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p-Bromobenzoic anhydride and biferrocenyl – corrigenda. By J. TROTTER, *Department of Chemistry, University of British Columbia, Vancouver 8, B.C., Canada.*

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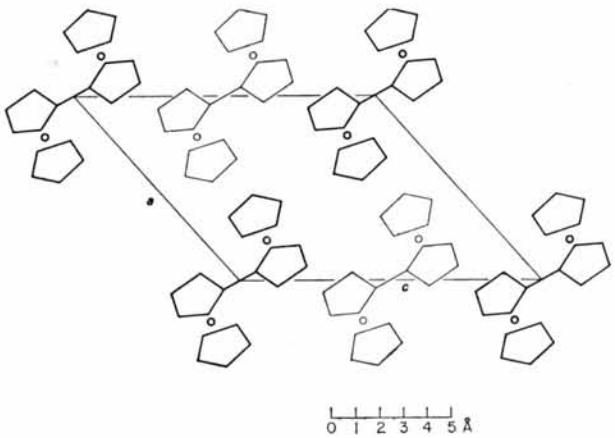

Biferrocenyl: corrected Fig. 3.

In the paper on *p*-bromobenzoic anhydride (McCammon & Trotter, 1964) x of C(7) should be 0·116. In that on biferrocenyl (Macdonald & Trotter, 1964) Fig. 3 is incorrect; the correct version is shown.

References

McCAMMON, C.S. & TROTTER, J. (1964). *Acta Cryst.* **17**, 1333.

MACDONALD, A.C. & TROTTER, J. (1964). *Acta Cryst.* **17**, 872.

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On the existence of hexagonal nickel. By P. HEMENGER* and H. WEIK, *Department of Physics, University of Cincinnati, Ohio, U.S.A.*

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In text books on X-ray diffraction (*e.g.* Cullity, 1956; or Glocker, 1958) nickel is listed as crystallizing in the h.c.p. ($A3$) modification, in addition to the f.c.c. ($A1$) structure. The hexagonal lattice parameters reported there as $a = 2{\cdot}66$ Å, $c/a = 1{\cdot}624$ and $a = 2{\cdot}66$ Å, $c/a = 1{\cdot}61$, respectively, are given without special references and apparently originated in older and somewhat doubtful sources. [For a brief survey of the situation see Pearson (1958, p.780)]. In some cases, the presumptive hexagonal phase has been shown to be instead Ni_3N (Büssem & Gross, 1934; Jack, 1950). From these results, it may be concluded that pure nickel does not form a hexagonal phase, but that the hexagonal structures reported were due to the formation of hydrides, nitrides, and possibly carbides or carbonitrides (Pearson, 1958, p. 780). Even so, the question as to exactly whether or not hexagonal nickel does in fact exist, appears to be still not completely settled (Heavens, 1959).

The purpose of this note is to show that in thin (about 200 Å thick) nickel films, when evaporated at about 10^{-5} torr, the hexagonal close-packed structure can be produced under certain circumstances.

During high magnification viewing in the electron microscope of nickel and nickel-rich Ni–Cu films, prepared for magnetic structure investigations (Hemenger, 1964; Weik & Hemenger, 1965), some nickel films exhibited what appeared to be a rapid grain growth. The grain size of these large particles varied between 500 and 1200 Å, as compared to a grain size for normal films of 50 to 125 Å.

Fig. 1 shows an electron diffraction pattern, which was taken of the film region containing the large grains within the matrix of the normal grains of the film. The continuous rings are due to the normal, f.c.c. nickel and are indexed, while the spotted rings are due to a new structure, which is obviously associated with the large grains.

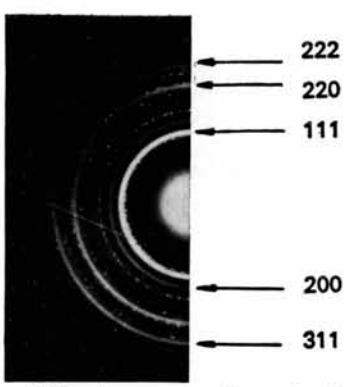

Fig. 1. Electron diffraction pattern of a region in a nickel film containing large grains within the normal fine grain matrix. The continuous rings are due to the normal f.c.c. nickel matrix and are indexed.

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