

第 14 卷 第 2 期 2006 年 4 月

## 目次

### 研究论文

- Formulation Tailoring for Ballistic Properties of Composite Propellants ..... Muhammad MAZHAR Iqbal, WANG Liang (81)
- 4-羟基-3,5-二硝基吡啶铅盐在固体推进剂燃烧中的催化作用 ..... 赵凤起, 高红旭, 胡荣祖, 宋秀铎, 高茵, 李上文 (86)
- CL-20 基无烟 NEPE 推进剂的热行为 ..... 刘小刚, 张亚俊, 孙育坤, 樊学忠, 任晓宁, 李吉祯 (89)
- 含 HNIW 的 NEPE 推进剂的热分解特性研究 ..... 李杰, 张维, 罗运军, 赵辉, 马俪芳, 谭惠民 (92)
- HAN 基水下单元推进剂性能研究 ..... 李志良, 马忠亮, 肖忠良, 张续柱 (95)
- 微波消解-火焰原子吸收光谱法测定某推进剂中 Pb、Cu 和 Ca 元素含量 ..... 雷蓓, 张敏 (99)
- 带尾翼爆炸成型弹丸的新技术 ..... 赵慧英, 沈兆武, 李成兵, 马宏昊, 梅群 (102)
- 基于 ALE 算法的爆破战斗部爆炸效应数值模拟研究 ..... 李卫平, 王少龙, 汪德武, 韩秀凤 (105)
- $\epsilon$ -HNIW 在不同溶剂中的晶型稳定性 ..... 刘进全, 欧育湘, 孟征, 王艳飞, 吴相国 (108)
- 含能配合物  $[\text{Cd}(\text{CHZ})_3](\text{NO}_3)_2$  的极谱伏安行为 ..... 刘影, 杨利, 张同来, 张建国 (111)
- 3,4-二氨基咪唑的三种简便合成方法 ..... 黄明, 李洪珍, 李金山 (114)
- 3,6-二胍基-1,2,4,5-四嗪及其盐的合成与表征 ..... 潘劫, 何金选, 陶永杰 (116)
- 强光致盲弹药技术的研究 ..... 霸书红, 焦清介, 杜志明 (118)
- 发射药燃速压力指数变化规律的研究 ..... 黄振亚, 王泽山, 张远波 (123)
- 甲基紫试验用于长贮发射药安全性检测的可行性探讨 ..... 路桂娥, 江劲勇, 李孝玉, 李树兴 (127)
- 底-6 乙底火药剂的燃烧温度测定与计算 ..... 陈明华, 马桂海, 柳维旗, 刘礼斌 (129)
- Arrhenius 方法的局限性讨论 ..... 高大元, 何碧, 何松伟, 董海山, 李敬明 (132)
- 高聚物粘结炸药试件应力状态的超声法测试技术 ..... 张伟斌, 赵北君, 田勇, 黄辉, 朱世富, 杨占锋 (136)
- 微/纳米含能薄膜材料的制备与应用研究 ..... 王晓丽, 焦清介 (139)
- 纳米级 RDX 颗粒的制备 ..... 何得昌, 周霖, 徐军培 (142)
- 雷管可靠性试验环境系数的确定方法研究 ..... 赵婉, 温玉全, 王玮 (144)
- 乳化炸药基质分散相液滴大小及分布的影响因素 ..... 张显丕, 郭子如, 李道平 (147)
- 炮孔装药量与炮孔间距关系的研究 ..... 罗勇, 沈兆武, 夏红兵 (151)
- HTPB/AP 推进剂的慢速烤燃特征 ..... 陈中斌, 唐承志, 赵孝彬 (155)

### 研究快报

- 由量子化学计算快速预测含能材料晶体密度的简易新方法——HEDM 的定量分子设计 ... 邱玲, 肖鹤鸣 (158)
- 芳香羧酸类配位聚合物在含能材料中的应用研究 ..... 吴瑞凤, 张同来, 张建国, 乔小晶, 于文广 (159)

### 读者·作者·编者

- 会议信息(一)(104) 会议信息(二)(138) 关于 2006 年《钝感弹药研究论文专辑》的征稿启事(160)
- 关于 2007 年《推进剂研究论文专辑》的征稿启事(160) 关于《含能材料》研究快报的征稿启事(160)
- 《含能材料》2005 年第 6 期被 EI 收录论文(VII) 《含能材料》2005 年增刊被 EI 收录论文(VII) 《含能材料》征稿启事(VIII)

# CHINESE JOURNAL OF ENERGETIC MATERIALS

Vol. 14, No. 2, 2006

## CONTENTS

- Formulation Tailoring for Ballistic Properties of Composite Propellants ..... Muhammad MAZHAR Iqbal, WANG Liang ( 81 )
- Combustion Energy Determination of Lead Salt of 4 - Hydroxy - 3 , 5 - dinitropyridine and its Catalysis for RDX - CMDB  
Propellant Combustion ..... ZHAO Feng-qi, GAO Hong-xu, HU Rong-zu, SONG Xiu-duo, GAO Yin, LI Shang-wen ( 86 )
- Thermal Behaviors of Smokeless NEPE Propellants with CL-20  
..... LIU Xiao-gang, ZHANG Ya-jun, SUN Yu-kun, FAN Xue-zhong, REN Xiao-ning, LI Ji-zhen ( 89 )
- Thermal Decomposition of NEPE Propellant Containing HNIW  
..... LI Jie, ZHANG Wei, LUO Yun-jun, ZHAO Hui, MA Li-fang, TAN Hui-min ( 92 )
- Properties of HAN-based Underwater Monopropellants ..... LI Zhi-liang, MA Zhong-liang, XIAO Zhong-liang, ZHANG Xu-zhu ( 95 )
- Determination of Lead, Copper and Calcium in Propellant by Flame Atomic Absorption Spectrometry with Microwave  
Assisted Digestion ..... LEI Pei, ZHANG Min ( 99 )
- A New Way of Explosively Formed Projectile with Stabilizing Fins  
..... ZHAO Hui-ying, SHEN Zhao-wu, LI Cheng-bing, MA Hong-hao, MEI Qun ( 102 )
- Numerical Simulation of Blasting Warheads Exploding Based on ALE Method  
..... LI Wei-ping, WANG Shao-long, WANG De-wu, HAN Xiu-feng ( 105 )
- Polymorph Stability of  $\epsilon$ -HNIW in Different Solvents ..... LIU Jin-quan, OU Yu-xiang, MENG Zheng, WANG Yan-fei, WU Xiang-guo ( 108 )
- Polarographic and Voltammetric Behaviors of  $[\text{Cd}(\text{CHZ})_3](\text{NO}_3)_2$  ..... LIU Ying, YANG Li, ZHANG Tong-lai, ZHANG Jian-guo ( 111 )
- Three Methods of Synthesizing 3,4-Diaminofurazan ..... HUANG Ming, LI Hong-zhen, LI Jin-shan ( 114 )
- Synthesis and Characterization of 3,6-Dihydrazine-1,2,4,5-tetrazine and its Energetic Salts  
..... PAN Jie, HE Jin-xuan, TAO Yong-jie ( 116 )
- The Technology of the Strong Light Blindness Ammunition ..... BA Shu-hong, JIAO Qing-jie, DU Zhi-ming ( 118 )
- Regularity of Burning Rate Pressure Exponent for Propellant ..... HUANG Zhen-ya, WANG Ze-shan, ZHANG Yuan-bo ( 123 )
- Feasibility of Methyl-violet Test Used in Storage Stability of Propellants ..... LU Gui-e, JIANG Jin-yong, LI Xiao-yu, LI Shu-xing ( 127 )
- Determination and Calculation of the Burning Temperature for DJ-6B Primer Compositions  
..... CHEN Ming-hua, MA Gui-hai, LIU Wei-qi, LIU Li-bin ( 129 )
- Discussion on Limitations of the Arrhenius Methodology ..... GAO Da-yuan, HE Bi, HE Song-wei, DONG Hai-shan, LI Jing-ming ( 132 )
- Ultrasonic Testing Stress of Polymer Bonded Explosive Specimens  
..... ZHANG Wei-bin, ZHAO Bei-jun, TIAN Yong, HUANG Hui, ZHU Shi-fu, YANG Zhan-feng ( 136 )
- Preparation and Application of Micron/Nanometer Energetic Film Materials ..... WANG Xiao-li, JIAO Qing-jie ( 139 )
- Preparation of Nanometer RDX Particle ..... HE De-chang, ZHOU Lin, XU Jun-pei ( 142 )
- Determination Method for the Environmental Coefficient of Detonators in Reliability Test  
..... ZHAO Wan, WEN Yu-quan, WANG Wei ( 144 )
- Factors Affecting the Droplet Size and Distribution of Dispersion Phase of Emulsion Explosives Matrix  
..... ZHANG Xian-pei, GUO Zi-ru, LI Dao-ping ( 147 )
- Correlations between Explosive Charge and Space of Boreholes in Blasting ... LUO Yong, SHEN Zhao-wu, XIA Hong-bing ( 151 )
- Characteristics of HTPB/AP Propellants in Slow Cook-off ..... CHEN Zhong-e, TANG Cheng-zhi, ZHAO Xiao-bin ( 155 )
- A New Simple Method for Rapid Predicting Crystalline Densities of Energetic Materials Based on Quantum Chemistry  
—Quantitative Molecular Design of HEDM ..... QIU Ling, XIAO He-ming ( 158 )
- Application Research on Coordination Polymer Containing Organic Aromatic Carboxylic Acid for Energetic Materials  
..... WU Rui-feng, ZHANG Tong-lai, ZHANG Jian-guo, QIAO Xiao-jing, YU Wen-guang ( 159 )