



>>Entry Name: Zinc selenide (ZnSe)

CAS Registry Number: 1315-09-9

ZnSe

Molecular Formula: SeZn

Molecular Weight: 144.35

Accurate Mass: 143.845665

Percentage Composition: Se 54.70%; Zn 45.30%

Source/Synthesis: Prepd. from elements or by epitaxy

Use/Importance: Many applications in electronic devices, sometimes as mixt. with ZnS, ZnTe

Physical Description: Yellow cryst.; sensitive to air when moist

Melting Point: Mp 1100°

Boiling Point: Subl. 2000°

Solubility: Insol. H₂O

Aldrich: 24461-9

Fluka: 96485

References:

- Coustal, R. *et al.*, *C. R. Hebd. Seances Acad. Sci.*, 1929, **188**, 703
Gmelin Handbook Inorg. Chem., Syst. No. 32, 1956, 967
Juza, R. *et al.*, *Z. Anorg. Allg. Chem.*, 1956, **285**, 61
Mitra, S.S., *Indian J. Pure Appl. Phys.*, 1971, **9**, 922, (*Raman*)
Shalimova, K.V. *et al.*, *Kristallografiya*, 1972, **17**, 541, (*cryst struct*)
Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **2**, 1028, (*synth*)
Mannami, M. *et al.*, *Bull. Inst. Chem. Res., Kyoto Univ.*, 1977, **55**, 163, (*polymorphs*)
O'Brien, D.F., *NBS Spec. Publ. (U.S.)*, 1977, **509**, 276
Satoh, S. *et al.*, *Jpn. J. Appl. Phys.*, Part 1, 1983, **22**, 1167, (*elect props*)
Climent-Montoliu, F. *et al.*, *An. Quim., Ser. B*, 1984, **80**, 172, (*powder struct*)
Barr, T.L. *et al.*, *Mater. Res. Soc. Symp. Proc.*, 1985, **47**, 205, (*thin films, esca*)
McMurdie, H.F. *et al.*, *Powder Diffr.*, 1986, **1**, 334, (*powder struct*)
Ermolovich, I.B. *et al.*, *Zh. Prikl. Spektrosk.*, 1987, **47**, 829, (*luminescence*)
Koch, S.W. *et al.*, *J. Phys. C: Solid State Phys.*, 1988, **21**, 5229, (*non-linear optical props*)
Svane, A. *et al.*, *Phys. Scr.*, 1988, **37**, 407, (*Zn-67 nmr*)
Bastow, T.J. *et al.*, *Phys. Status Solidi B*, 1988, **145**, 719, (*Se-77 nmr, Zn-67 nmr*)
Stead, M. *et al.*, *Appl. Opt.*, 1989, **28**, 1874, (*ir*)
Neumark, G.F., *J. Appl. Phys.*, 1989, **65**, 4859, (*elect props*)
Kasiyan, V.A. *et al.*, *Phys. Status Solidi B*, 1989, **154**, 287, (*elect cond*)
Henshaw, G. *et al.*, *Chem. Comm.*, 1996, 1095-1096, (*synth*)
Chunggaze, M. *et al.*, *Chem. Comm.*, 1998, 833-834, (*deposition*)