DIE KRISTALLE ALS VORBILDER DES FEINBAULICHEN WESENS DER MATERIE. FRIEDRICH RINNE. 8-vo. 101 pages, with 5 plates and 100 figures. Borntraeger Brothers, *Berlin*, 1921.

This is an excellent survey of our present knowledge of the structure of matter, and can be recommended heartily to all students of mineralogy, physics, and chemistry interested in this important field of investigation. The treatment is very concise, and all phases of the subject have been covered. It is to be regretted that a complete bibliography was not included.

Aside from a short introduction, this little volume contains 14 chapters. There is also a very brief section devoted to concluding remarks. The subjects discussed include:—Leptonology (the study of the fine or ultimate structure of matter), Leptonological units of matter, General outline of the ultimate structure of matter, Metamorphosis-series of matter, General tectonic arrangement of the fine structure of matter, Relationship of the ultimate structure of mixed crystals and intergrowths, Morphotropy and topotropy, Isotypy, Crystal growth and solution, Chemical processes based upon observations on crystals, Analogy between the morphological effect of physical and chemical fields upon crystal structure, and Physiology of crystals and types of atoms.

The numerous text-figures are an important feature of this timely treatise. Sepia prints of Röntgen, Groth, von Laue, and Schönfliess appear as full page plates.

E. H. K.

NOTES AND NEWS

NOTE ON AN UNUSUAL CARBONACEOUS SUBSTANCE. A rather interesting carbonaceous substance was recently sent to the Mineralogical laboratory of the University of Michigan by Mr. J. Moyer of the North Dakota Agricultural College. The accompanying letter stated that it was from an arid part of North Dakota, and was the residue formed by the evaporation of a peculiar black water which had seeped thru lignite to the surface.

The substance is soft and dark brownish black in color, somewhat resembling dried muck. It is unusual in being rapidly and completely soluble in water, giving a dark brown and almost opaque liquid, all of which passes readily thru a quantitative filter paper, and reacts alkaline to litmus. It is insoluble in alcohol, ether, or benzene. It does not melt, but when heated first gives up water, then a combustible gas, and finally the fixed carbon burns off and leaves a rather large amount of yellowish ash. Qualitative tests indicate that the ash is principally sodium carbonate.

The original material liberated CO_2 with HCl, but the carbonaceous portion did not dissolve. After leaching out all the ash with acid, the residue was insoluble in water, but immediately went into solution when sodium bicarbonate was added.

Evidently the material is of the nature of a "humus acid," with a large proportion of sodium carbonate ash. The alkali carbonate dissolves when the material is placed in water, and the resulting liquid takes the humus compound into solution. It is well known that humus acids are held in solutions by alkali carbonate waters. The carbonaceous substance was probably leached out of the lignite by alkaline water, and was precipitated, by evaporation, with enough sodium carbonate to act as the solvent when pure water was again at hand.

EDW. F. HOLDEN.

We are informed through "Science" (July 21, 1922, p. 68) of a new and important occurrence of magnesite in southern Nevada, a few miles above the town of St. Thomas. The deposit occurs in Clark County, in the valley of Muddy River, which is one of the tributaries of the Virgin River.

The material is porcelain-white, fine grained and massive, is remarkably free from foreign material, and has the general appearance and conchoidal fracture that are so characteristic of magnesite. It is not as hard as the more typical specimens as it crumbles rapidly on exposure to the weather. Because of this tendency the material has been known for some time as kaolin.

The deposit is included between tilted beds of conglomerate and sand-stone below and shale above. It is estimated that the beds aggregate two hundred feet in thickness and have an extent of one mile at least.

The first meeting of the newly formed Association of Maine Geologists was held on August 11th in Auburn and Lewiston. The local committee arranged a program that included all points of geological interest in the vicinity. These included Mt. Apatite, the source of much of the feldspar, many of the Maine gems and a large variety of minerals; also the Lewiston Falls and a number of other localities.

NEW MINERALS: NEW SPECIES

FAMILY: PHOSPHATES, ETC. DIVISION: PROBABLY R″:R‴″:

$R‴″:H_2O = 1:2:1:X$.

Dewindtite

ALFRED SCHOEP: Sur la dewindtite, nouveau minéral radioactif. (On dewindtite, a new radioactive mineral.) *Compt. rend.*, **174**(9), 623–625, 1922.

NAME: In memory of Dr. Jean *Dewindt*, a Belgian geologist.

CHEMICAL PROPERTIES: *Formula*, probably $PbO{:}2UO_3{:}P_2O_5{:}3H_2O$ or $Pb(UO_2)_2[3H_2O](PO_4)_2$, a lead-phosphorus low water member of the uranite group. [Author gives a more complicated formula, but it is hardly justified by the analysis, which was made on impure material.] Theory, PbO 22.5, UO_3 57.7, P_2O_5 14.3, H_2O 5.5%. Analysis on material washed out of the torbernite which it impregnates, but not separable from more or less whitish talcose gangue gave: PbO 21.74, UO_3 55.50, P_2O_5 10.01, H_2O 5.82, $A1_2O_3$, 2.06, CaO 1.32, MgO 2.75, insol. 0.40, sum 99.60%. Readily soluble in acids. In closed tube gives H_2O. Before blowpipe gives reactions for Pb only with difficulty. More radioactive than kasolite.

CRYSTALLOGRAPHIC AND OPTICAL PROPERTIES: System evidently tetragonal. Under the microscope it is seen to be made up of minute square plates, which are isotropic, but show double refraction when tilted on edge. Refractive indices greater than 1.74.

PHYSICAL PROPERTIES: Color canary yellow. Structure pulverulent to compact. Sp. gr. 4.08.

OCCURRENCE: As an impregnation in specimens of torbernite from Kasolo, Katanga, Belgian Congo.

DISCUSSION: In spite of the incomplete data, it seems evident that this mineral is a new member of the uranite group, $R''(UO_2)_2[XH_2O](RO_4)_2$. E. T. W.