shallow-water cocolithophorid algae skeletons, which reflect near-surface temperatures. Isotope exchange during diagenesis, from ground water or during silicification, may lower the δO^{18} values of rostra surfaces. —F. J. Pearson, Jr.

abstract only

N. E. Galdin

DENSITIES AND ELASTIC CONSTANTS OF OXIDES AND SILICATES AT HIGH PRESSURES*

Rock-forming minerals can be divided into two groups, one with mean atomic weight <22, and the other >22, for the purpose of analyzing their densities and elastic properties under conditions like those in the earth's mantle. The bulk modulus K and seismic parameter K/ρ of the minerals of the first group vary smoothly with mean atomic volume, molecular weight M divided by the number of atoms n in the unit cell divided by density ρ, $M/\rho n$. The minerals of the second group, consisting largely of Fe- and Ca-bearing minerals, exhibit scatter and anomalous distribution of K and $K/\rho n$. The anomalies can be explained in terms of high atomic weight, ionic radius, and charges of Ca^{2+} and Fe^{2+}. Variation of K with pressure, dK/dP, is nearly constant at 4 to 5.5. Prediction of K and K/ρ can be made for minerals, like coesite, stishovite, andalusite, sillmanite, and kyanite, and the spinel forms of forsterite and fayalite from their densities and their mean atomic volumes $M/\rho n$ from the empirical curves and from dK/dP. —E. C. Robertson

Yu. A. Novikov, Yu. D. Skobelev and L. N. Novikova

ESTIMATION OF DEPTH OF NATIVE COPPER ORE DEPOSITS BY GEOCHEMICAL PROSPECTING OF THEIR OUTCROPS**

1. Arsenic, which preferentially accumulates in the upper zones of the ore bodies, is the element responsible for the vertical zonation in the native copper ore bodies.

2. The slightly eroded and the larger blind ore bodies have well-defined arsenic dispersion aureoles, whose areas are commensurate with the areas of the tops of the ore bodies. The basal parts, or roots, of the ore bodies do not have arsenic aureoles, and this fact permits determination of the depth to which the ore bodies had been eroded by analysis of samples collected from their outcrops. Arsenic aureoles may also be of considerable help in the search for blind ore bodies. —Authors' summary

M. P. Volarovich and E. G. Ponyatovskiy

SECOND INTERNATIONAL CONFERENCE ON HIGH PRESSURES***

A brief, general report on the topics and substance of the 66 papers presented at the conference, which was held in Ehlmau (Southern Bavaria), May, 1968. —R. I. Tilling

A. K. Lavrukhina and K. G. Knorre

INTERNATIONAL SYMPOSIUM ON METEORITE RESEARCH****

The authors provide a brief resume of the topics covered at the International Symposium on Meteorite Research held in Vienna, August 7 - 12, 1968. —L. P. Greenland

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*Trans. from Geokhimiya, No. 1, pp. 40-49, 1969. UDC 548.3. Order document GI-69-1-3, $5.75.

**Trans. from Geokhimiya, No. 1, pp. 96-103, 1969. UDC 550.42. Order document GI 69-1-4, $4.50.

***Trans. from Geokhimiya, No. 1, pp. 120-121, 1969. Order document GI 69-1-5, $1.75.

****Trans. from Geokhimiya, No. 1, pp. 122-124, 1969. Order document GI 69-1-6, $2.25.