LAN JIANG (姜澜)

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Laser Micro/Nano Fabrication Lab
School of Mechanical Engineering
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CURRENT EMPLOYMENT

Changjiang Distinguished Professor
School of Mechanical Engineering
Beijing Institute of Technology, China

SUMMARY PROFILE

Recent Grants	In the past 7 years, as PI, received 19 grants in the total of RMB¥91.04 M (or about USD$13.6 M including facilities) from the Ministry of Science & Technology of China, Ministry of Industry & Information Technology of China, Ministry of Education of China, National Natural Science Foundation of China, Beijing Metropolis Government, and Suzhou Industry Park
Publications	178 journal publications, 50 keynote/plenary/invited conference talks/papers, and 52 approved/pending patents
Teaching	Average teaching evaluation: 96.79/100 (or about 3.87/4); National Model Instructor of Bilingual Courses, China
Education	Ph.D. and Bachelor in Mechanical Engineering
Major Awards & Honors	■ National Leading Researcher for S&T Innovations, China ■ Leader of National Innovation Group, China ■ Chief Scientist, National Basic Research Program (973 Project), China ■ National Outstanding Young-Scientist Award, China ■ Beijing Medal of May 4, China ■ Panelist, National High-Tech R&D Program (863 Project), China ■ Panel Chair, Laser-Based Manufacturing, National Key R&D Program of China ■ National Model Instructor of Bilingual Courses, China ■ The First Award of Natural Sciences, Ministry of Education, China

RESEARCH INTERESTS

Laser Micro-/Nano-Scale Fabrication

TEACHING INTERESTS

Manufacturing, Thermodynamics, Heat Transfer

MAJOR AWARDS & HONORS

Panel Chair, Laser-Based Manufacturing, National Key R&D Program, Ministry of Science and Technology of China, 2015
[国家重点研发计划激光制造方向组长]

The First Award of Natural Sciences, Ministry of Education, China, 2014 [教育部自然科学奖一等奖(第一完成人)]

National Leading Researcher for S&T Innovations, Central Government of China, 2013
[中组部、科技部等八部委联合授予首批国家科技创新领军人才]

Leader of National Innovation Group, Ministry of Education, China, 2013 [教育部创新团队（国家创新团队）带头人]

Panelist, National High-Tech R&D Program (863 Project), Ministry of Science and Technology of China, 2012
[国家高技术研究发展计划（863 计划）主题专家]

Chief Scientist, National Basic Research Program (973 Project), Ministry of Science and Technology of China, 2011
[国家重点基础研究发展计划（973 计划）项目首席科学家]

National Outstanding Young-Scientist Award, National Natural Science Foundation of China, 2010
[国家杰出青年科学基金获得者]

Panel Chair, 5-10 Years Strategic Planning of "High Energy Density Beam and Nontraditional Energy Field Manufacturing," National Natural Science Foundation of China, 2010
[国家自然科学基金"十二五"规划"高能束与特种能场制造科学"领域负责人]

Beijing Medal of May 4, Beijing Metropolis Government, 2010
[北京青年五四奖章获得者]

National Model Instructor of Bilingual Courses (The course is Advanced Manufacturing Technology), Ministry of Education, China, 2009 [所负责的《现代加工技术》入选国家级双语教学示范课程]

Changjiang Distinguished Professor, Ministry of Education, China, 2006 [教育部长江学者特聘教授]

EDUCATION

Ph.D. in Mechanical Engineering Sept. 1995-Feb. 2000
Beijing Institute of Technology
Jointly educated by Tokyo University of Agriculture & Technology

Bachelor in Mechanical Engineering Sept. 1991-July1995
Beijing Institute of Technology
Minor in Automation Engineering Sept. 1992-July1995

MAJOR SERVICES

Panel Chair, Laser Based Manufacturing, National Key R&D Program, Ministry of Science and Technology of China, 2015-present

Dean, School of Mechanical Engineering, Beijing Institute of Technology, 2015-present

Vice Chair, Academy of Mechanical and Transportation Engineering, Beijing Institute of Technology, 2009-present

Leader, National Innovation Group in Micro/Nano-Manufacturing, Ministry of Education, China, 2013-present

Panelist, National High-Tech R&D Program (863 project), Ministry of Science and Technology of China, 2012-present

Chief Scientist, National Basic Research Program (973 Project), Ministry of Science and Technology of China, 2011-present

Vice Chair, Academy of Microfabrication Center, Ministry of Industry and Information Technology of China, 2009-present

Vice Chair, Committee of Teaching and Research, Beijing Institute of Technology, China, 2008-2015

Panel Chair, 5-10 Years Strategic Planning of Non-Traditional Manufacturing, National Natural Science Foundation of China, 2009-2010

WORKING EXPERIENCES

Professor / Changjiang Distinguished Professor
Oct. 2006-present
School of Mechanical Engineering
Beijing Institute of Technology, China

Adjunct Professor March 2010-present
Department of Electrical Engineering
University of Nebraska-Lincoln, USA

Adjunct Professor March 2010-Sep. 2012
Department of Electrical and Computer Engineering
Missouri University of Science and Technology (formerly University of Missouri-Rolla), USA

Adjunct Associate Professor Oct. 2006- March 2010
Department of Mechanical & Aerospace Engineering
Missouri University of Science & Technology (formerly University of Missouri-Rolla) , USA

Assistant Research Professor
Nov. 2002- Oct. 2006
Department of Mechanical & Aerospace Engineering
University of Missouri-Rolla, USA

Research Associate
Nov. 2001- Oct. 2002
Department of Mechanical & Aerospace Engineering
University of Missouri-Rolla, USA

Research Associate March 2000 - Oct. 2001
Department of Engineering Management
University of Missouri-Rolla, USA

JOURNAL PUBLICATIONS

[1] F. Zhao, Y. Liang, H.H. Cheng, **L. Jiang** and L.T. Qu, "Highly efficient moisture-enabled electricity generation from graphene oxide frameworks", ***Energy & Environmental Science***, 9, 912-916 (2016). (SCI, EI, Impact Factor:20.523)

[2] H.H. Cheng, M.H. Ye, F. Zhao, C.G. Hu, Y. Zhao, Y. Liang, N. Chen, S.L. Chen, **L. Jiang** and L.T. Qu, "A General and Extremely Simple Remote Approach toward Graphene Bulks with In Situ Multifunctionalization", ***Advanced Materials***, (2016). (SCI, EI, Impact Factor:17.493)

[3] W. Xiong, Y. Liu, L.J. Jiang, Y.S. Zhou, D.W. Li, **L. Jiang**, J.-F. Silvain, and Y.F. Lu, "Laser-Directed Assembly of Aligned Carbon Nanotubes in Three Dimensions for Multifunctional Device Fabrication", ***Advanced Materials***, (2016). (SCI, EI, Impact Factor:17.493)

[4] Y.W. Yu, **L. Jiang**, Q. Cao, X.S. Shi, Q.S. Wang, G.Y. Wang, and Y.F. Lu, "Ultrafast imaging of the light-speed propagation of a focused femtosecond laser pulse in air and its ionized electron dynamics and plasma-induced pulse reshaping", ***Applied Physics A***, 122, 205 (2016).

[5] Q. Xie, X.W. Li, **L. Jiang**, B. Xia, X.L. Yan, W.W. Zhao, and Y.F. Lu, "High-aspect-ratio, high-quality microdrilling by electron density control using a femtosecond laser Bessel beam", ***Applied Physics A***, 122, 136 (2016).

[6] P.F. Liu, **L. Jiang**, S.M. Wang, Z.T. Cao, P. Wang, and L.Y. Lv, "Temperature-insensitive refractive index sensor based on an optical fiber extrinsic Fabry-Perot interferometer processed by femtosecond laser", ***Chinese Optics Letters***, 14(2), 020602 (2016).

[7] A.D. Wang, **L. Jiang**, X.W Li, Y. Liu, X.Z. Dong, L.T. Qu, X.M. Duan, and Y.F. Lu, "Mask-free patterning of high-conductivity metal nanowire in open air by spatially modulated femtosecond laser pulses", ***Advanced Materials***, 27, 6238-6243 (2015).

[8] X.S. Shi, X. Li, **L. Jiang**, L.T. Qu, Y. Zhao, P. Ran, Q.S. Wang, Q. Cao, T.B. Ma and Y.F. Lu, "Femtosecond laser rapid fabrication of large-area rose-like micropatterns on freestanding flexible graphene films", ***Scientific Reports***, 5, 17557 (2015). (SCI, EI, Impact Factor:5.578)

[9] M.J. Zhao, J. Hu, **L. Jiang**, K.H. Zhang, P.J. Liu, and Y.F. Lu, "Controllable high-throughput high-quality femtosecond laser-enhanced chemical etching by temporal pulse shaping based on electron density control", ***Scientific Reports***, 5, 13202 (2015).

[10] Y.W. Yu, **L. Jiang**, Q. Cao, B. Xia, Q.S. Wang, and Y. F. Lu, "pump-probe imaging of the fs-ps-ns dynamics during femtosecond laser Bessel beam drilling in PMMA", ***Optics Express***, 23(25), 32728-32735 (2015).

[11] B. Xia, **L. Jiang**, X.W. Li, X.L. Yan and Y.F. Lu, "Mechanism and elimination of bending effect in femtosecond laser deep-hole drilling", ***Optics Express***, 23(21), 27853-27864 (2015).

[12] X. Li, G.M. Zhang, **L. Jiang**, X.S. Shi, K.H. Zhang, W.L. Rong, J.A. Duan, and Y.F. Lu, "Production rate enhancement of size-tunable silicon nanoparticles by temporally shaping a femtosecond laser in ethanol", ***Optics Express***, 23(4), 4226-4232 (2015).

[13] Q.Q. Yang, X. Li, **L. Jiang**, N. Zhang, G.M. Zhang, X.S. Shi, K.H. Zhang, J. Hu, and Y.F. Lu, "Nanopillar arrays with nanoparticles fabricated by a femtosecond laser pulse train for highly sensitive SERRS", ***Optics Letters***, 40(9), 2045-2048 (2015).

[14] W.N. Han, **L. Jiang**, X.W. Li, Y. Liu and Y.F. Lu, "Femtosecond laser induced tunable surface transformations on (111) Si aided by square grids diffraction", ***Applied Physics Letters***, 107, 251601 (2015).

[15] X. Ji, **L. Jiang**, X.W. Li, W.N. Han, Y. Liu, A.D. Wang, and Y.F. Lu, "Femtosecond laser-induced cross-periodic structures on a crystalline silicon surface under low pulse number irradiation", ***Applied Surface Science***, 326, 216-221 (2015).

[16] L.L. Gao, F. Wang, **L. Jiang**, L.T. Qu, and Y.F. Lu, "Optical-induced electrical current in diamond switched by femtosecond-attosecond laser pulses by ab-initio simulations", ***Journal of Physics D: Applied Physics***, 49, 025102 (2015).

[17] L.Y. Lv, S.M. Wang, **L. Jiang**, F. Zhang, Z.T. Cao, P. Wang, Y. Jiang, and Y.F. Lu, "Simultaneous measurement of strain and temperature by two peanut tapers with embedded FBG", ***Applied Optics***, 54(36), 10678-10683 (2015).

[18] Z.T. Cao, **L. Jiang**, S.M. Wang, M.M. Wang, D. Liu, P. Wang, F. Zhang, and Y.F. Lu, "All-glass EFPI thermo-optic coefficient sensor based on a capillary bridged two fiber ends", ***Applied Optics***, 54(9), 2371-2375 (2015).

[19] P. Feng, **L. Jiang**, Xin Li, W.L. Rong, K.H. Zhang, and Q. Cao, "Gold-film coating assisted femtosecond laser fabrication of large-area, uniform periodic surface structures", ***Applied Optics***, 54(6), 1314-1319 (2015).

[20] D. Yu, **L. Jiang**, F. Wang, X.S. Shi, L.T. Qu, and Y.F. Lu, "Hydrodynamic simulation of ultrashort pulse laser ablation of gold film", ***Applied Physics A***, 119(3), 1047-1052 (2015).

[21] B. Xia, **L. Jiang**, X.W. Li, X.L. Yan, W.W. Zhao, and Y.F. Lu, "High aspect ratio, high-quality microholes in PMMA: a comparison between femtosecond laser drilling in air and in vacuum", ***Applied Physics A***, 119(1), 61-68 (2015).

[22] D. Yu, **L. Jiang**, F. Wang, X. Li, L.T. Qu, and Y.F. Lu, "Electron ionization and spin polarization control of Fe atom adsorbed graphene irradiated by a femtosecond laser", ***Physics Letters A***, 379, 2615-2618 (2015).

[23] L.L. Zhao, F. Wang, **L. Jiang**, Y.F. Lu, W.W. Zhao, J. Xie, and X.W. Li, "Femtosecond

Bessel-beam-assisted high-aspect-ratio microgroove fabrication in fused silica", ***Chinese Optics Letters***, 13(4), 041405 (2015).

[24] X.D. Tan, **L. Jiang**, J. Hu, P.J. Liu, A.D. Wang, and Y. Lu, "Highly sensitive and homogeneous SERS substrate fabricated by a femtosecond laser combined with dewetting", ***Chinese Optics Letters***, 13(11), 111401 (2015).

[25] F.T. Meng, J. Hu, W.N. Han, P.J. Liu, and Q.S. Wang, "Morphology control of laser induced periodic surface structure on the surface of nickel by femtosecond laser", ***Chinese Optics Letters***, 13(6), 062201 (2015).

[26] J. Xie, F. Wang, **L. Jiang**, L.L. Zhao, and Y.F. Lu, "Periodic surface structures induced by femtosecond laser single pulse and pulse train on metals", ***Laser Physics***, 25, 056103 (2015).

[27] L.L. Gao, F. Wang, **L. Jiang**, L.T. Qu, and Y.F. Lu, "Controlling the excitation process of free electrons by a femtosecond elliptically polarized laser", ***International Journal of Modern Physics B***, 29, 1550033 (2015).

[28] D.W. Li, Y.S. Zhou, X. Huang, **L. Jiang**, J.-F. Silvain, and Y.F. Lu, "In situ imaging and control of layer-by-layer femtosecond laser thinning of graphene", ***Nanoscale***, 7, 3651-3659 (2015).

[29] D.W. Li, Y.S. Zhou, X. Huang, **L. Jiang**, J.F. Silvain, and Y.F. Lu, "In situ imaging and control of layer-by-layer femtosecond laser thinning of graphene", ***Nanoscale***, 7, 3651-3659 (2015). (SCI, EI, Impact Factor:7.394)

[30] Y. Liang, Z. Wang, J. Huang, H.H. Cheng, F. Zhao, Y. Hu, **L. Jiang**, and L.T. Qu, "Series of in-fiber grapheme surpercapacitors for flexible wearable devices", ***Joumal of Materials Chemistry A***, 3, 2547-2551 (2015). (SCI, EI, Impact Factor: 7.443)

[31] Y. S. Zhou, L. S. Fan, Z. Q. Xie, **L. Jiang**, J. F. Silvain, and Y. F. Lu, "Laser-assisted vibrational control of precursor molecules in diamond synthesis." ***Current Opinion in Solid State & Materials Science***, 19, 107 (2015). (SCI, EI, Impact Factor:6.235)

[32] Y.S. Zhou, L.S. Fan, Z.Q. Xie, **L. Jiang**, J.F. Silvain, and Y.F. Lu, "Laser-assisted vibrational control of precursor molecules in diamond synthesis", ***Current Opinion in Solid State & Materials Science***, 19(2), 107-114 (2015). (SCI, EI, Impact Factor:6.235)

[33] L. Liu, S. Li, X. Huang, Y. Lu, K. Chen, R. Pik, **L. Jiang**, J.F. Silvain, and Y.F. Lu, "Trace-level detection of uranium and samarium elements in laser-induced breakdown spectroscopy by combined analyses of ionic, atomic, and compound emissions", ***Journal of Analytical Atomic Spectrometry***, 30, 1128-1132 (2015). (SCI, EI, Impact Factor:3.466)

[34] L. Liu, X. Huang, S. Li, Y. Lu, K. Chen, **L. Jiang**, J.F. Silvain, and Y.F. Lu, "Laser-induced Breakdown Spectroscopy Enhanced by a Micro Torch", ***Optics Express***, 23(10), 15047-15056 (2015). (SCI, EI, Impact Factor:3.488)

[35] Y. Lu, Y.S. Zhou, W. Qiu, X. Huang, Y. Gao, L. Liu, Y.T. Lei, T.C. Zhang, **L. Jiang**, J.F. Silvain, and Y.F. Lu, "Sensitivity and intensity enhancement in open air mass spectrometry assisted by a continuous wave infrared laser", ***Journal of Analytical Atomic Spectrometry***, 30, 1663-1667(2015). (SCI, EI, Impact Factor:3.466)

[36] Y. Lu, Y. S. Zhou, W. Qiu, X. Huang, L. Liu, **L. Jiang**, J. F. Silvain, and Y.F. Lu, "Magnetic field enhancement for femtosecond-laser-ablation mass spectrometry in ambient environments", ***Journal of Analytical Atomic Spectrometry***, 30, 2303-2306 (2015). (SCI, EI, Impact Factor:3.466)

[37] W. Xiong, Y. S. Zhou, W. J. Hou, T. Guillemet, J. F. Silvain, Y. Gao, M. Lahaye, E. Lebraud, S. Xu, X. W. Wang, D. A. Cullen, K. L. More, **L. Jiang,** and Y.F. Lu, "Solid-state graphene formation via nickel carbide intermediate phase", ***RSC Advances***, 5, 99037-99043 (2015). (SCI, EI, Impact Factor:3.84)

[38] K. Keramatnejad, Y. S. Zhou, Y. Gao, H. Rabiee Golgir, M. Wang, **L. Jiang**, J.-F. Silvain, and Y. F. Lu, "Skin effect mitigation in laser processed multi-walled carbon nanotube/copper conductors", ***Journal of Applied Physics***, 118, 144311 (2015). (SCI, EI, Impact Factor:2.183)

[39] L. Liu, S. Li, X. Huang, Y. Lu, K. Chen, R. Pik, **L. Jiang**, J.F. Silvain, and Y.F. Lu, "Detection of trace-level uranium and samarium in glasses by combined laser-induced breakdown spectroscopy and plasma-induced fluorescence spectroscopy", ***Journal of Analytical Atomic Spectrometry***, 30, 1128-1132 (2015). (SCI, EI, Impact Factor:3.466)

[40] Y. Lu, Y.S. Zhou, W. Qiu, X. Huang, Y. Gao, L. Liu, Y.T. Lei, T.C. Zhang, **L. Jiang**, J.F. Silvain, and Y.F. Lu, "Sensitivity and intensity enhancement in open air mass spectrometry assisted with a continuous wave infrared laser", ***Journal of Analytical Atomic Spectrometry***, 30, 1663-1667 (2015). (SCI, EI, Impact Factor: 3.466)

[41] F. Zhao, H.H. Cheng, Z.P. Zhang, **L. Jiang**, and L.T. Qu, "Direct power generation from a graphene oxide film under moisture", ***Advanced Materials***, 27, 4351-4357 (2015). (SCI, EI, Impact Factor:17.493)

[42] C. Wang, Z. Luo, J.A. Duan, **L. Jiang**, X.Y. Sun, Y.W. Hu, J.Y. Zhou, and Y.F. Lu, "Adjustable annular rings of periodic surface structures induced by spatially shaped femtosecond laser", ***Laser Physics Letters***, 12(5), 056001 (2015). (SCI, EI, Impact factor:2.458)

[43] F.F. Chen, Y. Jiang, H.C. Gao, and **L. Jiang**, "A high-finesse fiber optic Fabry-Perot interferometer based magnetic-field sensor", ***Optics and Lasers in Engineering***, 71, 62-65 (2015). (SCI, EI, Impact factor:2.237)

[44] F.F. Chen, Y. Jiang, and **L. Jiang**, "3×3 coupler based interferometric magnetic field sensor using a TbDyFe rod", ***Applied Optics***, 54(8), 2085-2090 (2015). (SCI, EI, Impact

factor:1.784)

[45] C. Wang, J.A. Duan, **L. Jiang**, X.Y. Sun, Y.W. Hu, J.Y. Zhou, and H. Wang, "Effects of key pulse train parameters on electron dynamics during femtosecond laser nonlinear ionization of silica", ***Laser Physics***, 25, 066101 (2015). (SCI, EI, Impact factor:1.032)

[46] C. Wang, J.A. Duan, **L. Jiang**, X.Y. Sun, Y.W. Hu, J.Y. Zhou, H. Wang, and Y.F. Lu, "Ultrafast electron dynamics of a Na4 cluster under resonant femtosecond laser pulse train irradiation", ***Laser Physics***, 25, 026001 (2015).

[47] **L. Jiang**, W.N. Han, X.W. Li, Q.S. Wang, F.T. Meng, and Y.F. Lu, "Crystal orientation dependence of femtosecond laser induced periodic surface structure on (100) silicon", ***Optics Letters***, 39(11), 3114-3117 (2014).

[48] X.L. Yan, **L. Jiang**, X.W. Li, K.H. Zhang, B. Xia, P.J. Liu, L.T. Qu, and Y.F. Lu, "Polarization-independent etching of fused silica based on electrons dynamics control by shaped femtosecond pulse trains for microchannel fabrication", ***Optics Letters***, 39(17), 5240-5243 (2014).

[49] K.H. Zhang, **L. Jiang**, X. Li, X.S. Shi, D. Yu, L.T. Qu, and Y.F. Lu, "Femtosecond laser pulse-train induced breakdown in fused silica: the role of seed electrons", ***Journal of Physics D: Applied Physics***, 47, 435105 (2014).

[50] X. Ji, **L. Jiang**, X.W. Li, W.N. Han, Y. Liu, Q. Huang, and Y.F. Lu, "Polarization-dependent elliptical crater morphologies formed on a silicon surface by single-shot femtosecond laser ablation", ***Applied Optics***, 53(29) 6742-6748, (2014).

[51] X.S. Shi, **L. Jiang**, X. Li, K.H. Zhang, D. Yu, Y.W. Yu, and Y.F. Lu, "Temporal femtosecond pulse shaping dependence of laser-induced periodic surface structures in fused silica", ***Journal of Applied Physics***, 116, 033104 (2014).

[52] L. Xu, W.N. Han, P. Wang, and S.M. Wang, "Hybrid Mach-Zehnder interferometric sensor based on two core-offset attenuators and an abrupt taper in single-mode fiber", ***Chinese Optics Letters***, 12(7), 070602 (2014).

[53] J.Q. Fang, **L. Jiang**, Q. Cao, K.H. Zhang, Y.P. Yuan, and Y.F. Lu, "Doping effects on ablation enhancement in femtosecond laser irradiation of silicon", ***Applied Optics***, 53(18), 3897-3902 (2014).

[54] M.M. Wang, **L. Jiang**, S.M. Wang, X.D. Tan, and Y.F. Lu, "A robust fiber inline interferometer sensor based on a core-offset attenuator and a microsphere-shaped splicing junction", ***Optics & Laser Technology***, 63, 76-82 (2014).

[55] **L. Jiang**, J.Q. Fang, Q. Cao, K.H. Zhang, P. Wang, Y.W. Yu, Q. Huang, and Y.F. Lu, "Femtosecond laser high-efficiency drilling of high-aspect-ratio microholes based on free-electron-density adjustments", ***Applied Optics***, 53(31), 7290 (2014).

[56] R. Gao, Y. Jiang, and **L. Jiang**, "Multi-phase-shifted helical long period fiber grating

based temperature-insensitive optical twist sensor", ***Optics Express***, 22(13), 15697-15701 (2014).

[57] P.J. Liu, **L. Jiang**, J. Hu, S. Zhang, and Y.F. Lu, "Self-organizing microstructures orientation control in femtosecond laser patterning on silicon surface", ***Optics Express***, 22(14), 16669-16674 (2014).

[58] W.N. Han, **L. Jiang**, X.W. Li, Q.S. Wang, F.T. Meng, and Y.F. Lu, "Anisotropy modulations of femtosecond laser pulse induced periodic surface structures on silicon by adjusting double pulse delay", ***Optics Express***, 22(13), 15820-15828 (2014).

[59] L.J. Jiang, Y.S. Zhou, W. Xiong, Y. Gao, X. Huang, **L. Jiang**, T. Baldacchini, and Y.F. Lu, "Two-Photon Polymerization: Investigation of Chemical and Mechanical Properties of Resins Using Raman Microspectroscopy", ***Optics Letters***, 39(10), 3034-3037 (2014).

[60] L.L. Gao, F. Wang, **L. Jiang**, L.T. Qu, and Y.F. Lu, "Controlling the excitation process of free electrons by a femtosecond elliptically polarized laser", ***International Journal of Modern Physics B***, (2014). (in press)

[61] J.Q. Fang, **L. Jiang**, Q. Cao, Y.P. Yuan, L.T. Qu, J.A. Duan, and Y.F. Lu, "Doping transition metal ions as a method for the enhancement of ablation rate in femtosecond laser irradiation of silicate glass", ***Chinese Optics Letters***, 12(12), (2014).

[62] W. Xiong, Y.S. Zhou, W.J. Hou, L.J. Jiang, Y. Gao, L.S. Fan, **L. Jiang**, J.F. Silvain, and Y.F. Lu, "Direct writing of graphene patterns on insulating substrates under ambient conditions", ***Scientific Reports***, 4(4892), (2014).

[63] L. Liu, S. Li, X.N. He, X. Huang, C.F. Zhang, L.S. Fan, M.X. Wang, Y.S. Zhou, K. Chen, **L. Jiang**, J.K. Silvain, and Y.F. Lu, "Flame-enhanced laser-induced breakdown spectroscopy", ***Optics Express***, 22(7), 7686-7693 (2014).

[64] Y. Gao, Y.S. Zhou, W. Xiong, M.M. Wang, L.S. Fan, H. Rabiee-Golgir, L.J. Jiang, W.J. Hou, X. Huang, **L. Jiang**, J.F. Silvain, and Y. F. Lu, "Highly efficient and recyclable carbon soot sponge for oil cleanup", ***ACS Applied Materials & Interfaces***, 6(8), 5924-5929 (2014).

[65] X. Huang, X.N. He, W. Xiong, Y. Gao, L.J. Jiang, L. Liu, Y.S. Zhou, **L. Jiang**, J.F. Silvain, and Y.F. Lu, "Contrast enhancement using silica microspheres in coherent anti-Stokes Raman spectroscopic imaging", ***Optics Express***, 22(3), 2889-2896 (2014).

[66] Z.T. Cao, **L. Jiang**, S.M. Wang, P. Wang, F. Zhang, and Y.F. Lu, "Trench-embedding fiber taper sensor fabricated by a femtosecond laser for gas refractive index sensing", ***Applied Optics***, 53(6), 1028-1032 (2014).

[67] L. Yuan, J. Huang, X.W. Lan, H.Z. Wang, **L. Jiang**, and H. Xiao, "All-in-fiber optofluidic sensor fabricated by femtosecond laser assisted chemical etching", ***Optics Letters***, 39(8), 2358-2361 (2014).

[68] X. Li, C. Li, **L. Jiang**, X.S Shi, N. Zhang, and Y.F. Lu, "Ablation area quasiperiodic oscillations in semiconductors with femtosecond laser double pulse delay", ***Optics Letters***, 39(9), 2382-2385 (2014).

[69] Z.Q. Xie, J. Bai, Y.S. Zhou, Y. Gao, J.B. Park, T. Guilemet, **L. Jiang**, X.C. Zeng, and Y.F. Lu, "Control of crystallographic orientation in diamond synthesis through laser resonant vibrational excitation of precursor molecules", ***Scientific Reports***, 4(4581), (2014).

[70] H.R. Golgir, Y. Gao, Y.S. Zhou, L.S. Fan, P. Thirugnanam, K. Keramatnejad, **L. Jiang**, J.F. Silvain, and Y.F. Lu, "Low-temperature growth of crystalline gallium nitride films using vibrational excitation of ammonia molecules in laser-assisted metal organic chemical vapor deposition", ***Crystal Growth & Design***, (2014).

[71] Y.S. Zhou, L.S. Fan, Z.Q. Xie, **L. Jiang**, J.F. Silvain, and Y.F. Lu, "Laser-assisted vibrational control of precursor molecules in diamond synthesis", ***Current Opinion in Solid State & Materials Science***, (2014).

[72] F. Zhao, H.H. Cheng, Y. Hu, L. Song, Z.P. Zhang, **L. Jiang**, and L.T. Qu, "Functionalized graphitic carbon nitride for mental-free, flexible and rewritable nonvolatile memory device via direct laser-writing", ***Scientific Reports***, 4(5882), (2014).

[73] Y. Hu, H.H. Cheng, F. Zhao, N. Chen, **L. Jiang**, Z.H. Feng, and L.T. Qu, "All-in-one grapheme fiber supercapacitor", ***Nanoscale***, 6, 6448-6451 (2014).

[74] C.G. Hu, G.P. Zheng, F. Zhao, H.B. Shao, Z.P. Zhang, N. Chen, **L. Jiang**, and L.T. Qu, "A powerful approach to functional graphene hybrids for high performance energy-related applications", ***Energy & Environmental Science***, 7, 3699-3708 (2014).

[75] H.H. Cheng, Y. Liang, F. Zhao, Y. Hu, Z.L. Dong, **L. Jiang**, and L.T. Qu, "Functional grapheme springs for responsive actuation", ***Nanoscale***, 6, 11052-11056 (2014).

[76] X. Li, W.L. Rong, **L. Jiang**, K.H. Zhang, C. Li, Q. Cao, G.M. Zhang, and Y.F. Lu, "Generation and elimination of polarization-dependent ablation of cubic crystals by femtosecond laser radiation", ***Optics Express***, (2014).

[77] C. Wang, **L. Jiang**, X. Li, F. Wang, Y.P. Yuan, L. Yuan, L.T. Qu, and J. A. Duan, "Frequency dependence of electron dynamics during femtosecond laser resonant photoionization of Li_4 cluster", ***Journal of Applied Physics***, 114(14), 143105 (2013).

[78] X.S. Shi, **L. Jiang**, X. Li, S.M. Wang, Y.P. Yuan, and Y.F. Lu, "Femtosecond laser pulse train induced periodic structures on fused silica: from subwavelength ripples to double-grating structures", ***Optics Letters***, 38(19), 3743-3746 (2013).

[79] N. Zhang, X. Li, **L. Jiang**, X.S. Shi, C. Li, and Y.F. Lu, "Femtosecond double-pulse fabrication of hierarchical nanostructures based on electron dynamics control for high surface-enhanced Raman scattering", ***Optics Letters***, 38(18), 3558-3561 (2013).

[80] M. Mahjouri-Samani, Y.S. Zhou, X.N. He, W. Xiong, P. Hilger, **L. Jiang**, and Y.F. Lu,

"Plasmonic-Enhanced Carbon Nanotube Infrared Bolometers", ***Nanotechnology***, 24, 035502 (2013).

[81] H. H. Cheng, J. Liu, Y. Zhao, C.G. Hu, Z.P. Zhang, N. Chen, **L. Jiang**, and L.T. Qu, "Graphene fibers with predetermined deformation as moisture-triggered actuators and robots", ***Angew. Chem. Int. Ed.,*** 52(40), 10482-10486 (2013).

[82] Y. Gao, Y.S. Zhou, M. Qian, H.M. Li, J. Redepenning, L.S. Fan, X.N. He, W. Xiong, X. Huang, M. Majhouri-Samani, **L. Jiang** and Y.F. Lu, "High-performance flexible solid-state supercapacitors based on MnO_2-decorated nanocarbon electrodes", ***RSC Advances***, 3, 20613–20618 (2013).

[83] F. Wang, **L. Jiang**, X.H. Hong, Y.L. Jiao, J.G. Wang, and F.S. Zhang，"An effective method for state population within time-dependent density functional theory", ***The Journal of Chemical Physics***, 139(9), 094108 (2013).

[84] P.J. Liu, **L. Jiang**, J. Hu, X.L. Yan, B. Xia, and Y.F. Lu, "Etching rate enhancement by shaped femtosecond pulse train for microchannels fabrication in fused silica glass" ***Optics Letters***, 38(11), 1969-1971 (2013).

[85] M. Mahjouri-Samani, Y. S. Zhou, L. Fan, Y. Gao, W. Xiong, K. L. More, **L. Jiang**, and Y. F. Lu, "Laser-assisted solid-state synthesis of carbon nanotube/silicon core/shell structures", ***Nanotechnology***, 24, 255604 (2013)

[86] P. Thirugnanam , W. Xiong , M. Mahjouri-Samani , L. Fan , R. Raju, M. Mitchell, Y. Gao, B. Krishnan , Y. S. Zhou, **L. Jiang**, and Y. F. Lu , "Rapid growth of m-plane oriented gallium nitride nanoplates on silicon substrate using laser-assisted metal organic chemical vapor deposition", ***Crystal Growth & Design***, 13 (7) , 3171–3176 (2013).

[87] C.G. Hu, X.Q. Zhai, L.L. Liu, Y. Zhao, **L. Jiang**, and L.T. Qu, "Spontaneous reduction and assembly of graphene oxide into three-dimensional graphene network on arbitrary conductive substrates", ***Scientific Reports***, 3(2065), (2013)

[88] Y. Gao, Y. S. Zhou, W. Xiong, L. J. Jiang, M. Mahjouri-samani, P. Thirugnanam, X. Huang, M. M. Wang, **L. Jiang**, and Y. F. Lu, "Transparent, flexible, and solid-state supercapacitors based on graphene electrodes", ***Applied Physics Letters***, 1(1), 012101 (2013).

[89] W.N. Han, **L. Jiang**, X.W. Li, P.J. Liu, L. Xu, and Y.F. Lu, "Continuous modulations of fs laser-induced periodic surface structures and scanned line-widths by polarization changes", ***Optics Express***, 21(13), 15505-15513 (2013).

[90] Y.P. Yuan, **L. Jiang**, X. Li, C. Wang, L. Yuan, L.T. Qu, and Y.F. Lu, "Adjustments of dielectrics craters and their surfaces by ultrafast laser pulse train based on localized electron dynamics control", ***Applied Optics***, 52(17), 4035-4041 (2013).

[91] P.J. Liu, **L. Jiang**, J. Hu, W.N. Han, and Y.F. Lu, "Direct writing anisotropy on crystalline silicon surface by linearly polarized femtosecond laser", ***Optics Letters***, 38(11), 1969-1971 (2013).

[92] M.M. Wang, Y.Sh. Zhou, Zh.Q. Xie, Y. Gao, X. N. He, **L. Jiang**, and Y.F. Lu, "Seed-free growth of diamond patterns on silicon predefined by femtosecond laser direct writing", ***Crystal Growth & Design***, 13(2), 716-722 (2013).

[93] Y. Zhao, J. Liu, Hu Y, H. Cheng, C. Hu, C. Jiang, **L. Jiang**, A. Cao, and L. Qu， "Highly compression-tolerant supercapacitor based on polypyrrole-mediated graphene foam electrodes", ***Advanced Materials***, 25(4), 591-595 (2013).

[94] L. Xu, **L. Jiang**, S.M. Wang, B.Y. Li, and Y.F. Lu, "High-temperature sensor based on an abrupt-taper Michelson interferometer in single-mode fiber", ***Applied Optics***, 52(10), 2038-2041 (2013).

[95] Y.P. Yuan, **L. Jiang**, X. Li, C. Wang, L.T. Qu, and Y.F. Lu, "Simulation of rippled structure adjustments based on localized transient electron dynamics control by femtosecond laser pulse trains", ***Applied Physics A,*** 111(3), 813-819 (2013).

[96] C. Wang, **L. Jiang**, X. Li, F. Wang, Y.P. Yuan, L.T. Qu, and Y.F. Lu, "Nonlinear ionization mechanism dependence of energy absorption in diamond under femtosecond laser irradiation", ***Journal of Applied Physics***, 113, 143106 (2013).

[97] C.C. Xu, **L. Jiang**, N. Leng, and P.J. Liu "Selective triggering of phase change in dielectrics by femtosecond pulse trains based on electron dynamics control"，***Chinese Physics B***，22(4), 045203 (2013).

[98] C.C. Xu, **L. Jiang**, N. Leng, Y.P. Yuan, P.J. Liu, C. Wang, and Y.F. Lu, "Ultrafast laser ablation size and recast adjustment in dielectrics based on electron dynamics control by pulse train shaping", ***Chinese Optics Letters***, 11(4), 041403 (2013).

[99] W. Xiong, Y.Sh. Zhou, L.J. Jiang, A. Sarkar, M. M. Samani, Zh.Q. Xie, Y. Gao, N.J. Ianno, **L. Jiang**, and Y.F. Lu， "Single-step formation of graphene on dielectric surfaces", ***Advanced Materials***, 25(4), 630-634 (2013).

[100] L. Yuan, T. Wei, Q. Han, H.Zh. Wang, J. Huang, **L. Jiang**, and H. Xiao, "Fiber inline Michelson interferometer fabricated by a femtosecond laser", ***Optics Letters,*** 37(21), 4489–4491 (2012).

[101] X. N. He, J. Allen, P. N. Black, T. Baldacchini, X. Huang, H. Huang, **L. Jiang**, and Y. F. Lu, " Coherent anti-stokes Raman scattering and spontaneous Raman spectroscopy and microscopy of microalgae with nitrogen depletion", ***Biomedical Optics Express***, 3(11), 2896-2906 (2012).

[102] C. Hu, Y. Zhao, H. Cheng, Y. Wang, Z. Dong, C. Jiang, X. Zhai, **L. Jiang**, and L. Qu, "Graphene microtubings: Controlled fabrication and site-specific functionalization", ***Nano Letters***, 12(11), 5879-5884 (2012).

[103] J. Liu, Zh. Wang, Y. Zhao, H.H. Cheng, Ch.G. Hu and **L. Jiang**, "Three-dimensional graphene/polypyrrole hybrid electrochemical actuator", ***Nanoscale***, 4(23), 7563-7568 (2012).

[104] **L. Jiang**, P.J. Liu, X.L. Yan, N. Leng, C.C. Xu, H. Xiao, and Y.F. Lu, "High throughput rear surface drilling of microchannls in glass based on electron dynamics control by femtosecond pulse trains", ***Optics Letters***, 37(14), 2781-2783 (2012).

[105] **L. Jiang**, X.S. Shi, X. Li, Y.P. Yuan, C. Wang, and Y.F. Lu, "Subwavelength ripples adjustment based on electron dynamics control by using shaped ultrafast laser pulse trains", ***Optics Express***, 20(19), 21505-21511 (2012).

[106] C. Wang, **L. Jiang**, F. Wang, X. Li, Y.P. Yuan, H. Xiao, H.L. Tsai, and Y.F. Lu, "First-principles electron dynamics control simulation of diamond under femtosecond laser pulse train irradiation", ***Journal of Physics: Condensed Matter***, 24(27), 275801 (2012).

[107] X. Li and **L. Jiang**, "Size distributions control of metal nanoparticles using femtosecond laser pulse train: A molecular dynamics simulation", ***Applied Physics A***, 109(2), 367-376 (2012).

[108] Y.D. Zhao, **L. Jiang**, J.Q. Fang, Q.H. Chen, X.W. Li, and Y.F. Lu, "Resonant effects in nonlinear photon absorption during femtosecond laser ablation of Nd-doped silicate glass", ***Applied Optics***, 51(29), 7039-7045 (2012).

[109] Y.Y. Yu, **L. Jiang**, B.Y. Li, S.M. Wang, and H.B. Wu, "High-temperature reflective sensor based on single fusion-splicing fiber taper without coating", ***Chinese Optics Letters***, 10(12), 122801 (2012).

[110] C. Wang, **L. Jiang**, F. Wang, X. Li, Y.P. Yuan, L.T. Qu, and Y.F. Lu, "Transient localized electron dynamics simulation during femtosecond laser tunnel ionization of diamond", ***Physics Letters A***, 376(45), 3327-3331 (2012).

[111] N. Leng, **L. Jiang**, X. Li, C.C. Xu, P.J. Liu, and Y.F. Lu, "Femtosecond laser processing of fused silica and aluminum based on electron dynamics control by shaping pulse trains", ***Applied Physics A***, 109(3), 679-684 (2012).

[112] Y.P. Yuan, **L. Jiang**, X. Li, C. Wang, and Y.F. Lu, "Adjustment of ablation shapes and subwavelength ripples based on electron dynamics control by designing femtosecond laser pulse trains," ***Journal of Applied Physics***, 112(10), 3327-3331 (2012).

[113] B. Xia, **L. Jiang**, S.M. Wang, X.L. Yan, and P. J. Liu, "Femtosecond laser drilling of micro-holes", ***Chinese Journal of Lasers*** (2012).

[114] D.R. Li, **L. Jiang**, J.H. Yin, and N. Lin, "Betavoltaic battery conversion efficiency improvement based on interlayer structures", ***Chinese Physics Letters***, 29(7), 8102 (2012).

[115] **L. Jiang**, D.W. Ying, X. Li, and Y.F. Lu, "Two-step femtosecond laser pulse train fabrication of nanostructured substrates for highly surface-enhanced Raman scattering", ***Optics Letters***, 37(17), 3648-3650 (2012).

[116] Y. Gao, Y. Sh. Zhou, M. Qian, X.N. He, J. Redepenning, P. Goodman, H.M. Li, **L. Jiang**, and Y.F. Lu, "Chemical activation of carbon nano-onions for high-rate supercapacitor electrodes", ***Carbon***, 51, 52-58 (2012).

[117] Q.N. Min, S.Z. Yun, G. Yang, F. Tao, S. Zhuo, **L. Jiang**, and F.L. Yong, "Production of few-layer graphene through liquid-phase pulsed laser exfoliation, of highly ordered pyrolytic graphite", ***Applied Surface Science***, 258(222), 9092-9095 (2012).

[118] Y.Sh. Zhou, W. X, J. Park, M. Qian, M. Mahjouri-Samani, Y. Gao, **L. Jiang**, and Y.F. Lu, "Laser-assisted nanofabrication of carbon nanostructures", ***Journal of Laser Applications***, 24, 042007 (2012). (JAP Most Read Articles in 2012)

[119] W. Xiong, Y. Zhou, X. He, Y. Gao, M. Mahjouri-Samani, **L. Jiang**, T. Baldacchini, and Y.F. Lu, "Simultaneous additive and subtractive three-dimensional nanofabrication using integrated two-photon polymerization and multi-photon ablation", ***Light: Science & Applications***, 1(4), (2012).

[120] N. Lin, **L. Jiang**, S.M. Wang, and Q.H. Chen, "Chemical vapor sensors based on whispering gallery modes in an optical fiber microresonator coated with a polymer layer", ***Fiber and Integrated Optics***, 31(4), 263-276 (2012).

[121] X.N. He, Z.Q. Xie, Y. Gao, W.Hu, L.B. Guo, **L. Jiang**, and Y.F. Lu, "Mass spectrometry of solid samples in open air using combined laser ionization and ambient metastable ionization", ***Spectrochimica Acta Part B***, 67, 64–73 (2012).

[122] B.Y. Li, **L. Jiang**, S.M. Wang, Q.H. Chen, M.M. Wang, and J.P. Yang , "A new Mach-Zehnder interferometer in a thinned-cladding fiber fabricated by electric arc for high sensitivity refractive index sensing", ***Optics and Lasers in Engineering***, 50(6), 829-832 (2012).

[123] Y.P. Yuan, **L. Jiang**, X. Li, C. Wang, H. Xiao, Y.F. Lu, and H.L. Tsai, "Formation mechanisms of sub-wavelength ripples during femtosecond laser pulse trains processing of dielectrics", ***Journal of Physics D: Applied Physics***, 45(17), 175301 (2012).

[124] B.Y. Li, **L. Jiang**, S.M. Wang, J.P. Yang, M.M. Wang, and Q.H. Chen, "High sensitivity Mach-Zehnder interferometer sensors based on concatenated ultra-abrupt tapers on thinned fibers", ***Optics & Laser Technology***, 44(3), 640-645 (2012).

[125] N. Lin, **L. Jiang**, S.M. Wang, and Q.H. Chen, "Simultaneous measurement of refractive index and temperature using optical ring resonators", ***Chinese Optics Letters***, 10(05), 052802(2012).

[126] X.N. He, Y. Gao, M. Mahjouri-Samani, P.N. Black, J. Allen, M. Mitchell, W. Xiong, and Y.S. Zhou, **L. Jiang**, and Y.F. Lu, "Surface-enhanced Raman spectroscopy using gold-coated horizontally aligned carbon nanotubes", ***Nanotechnology***, 23, 205702 (2012).

[127] Z.L. Dong, C.C. Jiang, H.H. Cheng, Y. Zhao, G.Q. Shi, **L. Jiang**, and L.T. Qu, "Facile fabrication of light, flexible and multifunctional graphene fibers", ***Advanced Materials***, 24(14), 1856–1861 (2012).

[128] J.P. Yang, **L. Jiang**, S.M. Wang, Q.H. Chen, B.Y. Li, and H. Xiao, "Highly sensitive refractive index optical fiber sensors fabricated by a femtosecond laser", ***IEEE Photonics Journal***, 3(6), 1189-1197(2011).

[129] C. Wang, **L. Jiang**, F. Wang, X. Li, Y.P. Yuan, and H.L. Tsai, "First-principles calculations of the electron dynamics during femtosecond laser pulse train material interactions", ***Physics Letters A***, 36(22), 3200-3204 (2011).

[130] N. Lin, **L. Jiang**, S.M. Wang, H. Xiao, H.L. Tsai, and Y.F. Lu, "Simulation and optimization of polymer-coated microsphere resonators in chemical vapor sensing", ***Applied Optics***, 50(28), 5465-5472 (2011).

[131] N. Lin, **L. Jiang**, S.M. Wang, H. Xiao, H.L. Tsai, and Y.F. Lu, "Ultrasensitive thermal sensors based on whispering gallery modes in a polymer core optical ring resonator", ***Applied Optics***, 50(33), 6254-6260 (2011).

[132] J.P. Yang, **L. Jiang**, S.M. Wang, B.Y. Li, M.M. Wang, H. Xiao, Y.F. Lu, and H.L. Tsai, "High sensitivity of taper-based Mach-Zehnder interferometer embedded in a thinned optical fiber for refractive index sensing", ***Applied Optics***, 50(28),5503-5507 (2011).

[133] N. Lin, **L. Jiang**, S.M. Wang, H. Xiao, H.L. Tsai, and Y.F. Lu, "Design and optimization of liquid core optical ring resonator for refractive index sensing", ***Applied Optics***, 50(20), 3615-3621 (2011).

[134] H.Y. Chen, **L. Jiang**, and X.Y. Chen, "Design optimization of GaAs betavoltaic batteries", ***Journal of Physics D: Applied Physics***, 44, 215303 (2011).

[135] **L. Jiang,** X. Li, X.P. Zhang, Q.H. Chen, H.L. Tsai, and Y.F. Lu, "Short pulse laser micro/nano manufacturing: fundamentals and applications"**,** ***International Journal of Nanomanufacturing***, 7(2), 126-142 (2011).

[136] S. M. Wang, **L. Jiang**, B.Y. Li, L.J. Zhao, J.P. Yang, M.M. Wang, H. Xiao, Y.F. Lu, and H.L. Tsai, "Ultrafast laser fabrication of novel fiber mach-zehnder interferometer sensors and its cost-effective alternative manufacturing methods", ***Chinese Journal of Lasers***, 38(6), 0601002 (2011).

[137] B.Y. Li, **L. Jiang**, S.M. Wang, L.Y. Zhou, H. Xiao, and H.L. Tsai, "Ultra–abrupt tapered fiber Mach–Zehnder interferometer sensors", ***Sensors***, 11(6), 5729-5739 (2011).

[138] **L. Jiang**, L.J. Zhao, S.M. Wang, and J.P. Yang "Femtosecond laser fabricated all-optical fiber sensors with ultrahigh refractive index sensitivity: modeling and experiment", ***Optics Express,*** 19(18), 17591-17598 (2011).

[139] **L. Jiang**, J.P. Yang, S.M. Wang, B.Y. Li, and M.M. Wang, "Fiber Mach-Zehnder interferometer based on microcavities for high temperature sensing with high sensitivity", ***Optics Letters***, 36(19), 3753-3755 (2011).

[140] B.Y. Li, **L. Jiang**, S.M. Wang, H.L. Tsai, and H. Xiao, "Femtosecond laser fabrication of long period fiber gratings and applications in refractive index sensing", ***Opt. & Laser Technol.***, 43(8), 1420-1423 (2011).

[141] J.B. Park, W. Xiong, Z.Q. Xie, Y. Gao, M. Qian, M. Mitchell, M. Mahjouri-Samani, Y.S. Zhou, **L. Jiang**, and Y.F. Lu, "Transparent interconnections formed by rapid single-step fabrication of graphene patterns", ***Applied Physics Letters***, 99, 053103 (2011).

[142] A. Hamdorf, M. Olson, C.H. Lin, **L. Jiang**, J. Zhou, H. Xiao, and H.L. Tsai, "Femtosecond and nanosecond laser fabricated substrate for surface–enhanced Raman scattering", ***Optics Letters***, 36(17), 3353-3355 (2011).

[143] Y. Gao, Y.S. Zhou, J.B. Park, H. Wang, X.N. He, H.F. Luo, **L. Jiang**, and Y.F. Lu, "Resonant excitation of precursor molecules in improving the particle crystallinity, growth rate and optical limiting performance of carbon nano-onions", ***Nanotechnology***, 22, 165604 (2011).

[144] Y. Gao, Y.S. Zhou, M. Qian, Z.Q. Xie, W. Xiong, H.F. Luo, **L. Jiang**, and Y.F. Lu, "Fast growth of branched nickel monosilicide nanowires by laser-assisted chemical vapor deposition", ***Nanotechnology*** 22, 235602 (2011).

[145] J.B. Park, W. Xiong, Y. Gao, M. Qian, Z.Q. Xie, M. Mitchell, Y.S. Zhou, G.H. Han, **L. Jiang**, and Y.F. Lu, "Fast growth of grapheme patterns by laser direct writing", ***Applied Physics Letters***, 98(12), 123109(1-3) (2011).

[146] H.Y. Chen, **L. Jiang**, and D.R. Li, "Measurement of beta particles induced electron-hole pairs recombination in depletion region of GaAs PN junction", ***Chinese Physics Letters,*** 28(5), 058101 (2011).

[147] L.J. Zhao, **L. Jiang**, S.M. Wang, Y.F. Lu, H.L. Tsai, and H. Xiao, "A novel all-optical fiber sensor fabricated by femtosecond laser pulses for temperature sensing application", ***Sensor Letters***, 9(5), 1948-1951 (2011).

[148] L.J. Zhao, **L. Jiang**, S.M. Wang, Y.F. Lu, H.L. Tsai, and H. Xiao, "A high-quality mach-zehnder interferometer fiber sensor by femtosecond laser one-step processing", ***Sensors***, 11(1), 54-61 (2011).

[149] M. Qian, Y.S. Zhou, Y. Gao, J.B. Park, T. Feng, S.M. Huang, Z. Sun, **L. Jiang** and Y.F. Lu, "Formation of freestanding two-dimensional carbon nanosheets from poly (phenylcarbyne) through pulsed laser ablation", ***Carbon***, 49, 5117–5123 (2011).

[150] M. Qian, Y.S. Zhou, Y. Gao, J.B. Park, T. Feng, S.M. Huang, Z. Sun, **L. Jiang**, and Y.F. Lu, "Formation of graphene sheets through laser exfoliation of highly ordered，pyrolytic graphite"，***Applied Physics Letters***, 98, 173108 (1-3) (2011).

[151] N. Lin, **L. Jiang**, S.M. Wang, H. Xiao, H.L. Tsai, and Y.F. Lu,"Thermostable refractive index sensors based on whispering gallery modes in a microsphere coated with poly(methyl methacrylate)", ***Applied Optics***, 50(7), 992-998 (2011).

[152] N. Lin, **L. Jiang**, S.M. Wang, H. Xiao, H.L. Tsai, and Y.F. Lu, "Ultrasensitive chemical fiber sensors based on whispering gallery modes in a microsphere coated with zeolite", ***Applied Optics***, 49(33), 6463-6471 (2010).

[153] Z.Q. Xie, X.N. He, W. Hu, T. Guillemet, J.B. Park, Y.S. Zhou, J. Bai, Y. Gao, X.C. Zeng, **L. Jiang**, and Y.F. Lu, "Excitations of precursor molecules by different laser powers in laser-assisted growth of diamond films", ***Crystal Growth & Design***, 10(11), 4928–4933 (2010).

[154] C.H. Lin, **L. Jiang**, Y.H. Chai, H. Xiao, S.J. Chen, and H.L. Tsai, "A method to fabricate 2D nanoparticle arrays", ***Applied Physics A***, 98(4), 0947-8396 (2010).

[155] C.H. Lin, R.A. Powell, **L. Jiang**, H. Xiao, S.J. Chen, and H.L. Tsai, "Real-time depth measurement for micro-holes drilled by lasers", ***IOP's Measurement Science and Technology***, 21, 025307(1-6) (2010).

[156] C.H. Lin, Z.H. Rao, **L. Jiang**, W.J. Tsai, P.H. Wu, C.W. Chien, S.J. Chen, and H.L. Tsai, "Investigations of femtosecond–nanosecond dual-beam laser ablation of dielectrics", ***Optics Letters***, 35(14), 2490-2492 (2010).

[157] X.N. He, X.K. Shen, T. Gebre, Z.Q. Xie, **L. Jiang**, and Y.F. Lu, "Spectroscopic determination of rotational temperature in $C_2H_4/C_2H_2/O_2$ flames for diamond growth with and without tunable CO_2 laser excitation", ***Applied Optics***, 9, 1555-1562 (2010).

[158] C.H. Lin, **L. Jiang**, J. Zhou, H. Xiao, S.J. Chen, and H.L. Tsai, "Laser-treated substrate with nanoparticles for surface-enhanced Raman scattering", ***Optics Letters***, 35(2), 941-943 (2010).

[159] C.H. Lin, **L. Jiang**, H. Xiao, S.J. Chen, and H.L. Tsai, "Surface-enhanced Raman scattering microchip fabricated by femtosecond laser", ***Optics Letters***, 35, 2937-2939 (2010).

[160] Z.Q. Xie, Y.S. Zhou, X.N. He, Y. Gao, J.B. Park, H. Ling, **L. Jiang**, and Y.F. Lu, "Fast growth of diamond crystals in open air by combustion synthesis with resonant laser energy coupling", ***Crystal Growth & Design***, 49(11), 1762–1766 (2010).

[161] Y.S. Zhou, W. Xiong and Y. Gao, "Mahjouri-Samani M., M. Mitchell, **L. Jiang**, and Y.F. Lu， "Towards carbon-nanotube integrated devices: optically controlled parallel integration of single-walled carbon nanotubes", ***Nanotechnology***, 21(31), 315601-315609 (2010).

[162] M. Mahjouri-Samani, Y.S. Zhou, W. Xiong, Y. Gao, M. Mitchell, **L. Jiang**, and Y.F. Lu, "Diameter modulation by fast temperature control in laser-assisted chemical vapor deposition of single-walled carbon nanotubes", ***Nanotechnology***, 21, 395601-395607 (2010).

[163] C.H. Lin, **L. Jiang**, Y.H. Chai, H. Xiao, S.J. Chen, and H.L. Tsai, "One-step fabrication of nanostructures by femtosecond laser for surface-enhanced Raman scattering", ***Optics Express***, 17(24), 21581-21589 (2009).

[164] **L. Jiang**, L.S. Li, and H.L. Tsai, "CO_2 gas resonance absorption at CO_2laser wavelength in multiple laser coating", ***Applied Physics B***, 97(1), 199-206 (2009).

[165] C.H. Lin, **L. Jiang**, H. Xiao, Y.H. Chai, S.J. Chen, and H.L. Tsai, "Fabry-Perot interferometer embedded in a glass chip fabricated by femtosecond laser", ***Optics Letters***, 34(16), 2408-2010 (2009).

[166] X. Li, **L. Jiang**, and H.L. Tsai, "Phase change mechanisms during femotsecond laser pulse train ablation of nickel thin films", ***Journal of Applied Physics***, 106(6), 064906(1-6) (2009).

[167] C.H. Lin, **L. Jiang**, Y.H. Chai, H. Xiao, S. J.Chen, and H. L.Tsai, "Fabrication of microlens arrays in photosensitive glass by femtosecond laser direct writing", ***Applied Physics A***, 97(4), 751-757 (2009).

[168] X.W. Lan, Y.K. Han, T. Wei, Y.N. Zhang, **L. Jiang**, H.L. Tsai, and H. Xiao, "Surface enhanced Raman scattering fiber probe fabricated by femtosecond laser" ***Optics Letters***, 34(15), 2285-2287 (2009).

[169] **L. Jiang**, L.S. Li, S.M. Wang, and H.L. Tsai, "Microscopic energy transport through photon-electron-phonon interactions during ultrashort laser ablation of wide bandgap materials Part I: photon absorption", ***Chinese Journal of Lasers***, 36(4), 779-789 (2009).

[170] **L. Jiang**, L.S. Li, S.M. Wang, and H.L. Tsai, "Microscopic energy transport through photon-electron-phonon interactions during ultrashort laser ablation of wide bandgap materials Part Ⅱ: phase change", ***Chinese Journal of Lasers***, 36(5), 1029-1036 (2009).

[171] X. Li, Y.Z. Hu, and **L. Jiang**, "Modeling of spreading process: effect from hydrogen bonds", ***Chinese Physics B***, 17(08), 30-35 (2008).

[172] X. Li, Y.Z. Hu, and **L. Jiang**, "Spreading dynamics of functional droplets", ***Applied Surface Science***, 244(5), 3336-3341 (2008).

[173] **L. Jiang** and H.L. Tsai, "A plasma model combined with an improved two-temperature equation for ultrafast laser ablation of dielectrics", ***Journal of Applied Physics***, 104(9), 093101(1-8) (2008).

[174] X. Li, Y.Z. Hu, and **L. Jiang**, "Spreading of droplets on lubricant-patterned substrates", ***Journal of Chemical Physics***, 128(19), 194904(1-7) (2008).

[175] **L. Jiang** and H.L. Tsai, "Modeling of ultrashort laser pulse train processing of metal thin films", ***International Journal of Heat and Mass Transfer***, 50(17-18), 3265-3700 (2007).

[176] **L. Jiang** and H.L. Tsai, "Plasma modeling for ultrashort pulse laser ablation of dielectrics", ***Journal of Applied Physics***, 100(2), 023116(1-7) (2006).

[177] **L. Jiang** and H.L. Tsai, "Energy transport and nanostructuring of dielectrics by femtosecond laser pulse trains" ***ASME Journal of Heat Transfer***, 128(9), 926-933 (2006).

[178] **L. Jiang** and H.L. Tsai, "Repeatable nanostructures in dielectrics by femtosecond laser pulse trains", ***Applied Physics Letters***, 87(15), 151104-151106 (2005).

[179] **L. Jiang** and H.L. Tsai, "Energy transport and material removal in wide bandgap materials by a femtosecond laser pulse" ***International Journal of Heat & Mass Transfer***, 48(3-4), 487-499 (2005).

[180] **L. Jiang** and H.L. Tsai, "Improved two-temperature model and its application in ultrashort laser heating of metal films" ***ASME Journal of Heat Transfer***, 127(10), 1167-1173 (2005).

[181] **L. Jiang** and V. Allada, "Robust modular product family design using a modified Taguchi method", ***Journal of Engineering Design***, 16(5), 443-458 (2005).

[182] **L. Jiang** and H.L. Tsai, "Prediction of crater shape in femtosecond laser ablation of dielectrics", ***Journal of Physics D***, 37(10), 1492-1496 (2004).

[183] Z. Yang, L. Qiao, and **L. Jiang**, "Improving the performances of part dispatching based on multiple process plans using graph theory", ***International Journal of Production Research***, 36(7), 1987-2003 (1998).