(*Chem. News*, **40**, 59, 1879), Kurtz (*Trans. Amer. Inst. Min. Eng.*, **33**, 347, 1903), A. French (*Chem. News*, **104**, 283, 1911) and many others claimed to have found new elements in native platinum. These 'discoveries,' however, have not been confirmed. In 1925 W. Noddak, I. Tacke and O. Berg (*Die Naturwissenschaften*, No. 26, pp. 167-174, 1925) published a paper stating that they found in native platinum from the Gorablogodatski region, Ural, an element of atomic number 75. The quantity of the discovered substance was, however, so small (about 1 mgm.) that it was not possible to carry out conclusive experiments.

We have tested the native platinum systematically for the presence in it of dwi-manganese (No. 75). The platinum (mixed) was treated chemically, and the final products were investigated Röntgenographically. Dwi-manganese would have been easily detected if it were present in the native platinum in quantities pointed out by Dr. Noddak, or even 10 or 100 times less than that. As a matter of fact, the Röntgenographs obtained prove with certainty the absence of dwi-manganese in native platinum in a quantity exceeding 0·0003 per cent.

Our investigation thus settles the question about the presence of manganese analogues in native platinum in the negative sense. It is also very likely that eka-manganese, a closer analogue of manganese and a rarer element in the earth's crust, is not present in native platinum. Druce (*Chem. News*, **131**, 273, 1925) and Heyrovský (NATURE, November 28, 1925, p. 782) seem to have chosen a more trustworthy way, assuming that dwi-manganese is associated with manganese and not with platinum.

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RÖNTGENOGRAPHICAL EXAMINATION.—The investigation of the spectra was carried out either with Siegbahn's vacuum spectograph or with Müller's spectrograph with Hadding's tube. In both cases the Röntgenographs were obtained with calcite crystal by the method of a fixed crystal. For the determination of the wave-lengths of unknown lines, the lines $K\alpha_1$Cu, $K\beta_1$Cu and $L\alpha_1$W were chosen for reference lines (the substance under investigation mixed with about 5 per cent. tungsten was deposited on the anticathode of copper). The wave-lengths of the unknown lines were calculated from the following formula:

$$Ctg\,(\theta_2-\theta_x) = \frac{a_{1x}}{a_{2x}}\cdot\frac{a_{23}}{a_{13}}\cdot\frac{\sin(\theta_1-\theta_3)}{\sin(\theta_2-\theta_3)\sin(\theta_1-\theta_2)} - Ctg\,(\theta_1-\theta_2),$$

where θ_1, θ_2 and θ_3 denote the angles of deflexion for three given lines and a_{1x}, a_{2x}, a_{13} and a_{23} denote the mutual distances between the lines, measured with a comparator.

On Röntgenographs obtained with Müller's spectrograph, the doublet $K\alpha$Cu was well resolved (the width of the lines was 0·06 mm. with equal breadth of the slit).

The accuracy of measurements of wave-lengths was 0·4 X.U., but no lines were found in the region where the K lines of the element 75 would be expected.

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Kaufmann's Experiment and the Spinning Electron.

IN a paper in a recent number of the *Zeitschr. für Physik*, Wentzel has published a calculation of the X-ray screening constants on the basis of the spinning electron. He obtains values of the screening constants which are much larger than those experimentally determined, so raising a difficulty in the way of the acceptance of the spinning electron. Wentzel introduces into the calculations a force $1/c(\mu[vX])$ (μ = magnetic moment of spinning electron, v = velocity, X = electric field) the exact analogy of the force $e[vH]$ on a moving electric charge in a magnetic field.

It can readily be shown that, if this force is accepted as having a real existence, Kaufmann's experiment is conclusive against the spinning electron. In this experiment the moving electrons are subjected to the action of parallel electric and magnetic fields. The deflexions of the electrons due to the actions of the fields are thus perpendicular to one another, and in the case of the spinning electron there will be an additional deflexion due to the force $1/c(\mu[vX])$. This deflexion will be in the same plane as that due to the magnetic field. Then, taking the simple theory of the experiment (as given, for example, in Richardson's "Electron Theory of Matter"), we have for the deflexion in the plane parallel to the condenser plates

$$x^1 = \frac{(He \pm X\mu/c)z'(z'-z_1)}{2mv},$$

the $\pm$ sign being required because of the spatial quantisation of the spinning electron in the magnetic field.

Since now $X = ncH$, in which n is a factor of the order 1/2 in Kaufmann's experiment, and $\mu = 2eh/4\pi m$ or two Bohr magnetons, it can be seen on inserting the values of the constants concerned that the quantity in the first bracket in the expression for the deflexion is approximately equal to $He(1 \pm \frac{1}{2})$. It will thus be seen that, instead of the trace on the photographic plate being a single arc of a parabola, this, for the case of the spinning electron, will consist of arcs of two parabolæ, the x co-ordinates of which are respectively approximately $\frac{1}{2}$ and $\frac{3}{2}$ of those of the arc obtained with the non-spinning electron. Kaufmann's published photographs do not appear to show any sign of this double trace. Hence, provided that the force $1/c(\mu[vX])$ has a real existence, Kaufmann's experiment shows definitely that the free electron cannot possess any spin comparable with that required by Goudsmit and Uhlenbeck's theory. This, of course, applies only to free electrons, and does not preclude the possibility that the electron may possess such a spin when it is a constituent part of an atom.

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Liver Extracts in the Treatment of Malignant Disease.

THE liver is proportionately very large during early fœtal life when rapid growth is the most prominent factor in the life of the organism. Since the formation of bile has not commenced at this stage of existence, the relatively large size of this organ may be attributed to the probability that it exercises some influence on the growth of the body. This effect would be brought about presumably through the medium of an internal secretion. As malignant disease in its various forms is primarily a manifestation of abnormal cellular growth, I attempted to determine the presence of such an