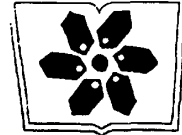


国家自然科学基金专项资助期刊

物 理 学 报

第 60 卷 第 6 期 2011 年 6 月

目 录



中国科学院科学出版基金资助出版

总 论

- 060201 广义 Hamilton 系统的 Mei 对称性导致的 Mei 守恒量 姜文安 罗绍凯
- 060202 考虑网络流量的无标度网络病毒免疫策略研究 王亚奇 蒋国平
- 060203 耦合 Schrödinger 系统的周期振荡折叠孤子 李帮庆 马玉兰 王 聪 徐美萍 李 阳
- 060301 量子纠缠消相干对确定型远程制备的影响 郭 振 闫连山 潘 炜 罗 斌 徐明峰
- 060302 量子隐形传态的新方案 何 锐 Bing He
- 060303 3 对非最大纠缠粒子的确定性纠缠浓缩协议 张闻钊 李文东 史 鹏 顾永建
- 060304 光晶格中超流费米气体的能隙孤子 杨树荣 蔡宏强 漆 伟 薛具奎
- 060305 $S=1$ 旋量 Bose-Einstein 凝聚中制备双模最大纠缠态方案 徐 岩 樊 炜 陈 兵 李照鑫
- 060306 线性延时反馈 Josephson 结的 Hopf 分岔和混沌化 张立森 蔡 理 冯朝文
- 060307 基于高损耗信道的纠缠分发实验模拟 印 娟 雍海林 吴裕平 彭承志
- 060308 远距离量子通信实验中的高维纠缠源
..... 印 娟 钱 勇 李晓强 包小辉 彭承志 杨 涛 潘阁生
- 060401 无截断薄膜模型与 Dirac 场的黑洞熵 杨学军 赵 峥
- 060501 一种基于误差快速扩散元胞自动机的加密技术 王福来
- 060502 朗之万方程及其在蛋白质折叠动力学中的应用 蒋泽南 房 超 孙立凤
- 060503 一种超混沌图像加密算法的安全性分析及其改进 王 静 蒋国平
- 060504 间歇同步分数阶统一混沌系统 胡建兵 章国安 赵灵冬 曾金全
- 060505 考虑意外事件对交通流影响的元胞自动机交通流模型
..... 钱勇生 曾俊伟 杜加伟 刘宇斐 王 敏 魏 军
- 060506 直驱型永磁同步风力发电机组中混沌运动的反步自适应控制
..... 郑 刚 邹见效 徐红兵 秦 钢
- 060507 新的具有光滑二次函数混沌系统的构建与实现 刘扬正 林长圣 李心朝
- 060508 改进型 Hénon 映射生成混沌伪随机序列及性能分析 李家标 曾以成 陈仕必 陈家胜
- 060509 Fermi 气体在势阱中的最大囚禁范围与状态方程 袁都奇
- 060510 不同开关频率下电压控制升压变换器中的 Hopf 分岔分析 王发强 马西奎 闫 晔
- 060511 非对称双链分子结构的热整流效应 张茂平 钟伟荣 艾保全
- 060512 焔的微观表述 程雪涛 梁新刚 徐向华
- 060513 Lévy 稳定噪声激励下的 Duffing-van der Pol 振子的随机分岔
..... 顾仁财 许 勇 郝孟丽 杨志强
- 060514 色高斯噪声驱动双稳系统的多重随机共振研究 张晓燕 徐 伟 周丙常

- 060701 火焰烟黑三维温度场和浓度场同时重建实验研究 刘冬 严建华 王飞 黄群星 池涌 岑可法
- 060702 材料中 He 深度分布演化的 Monte Carlo 模拟研究 周宇璐 李仁顺 张宝玲 邓爱红 侯氢
- 060703 应用多光路主动差分光学吸收光谱仪观测大气污染物的空间分布 王焯如 周斌 王珊珊 杨素娜
- 060704 瑞利散射多普勒激光雷达风场反演方法 沈法华 舒志峰 孙东松 王忠纯 薛向辉 陈廷娣 窦贤康
- 基本粒子物理学与场**
- 061101 休斯结构多间隙耦合腔的稳定性分析 崔健 罗积润 朱敏 郭炜
- 原子和分子物理学**
- 063101 MRCI 方法研究 CSe($X^1\Sigma^+$) 自由基的光谱常数和分子常数 刘慧 施德恒 孙金锋 朱遵略
- 063102 $XF_2(X = B, N)$ 分子基态的结构与势能函数 肖夏杰 韩晓琴 刘玉芳
- 063103 第一性原理研究 In, N 共掺杂 SnO_2 材料的光电性质 逯瑶 王培吉 张昌文 蒋雷 张国莲 宋朋
- 063104 TiAl 合金薄膜在冷却过程中结构变化的原子尺度计算研究 宋成粉 樊沁娜 李蔚 刘永利 张林
- 063201 原子玻色-爱因斯坦凝聚体对 V 型三能级原子激光压缩性质的影响 李明
- 063202 原子运动速度对激光驻波场作用下纳米光栅沉积特性的影响 张文涛 朱保华 熊显名 黄静
- 063203 中红外偏振态门驱动产生高效的极宽超连续谱 刘昆陇 洪伟毅 王少义 张庆斌 陆培祥
- 063301 CO 电子基态 P 线系跃迁谱线的理论研究 樊群超 孙卫国 李会东 冯灏
- 063401 TiO 基态($X^3\Delta_1$)的势能函数与光谱常数 魏洪源 熊晓玲 刘国平 罗顺忠
- 063402 非共面索末菲参量对三重微分截面的影响 陈展斌 杨欢 吴兴举 张穗萌
- 063701 实现冷原子、冷分子光学囚禁的组合三光学势阱方案 陆俊发 周琦 纪宪明 印建平
- 电磁学、光学、声学、传热学、经典力学和流体动力学**
- 064101 一种新颖的变异开口谐振环双频带磁谐振特异材料 唐明春 肖绍球 邓天伟 王多 柏艳英 金大鹏 王秉中
- 064102 多模块快直线变压器高功率脉冲源的研究 向飞 谭杰 罗敏 王淦平 康强
- 064201 808 nm 大孔径垂直腔面发射激光器研究 郝永芹 冯源 王菲 晏长岭 赵英杰 王晓华 王玉霞 姜会林 高欣 薄报学
- 064202 光纤法布里-珀罗复合结构折射率传感器的灵敏度分析 龚元 郭宇 饶云江 赵天 吴宇 冉曾令
- 064203 微腔面发射器件外量子效率研究 马凤英 苏建坡 郭茂田 池泉 陈明 余振芳
- 064204 Fernald 前向积分用于机载激光雷达气溶胶后向散射系数反演的理论研究 刘厚通 陈良富 苏林
- 064205 电磁感应透明介质中非线性法拉第偏转 余彦超 张蔚曦 王登龙
- 064206 利用半导体激光器环产生 27 GHz 的平坦宽带混沌激光 冯野 杨毅彪 王安帮 王云才
- 064207 湍流对部分相干双曲余弦高斯光束的瑞利区间的影响 季小玲
- 064208 多芯光子晶体光纤锁模激光器 方晓惠 胡明列 宋有建 谢辰 柴路 王清月
- 064209 光的偏振对热光关联成像的影响 张二峰 戴宏毅

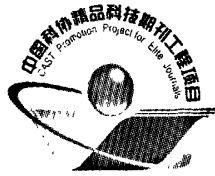
- 064210 非线性光纤环境在受激布里渊散射慢光级联系统中的可行性研究 郑 狄 潘 炜
- 064211 苯 C—H 伸缩振动弱增益模式的受激拉曼散射 姜永恒 孙成林 李占龙 曹安阳 里佐威
- 064212 基于高折射率断环结构的全固光子带隙光纤的设计 栗岩峰 胡晓望 王爱民
- 064213 中红外高双折射高非线性宽带正常色散 As_2S_3 光子晶体光纤
..... 王晓琰 李曙光 刘 硕 张 磊 尹国冰 冯荣普
- 064214 变系数非线性 Schrödinger 方程的孤子解及其相互作用 钱 存 王亮亮 张解放
- 064215 一种确定混沌伪随机序列复杂度的模糊关系熵测度 陈小军 李 赞 白宝明 蔡觉平
- 064216 交换节点基于电磁波全向辐射特性的 M 维空时纠错码理论 谢映海 杨 维 许昌龙
- 064217 基于光子晶体自准直环形谐振腔的全光均分束器
..... 童 星 韩 奎 沈晓鹏 吴琼华 周 菲 葛 阳 胡晓娟
- 064301 基于最差性能优化的运动声源稳健聚焦定位识别方法研究 时 洁 杨德森 时胜国
- 064302 声悬浮液滴的表面毛细波及八阶扇谐振荡 鄢振麟 解文军 沈昌乐 魏炳波
- 064401 飞秒脉冲激光加热金属薄膜的理论和实验研究 马维刚 王海东 张 兴 王 玮
- 064501 Birkhoff 意义下 Hénon-Heiles 方程的离散变分计算 刘世兴 刘 畅 郭永新
- 064701 磁化水的磁化机理研究 丁振瑞 赵亚军 陈凤玲 陈金忠 段书兴
气体、等离子体和放电物理
- 065101 锗硅/硅异质结材料的化学气相淀积生长动力学模型
戴显英 金国强 董洁琼 王船宝 赵 炯 楚亚萍 奚鹏程 邓文洪 张鹤鸣 郝 跃
- 065201 利用 Grad-Shafranov 重构方法研究磁尾通量绳的特征参量和内部结构
..... 张永存 沈 超 刘振兴
- 065202 355 nm 纳秒紫外激光辐照下熔石英前后表面损伤的对比研究
..... 刘红婕 周信达 黄 进 王凤蕊 蒋晓东 黄 竞 吴卫东 郑万国
- 065203 Hall 推力器内饱和鞘层下电子与壁面碰撞频率特性 张凤奎 丁永杰
- 065204 神光 II 升级装置远场准直系统研究 高妍琦 朱宝强 刘代中 彭增云 林尊琪
- 065205 介质阻挡放电丝结构转变中的缺陷研究 董丽芳 李树峰 范伟丽
- 065206 介质阻挡放电跃变升压模式下靶波斑图研究
..... 董丽芳 岳 晗 范伟丽 李媛媛 杨玉杰 肖 红
凝聚物质:结构、力学和热学性质
- 066101 钪离子注入碳化硅的射程和退火行为研究
..... 秦希峰 梁 毅 王凤翔 李 双 付 刚 季艳菊
- 066102 KTP(001) 晶体分光性能研究
..... 赵 佳 崔明启 赵屹东 周克瑾 郑 雷 朱 杰 孙立娟 陈 凯 马陈燕
- 066103 碳纳米管熔接金电极的分子动力学模拟
..... 左学云 李中秋 王 伟 孟利军 张凯旺 钟建新
- 066104 体心立方 Ta 的广义面错能及在 II 型裂纹尖端初始塑性研究中的应用
..... 梅继法 黎军硕 倪玉山 王华滔
- 066201 退火对 AlTiN 多层薄膜结构及力学性能影响 罗庆洪 娄艳芝 赵振业 杨会生
- 066401 池沸腾中气泡生长过程的格子 Boltzmann 方法模拟 曾建邦 李隆键 廖 全 蒋方明
- 066402 基于 Wenzel 模型的粗糙界面异质形核分析 郑浩勇 王 猛 王修星 黄卫东
- 066403 远场来流条件下过冷熔体球晶生长的稳定性 曹 斌 林 鑫 黄卫东
- 066404 纳米多晶铁的冲击相变研究 马 文 祝文军 张亚林 经福谦

- 066501 纳米颗粒与纳米块材摩尔定压热容的理论计算 陈慧敏 刘恩隆
- 066601 TiO₂/ZnO 纳米薄膜界面热导率的分子动力学模拟
 杨平 吴勇胜 许海锋 许鲜欣 张立强 李培
- 066801 Al 表面的“类液”结构及其自扩散通道 汤富领 陈功宝 谢勇 路文江
- 066802 ZnO(0001) 表面吸附 B 的电子结构和光学性质研究 张宇飞 郭志友 曹东兴
- 066803 工作压强对硅掺杂辉光放电聚合物结构和性能的影响
 张颖 何智兵 闫建成 李萍 唐永建
- 066804 高能氮离子轰击对四面体非晶碳膜的表面改性和摩擦系数影响的研究
 韩亮 陈仙 杨立 王炎武 王晓艳 赵玉清
- 凝聚物质: 电子结构、电学、磁学和光学性质
- 067101 钴磷族化合物 BaT₂P₂ 和 BaT₂As₂ (T = Co, Rh, Ir) 的电子结构 钱玉敏 徐刚
- 067102 固态二氧化碳电子结构及性能的理论研究 屈年端 高发明
- 067103 Mg 和 Zn 掺杂 CuAlS₂ 电子结构的分析 万文坚 姚若河 耿魁伟
- 067201 β-Zn₄Sb₃/Zn_{1-δ}Al_δO 复合材料的制备及热电性能研究
 周丽梅 李炜 蒋俊 陈建敏 李勇 许高杰
- 067301 指数掺杂结构对透射式 GaAs 光电阴极量子效率的影响研究
 张益军 牛军 赵静 邹继军 常本康
- 067302 纳米 VO_x 薄膜在空气中的电学特性退化研究 罗振飞 吴志明 许向东 王涛 蒋亚东
- 067303 La_{0.88}Te_{0.12}MnO₃/Si 异质结的整流和光伏特性研究 陈鹏 金克新 陈长乐 谭兴毅
- 067304 H₂ 气对脉冲磁控溅射铝掺杂氧化锌薄膜性能的影响
 李林娜 陈新亮 王斐 孙建 张德坤 耿新华 赵颖
- 067305 截面形状对快电子激发纳米双线表面等离激元的影响
 王垒 蔡卫 谭信辉 向吟啸 张心正 许京军
- 067306 有机-无机杂化钙钛矿自组装量子阱结构的能带调控和光电性能的研究
 郑莹莹 邓海涛 万静 李超荣
- 067307 基于相变原理模拟红色顶发射有机电致发光器件的出光性能 李慧盈 段羽
- 067501 高磁导率材料 FeCuNbSiB 对超磁致伸缩/压电层合材料磁电性能的影响
 陈蕾 李平 文玉梅 王东
- 067502 Al 掺杂 ZnO 薄膜的厚度对其结构及磁学性能的影响
 邕云开 顾建军 刘力虎 张海峰 徐芹 孙会元
- 067503 压应力对 Fe_{0.81}Ga_{0.19} 单晶磁化和磁致伸缩的影响 张辉 曾德长 刘仲武
- 067504 纵向极化与磁化叠层复合材料磁电效应理论及计算 鲍丙豪 骆英
- 067505 类花状 ZnO-CoFe₂O₄ 复合纳米管束的制备及其电磁波吸收特性
 付乌有 曹静 李伊苻 杨海滨
- 067701 复合薄膜 NiFe₂O₄-BiFeO₃ 中的磁电耦合
 顾建军 刘力虎 邕云开 徐芹 张惠敏 孙会元
- 067801 Sr_{0.6}Ba_{0.2}Ca_{0.2}Al₂O₄: Eu, Dy 的制备与长余辉发光性能研究
 谢伟 王银海 胡义华 张军 邹长伟 李达 邵乐喜
- 067802 Ca₂GeO₄: Eu³⁺ 的电子结构和紫外-真空紫外发光特性的研究
 秦青松 于明汇 周宏亮 周美娇 项晓天 李晚的 曾俊玺 张加驰
- 067803 纳米 Fe₃O₄ 颗粒的正电子湮没谱学研究 ... 许红霞 郝颖萍 韩荣典 翁惠民 杜淮江 叶邦角

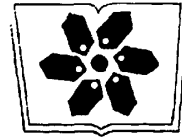
- 067804 超短脉冲激光在电介质材料中传输及破坏深度微观理论计算 李东海 陈发良
- 067805 MoO₃ 在多孔 γ -Al₂O₃ 中固熔分散的研究 康婷霞 毕翱翔 朱俊
物理学交叉学科及有关科学技术领域
- 068101 磷离子注入纳米金刚石薄膜的 n 型导电性能与微结构研究
..... 胡晓君 胡衡 陈小虎 许贝
- 068102 a-Si:H/SiO₂ 多量子阱材料制备及其光学性能和微结构研究 马小凤 王懿喆 周呈悦
- 068103 界面动力学对过冷熔体中球晶生长界面形态的影响
..... 陈明文 倪锋 王艳林 王自东 谢建新
- 068201 晶粒生长演变相场法模拟界面表达的物理模型 张宪刚 宗亚平 王明涛 吴艳
- 068202 熔融盐法合成锂离子电池正极材料纳米 LiNiO₂ 白莹 王蓓 张伟凤
- 068401 合成孔径雷达资料反演海面风场的正则化方法研究 姜祝辉 黄思训 何然 周晨腾
- 068402 带状注速调管注波相互作用及其计算程序的研究 张小锋 阮存军 罗积润 阮望 赵鼎
- 038403 基于电子注可回收能力的空间行波管慢波结构的优化设计
..... 易红霞 肖刘 刘濮鲲 郝保良 李飞 李国超
- 068501 单壁碳纳米管吸附氧分子的电子输运性质理论研究
..... 赵佩 郑继明 陈有为 郭平 任兆玉
- 068502 Si 基碲镉汞光伏探测器的深能级研究 张姗 胡晓宁
- 068701 钎锌矿相 GaN 电子高场输运特性的 Monte Carlo 模拟研究 郭宝增 张锁良 刘鑫
- 068702 p 型金属氧化物半导体场效应晶体管低剂量率辐射损伤增强效应模型研究
..... 高博 余学峰 任迪远 崔江维 兰博 李明 王义元
- 068801 单室沉积非晶硅/非晶硅/微晶硅三叠层太阳能电池的研究
..... 郑新霞 张晓丹 杨素素 王光红 许盛之 魏长春 孙建 耿新华 熊绍珍 赵颖
- 068802 输电线非线性振动问题的同伦映射近似解 吴钦宽
- 068803 混沌量子克隆算法求解认知无线网络频谱分配问题 柴争义 刘芳 朱思峰
- 068901 考虑驾驶员预估效应的交通流格子模型与数值仿真 孙棣华 田川
- 068902 原油期货与现货价格联动性的复杂网络拓扑性质 高湘昀 安海忠 刘红红 丁颖辉
地球物理学、天文学和天体物理学
- 069601 中国近 50 年太阳直接辐射和散射辐射变化趋势特征 马金玉 梁宏 罗勇 李世奎



Supported by the National Natural
Science Foundation of China



ACTA PHYSICA SINICA
Vol. 60, No. 6, June 2011
CONTENTS



Supported by the Science Publication
Foundation, Chinese Academy of Sciences

GENERAL

- 060201 Mei symmetry leading to Mei conserved quantity of generalized Hamiltonian system
..... *Jiang Wen-An, Luo Shao-Kai*
- 060202 Epidemic immunization on scale-free networks with traffic flow *Wang Ya-Qi, Jiang Guo-Ping*
- 060203 Folded soliton with periodic vibration for a nonlinear coupled Schrödinger system
..... *Li Bang-Qing, Ma Yu-Lan, Wang Cong, Xu Mei-Ping, Li Yang*
- 060301 Influence of decoherence of entanglement on deterministic remote state preparation
..... *Guo Zhen, Yan Lian-Shan, Pan Wei, Luo Bin, Xu Ming-Feng*
- 060302 A new quantum teleportation protocol *He Rui, Bing He*
- 060303 Protocol for deterministic entanglement concentration of three pairs of partially entangled particles
..... *Zhang Wen-Zhao, Li Wen-Dong, Shi Peng, Gu Yong-Jian*
- 060304 Gap solitons of a superfluid fermion gas in optical lattices
..... *Yang Shu-Rong, Cai Hong-Qiang, Qi Wei, Xue Ju-Kui*
- 060305 Scheme for generating maximally two-mode entangled state in an $S = 1$ antiferromagnetic Bose-Einstein
condensation *Xu Yan, Fan Wei, Chen Bing, Li Zhao-Xin*
- 060306 Hopf bifurcation and chaotification of Josephson junction with linear delayed feedback
..... *Zhang Li-Sen, Cai Li, Feng Chao-Wen*
- 060307 Experimental simulation of quantum entanglement distribution over a high-loss channel
..... *Yin Juan, Yong Hai-Lin, Wu Yu-Ping, Peng Cheng-Zhi*
- 060308 High-dimensional entanglement for long distance quantum communication
..... *Yin Juan, Qian Yong, Li Xiao-Qiang, Bao Xiao-Hui, Peng Cheng-Zhi, Yang Tao, Pan Ge-Sheng*
- 060401 The thin film model without cutoff and the black hole entropy of Dirac field *Yang Xue-Jun, Zhao Zheng*
- 060501 A method of digital secure communication based on a cellular automata with rapid dispersion of errors
..... *Wang Fu-Lai*
- 060502 Langevin equation and its applications in the simulation of protein folding process
..... *Jiang Ze-Nan, Fang Chao, Sun Li-Feng*
- 060503 Cryptanalysis of a hyper-chaotic image encryption algorithm and its improved version
..... *Wang Jing, Jiang Guo-Ping*
- 060504 Intermittent synchronizing fractional unified chaotic systems
..... *Hu Jian-Bing, Zhang Guo-An, Zhao Ling-Dong, Zeng Jin-Quan*
- 060505 Cellular automaton traffic flow model considering influence of accidents
..... *Qian Yong-Sheng, Zeng Jun-Wei, Du Jia-Wei, Liu Yu-Fei, Wang Min, Wei Jun*
- 060506 Adaptive backstepping control of chaotic property in direct-drive permanent magnet synchronous generators for
(*Continued*)

- wind power *Zheng Gang, Zou Jian-Xiao, Xu Hong-Bing, Qin Gang*
- 060507 A new smooth quadratic chaotic system and its digital signal processing implementation
 *Liu Yang-Zheng, Lin Chang-Sheng, Li Xin-Chao*
- 060508 Modified Hénon map generated chaotic pseudorandom-bit sequences and performance analysis
 *Li Jia-Biao, Zeng Yi-Cheng, Chen Shi-Bi, Chen Jia-Sheng*
- 060509 Maximum trap range and equation of state for Fermi gas in potential trap *Yuan Du-Qi*
- 060510 Analysis of Hopf bifurcation in voltage-controlled boost converter under different switching frequencies
 *Wang Fa-Qiang, Ma Xi-Kui, Yan Ye*
- 060511 Thermal rectification of asymmetric double-stranded molecular structure
 *Zhang Mao-Ping, Zhong Wei-Rong, Ai Bao-Quan*
- 060512 Microscopic expression of entransy *Cheng Xue-Tao, Liang Xin-Gang, Xu Xiang-Hua*
- 060513 Stochastic bifurcations in Duffing-van der Pol oscillator with Lévy stable noise
 *Gu Ren-Cai, Xu Yong, Hao Meng-Li, Yang Zhi-Qiang*
- 060514 Effect of gaussian color-correlated colored noise on stochastic multiresonance of a bistable system
 *Zhang Xiao-Yan, Xu Wei, Zhou Bing-Chang*
- 060701 Simultaneous experimental reconstruction of three-dimensional flame soot temperature and volume fraction
 distributions *Liu Dong, Yan Jian-Hua, Wang Fei, Huang Qun-Xing, Chi Yong, Cen Ke-Fa*
- 060702 Monte Carlo simulations of the evolution of helium depth distribution in materials
 *Zhou Yu-Lu, Li Ren-Shun, Zhang Bao-Ling, Deng Ai-Hong, Hou Qing*
- 060703 Observation on the spatial distribution of air pollutants by active multi-axis differential optical absorption
 spectroscopy *Wang Zhuo-Ru, Zhou Bin, Wang Shan-Shan, Yang Su-Na*
- 060704 Wind retrieval algorithm of Rayleigh Doppler lidar *Shen Fa-Hua,*
Shu Zhi-Feng, Sun Dong-Song, Wang Zhong-Chun, Xue Xiang-Hui, Chen Ting-Di, Dou Xian-Kang
- THE PHYSICS OF ELEMENTARY PARTICLES AND FIELDS**
- 061101 Analyses for the stability of multi-gap Hughes-type coupled cavity
 *Cui Jian, Luo Ji-Run, Zhu Min, Guo Wei*
- ATOMIC AND MOLECULAR PHYSICS**
- 063101 Spectroscopic parameters and molecular constants of $CSe(X^1\Sigma^+)$ radical
 *Liu Hui, Shi De-Heng, Sun Jin-Feng, Zhu Zun Lüe*
- 063102 Structure and potential energy function of $XF_2(X = B, N)$ molecular ground state
 *Xiao Xia-Jie, Han Xiao-Qin, Liu Yu-Fang*
- 063103 Material opto-electronic properties of In, N co-doped SnO_2 studied by first principles
 *Lu Yao, Wang Pei-Ji, Zhang Chang-Wen, Jiang Lei, Zhang Guo-Lian, Song Peng*
- 063104 Atomic-scale study of structural change of TiAl alloy film during the cooling process
 *Song Cheng-Fen, Fan Qin-Na, Li Wei, Liu Yong-Li, Zhang Lin*
- 063201 Influence of an atomic Bose-Einstein condensate on the squeezing properties of V-type three-level atomic lasers
 *Li Ming*
- 063202 Characteristics of deposition for neutral atoms in laser standing wave with different velocities
 *Zhang Wen-Tao, Zhu Bao-Hua, Xiong Xian-Ming, Huang Jing*
- 063203 Efficient generation of ultra-broadband supercontinuum in the mid-infrared polarization gating
 *Liu Kun-Long, Hong Wei-Yi, Wang Shao-Yi, Zhang Qing-Bin, Lu Pei-Xiang*
- 063301 P-branch spectral lines of rovibrational transitions of CO molecule in ground state
 *(Continued)*

- *Fan Qun-Chao , Sun Wei-Guo , Li Hui-Dong , Feng Hao*
- 063401 Spectroscopic parameters and potential energy function of the ground state of TiO ($X^3\Delta_1$)
 *Wei Hong-Yuan, Xiong Xiao-Ling, Liu Guo-Ping, Luo Shun-Zhong*
- 063402 Influence of Sommerfeld parameters on triple differential cross section in non-coplanar geometry
 *Chen Zhan-Bin, Yang Huan, Wu Xing-Ju, Zhang Sui-Meng*
- 063701 A combinative triple-well optical trap for three-species cold atoms or molecules
 *Lu Jun-Fa, Zhou Qi, Ji Xian-Ming, Yin Jian-Ping*
- ELECTROMAGNETISM, OPTICS, ACOUSTICS, HEAT TRANSFER, CLASSICAL MECHANICS,
 AND FLUID DYNAMICS**
- 064101 A novel dual-band evolved split ring magnetic resonance metamaterial *Tang Ming-Chun,*
Xiao Shao-Qiu, Deng Tian-Wei, Wang Duo, Bai Yan-Ying, Jin Da-Peng, Wang Bing-Zhong
- 064102 Fast linear transformer high power pulse generator
 *Xiang Fei, Tan Jie, Luo Min, Wang Gan-Ping, Kang Qiang*
- 064201 808 nm vertical-cavity surface-emitting laser with large aperture *Hao Yong-Qin, Feng Yuan, Wang Fei,*
Yan Chang-Ling, Zhao Ying-Jie, Wang Xiao-Hua, Wang Yu-Xia, Jiang Hui-Lin, Gao Xin, Bo Bao-Xue
- 064202 Sensitivity analysis of hybrid fiber Fabry-Pérot refractive-index sensor
 *Gong Yuan, Guo Yu, Rao Yun-Jiang, Zhao Tian, Wu Yu, Ran Zeng-Ling*
- 064203 External quantum efficiency of microcavity planar emitting devices
 *Ma Feng-Ying, Su Jian-Po, Guo Mao-Tian, Chi Quan, Chen Ming, Yu Zhen-Fang*
- 064204 Theoretical research of Fernald forward integration method for aerosol backscatter coefficient inversion of airborne
 atmosphere detecting lidar *Liu Hou-Tong , Chen Liang-Fu, Su Lin*
- 064205 Nonlinear Faraday rotation in electromagnetically induce transparency medium
 *She Yan-Chao, Zhang Wei-Xi, Wang Deng-Long*
- 064206 Generation of 27 GHz flat broadband chaotic laser with semiconductor laser loop
 *Feng Ye, Yang Yi-Biao, Wang An-Bang, Wang Yun-Cai*
- 064207 Influence of turbulence on the Rayleigh range of partially coherent cosh-Gaussian beams *Ji Xiao-Ling*
- 064208 Mode locked multi-core photonic crystal fiber laser
 *Fang Xiao-Hui, Hu Ming-Lie, Song You-Jian, Xie Chen, Chai Lu, Wang Qing-Yue*
- 064209 Effect of light polarization on thermal light correlated imaging *Zhang Er-Feng, Dai Hong-Yi*
- 064210 Feasibility study of nonlinear optical loop mirror in the cascaded stimulated Brillouin scattering-based slow light
 system *Zheng Di, Pan Wei*
- 064211 Enhanced stimulated Raman scattering of weak-gain mode C—H stretching vibration of benzene
 *Jiang Yong-Heng, Sun Cheng-Lin, Li Zhan-Long, Cao An-Yang, Li Zuo-Wei*
- 064212 Design of high-index broken-ring-based all-solid photonic bandgap fibers
 *Li Yan-Feng, Hu Xiao-Kun, Wang Ai-Min*
- 064213 Midinfrared As₂S₃ chalcogenide glass broadband normal dispersion photonic crystal fiber with high birefringence
 and high nonlinearity
 *Wang Xiao-Yan, Li Shu-Guang, Liu Shuo, Zhang Lei, Yin Guo-Bing, Feng Rong-Pu*
- 064214 Solitons of nonlinear Schrödinger equation with variable-coefficients and interaction
 *Qian Cun, Wang Liang-Liang, Zhang Jie-Fang*
- 064215 New complexity metric of chaotic pseudorandom sequences using fuzzy relationship entropy
 *Chen Xiao-Jun, Li Zan, Bai Bao-Ming, Cai Jue-Ping*

(Continued)

- 064216 *M*-dimensional space-time error correction code theory for switch node based on omnidirectional radiation of electromagnetic wave Xie Ying-Hai, Yang Wei, Xu Chang-Long
- 064217 Equal intensity polarization-independent beam splitter based on photonic crystal self-collimation ring resonator Tong Xing, Han Kui, Shen Xiao-Peng, Wu Qiong-Hua, Zhou Fei, Ge Yang, Hu Xiao-Juan
- 064301 Robust localization and identification method of moving sound sources based on worst-case performance optimization Shi Jie, Yang De-Sen, Shi Sheng-Guo
- 064302 Surface capillary wave and the eighth mode sectorial oscillation of acoustically levitated drop Yan Zhen-Lin, Xie Wen-Jun, Shen Chang-Le, Wei Bing-Bo
- 064401 Theoretical and experimental study of femtosecond pulse laser heating on thin metal film Ma Wei-Gang, Wang Hai-Dong, Zhang Xing, Wang Wei
- 064501 Discrete variational calculation of Hénon-Heiles equation in the Birkhoffian sense Liu Shi-Xing, Liu Chang, Guo Yong-Xin
- 064701 Magnetization mechanism of magnetized water Ding Zhen-Rui, Zhao Ya-Jun, Chen Feng-Ling, Chen Jin-Zhong, Duan Shu-Xing
- PHYSICS OF GASES, PLASMAS, AND ELECTRIC DISCHARGES**
- 065101 A kinetics model for the chemical vapor deposition growth of SiGe/Si heterojunction materials Dai Xian-Ying, Jin Guo-Qiang, Dong Jie-Qiong, Wang Chuan-Bao, Zhao Xian, Chu Ya-Ping, Xi Peng-Cheng, Deng Wen-Hong, Zhang He-Ming, Hao Yue
- 065201 Characteristics and structure of magnetotail flux rope recovered from Grad-Shafranov method Zhang Yong-Cun, Shen Chao, Liu Zhen-Xing
- 065202 Comparison of damage between front and rear surfaces under nanosecond 355 nm laser irradiation on fused silica Liu Hong-Jie, Zhou Xin-Da, Huang Jin, Wang Feng-Rui, Jiang Xiao-Dong, Huang Jing, Wu Wei-Dong, Zheng Wan-Guo
- 065203 Features of electron-wall collision frequency with saturated sheath in Hall thruster Zhang Feng-Kui, Ding Yong-Jie
- 065204 Far field auto-alignment system used in SG-II-Up system Gao Yan-Qi, Zhu Bao-Qiang, Liu Dai-Zhong, Peng Zeng-Yun, Lin Zun-Qi
- 065205 Defects in transition between different filament structures in dielectric barrier discharge Dong Li-Fang, Li Shu-Feng, Fan Wei-Li
- 065206 Target patterns obtained by suddenly increasing applied voltage in dielectric barrier discharge Dong Li-Fang, Yue Han, Fan Wei-Li, Li Yuan-Yuan, Yang Yu-Jie, Xiao Hong
- CONDENSED MATTER: STRUCTURAL, MECHANICAL, AND THERMAL PROPERTIES**
- 066101 Range and annealing behavior of Er ions implanted in SiC Qin Xi-Feng, Liang Yi, Wang Feng-Xiang, Li Shuang, Fu Gang, Ji Yan-Ju
- 066102 Dispersing performance of KTP(011) crystal Zhao Jia, Cui Ming-Qi, Zhao Yi-Dong, Zhou Ke-Jin, Zheng Lei, Zhu Jie, Sun Li-Juan, Chen Kai, Ma Chen-Yan
- 066103 Nanowelding of contact between carbon nanotubes and gold electrodes Zuo Xue-Yun, Li Zhong-Qiu, Wang Wei, Meng Li-Jun, Zhang Kai-Wang, Zhong Jian-Xin
- 066104 Generalized planar fault energy of body-centered cubic Ta and its application to plastic deformation of mode II crack tip Mei Ji-Fa, Li Jun-Wan, Ni Yu-Shan, Wang Hua-Tao
- 066201 Effect of annealing on microstructure and mechanical properties of AlTiN multilayer coatings Luo Qing-Hong, Lou Yan-Zhi, Zhao Zhen-ye, Yang Hui-Sheng

(Continued)

- 066401 Simulation of bubble growth process in pool boiling using lattice Boltzmann method
..... Zeng Jian-Bang, Li Long-Jian, Liao Quan, Jiang Fang-Ming
- 066402 Analysis of heterogeneous nucleation on rough surfaces based on Wenzel model
..... Zheng Hao-Yong, Wang Meng, Wang Xiu-Xing, Huang Wei-Dong
- 066403 Effect of far field flow on the stability of the spherical crystal in undercooled melt
..... Cao Bin, Lin Xin, Huang Wei-Dong
- 066404 Shock-induced phase transformation in nanocrystalline iron
..... Ma Wen, Zhu Wen-Jun, Zhang Ya-Lin, Jing Fu-Qian
- 066501 Theoretical calculation of molar heat capacity at constant pressure of nanoparticle and nanocrystalline
..... Chen Hui-Min, Liu En-Long
- 066601 Molecular dynamics simulation of thermal conductivity for the TiO₂/ZnO nano-film interface
..... Yang Ping, Wu Yong-Sheng, Xu Hai-Feng, Xu Xian-Xin, Zhang Li-Qiang, Li Pei
- 066801 Liquid-like structure and self-diffusion channels on Al surfaces
..... Tang Fu-Ling, Chen Gong-Bao, Xie Yong, Lu Wen-Jiang
- 066802 Electronic structure and optical property of Boron adsorption on wurtzite ZnO(0001) surface
..... Zhang Yu-Fei, Guo Zhi-You, Cao Dong-Xing
- 066803 Influence of pressure on structure and properties of Si-doped glow discharge polymer film
..... Zhang Ying, He Zhi-Bing, Yan Jian-Cheng, Li Ping, Tang Yong-Jian
- 066804 Surface modification and the friction coefficient of tetrahedral amorphous carbon films bombarded by energetic N ion
..... Han Liang, Chen Xian, Yang Li, Wang Yan-Wu, Wang Xiao-Yan, Zhao Yu-Qing
- CONDENSED MATTER; ELECTRONIC STRUCTURE, ELECTRICAL, MAGNETIC, AND OPTICAL PROPERTIES**
- 067101 Electronic structures cobalt group pnictides: BaT₂P₂ and BaT₂As₂ (T = Co, Rh, Ir)
..... Qian Yu-Min, Xu Gang
- 067102 Theoretical study on electronic structure and properties of solid carbon dioxide
..... Qu Nian-Rui, Gao Fa-Ming
- 067103 Electronic structure of CuAlS₂ doped with Mg and Zn Wan Wen-Jian, Yao Ruo-He, Geng Kui-Wei
- 067201 Preparation and thermoelectric properties of β-Zn₄Sb₃/Zn_{1-x}Al_xO
..... Zhou Li-Mei, Li Wei, Jiang Jun, Chen Jian-Min, Li Yong, Xu Gao-Jie
- 067301 Effect of exponential-doping structure on quantum yield of transmission-mode GaAs photocathodes
..... Zhang Yi-Jun, Niu Jun, Zhao Jing, Zou Ji-Jun, Chang Ben-Kang
- 067302 Aging in the electrical properties of nanostructured vanadium oxide thin film exposed to air
..... Luo Zhen-Fei, Wu Zhi-Ming, Xu Xiang-Dong, Wang Tao, Jiang Ya-Dong
- 067303 Rectifying behavior and photovoltaic effect in La_{0.48}Te_{0.12}MnO₃/Si heterostructure
..... Chen Peng, Jin Ke-Xin, Chen Chang-Le, Tan Xing-Yi
- 067304 Effects of hydrogen flux on aluminum doped zinc thin films by pulsed magnetron sputtering
..... Li Lin-Na, Chen Xin-Liang, Wang Fei, Sun Jian, Zhang De-Kun, Geng Xin-Hua, Zhao Ying
- 067305 Effects of cross-section shape on fast electron beams excited plasmons in the surface of nanowire pairs
..... Wang Lei, Cai Wei, Tan Xin-Hui, Xiang Yin-Xiao, Zhang Xin-Zheng, Xu Jing-Jun
- 067306 Bandgap energy tuning and photoelectrical properties of self-assembly quantum well structure in organic-inorganic hybrid perovskites
..... Zheng Ying-Ying, Deng Hai-Tao, Wan Jing, Li Chao-Rong
- 067307 Simulation of optical performance of red top emitting organic light emitting devices based on phase-shift on

(Continued)

- reflection theory *Li Hui-Ying, Duan Yu*
- 067501 Effect of high-permeability FeCuNbSiB on magnetoelectric property of magnetostrictive/piezoelectric composite *Chen Lei, Li Ping, Wen Yu-Mei, Wang Dong*
- 067502 Effects of thickness for Al doped ZnO thin films on their microstructure and magnetic properties *Qi Yun-Kai, Gu Jian-Jun, Liu Li-Hu, Zhang Hai-Feng, Xu Qin, Sun Hui-Yuan*
- 067503 Effect of compressive stress on the magnetization and magnetostriction of $\text{Fe}_{0.81}\text{Ga}_{0.19}$ alloy *Zhang Hui, Zeng De-Chang, Liu Zhong-Wu*
- 067504 Theory and calculation of magnetoelectric effect in longitudinally polarized and magnetized laminate materials *Bao Bing-Hao, Luo Ying*
- 067505 Preparation and electromagnetic wave absorption of flower-like $\text{ZnO-CoFe}_2\text{O}_4$ nanotube bundles composites *Fu Wu-You, Cao Jing, Li Yi-Xing, Yang Hai-Bin*
- 067701 Magnetoelectric coupling in $\text{NiFe}_2\text{O}_4\text{-BiFeO}_3$ composite films *Gu Jian-Jun, Liu Li-Hu, Qi Yun-Kai, Xu Qin, Zhang Hui-Min, Sun Hui-Yuan*
- 067801 Preparation and long-afterglow luminescence research of $\text{Sr}_{0.6}\text{Ba}_{0.2}\text{Ca}_{0.2}\text{Al}_2\text{O}_4\text{:Eu, Dy}$ *Xie Wei, Wang Yin-Hai, Hu Yi-Hua, Zhang Jun, Zou Chang-Wei, Li Da, Shao Le-Xi*
- 067802 Electronic structure and photoluminescence properties of $\text{Ca}_2\text{GeO}_4\text{:Eu}^{3+}$ in ultraviolet and vacuum ultraviolet region *Qin Qing-Song, Yu Ming-Hui, Zhou Hong-Liang, Zhou Mei-Jiao, Xiang Xiao-Tian, Li Xiao-Di, Zeng Jun-Xi, Zhang Jia-Chi*
- 067803 Positron annihilation spectroscopy study on the Fe_3O_4 nanoparticle *Xu Hong-Xia, Hao Ying-Ping, Han Rong-Dian, Weng Hui-Min, Du Huai-Jiang, Ye Bang-Jiao*
- 067804 Microscopic theoretical investigation on propagation and breakdown depth of ultrashort-pulse laser in dielectrics *Li Dong-Hai, Chen Fa-Liang*
- 067805 Solid state dispersions of MoO_3 into porous $\gamma\text{-Al}_2\text{O}_3$ *Kang Ting-Xia, Bi Ao-Xiang, Zhu Jun*
- CROSS-DISCIPLINARY PHYSICS AND RELATED AREAS OF SCIENCE AND TECHNOLOGY**
- 068101 The n-type conduction and microstructural properties of phosphorus ion implanted nanocrystalline diamond films *Hu Xiao-Jun, Hu Heng, Chen Xiao-Hu, Xu Bei*
- 068102 Structural and optical properties of a-Si:H/SiO₂ multiple quantum wells *Ma Xiao-Feng, Wang Yi-Zhe, Zhou Cheng-Yue*
- 068103 Effect of interface kinetics on the interface morphology of a spherical crystal in the undercooled melt *Chen Ming-Wen, Ni Feng, Wang Yan-Lin, Wang Zi-Dong, Xie Jian-Xin*
- 068201 A physical model to express grain boundaries in grain growth simulation by phase-field method *Zhang Xian-Gang, Zong Ya-Ping, Wang Ming-Tao, Wu Yan*
- 068202 Nano-LiNiO₂ as cathode material for lithium ion battery synthesized by molten salt method *Bai Ying, Wang Bei, Zhang Wei-Feng*
- 068401 Regularization method to retrieve synthetic aperture radar sea surface wind *Jiang Zhu-Hui, Huang Si-Xun, He Ran, Zhou Chen-Teng*
- 068402 Beam-wave interaction and simulation program for sheet beam klystron *Zhang Xiao-Feng, Ruan Cun-Jun, Luo Ji-Run, Ruan Wang, Zhao Ding*
- 038403 Optimization of slow wave structures of space traveling wave tube based on collectability of spent beam *Yi Hong-Xia, Xiao Liu, Liu Pu-Kun, Hao Bao-Liang, Li Fei, Li Guo-Chao*
- 068501 Theoretical investigation on electron transport properties of single wall carbon nanotube with oxygen molecular absorption *Zhao Pei, Zheng Ji-Ming, Chen You-Wei, Guo Ping, Ren Zhao-Yu*
- 068502 Deep levels of HgCdTe diodes on Si substrates *Zhang Shan, Hu Xiao-Ning*

- 068701 Electron transport property in wurtzite GaN at high electric field with Monte Carlo simulation
..... *Guo Bao-Zeng, Zhang Suo-Liang, Liu Xin*
- 068702 Theoretical model of enhanced low dose rate sensitivity observed in p-type metal-oxide-semiconductor field-effect transistor
..... *Gao Bo, Yu Xue-Feng, Ren Di-Yuan, Cui Jiang-Wei, Lan Bo, Li Ming, Wang Yi-Yuan*
- 068801 a-Si: H/a-Si: H/ μ c-Si: H triple junction solar cells
..... *Zheng Xin-Xia, Zhang Xiao-Dan, Yang Su-Su, Wang Guang-Hong, Xu Sheng-Zhi, Wei Chang-Chun, Sun Jian, Geng Xin-Hua, Xiong Shao-Zhen, Zhao Ying*
- 068802 Approximate solution of homotopic mapping for nonlinear vibration problem of transmission line
..... *Wu Qin-Kuan*
- 068803 Chaos quantum clonal algorithm for spectrum allocation of cognitive wireless network
..... *Chai Zheng-Yi, Liu Fang, Zhu Si-Feng*
- 068901 A traffic flow lattice model with the consideration of driver anticipation effect and its numerical simulation
..... *Sun Di-Hua, Tian Chuan*
- 068902 Analysis on the topological properties of the linkage complex network between crude oil future price and spot price
..... *Gao Xiang-Yun, An Hai-Zhong, Liu Hong-Hong, Ding Ying-Hui*
- GEOFYSICS, ASTRONOMY AND ASTROPHYSICS**
- 069601 Variation trend of direct and diffuse radiation in China over recent 50 years
..... *Ma Jin-Yu, Liang Hong, Luo Yong, Li Shi-Kui*