.-F., Xie, F.-Y., Luo, X.-Z. and Zhou, J.-D. 2016 "Experimental and physical model of the melting zone in the interface of the explosive cladding bar" *J. Mater. Res. Technol.* 5 333-338
- Wang, M., Lu, L., Li, C., Xiao, X.H., Zhou, X.M., Zhu, J. and Luo, S.N. 2016 "Deformation and spallation of a magnesium alloy under high strain rate loading" *Mater. Sci. Engng A* 661 126-131
- Wang, C., Qiu, S. and Eliasson, V. 2016 "Quantitative pressure measurement of shock waves in water using a schlieren-based visualization technique" *Exper. Techniq.* 40 323-331
- Wang, C., Chen, L., Wu, J.-Y., Liu, Q. and Hu, X.-M. 2016 "Shock to initiation characters of heated explosives with different confinement" *Propell. Explos. Pyrotech.* 41 383-392
- Whelchel, R.L., Mehoke, D.S., Iyer, K.A., Sanders, T.H. and Thadhani, N.N. 2016 "Dynamic yielding and fracture of grade 4 titanium in plate impact experiments" *J. Appl. Phys.* 119 115901
- White, B.W., Sullivan, K.T., Gash, A.E., Reeves, R.V. and Springer, H.K. 2016 "Modeling the detonation wave dynamics in reactive materials", in "Proc. 19th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán and J. Selesovsky, pp. 310-319, (Pardubice, Czech Republic, University of Pardubice)
- Whiteman, G., Keightley, P.T. and Millett, J.C.F. 2016 "The behaviour of 2169 steel under uniaxial stress and uniaxial strain loading" *J. Dyn. Behav. Mater.* 2 337-346
- Wilk, J. and Kenkmann, T. 2016 "Formation of shatter cones in MEMIN impact experiments" *Meteor. Planet. Sci.* 51 1477-1496
- Wilkerson, J.W. and Ramesh, K.T. 2016 "Unraveling the anomalous grain size dependence of cavitation" *Phys. Rev. Letts* 117 215503
- Willey, T.M., Champlay, K., Hodgin, R., Lauderbach, L., Bagge-Hansen, M., May, C., Sanchez, N., Jensen, B.J., Iverson, A. and van Buuren, T. 2016 "X-ray imaging and 3D reconstruction of in-flight exploding foil initiator flyers" *J. Appl. Phys.* 119 235901

- Williams, C.L., Sano, T., Walter, T.R., Bradley, J. and Kecske, L.J. 2016 "The role of second phase intermetallic particles on the spall failure of 5083 aluminum" *J. Dyn. Behav. Mater.* 2 476-483
- Wilson, D.C., Yi, S.A., Simakov, A.N., Kline, J.I., Kyrala, G.A., Dewald, E.L., Tommasini, R., Ralph, J.E., Olson, R.E. and Strozzi, D.J. 2016 "X-ray drive of beryllium capsule implosions at the National Ignition Facility" *J. Phys.: Conf. Ser.* 717 012058
- Winey, J.M. and Gupta, Y.M. 2016 "Complete equation of state for shocked liquid nitrogen: Analytical developments" *J. Chem. Phys.* 145 054504
- Winey, J.M., Hmiel, A. and Gupta, Y.M. 2016 "Third-order elastic constants of diamond determined from experimental data" *J. Phys. Chem. Solids* 93 118-120
- Winter, R.E., Cotton, M., Harris, E.J., Chapman, D.J. and Eakins, D. 2016 "Generation of ramp waves using variable areal density flyers" *Shock Waves* 26 395-401
- Winter, R.E., Stirk, S.M., Harris, E.J., Chapman, D.J. and Eakins, D.E. 2016 "A technique for studying the response of materials to high rate, high strain deformation" *Int. J. Impact Engng* 97 116-126
- Wojtecki, L., Mendecki, M.J. and Zuberek, W.M. 2016 "The seismic source parameters of tremors provoked by destress blastings in coal seam" *J. Mining Sci.* 52 258-264
- Wood, D., Appleby-Thomas, G., Hameed, A. and Roberson, C. 2016 "On the shock response of an UHMWPE composite", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 2407-2416, (Lancaster, PA, DesTech)
- Wu, Q., Zhang, Q.M., Long, R.R., Zhang, K. and Guo, J. 2016 "Potential space debris shield structure using impact-initiated energetic materials composed of PTFE and aluminum" *Appl. Phys. Letts* 108 101903
- Wünnemann, K., Zhu, M.H. and Stöffler, D. 2016 "Impacts into quartz sand: Crater formation, shock metamorphism, and ejecta distribution in laboratory experiments and numerical models" *Meteor. Planet. Sci.* 51 1762-1794
- Xia, Y., Wu, C.Q., Liu, Z.X. and Yuan, Y.M. 2016 "Protective effect of graded density aluminium foam on reinforced concrete slab under blast loading: An experimental study" *Construct. Building Mater.* 111 209-222
- Xiang, M.Z., Chen, J. and Su, R. 2016 "Spalling behaviors of lead induced by ramp-wave-loading: Effects of the loading rise time studied by molecular dynamics simulations" *Comput. Mater. Sci.* 117 370-379
- Xiang, D.-L., Rong, J.-L. and He, X. 2016 "Detonation performance of four groups of aluminized explosives" *Central Eur. J. Energ. Mater.* 13 903-915
- Xiao, P., Kang, Z.-T., Banshev, A.A., Breidenich, J., Scripka, D.A., Christensen, J.M., Summers, C.J., Dlott, D.D., Thadhani, N.N. and Zhou, M. 2016 "Laser-excited optical emission response of CdTe quantum dot/polymer nanocomposite under shock compression" *Appl. Phys. Letts* 108 011908

- Xie, F., Lu, Z.X., Yang, Z.Y., Hu, W.J. and Yuan, Z.S. 2016 "Mechanical behaviors and molecular deformation mechanisms of polymers under high speed shock compression: A molecular dynamics simulation study" *Polymer* 98 294-304
- Xiong, W., Zhang, X.F., Tan, M.T., Liu, C. and Wu, X. 2016 "The energy release characteristics of shock-induced chemical reaction of aluminum/nickel composites" *J. Phys. Chem. C* 120 24551-24559
- Xiong, L.M., Rigelesaiyin, J., Chen, X., Xu, S.Z., McDowell, D.L. and Chen, Y.P. 2016 "Coarse-grained elastodynamics of fast moving dislocations" *Acta mater.* 104 143-155
- Xu, A.G., Zhang, G.C., Ying, Y.J. and Wang, C. 2016 "Complex fields in heterogeneous materials under shock: Modeling, simulation and analysis" *Science China: Phys. Mech. Astronomy* 59 650501
- Xu, T., Zhao, G.F., Zhu, W.C., Chen, C.F. and Yuan, L. 2016 "Mesoscale modeling of spallation failure in fiber-reinforced concrete slab due to impact loading" *Int. J. Geomech.* 16 B4015001
- Xu, C.X., Chen, P.W., Liu, J.J., Yin, H., Gao, X. and Mei, X.F. 2016 "Fabrication of visible-light-driven Ag/TiO<sub>2</sub> heterojunction composites induced by shock wave" *J. Alloys Compounds* 679 463-469
- Xu, P.B., Xu, H. and Wen, H.M. 2016 "3D mesomechanical modeling of concrete spall tests" *Int. J. Impact Engng* 97 46-56
- Xue, X.G., Wen, Y.S. and Zhang, C.Y. 2016 "Early decay mechanism of shocked ε-CL-20: A molecular dynamics simulation study" *J. Phys. Chem. C* 120 21169-21177
- Xue, K., Sun, L. and Bai, C. 2016 "Formation mechanism of shock-induced particle jetting" *Phys. Rev. E* 94 022903
- Yakushev, V.V., Utkin, A.V., Zhukov, A.N., Shakhrai, D.V. and Kim, V.V. 2016 "Determination of P,T-conditions developed at high-temperature shock compression of silicon nitride in planar recovery ampoules" *High Temp.* 54 197-205
- Yan, N., Zhang, L., Wu, W. and Cao, K. 2016 "Research on output energy of micro-charge explosive driven fl", in "Proc. 19th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán and J. Selesovsky, pp. 363-369, (Pardubice, Czech Republic, University of Pardubice)
- Yan, X., Cao, P., Tao, W., Sharma, P. and Park, H.S. 2016 "Atomistic modeling at experimental strain rates and timescales" *J. Phys. D: Appl. Phys.* 49 493002
- Yan, H.H., Zhao, T.J., Li, X.J. and Zhao, B.B. 2016 "Slurry explosive detonation synthesis and characterization of 10 nm TiO<sub>2</sub>" *Ceram. Int.* 42 14862-14866

- Yan, Z.H., Liu, W., Zhang, C.C., Li, J.S., Xiang, X., Huang, M., Liao, W., Yang, Z.W., Tan, B.S., Li, Z.J., Yan, H.W., Yuan, X.D. and Zu, X.T. 2016 "Scratch defects modulated hot spots generation in laser irradiated RDX crystals: A 3D FDTD simulation" *J. Mater. Sci.* 51 8812-8823
- Yang, Y., Peng, Z.Q., Chen, X.Z., Guo, Z.L., Tang, T.G., Hu, H.B. and Zhang, Q.M. 2016 "Spall behaviors of high purity copper under sweeping detonation" *Mater. Sci. Engng A* 651 636-645
- Yang, Q., Liu, D., Mu, J., Huang, X., Dan, J., Xie, X., Deng, W., Feng, S., Wang, M., Ye, Y., Peng, Q. and Li, Z. 2016 "X-ray backlighting of imploding aluminium liners on PTS facility" *Rev. Sci. Instrum.* 87 093706
- Yang, Y., Chen, J., Peng, Z., Guo, Z., Tang, T., Hu, H. and Hu, Y. 2016 "X-ray quantitative analysis on spallation response in high purity copper under sweeping detonation" *Mater. Sci. Engng A* 667 54-60
- Yanuka, D., Rososhek, A., Efimov, S., Nitishinskiy, M. and Krasik, Y.E. 2016 "Time-resolved spectroscopy of light emission from plasma generated by a converging strong shock wave in water" *Appl. Phys. Letts* 109 244101
- Yanuka, D., Zinowits, H.E., Antonov, O., Efimov, S., Virozub, A. and Krasik, Y.E. 2016 "Convergence of shock waves between conical and parabolic boundaries" *Phys. Plasmas* 23 072704
- Yao, S.J., Zhang, D., Chen, X.G., Lu, F.Y. and Wang, W. 2016 "Experimental and numerical study on the dynamic response of reinforced concrete slabs under blast loading" *Engng Failure Anal.* 66 120-129
- Yelisseyev, A.P., Khrenov, A.V. and Afanasiev, V.P. 2016 "Photoluminescence spectra of impact diamonds formed by solid-state graphite-to-diamond transition" *J. Opt. Soc. Amer. B* 33(3) 43-48
- Yeo, C.D., Palazotto, A., Song, J.G. and Buentello, R. 2016 "Evaluation of thermomechanical damage of a slipper and rail in a rocket sled system" *J. Test. Eval.* 44 doi: 10.1520/JTE20140367
- Yin, C., Jin, Z., Chen, Y. and Hua, H. 2016 "One-dimensional response of single/double-layer cellular cladding to water blast" *Int. J. Impact Engng* 88 125-138
- Yu, H. and Yoh, J.J. 2016 "Laser-generated shock wave attenuation aimed at microscale pyrotechnic device design" *AIP Advances* 6 055314
- Yu, M. and Liu, Q. 2016 "Refraction of detonation wave at interface between condensed explosives and high sound-speed material (in Chinese)" *Acta Phys. Sinica* 65 024702
- Zaitsev, M.A., Gerasimov, M.V., Safonova, E.N. and Vasiljeva, A.S. 2016 "Peculiarities in the formation of complex organic compounds in a nitrogen-methane atmosphere during hypervelocity impacts" *Solar Syst. Res.* 50 113-129
- Zaretsky, E.B. 2016 "Light gas gun", in "Hypervelocity Launchers", ed. F. Seiler and O. Igra, pp. 3-19, (Berlin, Springer)

- Zaretsky, E.B. 2016 "Experimental determination of the dynamic tensile strength of liquid tin, lead, and zinc" *J. Appl. Phys.* 120 025902
- Zaretsky, E.B. and Kanel, G.I. 2016 "Invariability of rate dependences of normalized flow stress in niobium and molybdenum under conditions of shock compression" *J. Appl. Phys.* 120 105901
- Zastrau, U., Gamboa, E.J., Kraus, D., Benage, J.F., Drake, R.P., Efthimion, P., Falk, K., Falcone, R.W., Fletcher, L.B., Galtier, E., Gauthier, M., Granados, E., Hastings, J.B., Heimann, P., Hill, K., Keiter, P.A., Lu, J., MacDonald, M.J., Montgomery, D.S., Nagler, B., Pablant, N., Schropp, A., Tobias, B., Gericke, D.O., Glenzer, S.H. and Lee, H.J. 2016 "Tracking the density evolution in counter-propagating shock waves using imaging X-ray scattering" *Appl. Phys. Letts* 109 031108
- Zeng, Q.X., Li, B., Li, M.Y. and Wu, X.Y. 2016 "A miniature device for shock initiation of hexanitrostilbene by high-speed flyer" *Propell. Explos. Pyrotech.* 41 864-869
- Zganec, S., Bohanek, V. and Dobrilovic, M. 2016 "Influence of a primer on the velocity of detonation of ANFO and heavy ANFO blends" *Central Eur. J. Energ. Mater.* 13 695-705
- Zhang, Z., Eakins, D.E. and Dunne, F.P.E. 2016 "On the formation of adiabatic shear bands in textured hcp polycrystals" *Int. J. Plast.* 79 196-216
- Zhang, C., Xue, X., Wen, Y., Ma, Y. and Qian, W. 2016 "Molecular dynamics simulations on the responses of some typical energetic materials against heating and shock", in "Proc. 19th Seminar on New Trends in Research of Energetic Materials", ed. J. Pachmán and J. Selesovsky, pp. 351-362, (Pardubice, Czech Republic, University of Pardubice)
- Zhang, Q.B. 2016 "Shear strength and Hugoniot elastic limit (HEL) of rock materials under shock loading", in "Rock Dynamics: From Research to Engineering", ed. H. Li, J. Li, Q. Zhang and J. Zhao, pp. 227-232, (London, Taylor & Francis)
- Zhang, H.S., Yan, M., Wang, H.Y., Shen, L.T. and Dai, L.H. 2016 "Determination of dynamic shear strength of 2024 aluminum alloy under shock compressio" *AIP Advances* 6 045309
- Zhang, L., Li, Y.-H., Ye, X.-P., Zhang, Z.-G., Cheng, J.-M. and Cai, L.-C. 2016 "Exploration of the fragmentation of laser shock-melted aluminum using X-ray backlighting" *AIP Advances* 6 055311
- Zhang, Z., Zhao, Y. and Yang, J. 2016 "Transparency of the strong shock-compressed diamond for 532 nm laser light" *Phys. Plasmas* 23 043301
- Zhang, C., Li, X. and Yang, C. 2016 "A modified method of characteristics and its application in forward and inversion simulations of underwater explosion" *AIP Advances* 6 075319
- Zhang, K., Long, R., Zhang, Q., Xue, Y. and Ju, Y. 2016 "Flash characteristics of plasma induced by hypervelocity impact" *Phys. Plasmas* 23 083519

- Zhang, T. and Shen, C. 2016 "The shock wave solution to the Riemann problem for the Burgers equation with the linear forcing term" *Applicable Analysis* 95 283-302
- Zhang, S., Wang, H.W., Kang, W., Zhang, P. and He, X.T. 2016 "Extended application of Kohn-Sham first-principles molecular dynamics method with plane wave approximation at high energy: From cold materials to hot dense plasmas" *Phys. Plasmas* 23 042707
- Zhang, H., Duan, X.X., Zhang, C., Liu, H., Zhang, H.G., Xue, Q.X., Ye, Q., Wang, Z.B. and Jiang, G. 2016 "Analysis of the intrinsic uncertainties in the laser-driven iron Hugoniot experiment based on the measurement of velocities" *Chinese Phys. Letts* 33 086202
- Zhang, H., Liu, Y., Sun, H. and Wu, S.F. 2016 "Transient dynamic behavior of polypropylene fiber reinforced mortar under compressive impact loading" *Construct. Building Mater.* 111 30-42
- Zhang, M., Li, C., Gao, H.Q., Fu, W., Li, Y.Y., Tang, L.W. and Zhou, Z.M. 2016 "Promising hydrazinium 3-nitro-1,2,4-triazol-5-one and its analogs" *J. Mater. Sci.* 51 10849-10862
- Zhang, R., Tian, X.C., Zhou, D.D., Zhu, N., Wang, Z.G., Li, H.X., Wang, J.J., Li, M.Z., Xu, D.P., Dang, Z., Hu, D.X., Zhu, Q.H., Zheng, W.G. and Wang, F. 2016 "Research of time fiducial laser and probe laser of velocity interferometer system for any reflector for Shenguang-III laser facility (in Chinese)" *Acta Phys. Sinica* 65 024203
- Zhang, X.P., Luo, B.Q., Chong, T., Wang, G.J., Tan, F.L., Zhao, J.H., Sun, C.W. and Liu, C.L. 2016 "Refractive index of Z-cut quartz under magnetically driven quasi-isentropic compression (in Chinese)" *Acta Phys. Sinica* 65 046201
- Zhang, T.K., Han, D., Wu, Y.C., Yan, Y.H., Zhao, Z.Q. and Gu, Y.Q. 2016 "Optimization design of laser X-ray radiography for density diagnosis in compressed matter (in Chinese)" *Acta Phys. Sinica* 65 045203
- Zhang, C., Wang, Z.B., Liu, H., Peng, X.S., Wang, F., Ding, Y.K. and Zheng, J. 2016 "Measurement of preheat in aluminium target in indirect drive using the SGIII prototype facilities" *J. Phys.: Conf. Ser.* 688 012131
- Zhao, S., Hahn, E.N., Kad, B., Remington, B.A., Bringa, E.M. and Meyers, M.A. 2016 "Shock compression of [001] single crystal silicon" *EPJ Special Topics* 225 334-341
- Zhao, S., Hahn, E.N., Kad, B., Remington, B.A., Wehrenberg, C.E., Bringa, E.M. and Meyers, M.A. 2016 "Amorphization and nanocrystallization of silicon under shock compression" *Acta mater.* 103 519-533
- Zhao, S., Kad, B., Remington, B.A., LaSalvia, J.C., Wehrenberg, C.E., Behler, K.D. and Meyers, M.A. 2016 "Directional amorphization of boron carbide subjected to laser shock compression" *Proc. Nat. Acad. Sci. US* 113 12088-12093

- Zhao, K., Ringdalen, I.G., Wu, J.Y., He, J.Y. and Zhang, Z.L. 2016 "Ductile mechanisms of metals containing pre-existing nanovoids" *Comput. Mater. Sci.* 125 36-50
- Zhou, T., Cheng, S.-J., Wang, H. and Shen, F. 2016 "Research on driving characteristic for dual charge of DNTF-based aluminized explosive", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 1355-1362, (Lancaster, PA, DesTech)
- Zhou, Q., Qiu, R., Jiang, Y., Gao, X., Yang, Y.J., Wang, H.L. and Ren, H. 2016 "Ultra-fast diagnosis of shock waves and plasma at front and rear surfaces in the bulk of fused silica induced by an Nd:YAG pulse laser" *Chinese Optics Letts* 14 051402
- Zhou, L., Li, X.Y., Zhu, W.J., Wang, J.X. and Tang, C.J. 2016 "Plasma recoil induced by laser radiated solid target (in Chinese)" *Acta Phys. Sinica* 65 085201
- Zhou, T.T., Lou, J.F., Zhang, Y.G., Song, H.J. and Huang, F.L. 2016 "Hot spot formation and chemical reaction initiation in shocked HMX crystals with nanovoids: A large-scale reactive molecular dynamics study" *Phys. Chem. Chem. Phys.* 18 17627-17645
- Zhou, Q. and Chen, P.W. 2016 "Fabrication of tungsten-copper composite by shock consolidation of copper-coated tungsten powders" *J. Alloys Compounds* 657 215-223
- Zhou, L.C., He, W.F., Luo, S.H., Long, C.B., Wang, C., Nie, X.F., He, G.Y., Shen, X.J. and Li, Y.H. 2016 "Laser shock peening induced surface nanocrystallization and martensite transformation in austenitic stainless steel" *J. Alloys Compounds* 655 66-70
- Zhu, Y.Y., Wang, H.Z., Gao, Z.Y. and Cai, W. 2016 "Phase transformation and mechanical properties of Ti50Ni50 alloy after high-velocity impact" *J. Alloys Compounds* 664 223-228
- Zhu, H. and Khanna, S.K. 2016 "A novel transparent glass fiber-reinforced polymer composite interlayer for blast-resistant windows" *Trans. ASME: J. Engng Mater. Technol.* 138 031007
- Zhukov, I.A., Garkushin, G.V., Vorozhtsov, S.A., Khrustalyov, A.P., Razorenov, S.V., Kvetinskaya, A.V., Promakhov, V.V. and Zhukov, A.S. 2016 "Special features of the mechanical characteristics of Al-Al<sub>2</sub>O<sub>3</sub> composites produced By explosive compaction of powders under shock-wave deformation" *Russ. Phys. J.* 58 1358-1361
- Zhukov, A.N., Zakiev, S.E. and Yakushev, V.V. 2016 "Assessment of the effect of particle size on the rate of temperature alignment in systems used for shock-wave synthesis of diamond, cubic boron nitride, and γ-silicon nitride, based on a simple model" *High Temp.* 54 62-67
- Zingg, L., Mealecot, Y., Briffaut, M., Baroth, J. and Pla, S. 2016 "A radial strain sensor for the characterization of concrete under triaxial loading" *Exper. Mech.* 56 703-711

- Zlatkis, A., Teitel, M. and Gofman, E. 2016 "Cast study: Reliability of detonation train with shaped charge donor", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 1374-1382, (Lancaster, PA, DesTech)
- Zong, H.X., Ding, X.D., Lookman, T. and Sun, J. 2016 "Twin boundary activated  $\alpha$  to  $\omega$  phase transformation in titanium under shock compression" Acta mater. 115 1-9
- Zu, X.-D., Huang, Z.-X., Zhu, C.-S. and Xiao, Q.-Q. 2016 "Study of detonation wave contours in EFP warhead", in "Proc. 29th Int. Symp. on Ballistics", ed. C. Woodley and I. Cullis, pp. 1383-1387, (Lancaster, PA, DesTech)
- Zu, X.-D., Huang, Z.-X., Zhu, C.-S. and Xiao, Q.-Q. 2016 "Study of detonation wave contours in EFP warhead" Defence Technol. 12 129-133
- Zubareva, A.N., Efremov, V.P., Mochalova, V.M. and Utkin, A.V. 2016 "Experimental study of dynamic properties of porous materials under shock-wave loading" J. Phys.: Conf. Ser. 774 012055
- Zuber, C., Bazzoli, S., Brunel, P., Burillo, M., Fronty, J.P., Gontier, D., Goulmy, C., Moreau, I., Oudot, G., Rubbelynck, C., Soullié, G., Stemmler, P. and Trosseille, C. 2016 "Performance of Laser Megajoule's X-ray streak camera" Rev. Sci. Instrum. 87 11E303
- Zuber, C., Bazzoli, S., Brunel, P., Fronty, J.-P., Contier, D., Goulmy, C., Raimbourg, J., Rubbelynck, C. and Trosseille, C. 2016 "Picosecond X-ray streak camera dynamic range measurement" Rev. Sci. Instrum. 87 093501
- Zuber, C., Bazzoli, S., Brunel, P., Burillo, M., Fronty, J.P., Contier, D., Goulmy, C., Moreau, I., Oudot, G., Rubbelynck, C., Soullié, G., Stemmler, P. and Trosseille, C. 2016 "Performance of Laser Megajoule's X-ray streak camera" Rev. Sci. Instrum. 87 11E303