

脉冲功率及特种电源技术专辑:I

目次

强流加速器与粒子束技术

- 磁场调控型离子源的设计与实验 李杰, 董攀, 王韬, 等 074001 (5)
- 基于Geant4的回旋加速器束流动力学计算 张昱, 何小中, 杜洋, 等 074002 (6)
- MHz重频双极性脉冲感应加速组元研制 黄子平, 龙继东, 王卫, 等 074003 (6)

脉冲功率技术

- 高功率紧凑PFN-Marx发生器研究进展综述 刘世飞, 张建德, 张自成 075001 (11)
- 水中金属丝电爆炸拉氏磁流体动力学模拟方法 刘志刚, 邹晓兵, 王新新 075002 (11)
- 强流脉冲电弧作用下石墨电极蒸发特性 戴宏宇, 郭景润, 俞斌, 等 075003 (7)
- 百kV/cm场强下SF₆气体开关纳秒脉冲击穿场强和时延经验公式 郭帆, 贾伟, 谢霖霖, 等 075004 (6)
- 基于谐振电路的固态Marx发生器的顶降补偿 饶俊峰, 王秀智, 王永刚, 等 075005 (7)
- 基于光导半导体的MHz高重频可调谐脉冲产生技术研究 楚旭, 王朗宁, 朱效庆, 等 075006 (6)
- LTD单路验证装置电流测量 卫兵, 王杰, 李远, 等 075007 (6)
- 一种固态化瞬态强场测试平台研制 高景明, 李嵩, 金尚东, 等 075008 (5)
- 霍普金森杆电磁加载系统设计及实验 王禹晨, 刘晓艳, 黄懿贇, 等 075009 (6)
- 自触发紫外预电离开关脉冲击穿时延抖动影响因素及改进方法 王天驰, 王海洋, 黄涛, 等 075010 (7)
- 氙钛等离子体高压查尔斯特鞘层特性理论研究 沈伯昊, 董焯, 周前红, 等 075011 (9)
- 强流二极管阳极靶温度和热形变模拟 胡杨, 蔡丹, 孙江, 等 075012 (7)
- 平顶脉冲磁场连续微调控系统设计 万昊, 张绍哲, 刘沁莹, 等 075013 (6)
- 电爆炸法制备纳米颗粒收集方法 李琛, 韩若愚, 耿金越, 等 075014 (6)
- 水中金属丝爆引燃铝粉悬浮液冲击波增强效应 袁伟, 韩若愚, 李琛, 等 075015 (6)

特种电源技术

- 紧凑小型脉冲功率源ARC-01/02及其应用 张自成, 李典耕, 刘世飞, 等 075016 (8)
- 爆炸驱动铁电体电源快脉冲产生技术 伍友成, 刘高旻, 贺红亮, 等 075017 (7)
- 重频条件下电容器充电电源谐振电路的稳定 李泽峰, 刘庆想, 李伟 075018 (6)
- 50 kV紧凑型自动化纳秒脉冲源的研制 谢霖霖, 石凌, 王伟 075019 (4)

前沿技术与交叉科学

- 电动汽车高压线束电磁脉冲压接装置的研制及实验 李成祥, 沈婷, 周言, 等 079001 (6)
- 硅光电倍增管自动增益校正系统设计 张琦, 王传伟, 李洪涛 079002 (6)

Special Issue on Pulsed Power and Special Power Supply Technology: Part I

CONTENTS

• High Current Accelerator and Particle Beams Technology •

Design and experimental study of magnetic field regulating ion source *Li Jie, Dong Pan, Wang Tao, et al.* 074001(5)

Beam dynamics calculation of cyclotron based on Geant4 *Zhang Gang, He Xiaozhong, Du Yang, et al.* 074002(6)

Development of the MHz repetition bipolar pulse induction acceleration system *Huang Ziping, Long Jidong, Wang Wei, et al.* 074003(6)

• Pulsed Power Technology •

Review of high power compact pulse forming network-Marx generators *Liu Shifei, Zhang Jiande, Zhang Zicheng* 075001(11)

Lagrangian magneto-hydrodynamics simulation for underwater electrical wire explosion *Liu Zhigang, Zou Xiaobing, Wang Xinxin* 075002(11)

Effect of high-current pulsed arc on the evaporation characteristics of graphite electrode *Dai Hongyu, Guo Jingrun, Yu Bin, et al.* 075003(7)

Empirical formula of breakdown electric field and time delay for SF₆ gas switch under nanosecond pulse and hundreds of kV/cm electric field *Guo Fan, Jia Wei, Xie Linshen, et al.* 075004(6)

Voltage droop compensation based on resonant circuit for solid-state Marx generators *Rao Junfeng, Wang Xiuzhi, Wang Yonggang, et al.* 075005(7)

Research on tunable pulse generation with MHz repetition rate based on compensated 4H-SiC photoconductive semiconductor *Chu Xu, Wang Langning, Zhu Xiaoping, et al.* 075006(6)

Current measurement for LTD single branch verification device *Wei Bing, Wang Jie, Li Yuan, et al.* 075007(6)

Development of solid-state platform for transient intense field test *Gao Jingming, Li Song, Jin Shangdong, et al.* 075008(5)

Design and experiment of Hopkinson bar electromagnetic loading system *Wang Yuchen, Liu Xiaoyan, Huang Yiyun, et al.* 075009(6)

Influence factors of the pulsed breakdown time delay jitter of a self-triggered UV-illuminated switch and an improvement method *Wang Tianchi, Wang Haiyang, Huang Tao, et al.* 075010(7)

Theoretical study on characteristics of high voltage Child-sheath of mixed D⁺ and Ti²⁺ plasmas *Shen Bohao, Dong Ye, Zhou Qianhong, et al.* 075011(9)

Simulation of the temperature and thermal deformation of anode targets in high-current diodes *Hu Yang, Cai Dan, Sun Jiang, et al.* 075012(7)

Design of continuous micro-control system for flat-top pulsed magnetic field *Wan Hao, Zhang Shaozhe, Liu Qinying, et al.* 075013(6)

Collection method for nanoparticles prepared by electric explosion *Li Chen, Han Ruoyu, Geng Jinyue, et al.* 075014(6)

Enhancement of underwater shock waves generated by exploding-wire-initiated reactions of aluminum powder suspension *Yuan Wei, Han Ruoyu, Li Chen, et al.* 075015(6)

• Special Power Supply Technology •

Compact small-sized pulsed power sources ARC-01/02 and their applications *Zhang Zicheng, Li Diangeng, Liu Shifei, et al.* 075016(8)

Fast pulse generation technology based on explosive driven ferroelectric generators *Wu Youcheng, Liu Gaomin, He Hongliang, et al.* 075017(7)

Stabilizing of resonant circuit of capacitor charging power supply under repetition frequency condition *Li Zefeng, Liu Qingxiang, Li Wei* 075018(6)

Development of 50 kV compact automatic nanosecond pulse source *Xie Linshen, Shi Ling, Wang Wei* 075019(4)

• Advanced Interdisciplinary Science •

Development and experiment of electromagnetic pulse crimping device for high-voltage wire harness of electric vehicles *Li Chengxiang, Shen Ting, Zhou Yan, et al.* 079001(6)

Design of automatic gain correction system for silicon photomultiplier tube *Zhang Qi, Wang Chuanwei, Li Hongtao* 079002(6)