knowledge of each of these factors, the mechanism of polymerization has been discussed fully in the individual cases of the acetylenes, the olefines and the diolefines, the concluding part of the chapter, as well as chapter V being devoted to polymerization in liquid systems.

The chapters concerned with the part played by polymerization in the rubber, synthetic resin and petroleum industries are of uniform excellence. Every feature is clearly and adequately treated and the one defect of the earlier chapters — a tendency to sacrifice clarity for comprehensive cataloguing of published data is notably absent. While the study of the chemical structure of the technically valuable polymers is rendered a matter of the utmost complexity by reason of the high molecular weights and the nature of the substances as a mixture of closely related compounds rather than chemical individuals, the chemical and X-ray evidence has been extensively surveyed. Polymerization in the petroleum field is of necessity restricted to technical applications, such as the refining of petroleum products by selective polymerization, the use of inhibitors for the suppression of oxidation and consequent polymerization, the manufacture of artificial asphalt and the synthesis of motor fuels from gas.

To the general chemist who wishes to have an introduction to a new and rapidly developing branch of chemical technology, the usefulness of the book would be increased by an expansion of the chapter on the relation between molecular structure and polymerization, and more particularly by the inclusion of structural formulæ in at least a few of the more important of the numerous instances where the name of a compound does not lead to an immediate mental picture of its constitution. In discussing isoprene and its bearing on polymerization problems,[2] more pointed attention might have been drawn to the isoprene basis of the structure of many natural products. A very minor omission, which happens to be of interest to the reviewer, is the application of synthetic resins in the manufacture of anti-crease fabrics.

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[2] *Cf.* Whitby, *Trans. Inst. Rubber Industry*, 1929, **5**, 185; 1930, **6**, 40.

ASTRONOMICAL NOTES.

Planets during February 1938.—Mercury will be a morning star during the month; on February 17 it will be in conjunction with Jupiter, the distance between the two planets at the time being 1° 23′. Mars will continue to be visible in the western sky in the early part of the night. Jupiter after passing conjunction with the Sun on January 29, becomes a morning star and can be seen, during the latter half of the month, as a bright object rising about three-quarters of an hour before sunrise. Saturn is situated in the same direction as Mars and on February 3, the two plantets will closely approach each other to an angular distance of about 2°. Uranus is in the constellation Aries and will be in conjunction with the Moon on February 7.

The Minor Planet Eros.—The physical nature of this well-known asteroid is discussed by F. Watson Jr. in *Harvard Circular* 419. From the short period light variations he deduces that the axis of rotation is pointing towards the direction indicated by the point on the celestial sphere whose co-ordinates are R.A. $21^h\ 4^m$ Dec. 51° N. The rotation is found to be retrograde. The observations of Finsen and Van den Bos at Johannesburgh in February 1931 appear to show that the asteroid is probably a long irregular solid about 35 kilometres long and 11 kilometres in diameter, and that the reflectivity is about 15 per cent. But the results of the work of Zessewitsch of the Leningrad Institute are not in agreement with these conclusions. His discussion seems to indicate that the direction of Eros' rotation does not remain constant, but is subject to considerable changes. The observations that will be made during the opposition of 1938 are likely to throw further light on the subject.