may of course be achieved either by the observer moving round the stationary net and mirror or by the net with mirror being rotated about a vertical axis by the stationary observer. Further, the eye should be at such a height above the plane of the card that the image of the card edge is at or above the top of the mirror: the mirror will then be filled by the image.

Small dark disks may be placed on the square net in positions corresponding to those occupied by nodes of any layer of any reciprocal lattice: their corresponding positions on the Weissenberg-type net may then be observed in the mirror.

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BOOK REVIEWS

STASIW (O.). *Elektronen- und Ionenprozesse in Ionenkristallen. Mit Berücksichtigung Photochemischer Prozesse.* Berlin (Springer), 1959. viii+307 pp., 107 text-figs. Price (bound) DM 66.

Volume xxii of the well-known series *Struktur und Eigenschaften der Materie* is written and produced according to the standard expected. There are many books on electronic and ionic conduction and diffusion processes in solid bodies. Professor Stasiw gives a complementary picture concerning photochemical reactions in ionic solids. The aim is to fit photochemical processes into the general picture of defect reactions.

The mathematical treatment adopted is comparatively simple; it deals with statistics of defects in ionic crystals, energy of the lattice and of its defects, diffusion, and ionic conductivity. A simplified picture of the band model for ionic crystals is presented, and the absorption spectra of the real ionic lattice and of the ideal lattice with stoicheiometric defects or with added foreign ions are considered. The semi-conduction process is treated in relation to structure, and there are sections on photoelectric conduction. Photochemical processes in pure ionic lattices, in lattices with impurities, and in mechanically deformed crystals are all considered. The subjects treated include photochemical changes in alkali halides irradiated with X-rays and photochemistry of silver halides. A special chapter deals with the relationship between defects and nuclear resonance.

The author has deliberately limited himself to the simplest ionic lattices, and has given a comprehensive account of this. He has achieved this without overloading the text with mathematical difficulties. When necessary, towards the end of the book and in an appendix, he gives appropriate mathematical treatment. Many mineralogists may prefer not to give much attention to this part; the book has been arranged so that those with a more general interest in the properties of crystals need not do so. H. M. P.

NORTHROP (Stuart A.). *Minerals of New Mexico.* Revised [second] edition. University of New Mexico Press, Albuquerque, 1959, 665 pp., map (16 miles = 1 in. approx.). Price $10.00.

This is a second and revised edition of the author's former work published in 1942 [M.A. 8–357]. It has been greatly expanded and there are now 665 pages (formerly 387); the page size has been considerably increased and the price has risen from $1.75 (bound) to $10.00. Part I, as before, deals with the history and prehistory of New Mexican mineralogy and in addition to the features in the former edition there are sections on minerals discovered since 1925; recent and unpublished records of occurrences; fluorescent minerals and radioactive minerals. The economic aspects of mineral industry in the state have also been brought up to date. Part II, an alphabetical catalogue of minerals, now includes about 440 species and 130 varieties, also many synonyms, some of them purely local names such as "Mora diamond" and "Pecos diamond" (quartz). The localities of each species are given under counties with descriptions of the occurrence and references to the literature. Part III consists of an alphabetical list of districts, subdistricts, camps, &c., and is followed by an extensive bibliography. This excellent reference book represents such a great amount of careful research that it would perhaps be ungracious to wish that the topographical index had been a complete index of the localities mentioned in Part II. This, however, is always the ideal to be aimed at by the topographical mineralogist. J. M. S.

JUNG (J.) and BROUSSE (R.). *Classification modale des roches éruptives, utilisant les données fournies par le compteur de points.* Paris (Masson et Cie.), 1959. 122 pp., 5 figs., 5 tables. Price 14.00 fr.

This handbook of the quantitative classification and nomenclature of igneous rocks is of interest mainly as an attempt to discard the chemical-