

Publications in 2012

1. **Yan Bao, Jianjun Tao**, The Passive Control of Wake Flow Behind Acircular Cylinder by Parallel Dual Plates, *Journal of Fluids and Structures*, 2012
2. **Guoxin Cao**, Jie Sui, Shuli Sun, Evaluating the Nucleus Effect on the Dynamic Indentation Behavior of Cells, *Biomech Model Mechanobiol*, 2012
3. **Guoxin Cao**, Working Mechanism of Nanoporous Energy Absorption System under High Speed Loading, *The Journal of Physical Chemistry C*, 116, 8278–8286, 2012
4. **Lihua Cao**, Mo Chen, **Xiantu He**, Wei Yu and Mingyang Yu, Relative importance of mega electronvolt-electron energy deposition by collisions and field effects in fast ignition, *Physics of Plasmas* 19, 044503, 2012
5. **Huan Wang, Lihua Cao**, Zongqing Zhao, M.Y. Yu, Yuqiu Gu, and **Xiantu He**. Fast electron beam with manageable spotsize from laser interaction with the tailored cone-nanolayer target, *Laser and Particle Beams* 30, 553–558, 2012
6. Xiao-Lei Hao, Wei-Dong Li, **Jie Liu**, and **Jing Chen**, The Effect of Electron Initial Longitudinal Velocity on Non-Sequential Double Ionization Process in Elliptically Polarized Laser Field, *Chinese Physics B*, Vol. 21, No. 8, 083304, 2012
7. Wei Chu, Mingyan Wu, Bin Zeng, Jinping Yao, Jielei Ni, Hui Xiong, Han Xu, Zhiyang Lin, HuiPeng Kang, Wei Quan, **Jing Chen**, X. Liu, Ya Cheng, and Zhizhan Xu, Unexpected Breakdown of the Simple Man's Model for Strong-field Photoionization in the High-energy Recollision Region, *Physical Review A* 85, 021403(R), 2012
8. Bingbing Wang, Yingchun Guo, **Jing Chen**, Zong-Chao Yan, and Panming Fu, Frequency-domain Theory of Nonsequential Double Ionization in Intense Laser Fields Based on Nonperturbative QED, *Physical Review A* 85, 023402, 2012
9. Jigen Chen, Ruquang Wang, Zhen Zhai, **Jing Chen**, Panming Fu, Bingbing Wang, and Wu-Ming Liu, Frequency-selected enhancement of high-order-harmonic generation by interference of degenerate Rydberg states in a few-cycle laser pulse, *Physical Review A* 86, 033417, 2012
10. Zhen Zhai, Dian Peng, Xi Zhao, Fuming Guo, Yujun Yang, Panming Fu, **Jing Chen**, Zong-Chao Yan, and Bingbing Wang, Carrier-envelope-phase Effect on Laser-driven Bound-bound Transitions in the High-frequency Region, *Physical Review A* 86, 043432, 2012
11. L. Guo, S. S. Han, **Jing Chen**, Time-energy Analysis of Above-threshold Ionization in Few-cycle Laser Pulses, *Physical Review A* 86, 053409, 2012
12. C.Y. Wu, Y. D. Yang, Y. Q. Liu, Q. H. Gong, M. Wu, X. Liu, X. L. Hao, W. D. Li, **Xiantu He and Jing Chen**, Characteristic Spectrum of Very Low-Energy Photoelectron from Above-Threshold Ionization in the Tunneling Regime, *Physical Review Letters*, 109, 043001, 2012
13. ZhiYang Lin, XinYan Jia, ChuanLiang Wang, ZiLong Hu, HuiPeng Kang, Wei Quan, XuanYang Lai, XiaoJun Liu, **Jing Chen**, Bin Zeng, Wei Chu, JinPing Yao, Ya Cheng, and ZhiZhan Xu, Ionization Suppression of Diatomic Molecules in an Intense Midinfrared Laser Field, *Physical Review Letters*, 108, 223001, 2012
14. Yujuan Zhang, Baotian Wang, Yong Lu, Yu Yang, **Ping Zhang**, Electronic, mechanical and thermodynamic properties of α -UH₃: A comparative study by using the LDA and LDA+U approaches, *Journal of Nuclear Materials*, 430, 137–141, 2012
15. Shengli Jiang, **Jun Chen**, Tiecheng Lu, Yao Long, Kai Sun, Correlation of the atomic and electronic structures and the optical properties of the R₅(210)/[001] symmetric tilt grain boundary in yttrium aluminum garnet, *Acta Materialia* 60, 7041–7050, 2012
16. **Jun Chen** and Y. Long, A first-principles study on the helium doped grain boundary in metal Al, *European Physical Journal B* 85: 345, 2012
17. Shengli Jiang, **Jun Chen**, Yao Long, and Tiecheng Lu, Atomic Structure, Electronic Structure, and Optical Properties of YAG (110) Twin Grain Boundary, *Journal of the American Ceramic Society*, 1–7, 2012
18. **Qionglin Ni**, Fazle Hussain, **Jianchun Wang**, and Shiyi Chen, Analysis of Reynolds number scaling for viscous vortex reconnection, *Physics of Fluids* 24, 105102, 2012
19. **Jianchun Wang, Yipeng Shi**, LianPing Wang, **Zuoli Xiao, Xiantu He** and **Shiyi Chen**, Effect of compressibility on the smallscale structures in isotropic turbulence, *Journal of Fluid Mechanics* vol. 713, 588-631, 2012
20. **Qionglin Ni and Shiyi Chen**, Statistics of active and passive scalars in one-dimensional compressible turbulence, *Physical Review E* 86, 066307, 2012
21. **Shiyi Chen**, Zhenhua Xia, Suyang Pei, **Jianchun Wang, Yantao Yang, Zuoli Xiao and Yipeng Shi**,

- Reynolds-stress-constrained large-eddy simulation of wall-bounded turbulent flows, *Journal of Fluid Mechanics*, vol. 703, 1-28, 2012
22. **Jianchun Wang, Yipeng Shi**, Lian-Ping Wang, **Zuoli Xiao, Xiantu He, and Shiyi Chen**, Scaling and Statistics in Three-Dimensional Compressible Turbulence, *Physical Review Letter*, 108, 214505, 2012
 23. Jin Liu, Moran Wang, **Shiyi Chen**, and Mark O. Robbins, Uncovering Molecular Mechanisms of Electrowetting and Saturation with Simulations, *Physical Review Letter*, 108, 216101, 2012
 24. M.Q. Wang, Y. Wang, Y.J. Sun, G.Y. Zhang, Y.Z. Tong, **Huling Duan**, Thermo-mechanical solution of film/substrate systems under local thermal load and application to laser lift-off of GaN/sapphire structures, *International Journal of Solids and Structures* 49, 1701–1711, 2012
 25. Yahui Xue, Shigan Chu, Pengyu Lv and **Huiling Duan**, Importance of Hierarchical Structures in Wetting Stability on Submersed Superhydrophobic Surfaces, *Langmuir* 28, 9440–9450, 2012
 26. Fuquan Dou, Shengchang Li, Hui Cao, and **Libin Fu**, Creating Pentamer Molecules by Generalized Stimulated Raman Adiabatic Passage, *Physical Review A* 85, 023629, 2012
 27. **Libin Fu**, G. G. Xin, Dafei Ye and **Jie Liu**, Recollision Dynamics and Phase Diagram for Nonsequential Double Ionization with Circularly Polarized Laser Fields, *Physical Review Letter*, 108, 103601, 2012
 28. Hong Liu, Yunquan Liu, **Libin Fu**, Guoguo Xin, Difa Ye, **Jie Liu, Xiantu He**, Yudong Yang, Xianrong Liu, Yongkai Deng, Chengyin Wu, and Qihuang Gong, Low Yield of Near-Zero-Momentum Electrons and Partial Atomic Stabilization in Strong-Field Tunneling Ionization, *Physical Review Letter*, 109, 093001, 2012
 29. Wang Qiang, Ye Chong, **Fu Libin**, Quantum Cyclotron Orbits of a Neutral Atom Trapped in a Triple Well with a Synthetic Gauge Field, *Chinese Physical Letter*, Vol. 29, No. 6, 060301, 2012
 30. **Taiwu Huang, Cangtao Zhou, and Xian-Tu He**, Propagation of femtosecond terawatt laser pulses in N₂ gas including higher-order Kerr effects, *Aip Advances* 2, 042190, 2012
 31. Lizhi Lin, Yongping Wan, and **Faxin Li**, An Analytical Nonlinear Model for Laminate Multiferroic Composites Reproducing the DC Magnetic Bias Dependent Magnetoelectric Properties, *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, vol. 59, no. 7, 2012
 32. Ji Fu, Lizhi Lin, Xilong Zhou, Yingwei Li, and **Faxin Li**, A macroscopic Non-Destructive Testing System Based on the Cantilever-sample Contact Resonance, *Review of Scientific Instruments* 83, 123707, 2012
 33. Yingwei Li, and **Faxin Li**, In situ Observation of Electric Field Induced Crack Propagation in BaTiO₃ Crystals Along the Field Direction, *Scripta Materialia* 67, 601–604, 2012
 34. H. Cao and **Libin Fu**, Quantum phase transition and dynamics induced by atom-pair tunnelling of Bose-Einstein condensates in a double-well potential, *Eur. Phys. J. D*, 66: 97, 2012
 35. Zhenning Cai, Yuwei Fan, **Ruo Li, Tiao Lu, and Yanli Wang**, Quantum hydrodynamic model by moment closure of Wigner equation, *Journal of Mathematical Physics* 53, 103503, 2012
 36. **Ruo Li**, Pingbing Ming, and Fengyang Tang, An Efficient High Order Heterogeneous Multiscale Method for Elliptic Problems, *Multiscale Modeling & Simulation*, Vol. 10, No. 1, pp. 259–283, 2012
 37. Zhenning Cai, **Ruo Li**, and Zhonghua Qiao, NRxx Simulation of Microflows with Shakhov Model, *Siam Journal on Scientific Computing*, Vol. 34, No. 1, pp. A339–A369, 2012
 38. Zhenning Cai, **Ruo Li** and Yanli Wang, Numerical Regularized Moment Method for High Mach Number Flow, *Communications in Computational Physics*, Vol. 11, No. 5, pp. 1415-1438, 2012,
 39. **Xiaowei Li**, Jian Zhou, **Qian Wang**, Xiaoshuang Chen, Y Kawazoe and P Jena, Magnetism of two-dimensional triangular nanoflake-based kagome lattices, *New Journal of Physics* 14 033043, 2012
 40. **Xiaowei Li**, Jian Zhou, **Qian Wang**, Puru Jena, Magnetic properties of two dimensional silicon carbide triangular nanoflakes-based kagome lattices, *Journal of Nanoparticle Research* 14:1056, 2012
 41. **Xiaowei Li** and **Qian Wang**, Tunable ferromagnetism in assembled two dimensional triangular graphene nanoflakes, *Physical Chemistry Chemical Physics*, 14, 2065–2069, 2012
 42. Qianyi Chen, **Kaixin Liu**, A high-resolution Eulerian method for numerical simulation of shaped charge jet including solid–fluid coexistence and interaction, *Computers & Fluids* 56, 92–101, 2012
 43. Rongxin Feng, **Kaixin Liu**, Tuning the band-gap of phononic crystals with an initial stress, *Physica B* 407, 2032–2036, 2012
 44. Fu Zheng and **Liu Kai-Xin**, An improved two-dimensional unstructured CE/SE scheme for capturing shock waves, *Chinese Physics B*, Vol. 21, No. 4, 040202, 2012
 45. W. D. Liu and **Kaixin Liu**, Notable internal thermal effect on the yielding of metallic glasses. *Applied Physics*

Letters, 100, 141904, 2012

46. Li Shan, Ning Cui, Ming Cheng and **Kaixin Liu**, A New Combined Scheme of Discrete Element Method and Meshless Method for Numerical Simulation of Continuum/Discontinuum Transformation, *Computer Modeling in Engineering & Sciences*, vol.83, no.4, pp.353-383, 2012
47. Ning Luo, **KaiXin Liu**, ZhiYuan Liu, XiaoJie Li, ShiYang Chen, Yang Shen and TianWu Chen, Controllable synthesis of carbon coated iron-based composite nanoparticles, *Nanotechnology* 23 475603, 2012
48. Ning Luo, **Kai Xin Liu**, Xiao Jie Li, Zhen Wei Wu, Shi Yu Wu, Lin Mao Yea and Yang Shena, Synthesis of graphite-coated copper nanoparticles by the detonation of a copper-doped emulsion explosive, *Mendeleev Communications*, 22, 248–249, 2012
49. **Wanhai Liu**, **Xiantu He**, and C. P. Yu, Cylindrical effects on Richtmyer-Meshkov instability for arbitrary Atwood numbers in weakly nonlinear regime, *Physics of Plasmas* 19, 072108, 2012
50. Meng Shao-Ying(孟少英), Chen Xi-Hao(陈希浩), Wu Wei(吴炜), and **Fu Li-Bin(傅立斌)**, Linear instability and adiabaticity of a dark state during conversion of two species of fermionic atoms to stable molecules, *Chin. Phys. B*, Vol. 21, No. 4, 040308, 2012
51. **Liu Zhanjun**, **He Xiantu**, **Zheng Chunyang** and **Wang Yugang**, Bursting behaviours in cascaded stimulated Brillouin scattering, *Chinese Physics B* Vol. 21, No. 1, 015202, 2012
52. Hao Liang, **Liu Zhanju**, **Zheng Chunyang**, Xiang Jiang, Feng Wu, Hu Xiaoyan, Li Bin, Study of stimulated Raman and Brillouin scattering in a finite interaction region under the convective instability condition, *Chinese Science Bulletin*, Vol. 57 No. 21: 2747–2751, 2012
53. **刘占军**, **郝亮**, **项江**, **郑春阳**, 激光聚变中受激布里渊散射的混合模拟研究, *物理学报Acta Physica Sinica*, Vol. 61, No. 11, 115202, 2012
54. Jian Zhou and **Qiang Sun**, How to fabricate a semihydrogenated graphene sheet? A promising strategy explored, *Applied Physics Letters* 101, 073114, 2012
55. Min Kan, Jian Zhou, Yawei Li, and **Qiang Sun**, Using carbon chains to mediate magnetic coupling in zigzag grapheme nanoribbons, *Applied Physics Letters* 100, 173106, 2012
56. Kun Lü, Jian Zhou, Le Zhou, X. S. Chen, Siew Hwa Chan, and **Qiang Sun**, Pre-combustion CO₂ capture by transition metal ions embedded in phthalocyanine sheets, *Journal of chemical physics* 136, 234703, 2012
57. Jian Zhou, **Qian Wang**, **Qiang Sun**, Yoshiyuki Kawazoe, and Puru Jena, Strain-Induced Spin Crossover in Phthalocyanine-Based Organometallic Sheets, *the Journal of Physical Chemistry Letters* 3, 3109–3114, 2012
58. Xiong Gu, Le Zhou, Yawei Lia, **Qiang Sun**, Puru Jena, Design of new metal-free dyes for dye-sensitized solar cells: A first-principles study, *Physics Letters A* 376 2595–2599, 2012
59. Le Zhou a, **Kun Lü**, Xiong Gua, **Qiang Sun**, Structures and hydrogen adsorption of (MgCN₂)_n (n = 1–4) clusters, *Physics Letters A* 376, 864–868, 2012
60. Min Kan, Jian Zhou, **Qiang Sun**, **Qian Wang**, Yoshiyuki Kawazoe, and Puru Jena, Tuning magnetic properties of graphene nanoribbons with topological line defects: From antiferromagnetic to ferromagnetic, *Physical Review B* 85, 155450, 2012
61. Peng He, **Huazhong Tang**, An adaptive moving mesh method for two-dimensional relativistic magnetohydrodynamics, *Computers & Fluids* 60, 1–20, 2012
62. Peng He and **Huazhong Tang**, An Adaptive Moving Mesh Method for Two-Dimensional Relativistic Hydrodynamics, *Communications in Computational Physics*, Vol. 11, No. 1, pp. 114-146, 2012
63. Zhicheng Yang, **Huazhong Tang**, A direct Eulerian GRP scheme for relativistic hydrodynamics: Two-dimensional case, *Journal of Computational Physics* 231, 2116–2139, 2012
64. Huimin Lin, Zhenli Xu, **Huazhong Tang**, Wei Cai, Image Approximations to Electrostatic Potentials in Layered Electrolytes/Dielectrics and an Ion-Channel Model, *Journal of Scientific Computing* 53:249–267, 2012
65. Xia Ji, and **Huazhong Tang**, High-Order Accurate Runge-Kutta (Local) Discontinuous Galerkin Methods for One- and Two-Dimensional Fractional Diffusion Equations, *Numerical Mathematics Theory Methods and Applications*, vol. 5, No. 3, pp. 333-358, 2012
66. Ming Fang, **Shaoqiang Tang**, Zhihui Li, Xianming Wang, Artificial boundary conditions for atomic simulations of face-centered-cubic lattice, *Computational Mechanics*, 50:645–655, 2012
67. Gang Pang, Lei Bian, and **Shaoqiang Tang**, Almost exact boundary condition for one-dimensional Schrödinger equations, *Physical Review E* 86, 066709, 2012
68. Yujuan Zhang, **Cong Wang**, Fawei Zheng, and **Ping Zhang**, Quantum molecular dynamics simulations for the

- nonmetal-metal transition in fluid nitrogen oxide, *Journal of Applied Physics* 112, 033501, 2012
69. Yujuan Zhang, **Cong Wang, and Ping Zhang**, The electronic and optical properties of warm dense nitrous oxide using quantum molecular dynamics simulations, *Physics of Plasmas* 19, 112701, 2012
 70. Yujuan Zhang, **Cong Wang**, Fawei Zheng, and **Ping Zhang**, Quantum molecular dynamics simulations of thermophysical properties of fluid ethane, *Physical Review E* 86, 061111, 2012
 71. **Wang Cong**, GU Yun-Jun, Chen Qi-Feng, **He Xian-Tu, and Zhang Ping**, Equation of State for Shock Compressed Xenon in the Ionization Regime: ab Initio Study, *Communications in Theoretical Physics* 58, 160–164, 2012
 72. **Cong Wang, Xian-Tu He, and Ping Zhang**, First-Principles Calculations of Shocked Fluid Helium in Partially Ionized Region, *Communications in Computational Physics*, Vol. 12, No. 4, pp. 1121-1128, 2012
 73. **Cong Wang, Xian-Tu He, and Ping Zhang**, The equation of state, electronic thermal conductivity, and opacity of hot dense deuterium-helium plasmas, *Physics of Plasmas* 19, 042702, 2012
 74. **Lifeng Wang**, Wenhua Ye and Xiantu He, Density gradient effects in weakly nonlinear ablative Rayleigh-Taylor instability. *Physics of Plasmas*, 19: 012706/1-8, 2012
 75. Liu W H, **Lifeng Wang, (parallel first author)**, Wenhua Ye and Xiantu He, Nonlinear saturation amplitudes in classical Rayleigh-Taylor instability at arbitrary Atwood numbers, *Physics of Plasmas*, 19: 042705/1-7, 2012
 76. **Lifeng Wang**, B. L. Yang, **Wenhua Ye, Xiantu He**, Stabilization of the Rayleigh-Taylor instability in quantum magnetized plasmas, *Physics of Plasmas*, 19: 072704/1-13, 2012
 77. **Lifeng Wang, Ye Wenhua, He Xiantu**, Zhang W Y, Sheng Z M, and Yu M Y, Formation of jet-like spikes from the ablative Rayleigh-Taylor instability, *Physics of Plasmas*, 19: 100701/1-4, 2012
 78. **Lifeng Wang**, Wu J F, Fan Z F, Ye W H, He X T, Zhang W Y, Dai Z S, Gu J F, and Xue C, Coupling between interface and velocity perturbations in the weakly nonlinear Rayleigh-Taylor instability, *Physics of Plasmas*, 19: 112706/1-15, 2012
 79. 陶焯晟, **王立锋**, 叶文华, 张广财, 张建成, 李英骏. 任意 Atwood 数 Rayleigh-Taylor 和 Richtmyer-Meshkov 不稳定性气泡速度研究. *物理学报*, 61(7): 075207/1-7, 2012
 80. **Shunhong Zhang**, Jian Zhou, **Xiaowei Li, Qian Wang**, Magnetism of triangular nanoflakes with different compositions and edge terminations, *Journal of Nanoparticle Research* 14:1171, 2012
 81. **Qian Wang**, and Puru Jena, Density Functional Theory Study of the Interaction of Hydrogen with Li_6C_{60} , *Journal of Physical Chemistry Letters* 3, 1084–1088, 2012
 82. **Qian Wang**, D. X. Ye, Y. Kawazoe, and P. Jena, Adsorption of oxygen-containing functional groups on free and supported graphene using point contact, *Physical Review B* 85, 085404, 2012
 83. Zigang Ge, Chao Li, Boon Chin Heng, **Guoxin Cao**, Zheng Yang, Functional biomaterials for cartilage regeneration, *J Biomed Mater Res Part B* 2012: 00B: 000–000.
 84. Ceming Wang, Lin Wang, **Jianming Xue**, Low-voltage electroosmotic pumping using polyethylene terephthalate track-etched membrane, *Nuclear Instruments and Methods in Physics Research B* 286, 223–228, 2012
 85. Shijun Zhao, **Jianming Xue**, Yugang Wang, and Sha Yan, Study on the effect of pressure on the properties of intrinsic point defects in monoclinic zirconia: Ab initio calculations, *Journal of Applied Physics*, 111, 043514, 2012
 86. Shijun Zhao and **Jianming Xue**, Tuning the band gap of bilayer graphene by ion implantation: Insight from computational studies, *Physical Review B* 86, 165428, 2012
 87. Lixin Sun, Chune Lan, Shijun Zhao, **Jianming Xue** and **Yugang Wang**, Self-irradiation of thin SiC nanowires with low-energy ions: a molecular dynamics study, *Journal of Physics D: Applied Physics* 45, 135403, 2012
 88. Shijun Zhao, **Jianming Xue, Yugang Wang**, Sha Yan, Chemical bonding assisted damage production in single-walled carbon nanotubes induced by low-energy ions, *Applied Physics A*, 108:313–320, 2012
 89. Shijun Zhao, **Jianming Xue, Yugang Wang**, and Sha Yan, Effect of SiO₂ substrate on the irradiation-assisted manipulation of supported graphene: a molecular dynamics study, *Nanotechnology* 23, 285703, 2012
 90. Shijun Zhao, **Jianming Xue**, Li Liang, **Yugang Wang**, and Sha Yan, Drilling Nanopores in Graphene with Clusters: A Molecular Dynamics Study, *Journal of Physical Chemistry C* XXXX, XXX, XXX–XXX, dx.doi.org/10.1021/jp3023293, 2012
 91. Ceming Wang, Lin Wang, Xiaorui Zhu, **Yugang Wang**, and **Jianming Xue**, Low-voltage electroosmotic pumps

fabricated from track-etched polymer membranes, *Lab on a Chip*, 12, 1710, 2012

92. Shijun Zhao, **Jianming Xue**, Chune Lan, Lixin Sun, **Yugang Wang**, Sha Yan, Influence of high pressure on the threshold displacement energies in silicon carbide: A Car–Parrinello molecular dynamics approach, *Nuclear Instruments and Methods in Physics Research B* 286, 119–123, 2012
93. B. Duan, M. A. Bari, Z. Q. Wu, **Yan Jun**, Y.M. Li, and J. G. Wang, Relativistic quantum mechanical calculations of electron-impact broadening for spectral lines in Be-like ions, *Astronomy & Astrophysics* 547, A4, 2012
94. B. Duan, M. A. Bari, Z. Q. Wu, **Yan Jun**, and Y. M. Li, Widths and shifts of spectral lines in He II ions produced by electron impact, *Physical Review A* 86, 052502, 2012
95. Haitao Liu, Xiaolong Zou, Chenchen Wang, **Jun Yan**, Wenhui Duan, Structural transition of large lead monoxide clusters, *Computational and Theoretical Chemistry* 983, 61–64, 2012
96. Meng Wen, Luling Jin, Yuanrong Lu, **Jiaer Chen**, and **Xueqing Yan**, Frequency tunable x-ray/c-ray source via Thomson backscattering on flying mirror from laser foil interaction, *Applied Physics Letters* 101, 021102, 2012
97. Jürgen Meyer-ter-Vehn, **Xueqing Yan**, Ingo Hofmann, Husam Al-Omari, Chromatic energy filter and characterization of laser-accelerated proton beams for particle therapy, *Nuclear Instruments and Methods in Physics Research A* 681, 44–54, 2012
98. Lingyuan Gao, Hongyong Wang, Chen Lin, Yubin Zou, and **Xueqing Yan**, Efficient proton beam generation from a foam-carbon foil target using an intense circularly polarized laser, *Physics of Plasmas* 19, 083107, 2012
99. Meng Wen, **Haicheng Wu**, Luling Jin, Yuanrong Lu, **Jiaer Chen**, and **Xueqing Yan**, Energy spread inhibition of compact electron bunch driven by circularly polarized laser pulse, *Physics of Plasmas* 19, 083112, 2012
100. M. Wen, L. L. Jin, H. Y. Wang, Z. Wang, B. F. Shen, Y. R. Lu, **Jiaer Chen** and **Xueqing Yan**, Determination of carrier-envelope phase of relativistic few-cycle laser pulses by Thomson backscattering spectroscopy, *Physical Review E* 5, 035401(R), 2012
101. **Yan-Tao Yang** and Jie-Zhi Wu, Channel turbulence with spanwise rotation studied using helical wave decomposition, *Journal of Fluid Mechanics*, vol. 692, pp. 137–152., 2012
102. W. Li and **Jie Liu**, Two-center interference effects on the orientation dependence of the strong-field double-ionization yields for hydrogen molecules, *Physical Review A* 86, 033414, 2012
103. **Fanglan Zheng**, H. Y. Wang, **Xueqing Yan**, T. Tajima, M. Y. Yu, and **Xiantu He**, Sub-TeV proton beam generation by ultra-intense laser irradiation of foil-and-gas target, *Physics of Plasmas* 19, 023111, 2012
104. Ning Luo, **Kai Xin Liu**, Xiaojie Li, Hua Shen, ShiYu Wua, Zheng Fu, Systematic study of detonation synthesis of Ni-based nanoparticles, *Chemical Engineering Journal* 210, 114–119, 2012
105. Hua Shen, **Kaixin Liu**, Deliang Zhang, A local space–time conservation scheme and its application in shock wave propagation, *Applied Mathematics and Computation* 219, 1958–1974, 2012
106. Hua Shen, Gang Wang, **Kaixin Liu** and Deliang Zhang, Numerical Simulation of Liquid-Fueled Detonations by an Eulerian–Lagrangian Model, *Int. J. Nonlinear Sci. Numer. Simul.*, Vol. 13, pp. 177–188, 2012
107. Yu Yang, Wei Yang, and **Ping Zhang**, Electron correlation and spin-orbit coupling effects in US_3 and USe_3 , *The Journal of Chemical Physics* 137, 214703, 2012
108. Hongliang Shi, **Ping Zhang**, First-principles study of α - Pu_2O_3 , *Journal of Nuclear Materials* 420, 159–163, 2012
109. Y Lu, Y Yang and **Ping Zhang**, Thermodynamic properties and structural stability of thorium dioxide, *J. Phys.: Condens. Matter* 24, 225801, 2012
110. Bao-Tian Wang, Wei-Dong Li, **Ping Zhang**, First-principles calculations of phase transition, elasticity, and thermodynamic properties for TiZr alloy, *Journal of Nuclear Materials* 420, 501–507, 2012
111. Tengfei Yang, Xuejun Huang, Yuan Gao, Chenxu Wang, Yanwen Zhang, Jianming Xue, Sha Yan, **Yugang Wang**, Damage evolution of yttria-stabilized zirconia induced by He irradiation, *Journal of Nuclear Materials* 420, 430–436, 2012
112. Tengfei Yang, Xuejun Huang, Chenxu Wang, Yanwen Zhang, Jianming Xue, Sha Yan, **Yugang Wang**, Enhanced structural stability of nanoporous zirconia under irradiation of He, *Journal of Nuclear Materials* 427, 225–232, 2012