

substance: Ta₂O₅

property: peaks in optical spectra

infrared absorption results

<i>v/c</i>	220 cm ⁻¹			73K
	325 cm ⁻¹	shoulder	RT, 5000 Å film of polycrystalline β-Ta ₂ O ₅ on Si	
	380 cm ⁻¹	weak		
	425 cm ⁻¹	shoulder		
	525 cm ⁻¹	strong		
	630 cm ⁻¹	shoulder		
	710 cm ⁻¹	shoulder		
	840 cm ⁻¹			
	900 cm ⁻¹	shoulder		
	1040 cm ⁻¹	shoulder		
	315 cm ⁻¹		anodic film	64M
	455 cm ⁻¹	shoulder		
	575 cm ⁻¹	strong		

infrared reflection results

<i>v/c</i>	270 cm ⁻¹	medium	RT, sample as above	73K
	425 cm ⁻¹	broad		
	550 cm ⁻¹	shoulder		
	630 cm ⁻¹	medium		
	980 cm ⁻¹	strong		
	1140 cm ⁻¹	weak	intensity of these peaks very dependent on voltage of anodization	70K
	810 cm ⁻¹	weak to strong		
	950 cm ⁻¹	weak to strong		
	1100 cm ⁻¹	weak		

References:

- 64M McDevilt, N. T., Braun, W. L.: J. Am. Ceram. Soc. 47 (1964) 622.
- 70K Kihara-Morishita, H., Takamura, T., Takeda, R.: Thin Solid Films 6 (1970) R29.
- 73K Knausenberger, W., Tauber, R. N.: J. Electrochem. Soc. 120 (1973) 927.