

## Mineralogical Chemistry.

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**Fusibility of Minerals and their Solubility in Magmas.** By CORNELIUS DOELTER (*Chem. Centr.*, 1901, ii, 826—827; from *Tsch. Min. Mitth.*, 1901, 20, 307—330).—The results are given of detailed observations of the manner in which various minerals are attacked by molten magmas. As a rule, minerals with a very high melting point (quartz, corundum, olivine, leucite) are more sparingly soluble than those with a lower melting point (felspar, augite, mica). In general, however, the solubility of a mineral in a magma depends on the pressure, the temperature, and the chemical composition of the magma, as well as on the fusibility of the particular mineral. L. J. S.

**Retinite from Thessaly.** By CONSTANTIN ZENGELIS (*Chem. Centr.*, 1901, ii, 833; from *Tsch. Min. Mitth.*, 1901, 20, 356).—This retinite is yellowish-red, almost opaque, hard and readily combustible, sp. gr. 1.0023. At 290°, it softens and fuses with decomposition. Benzene dissolves 17.4 per cent. The following analysis corresponds with that required for the formula  $C_{10}H_{14}O$ :

C.	H.	S.	O.	Ash.	Moisture.
78.47	9.23	0.39	10.616	1.47	0.214

L. J. S.

**Calaverite.** By SAMUEL L. PENFIELD and W. E. FORD (*Amer. J. Sci.*, 1901, [iv], 12, 225—246. Compare Abstr., 1896, ii, 31).—A detailed crystallographic account is given of crystals of calaverite from Cripple Creek, Colorado. They are interpreted as being monoclinic and elongated in the direction of the axis of symmetry, but the faces have very high indices and do not fall into zones. The axial ratios,  $a : b : c = 1.6313 : 1 : 1.1449$ , axial angle,  $\beta = 89^\circ 47' \frac{1}{3}$ , and, twinning, resemble those of sylvanite, but calaverite differs from this mineral in having no distinct cleavage. The general formula  $(Au, Ag)Te_2$  expresses the chemical composition of both calaverite and sylvanite, but the latter contains more silver, and its formula approximates to  $AuAgTe_4$ . The following analyses are given of the material now described:

Au.	Ag.	Te.	Gangue.	Total.	Sp. gr.
40.99	1.74	[57.25]	0.02	100.00	9.328
42.77	0.40	[56.75]	0.08	100.00	9.388

The colour of the brightest calaverite crystals is silver-white, sometimes with a yellowish cast; it is not bronze-yellow as often described.

L. J. S.

**Monazite from New Granada.** By NICHOLAS J. BLUMAN (*Chem. News*, 1901, 84, 175).—A sample of reddish-brown colour, sp. gr. 6.001 and hardness 5, gave the following numbers on analysis:

$Ce_2O_3$ .	$La_2O_3$ .	$ThO_2$ .	MnO.	CaO.	$SnO_2$ .	$P_2O_5$ .	Fe, Zn, S.	Total.
25.02	22.41	18.00	1.21	2.13	3.00	28.23	traces	100.00

D. A. L.