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Review on Insensitive Non-metallic Energetic Ionic Compounds of Tetrazolate Anions

BI Fu-qiang, FAN Xue-zhong, XU Cheng, WANG Bo-zhou, ZHENG Ya-feng, GE Zhong-xue, LIU Qing

(Xi'an Modern Chemistry Research Institute, Xi'an 710065, China)

Abstract: Non-metallic energetic ionic compounds of tetrazolate anion are a kind of insensitive energetic materials. The progresses in the insensitive non-metallic energetic salts of aminotetrazolate, nitrotetrazolate, nitraminetetrazolate, azotetrazolate and furazan functionalized tetrazolate anions were reviewed in detail. It is found that most of ionic compounds based on tetrazolate anions which contain traditional energetic functionalities upon the carbon of position 5 such as nitro and nitrimino functionalities, show high sensitivities, while the sensitivities of ionic compounds based on 5-aminotetrazolate, 5, 5'-azotetrazolate and 5-(4-aminofurazan-3-yl) tetrazolate are so low that they can be used as insensitive energetic materials. Furthermore, new trends in research of insensitive non-metallic energetic ionic compounds of tetrazolate anion were proposed.

Key words: applied chemistry; insensitive; tetrazolate; energetic ionic compounds; research progress; review

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近年,《含能材料》得到了广大作者的大力支持,为表达我们深深的谢意,特向2011~2012两年来发表两篇以上论文的作者(第一作者)赠送2013年全年《含能材料》。本刊期望在新的一年里能继续得到广大作者更多的关心!欢迎赐稿!

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