silicate of Al and other bases with boron, and boro-aluminium silicate. Phosphorus has added o but once in the book, but aluminium appears both with and without the second i.

A feature likely to be particularly confusing to the student is the indiscriminate use of periods, commas, + signs, and no sign at all to set off the various parts of formulas. Thus on a single page (119), water of crystallization is shown in four different ways, $CuSO_45H_2O$, $MgCl_2.KCl.6H_2O$, $MgSO_4,KCl,3H_2O$ and $Al_2(SO_4)_2[_3]$ $+18\ H_2O$. Isomorphous replacement (called on page 94 isomorphoric) is indicated by commas in some places, as (Fe, Mn)WO_4, but by lack of them elsewhere, as $(ZnMn)_2\ SiO_4$ and then unfortunately both plans are also used to show non-isomorphism as in $K(Fe,20H)_3(SO_4)_2$ and $BiO(Bi2OH)CO_3$.

Some cases of peculiar spellings may be intentional, as asbestose for asbestos, duodecahedral (also appearing as doudecahedron) for dodecahedral (also used once), blend for blende, etc. But minerology (p. 95), melelite (p. 140 twice) and pargonite (p. 145) are not. The last belong to the almost incredible number of compositors' errors present. The reviewer has counted over 200 of these (more than one per page) and sees more every time he looks at the book. There are numerous instances of the subscript numerals in formulas being wrong; of capital initial letters where lower case would have been preferable; and of omitting, transposing, and inserting letters. There has evidently been some misunderstanding with respect to correcting proof. The composition must have been done by operators unaccustomed to chemical work; that the publishers did not go over the proof is indicated by the fact that every time one of their own books is mentioned, there is an error either in its title or its author's name; but apparently the author assumed that proof reading had been done. It is to be hoped that the book will soon be reprinted after all of these errors have been corrected. W.

PROCEEDINGS OF SOCIETIES

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences of Philadelphia, Nov. 10, 1921.

A meeting of the Society was held on the above date, President H. W. Trudell presiding. Nineteen members and sixteen visitors were present. Thru the courtesy of the Bureau of Mines at Pittsburgh, six reels of moving picture films were exhibited. The subjects illustrated were: "The Story of Sulphur" and "Zinc Mining, Milling and Smelting;" both of which proved very interesting and instructive.

Mr. Hoadley reported upon the following trips: rutile was found at 274th St., New York; tremolite and brown tourmaline were secured at the old dump at the Harlem River canal; while a visit to the locality of Ossining yielded specimens of azurite, serpentine, pyrite, malachite, and mountain leather. Prehnite, pseudomorphous after stilbite was also reported from Paterson.

At a new Perkiomenville quarry, Mr. Hilbiber found calcite crystals covered with pyrite. He also exhibited specimens of epidesmine from the Kibblehouse quarry.

Mr. Knabe reported having taken a trip to the DeKalb St. quarry where calcite crystals were found. These crystals were in the form of short hexagonal

prisms, up to 2 cm. in diameter, capped by rhombohedrons. Several other quarries at Port Kennedy and vicinity were visited but with negative results.

JOHN FRANKENFIELD, *Secretary pro tem*

NOTES AND NEWS

Under the title "Research Problems in colloid chemistry," Professor Wilder D. Bancroft has recently published a list of 200 subjects in which investigation is needed (*J. Ind. Eng. Chem.* **13**, 83, 153, 260 and 346, 1921; *Reprint & Circ. series, Nat. Res. Council*, No. **13**, 1921.). The following are of special interest to mineralogists and crystallographers:

(52) Adsorption and abnormal density: in density determinations by weighing a solid in a solution, an error may be introduced by adsorption of the salt.

(57) Comparative study of adsorption by alumina, silica, kaolin, etc.: determination of relative adsorptions should help in working out the constitution of silicates.

(78) Crystallization of grape sugar as an adsorption phenomenon: the formation of needles in an acid solution and plates in an alkaline one should be studied from the adsorption standpoint.

(79) Crystallization of sodium chloride in cubes and octahedra: should be studied as a case of adsorption.

(90) Production of crystals: large crystals of insoluble substances can be obtained by diffusion of their constituents; more work should be done; it might even be possible to synthesize dolomite thus.

(134) Definition of lusters: "The people who write about gems speak of adamantine, vitreous, oily, waxy, resinous, pearly, silky, and metallic lusters, but there is no adequate definition of any of these terms. Somebody should work out definitions of these terms with reference to the optical properties involved. . . ."

(200) Action of ultraviolet light and of radium on gems; many examples are cited. Apparently the radium increases the dispersity of the colloidal particles, and ultraviolet light decreases it, or vice-versa. It should be possible to test this on synthetic materials, using perhaps borate glasses. Careful study should straighten out the question of the colors of gems. E. T. W.

On the invitation of the Division of Geology and Geography of the National Research Council, the Council of the Mineralogical Society of America designated Dr. Edgar T. Wherry as the representative of the Society in that Division.

Contributors to THE AMERICAN MINERALOGIST will be pleased to hear that arrangements have now been effected whereby they will be given twenty-five copies of the issue containing their article. If additional reprints are desired these can be purchased at the prices listed on the inside cover of this magazine.

The new periodical, *Bulletin Suisse de Minéralogie et Pétrographie*, which in spite of present difficulties was founded a year ago with a view of centralizing publications of all work relating to the mineralogy and petrography of Switzerland, has now completed its first volume (comprising 412 pages). The subscription price is 25.—Swiss francs per annum, payable to the editor, Dr. U. Grubenmann, Sonneggstr. 5, Zürich 6.