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摘要(中)	<p>釩碲鋇氧化物玻璃在中紅外光區存在穿透帶，其截止頻率在短波長約為 6000 <math>\text{cm}^{-1}</math>，在長波長約為 2000 <math>\text{cm}^{-1}</math>。本論文以常溫紅外光譜研究釩碲鋇氧化物玻璃，探討由成份改變而產生的結構變化。實驗結果發現，隨著氧化鋇在玻璃成份的增加，氧化釩會從五配位的 VO5 結構轉變為四配位的 VO4 結構，而碲仍維持在三配位 TeO3 結構。在紅外光穿透光譜對於 OH 一離子群的吸收峰位置的觀察，得到樣品抗水性的比較，系列一的樣品中以 70V2O5-15TeO2-15BaO 玻璃抗水性較差，而系列二的樣品中則以 40V2O5-20TeO2-40 BaO 玻璃的抗水性較好。此外，本實驗室目前所用的高溫反射附件，在高溫下會產生源於附件本身的反射峰，嚴重影</p>

	響變溫反射光譜的量測結果，亟須找出發生的原因並加以改善。
摘要 (英)	Vanadium-tellurium-barium oxide glasses (VTBOG) exhibit infrared cut-off frequencies in the midinfrared spectral range for short and long wavelengths near 6,000 cm <sup>-1</sup> and 2,000 cm <sup>-1</sup> , respectively. Structure of the VTBOG in dependence of the composition was studied by infrared spectroscopy at room temperature. Experimental results deduced from the reflectance reveal that with the increase in the BaO content the five-coordinate VO <sub>5</sub> structure transforms gradually into the four-coordinate VO <sub>4</sub> structure, whilst the three-coordinate TeO <sub>3</sub> structure remains nearly unchanged. In the study of the OH— absorption peaking at 3440cm <sup>-1</sup> it is found that, among samples studied, the 70V2O <sub>5</sub> -15TeO <sub>2</sub> -15BaO glass in sample series I exhibits the highest hydrophilicity and the 40V2O <sub>5</sub> -20TeO <sub>2</sub> -40BaO one in sample series II displays the best hydrophobicity. In addition, peaks probably arising from the reflectance set employed emerge in the spectral range of interest at high temperatures. It is necessary to find the origin and to remove this artifact in order to obtain unambiguous information from the temperature dependent infrared reflectance.
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