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## Study on Tera-hertz Spectroscopy of HNS

HUANG Ping<sup>1</sup>, SHI Wei-fan<sup>1</sup>, ZHANG Cun-lin<sup>2</sup>, QIAN Xin-ming<sup>1</sup>, LIU Zhen-yi<sup>1</sup>

(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



读者·作者·编者

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