

per cent fayalite, then the phase and electron changes in fayalite will account for 18 per cent of the volume reduction in olivine.

W. S. FYFE

*University of California
Berkeley, California, U.S.A.*

REFERENCES

- CLARKE S. P. (1957) *Amer. Min.* **42**, 732.
- CLARKE S. P. (1959) *Researches in Geochemistry* (Edited by ABELSON P. H.) p. 495. John Wiley, New York.
- GILLESPIE R. J. and NYHOLM R. S. (1957) *Quart. Rev. Chem. Soc.* **11**, 339.
- GRIFFITH J. S. and ORGEL L. E. (1957) *Quart. Rev. Chem. Soc.* **11**, 381.
- MCCLURE D. S. (1957) *J. Phys. Chem. Solids.* **3**, 311.
- NÉEL L. and BENOIT R. (1953) *C.R. Acad. Sci., Paris* **237**, 444.
- ORGEL L. E. (1955) *J. Chem. Phys.* **23**, 1004.
- ORGEL L. E. (1956) *X Conseil de l'Institut International de Chimie Solway* p. 289. R. Stoops, Bruxelles.
- PARRY R. W. (1950) *Chem. Rev.* **46**, 507.
- PARSONS R. W. and DRICKAMER H. G. (1958) *J. Chem. Phys.* **29**, 930.
- PAULING L. (1948) *The Nature of the Chemical Bond*. Cornell University Press. Ithaca, N.Y.
- RINGWOOD A. E. (1958) *Geochim. et Cosmochim. Acta*, **15**, 180.