

PREPARATION AND CRYSTAL STRUCTURE OF DI-(3-NITRO-1,2,4-TRIAZOL-5-ONATE)- HEXAHYDRATE MANGANESE (I) WITH CRYSTAL WATER

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ABSTRACT The salt of $[\text{Mn}(\text{H}_2\text{O})_6](\text{NTO})_2 \cdot 2\text{H}_2\text{O}$ was prepared by mixing the aqueous solution of lithium 3-nitro-1,2,4-triazol-5-onate and manganese (I) sulfate. It was characterized by thermal analysis, elemental analysis and IR measurement. The crystal structure of $[\text{Mn}(\text{H}_2\text{O})_6](\text{NTO})_2 \cdot 2\text{H}_2\text{O}$ was determined by a single crystal diffraction analysis. The crystal belongs to space group $C2/C$ with crystal parameters of $a = 23.423(3) \text{ \AA}$, $b = 6.5262(9) \text{ \AA}$, $c = 19.412(3) \text{ \AA}$, $\alpha = 90.00(0)^\circ$, $\beta = 142.713(7)^\circ$, $\gamma = 90.00(0)^\circ$, $V = 1797.6(4) \text{ \AA}^3$, $Z = 4$, $D_c = 1.70 \text{ g} \cdot \text{cm}^{-3}$, $\mu = 7.87 \text{ cm}^{-1}$, $F(000) = 947.75$.

KEY WORDS salt of NTO, preparation, crystal structure.

简 讯

四项国军标送审稿在蓉通过审查

由中国工程物理研究院化工材料研究所编制的《炸药试验方法 平面飞片速度的测定》、《炸药试验方法 50mm 圆筒试验》、《炸药试验方法 拉伸应力—应变曲线测定》、《炸药试验方法 压缩应力—应变曲线测定》四项国军标(送审稿)审查会于一九九二年十二月十六日至十八日在四川成都召开。参加会议的有军代表刘永昌、中国工程物理研究院副总工程师张寿齐、太原机械学院教授叶毓鹏、西安近代化学研究所副研究员王润周、北京理工大学副教授黄正平等三十名专家。与会专家根据国军标编写有关规定,发扬技术民主,认真讨论,逐条审查并一致通过了四项国军标送审稿。编制组根据审查会意见已整理出报批稿上报。上述四项国军标的制定,对含能材料的研究,将起到一定的促进作用。

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