owing to the available energy being greater in the former than in the latter case.

In conclusion, we would commend this aluminium-iodine reaction to the consideration of other chemists, who may be investigating organic compounds containing oxygen.

V. Preliminary Note on the Ossification of the Terminal Phalanges of the Digits." By E. A. SCHÄFER, F.R.S., and F. A. DIXEY, B.A. Received June 3, 1880.

The diaphyses of the ungual phalanges of the digits offer an exception to the usual mode of ossification of diaphysial bones (including the other phalanges) in the fact that the calcification of the cartilage and its attendant changes begins at the tip and not in the centre of the diaphysis. The subperiosteal intramembranous ossification also commences at the same point—the tip, namely, of the cartilage—as a cap-like expansion over the end of the cartilage. The irruption of the osteoblastic subperiosteal tissue also first occurs here, so that this part seems to correspond morphologically with the centre of the shaft of other long bones. The expanded portion of the phalanx which bears the nail, claw, or hoof, is entirely formed by an outgrowth of the subperiosteal bone, and is not preceded by cartilage.

A detailed account of the mode of ossification of these phalanges will be shortly published.

VI. "On the Organisation of the Fossil Plants of the Coal-measures. Part XI." By W. C. WILLIAMSON, F.R.S., Professor of Botany in the Owens College, Manchester. Received June 3, 1880.

(Abstract.)

M. Renault has recently published a memoir, in which he reproduces the views of M. Brongniart respecting the relations which the Lepidodendra bear to the Sigillariæ, still insisting that the former are cryptogamic Lycopods, whilst the latter are exogenous Gymnosperms. In endeavouring to establish this position, the French palæo-botanist concludes that if the exogenous Diploxyloid stems (*i.e.*, Sigillarian ones) are but matured states of some Lepidodendra, every Sigillarian type of organisation ought to be found in a young or Lepidodendroid form, because, he contends, the type of the central organisation, once established, undergoes no further change with advancing age. In support of his position, he affirms that there are three such Sigillarian