



## IARPA MORGOTH'S CROWN: Optical Constant Value References

### Contents

IARPA MORGOTH'S CROWN: Optical Constant Value References .....	1
Optical Constant Values.....	1

### Optical Constant Values

1. Palik, E. D. 1998. *Handbook of Optical Constants of Solids*. Elsevier: Boston, Vol. 1-5.  
<http://www.sciencedirect.com/science/book/9780125444156>
2. S.W. Sharpe, T.J. Johnson, R.L. Sams, P.M. Chu, G.C. Rhoderick, P.A. Johnson. 2004. "Gas-Phase Databases for Quantitative Infrared Spectroscopy." *Applied Spectroscopy*, 58: 1452-1461.  
<https://www.osapublishing.org/as/abstract.cfm?uri=as-58-12-1452>
3. Washburn EW. 1926-1930, 2003. *International Critical Tables of Numerical Data, Physics, Chemistry and Technology*, 1st Electronic Edition. Knovel, Norwich New York.  
<http://app.knovel.com/hotlink/toc/id:kpICTNDPC4/international-critical/international-critical>
4. Bertie JE, CD Keefe, and RN Jones. 1995. *Tables of Intensities for the Calibration of Infrared Spectroscopic Measurements in the Liquid Phase*, Chemical Data Series No 40, International Union of Pure and Applied Chemistry, Blackwell Science Ltd, Cambridge, Massachusetts.  
<http://old.iupac.org/publications/books/author/bertie.html>
5. J.W. Salisbury, L.S. Walter, N. Vergo and D. M. D'Aria. 1991. *Infrared (2.1-25  $\mu$ m) Spectra of Minerals*. Johns Hopkins University Press, Baltimore, MD.
6. Dixon AL and CJ West. 1930. "Refractivity of Pure Organic Liquids," in *International Critical Tables of Numerical Data, Physics, Chemistry and Technology* (1st Electronic Edition), Vol 7, ed. EW Washburn, pp. 34-62. Knovel, Norwich New York.  
<http://app.knovel.com/hotlink/toc/id:kpICTNDPC4/international-critical/international-critical>
7. J.E. Bertie, SL Zhang, H.H. Eysel, S. Baluja, M.K. Ahmed. 1993. "Infrared Intensities of Liquids XI: Infrared Refractive Indices from 8000 to 2  $\text{cm}^{-1}$ , Absolute Integrated Intensities, and Dipole Moment Derivatives of Methanol at 25  $^{\circ}\text{C}$ ." *Applied Spectroscopy*, 47(8): 1100-1114.  
<http://dx.doi.org/10.1366/0003702934067973>
8. J.E. Bertie, R.N. Jones, C.D. Keefe. 1993. "Infrared Intensities of Liquids XII: Accurate Optical Constants and Molar Absorption Coefficients Between 6225 and 500  $\text{cm}^{-1}$  of Benzene at 25  $^{\circ}\text{C}$ , from Spectra Recorded in Several Laboratories." *Applied Spectroscopy*, 47: 891-911.  
<http://as.osa.org/abstract.cfm?URI=as-47-7-891>
9. J.E. Bertie, S.L. Zhang, H.H. Eysel, S. Baluja, M.K. Ahmed. 1993. "Infrared Intensities of Liquids XI: Infrared Refractive Indices from 8000 to 2  $\text{cm}^{-1}$ , Absolute Integrated Intensities, and Dipole Moment Derivatives of Methanol at 25  $^{\circ}\text{C}$ ." *Applied Spectroscopy*, 47: 1100-1114. DOI: 10.1366/0003702934067973 <http://dx.doi.org/10.1366/0003702934067973>

10. Lund Myhre, C. E., Grothe, H., Gola, A. A., Nielsen, C. J. 2005. "Optical Constants of HNO<sub>3</sub>/H<sub>2</sub>O and H<sub>2</sub>SO<sub>4</sub>/HNO<sub>3</sub>/H<sub>2</sub>O at Low Temperatures in the Infrared Region." *J. of Physical Chemistry A*, 109, (32), 7166-7171. DOI: 10.1021/jp0508406 <http://dx.doi.org/10.1021/jp0508406>
11. Lee, K.-M., Park, J.-H. 2014. "Optical constants for Asian dust in mid-infrared region." *Journal of Geophysical Research: Atmospheres*, 119, (2), 927-942. DOI: 10.1002/2013JD020207 <http://dx.doi.org/10.1002/2013JD020207>
12. Sokolik, I., Andronova, A., Johnson, T. C. 1993. "Complex refractive index of atmospheric dust aerosols." *Atmospheric Environment. Part A. General Topics*, 27, (16), 2495-2502. DOI: 10.1016/0960-1686(93)90021-P [https://doi.org/10.1016/0960-1686\(93\)90021-P](https://doi.org/10.1016/0960-1686(93)90021-P)
13. Denham, P., Field, G. R., Morse, P. L. R., Wilkinson, G. R. 1970. "Optical and Dielectric Properties and Lattice Dynamics of Some Fluorite Structure Ionic Crystals." *Proceedings of the Royal Society A*, 317, (1528), 55-77. DOI: 10.1098/rspa.1970.0102 <http://dx.doi.org/10.1098/rspa.1970.0102>
14. Andeen, C., Fontanella, J., Schuele, D. 1971. "Low-Frequency Dielectric Constants of the Alkaline Earth Fluorides by the Method of Substitution." *Journal of Applied Physics*, 42, (6), 2216-2219. DOI: 10.1063/1.1660527 <http://dx.doi.org/10.1063/1.1660527>
15. M.D. Lane. 1999. "Mid-Infrared Optical Constants of Calcite and their Relationship to Particle Size Effects in Thermal Emission Spectra of Granular Calcite." *Journal of Geophysical Research*, 104(E6) 14099-14108. DOI: 10.1029/2010JE003588 <http://dx.doi.org/10.1029/2010JE003588b>
16. Lund Myhre, C. E., Christensen, D. H., Nicolaisen, F. M., Nielsen, C. J. 2003. "Spectroscopic Study of Aqueous H<sub>2</sub>SO<sub>4</sub> at Different Temperatures and Compositions: Variations in Dissociation and Optical Properties." *Journal of Physical Chemistry A*, 107, (12), 1979-1991. DOI: 10.1021/jp026576n <http://dx.doi.org/10.1021/jp026576n>
17. Kaiser, W., Spitzer, W. G., Kaiser, R. H., Howarth, L. E. 1962. "Infrared Properties of CaF<sub>2</sub>, SrF<sub>2</sub>, and BaF<sub>2</sub>." *Physical Review*, 127, (6), 1950-1954. DOI: 10.1103/PhysRev.127.1950 <https://doi.org/10.1103/PhysRev.127.1950>
18. de Silans, T. P., Maurin, I., Segundo, P. C. d. S., Saltiel, S., Gorza, M.-P., Ducloy, M., Bloch, D., Meneses, D. d. S., Echegut, P. 2009. "Temperature dependence of the dielectric permittivity of CaF<sub>2</sub>, BaF<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub>: application to the prediction of a temperature-dependent van der Waals surface interaction exerted onto a neighbouring Cs (8P<sub>3/2</sub>) atom." *Journal of Physics: Condensed Matter*, 21, (25), 255902. DOI: 10.1088/0953-8984/21/25/255902 <http://stacks.iop.org/0953-8984/21/i=25/a=255902>
19. Rettie, A. J. E., Chemelewski, W. D., Wygant, B. R., Lindemuth, J., Lin, J.-F., Eisenberg, D., Brauer, C. S., Johnson, T. J., Beiswenger, T. N., Ash, R. D., Li, X., Zhou, J., Mullins, C. B. 2016. "Synthesis, electronic transport and optical properties of Si:a-Fe<sub>2</sub>O<sub>3</sub> single crystals." *Journal of Materials Chemistry C*, 4, (3), 559-567. DOI: 10.1039/C5TC03368C <http://dx.doi.org/10.1039/C5TC03368C>
20. Andersson, S. K., Thomas, M. E., Hoffman, C. E. 1998. "Multiphonon contribution to the reststrahlen band of BaF<sub>2</sub>." *Infrared Physics & Technology*, 39, (1), 47-54. DOI: 10.1016/S1350-4495(97)00044-3 [http://doi.org/10.1016/S1350-4495\(97\)00044-3](http://doi.org/10.1016/S1350-4495(97)00044-3)