

### 目次

第 19 卷 第 6 期 2011 年 12 月 25 日(卷终)

含能材料安全评价专辑

#### ◆ 研究论文

- Friction Sensitivity of Nitramines. Part I: Comparison with Impact Sensitivity and Heat of Fusion ..... Marcela Jungová, Svatopluk Zeman, Adéla Husarová (603)
- Friction Sensitivity of Nitramines. Part II: Comparison with Thermal Reactivity ..... Marcela Jungová, Svatopluk Zeman, Adéla Husarová (607)
- Friction Sensitivity of Nitramines. Part III: Comparison with Detonation Performance ..... Svatopluk Zeman, Marcela Jungová, Adéla Husarová (610)
- Friction Sensitivity of Nitramines. Part IV: Links to Surface Electrostatic Potentials ..... Zdeněk Friedl, Marcela Jungová, Svatopluk Zeman, Adéla Husarová (613)
- 电性拓扑状态指数预测硝基类含能材料静电感度 ..... 周璐璐, 蒋军成, 潘勇, 王睿 (616)
- 高品质 RDX 的晶体特性及冲击波起爆特性 ..... 黄明, 李洪珍, 徐容, 周小清, 聂福德, 陈波 (621)
- 二茂铁种类对超细 AP/二茂铁体系感度的影响 ..... 张炜, 杨军, 俞艳, 鲍桐, 柳先玮 (627)
- HMX 晶体内部孔隙率、缺陷类型及颗粒度对冲击波感度的影响 ..... 徐容, 李洪珍, 康彬, 李金山, 黄明, 卢校军 (632)
- 杂质晶型对  $AlH_3$  样品稳定性和安全性影响的研究 ..... 朱朝阳, 马煜, 张素敏, 王宏志, 曹一林 (637)
- 三叠氮化铝分子结构及爆炸性能理论研究 ..... 周雪松, 罗琼, 焦清介, 蒲洋 (641)
- 无硫黑火药的热分解动力学研究 ..... 俞进阳, 陈利平, 姜夕博, 彭金华 (646)
- 动态真空安定性试验方法研究(IV): HMX 的热分解 ..... 刘芮, 尹艳丽, 张同来, 杨利, 张建国, 周遵宁, 乔小晶, 王文杰, 王丽琼 (650)
- 绝热加速量热仪表征含能材料热感度的探讨 ..... 刘颖, 杨茜, 陈利平, 何中其, 陆燕, 陈网桦 (656)
- HMX 基 PBX 试件的热安全性及与高分子材料的相容性 ..... 陈捷, 彭强, 钱文, 王丽燕, 左玉芬, 池钰 (661)
- 密封状态下 HNS 的热烤试验研究 ..... 都振华, 张蕊, 同红海, 李芳, 付东晓 (664)
- 固体推进剂慢速烤燃特性的影响因素研究 ..... 赵孝彬, 李军, 程立国, 王宁, 王拯, 陈中斌, 王晨雪, 秦超, 程新丽 (669)
- 加速老化对炸药件安全性的影响研究 ..... 高大元, 申春迎, 文尚刚, 黄毅民, 李敬明 (673)
- 高聚物粘结炸药老化模型比较分析 ..... 张国辉, 韦兴文, 陈捷, 舒远杰, 宋绵新 (679)
- PBX 一维动态拉伸性能实验研究 ..... 蓝林钢, 温茂萍, 李明, 庞海燕, 敬仕明 (684)
- 发射药冲击波感度的试验研究 ..... 陈晓明, 金鹏刚, 张衡, 刘来东, 宋长文, 张邹邹, 赵瑛 (689)
- 叠氮胍安全性能参数的实验测定 ..... 王建灵, 姬月萍, 高福磊, 郭炜, 任松涛 (693)
- 高密度压装炸药燃烧转爆轰研究 ..... 陈朗, 王飞, 伍俊英, 王晨, 鲁峰, 黄毅民, 代晓淦, 文玉史 (697)
- 压制密度及密度均匀性对装药撞击安全性的影响 ..... 王淑萍, 王晓峰, 金大勇 (705)
- 高超音速侵彻混凝土过程中侵彻弹体装药塑性安定性分析 ..... 张旭, 曹仁义, 谭多望 (709)
- 子弹撞击对发射药易损性响应影响研究 ..... 张邹邹, 杨丽侠, 刘来东, 张衡 (715)
- 火箭发动机残余装药对战斗部毁伤效果影响的模拟研究 ..... 王宁, 赵孝彬, 王晨雪, 田军 (720)
- 一种 RDX-CMDB 推进剂危险性能研究 ..... 秦能, 裴江峰, 王明星 (725)
- 膨化硝铵炸药生产专用碾混机安全性研究 ..... 罗海滔, 胡炳成, 吕春绪, 刘祖亮 (730)
- 新型钝感含能增塑剂 3-硝基咪唑-4-甲醚的合成与性能研究 ..... 沈华平, 卢艳华, 曹一林, 何金选 (735)
- 纳米复合  $Fe_2O_3/Al/RDX$  的制备与性能测试 ..... 王瑞浩, 张景林, 王金英, 潘军杰, 张俊 (739)

#### ◆ 研究快报

- 2-硝基-4, 5-二氧基-1H-咪唑的一锅法合成(英) ..... 许诚, 毕福强, 樊学忠, 李吉祯, 王伯周, 葛忠学, 刘庆, 张国防 (743)
- RDX 单晶的生长及加工 ..... 李洪珍, 周小清, 徐容, 黄明, 王述存 (745)
- 一种高能量密度材料 DNTF 的低成本制备技术 ..... 王军, 周小清, 张晓玉, 李金山, 黄奕刚 (747)

#### ◆ 人物

- Prof. Svatopluk ZEMAN ..... (前插一)

#### ◆ 读者·作者·编者

- 向审稿人致谢(606) 向作者致谢(626) 《含能材料》征订启事(631) 2011 年中国兵工学会学术年会在苏州举行(660) 化工材料研究所承办第三届中俄青年学术研讨会(683) 《含能材料及相关物手册》出版(692) 《热分析动力学》、《量热学基础与应用》出版(744)
- 《含能材料的研究与发展》专辑征稿——纪念董海山院士诞辰 80 周年(748) 全国危险物质与安全应急技术研讨会在渝召开(前插二)
- 材料化学实验室(后插一) 灵巧雷管简介(后插二)

2011 年(第 19 卷)总目次 ..... (·I·)

期刊基本参数: CN 51-1489/TK \* 1993 \* b \* 16 \* 120 \* zh + en \* P \* ¥20.00 \* 1000 \* 33 \* 2011-12

## Article

- 603 Marcela Jungová, Svatopluk Zeman, Adéla Husarová **Friction Sensitivity of Nitramines. Part I: Comparison with Impact Sensitivity and Heat of Fusion**
- 607 Marcela Jungová, Svatopluk Zeman, Adéla Husarová **Friction Sensitivity of Nitramines. Part II: Comparison with Thermal Reactivity**
- 610 Svatopluk Zeman, Marcela Jungová, Adéla Husarová **Friction Sensitivity of Nitramines. Part III: Comparison with Detonation Performance**
- 613 Zdeněk Friedl, Marcela Jungová, Svatopluk Zeman, Adéla Husarová **Friction Sensitivity of Nitramines. Part IV: Links to Surface Electrostatic Potentials**
- 616 ZHOU Lu-lu, JIANG Jun-cheng, PAN Yong, WANG Rui **Prediction of the Electrostatic Sensitivity of Nitro Compounds with Electropological State Indices**
- 621 HUANG Ming, LI Hong-zhen, XU Rong, ZHOU Xiao-qing, NIE Fu-de, CHEN Bo **Evaluation of Crystal Properties and Initiation Characteristics of Decreased Sensitivity RDX**
- 627 ZHANG Wei, YANG Jun, YU Yan, BAO Tong, LIU Xian-wei **Type of Ferrocenes on Sensitivities of Ultra-fine AP and Ferrocene Mixture**
- 632 XU Rong, LI Hong-zhen, KANG Bin, LI Jin-shan, Huang Ming, LU Xiao-jun **Effects of HMX Crystal Characteristics on Shock Sensitivities: Crystalline Inter Voids, Particle Size, Morphology**
- 637 ZHU Zhao-yang, MA Yu, ZHANG Su-min, WANG Hong-zhi, CAO Yi-lin **Effects of Phase Impurity on Stability and Security of Aluminum Hydride**
- 641 ZHOU Xue-song, LUO Qiong, JIAO Qing-jie, PU Yang **Theoretical Study on Structure and Explosion Performance for Aluminum Triazide**
- 646 YU Jin-yang, CHEN Li-ping, JIANG Xi-bo, PENG Jin-hua **Thermal Kinetics of Sulphur-free Black Powder**
- 650 LIU Rui, YIN Yan-li, ZHANG Tong-lai, YANG Li, ZHANG Jian-guo, ZHOU Zun-ning, QIAO Xiao-jing, WANG Wen-jie, WANG Li-qiong **Dynamic Vacuum Stability Test (DVST) Method (IV): Thermal Decomposition of HMX**
- 656 LIU YING, YANG Qian, CHEN Li-ping, HE Zhong-qi, LU Yan, CHEN Wang-hua **Thermal Sensitivity of Energetic Materials Characterized by Accelerating Rate Calorimeter (ARC)**
- 661 CHEN Jie, PENG Qiang, QIAN Wen, WANG Li-yan, ZUO Yu-fen, CHI Yu **Thermal Safety and Compatibilities with Silicone Rubber Cushion and Polyurethane Adhesive of PBX Specimen Based on HMX**
- 664 DU Zhen-hua, ZHANG Rui, TONG Hong-hai, LI Fang, FU Dong-xiao **Cook-off Test of HNS under Sealed Condition**
- 669 ZHAO Xiao-bin, LI Jun, CHENG Li-guo, WANG Ning, WANG Zheng, CHEN Zhong-e, WANG Chen-xue, QIN Chao, CHENG Xin-li **Influence Factors of Slow Cook-off Characteristic for Solid Propellant**
- 673 GAO Da-yuan, SHEN Chun-ying, WEN Shang-gang, HUANG Yi-min, LI Jing-ming **Accelerated Aging on Effect of Safety for Explosive Parts**
- 679 ZHANG Guo-hui, WEI Xing-wen, CHEN Jie, SHU Yuan-jie, SONG Mian-xin **Comparison of Aging Models of Polymer Bonded Explosives**

- 684 LAN Lin-gang, WEN Mao-ping, LI Ming, PANG Hai-yan,  
JING Shi-ming **One-dimension Dynamic Tensile Properties of PBX**
- 689 CHEN Xiao-ming, JIN Peng-gang, ZHANG Heng,  
LIU Lai-dong, SONG Chang-wen, ZHANG Zou-zuo,  
ZHAO Ying **Experimental study on the Shock Wave Sensitivity Response of Gun Propellant**
- 693 WANG Jian-ling, JI Yue-ping, GAO Fu-lei, GUO Wei,  
REN Song-tao **Experimental Measurement of Safety Parameters of DIANP**
- 697 CHEN Lang, WANG Fei, WU Jun-ying, WANG Chen,  
LU Feng, HUANG Yi-min, DAI Xiao-gan, WEN Yu-shi **Investigation of the Deflagration to Detonation Transition in Pressed High Density Explosives**
- 705 WANG Shu-ping, WANG Xiao-feng, JIN Da-yong **Influence of Pressed Explosive Charges Density and its Distribution on Impact Safety**
- 709 ZHANG Xu, CAO Ren-yi, TAN Duo-wang **Plastic Charge Stability Analysis of Supersonic Projectile During Penetration of Concrete Targets**
- 715 ZHANG Zou-zou, YANG Li-xia, LIU Lai-dong,  
ZHANG Heng **Vulnerable Response of Gun Propellant by Bullet Impact Test**
- 720 WANG Ning, ZHAO Xiao-bin, WANG Chen-xue, TIAN Jun **Simulation on Influence of Residual Rocket Motor Propellant on Warhead Damage Effect**
- 725 QIN Neng, PEI Jiang-feng, WANG Ming-xing **Hazard Property of the RDX-CMDB Propellant**
- 730 LUO Hai-tao, HU Bing-cheng, Lü Chun-xu, LIU Zu-liang **Safety of Continuous Grinding and Mixing Machine Used Specially for Expanded Ammonium Nitrate Explosive**
- 735 SHEN Hua-ping, LU Yan-hua, CAO Yi-lin, HE Jin-xuan **Synthesis and Characterization of Novel Insensitive Energetic Plasticizer 3-Nitrofurazan-4-monomethyl Ether**
- 739 WANG Rui-hao, ZHANG Jing-lin, WANG Jin - ying,  
PAN Jun-jie, ZHANG Jun **Preparation and Characterization of Nano-composite Energetic Materials Fe<sub>2</sub>O<sub>3</sub>/Al/RDX**
- Letter**
- 743 XU Cheng, BI Fu-qiang, FAN Xue-zhong, LI Ji-zhen,  
WANG Bo-zhou, GE Zhong-xue, LIU Qing,  
ZHANG Guo-fang **One-pot Synthesis of 2-Nitro-4,5-dicyano-1H-imidazole**
- 745 LI Hong-zhen, ZHOU Xiao-qing, XU Rong,  
HUANG Ming, WANG Shu-cun **Growth and Machining of RDX Single Crystal**
- 747 WANG Jun, ZHOU Xiao-qing, ZHANG Xiao-yu,  
LI Jin-shan, HUANG Yi-gang **A Low-cost Preparation Technology of High Energy Density Material DNTF**
- EM People** **Prof. Svatopluk ZEMAN**
- 1 · **Annual Cumulative Contents ( Vol. 19, 2011 )**