

- Spectral Analysis*, 2007, 27(8): 1457-1460.
- [7] 吕春绪. 耐热硝基芳烃化学[M]. 北京: 兵器工业出版社, 2000: 122-140.
- Lü Chun-xu. Chemistry of Heat-resistant Nitryl-arenes[M]. Beijing: The Publishing House of Ordnance Industry, 2000: 122-140.
- [8] 杨振英, 马思孝, 邓琼, 等. 冲击片雷管的参数设计[J]. 火工品, 1996(1): 31-35.
- YANG Zhen-ying, MA Si-xiao, DENG Qiong, et al. Parameter design of slapper detonator[J]. *Initiators & Pyrotechnics*, 1996(1): 31-35.
- [9] Waschl J, Richardson D. The effect of the SSA upon the flyer plate shock sensitivity of HNS[J]. *Journal of Energetic Materials*, 1991(9): 269-282.
- [10] Ekip M, Setchell R E. A shock initiation model for fine grained HNS[R]. DE89007641 (SAND88-2385c).
- [11] 冯增国, 陈博仁, 刘佐才. 2,2',4,4',6,6'-六硝基联苯(HNBB)和2,2',4,4',6,6'-六硝基芪(HNS)的分子结构[J]. 兵工学报, 1990(2): 44-50.
- FENG Zeng-guo, CHEN Bo-ren, LIU Zuo-cai. Molecular structures of 2,2',4,4',6,6'-hexanitrobenzyl (HNBB) and 2,2',4,4',6,6'-hexanitrostilbene(HNS)[J]. *Acta Armamentarii*, 1990(2): 44-50.

Study on Tera-hertz Spectroscopy of HNS

HUANG Ping¹, SHI Wei-fan¹, ZHANG Cun-lin², QIAN Xin-ming¹, LIU Zhen-yi¹

(1. State Key Laboratory of Explosion Science and Technology, Beijing Institute of Technology, Beijing 100081, China;

2. Beijing Key Laboratory for Terahertz Spectroscopy and Imaging, Key Laboratory of Terahertz Optoelectronics, Ministry of Education, Department of Physics, Capital Normal University, Beijing 100048, China)

Abstract: The absorption spectra of HNS, in the frequency range of 0.2-4.0 THz, were calculated by using quantum chemistry calculation method, and the theoretical calculation results show that the characteristic peaks of HNS are located in 1.9 THz and 3.3 THz. The experimental results offered by THz time-domain spectroscopy technology and FTIR show that the characteristic peaks of HNS are located in 1.7 THz and 3.1 THz. The experimental results agree with the theoretical calculation results, which show that HNS has distinct characteristic absorption peaks in the frequency range of 0.2-4.0 THz.

Key words: physical chemistry; 2,2',4,4',6,6'-hexanitrostilbene(HNS); tera-hertz spectroscopy; absorption spectra



欢迎订阅 2010 年《固体火箭技术》

固体火箭技术

JOURNAL OF SOLID ROCKET TECHNOLOGY

ISSN 1006-2793

CN 61-1176/V

CODEN GHJIFL

《固体火箭技术》是由中国航天科技集团公司主管,中国航天科技集团公司第四研究院与中国宇航学会固体推进专业委员会主办的学术期刊。1978年创刊,国内外公开发行,主要刊登固体火箭相关专业领域的研究论文、实验简报、综述等内容,栏目分火箭研究及应用,发动机,推进剂,结构、材料与工艺,测试技术。本刊已被国外:美国《工程索引》(Ei Compendex 数据库)、《化学文摘》(CA)、《剑桥科学文摘》(CSA)、俄罗斯《文摘杂志》(AJ)、英国《科学文摘》(SA)、日本科学技术社数据库;国内:中文核心期刊(《中文核心期刊要目总览》)、中国科技论文统计源刊(中国科技核心期刊)、中国科学引文数据库核心库(中科院 CSCD)、中国核心期刊(遴选)数据库(万方-数字化期刊群)、中国期刊全文数据库(CJFD)、中国科技期刊数据库(VIP)等十几种国内外权威检索机构收录。

《固体火箭技术》为双月刊,逢双月末出版。每期定价 20.00 元,全年定价 120.00 元。本刊参加了天津市大寺泉全国非邮发的联合征订,定阅单位或个人可登陆该网址: <http://www.lhzd.com> 查询,或与本刊编辑部直接联系邮购。本刊联系电话:(029)83603254; 传真:(029)83603315; <http://pub.gthjjs.com>; E-mail: gthj@chinajournal.net.cn; 通讯地址:西安市 120 信箱 47 所《固体火箭技术》编辑部(710025)。