

Such results will be also attributable to neglect of the electronic conduction in the solid electrolyte. In such conventional coulometric titration methods, dependence of the measured value upon the electric current density passed through a cell should be examined more closely, because the electronic conduction in the solid electrolyte may have large influence on the results. In comparison with these two experimental results, the present results are very reliable because any error due to the electronic conduction was avoided for determination of the oxygen content in liquid metal.

By means of chemical analysis of the indium after isothermal equilibration with In_2O_3 , Fitzner and Jacob determined the saturation solubility of oxygen in liquid indium.² The standard Gibbs energy of solution of oxygen in liquid indium was calculated by combining these data with the published values on the equilibrium oxygen partial pressure over In- In_2O_3 mixtures.² However, in order to enhance the reliability of the obtained values of ΔG° , similar experiments have to be made subsequently in the range of various oxygen concentrations in liquid indium below the saturation limit. Generally, it will be difficult to apply the conventional isopiestic equilibrium technique to the oxygen concentration range below the saturation limit. Therefore,

the present experimental principle will be very superior. However, accurate causes of the significant difference between the present and their results are not still clear. It may be only guessed that In_2O_3 particle had been caught in the liquid metal phase in their experiments.

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*See correction notice below.

Correction to *Met. Trans. B*, 1979, vol. 10B

Activities of Oxygen in Liquid Lead and Antimony from Electrochemical Measurements by Shinya Otsuka and Zensaku Kozuka

Page 568:

A line was omitted in the second column of page 568. The sentence beginning at the fourth line should read "The true initial oxygen concentration calculated by this subtraction was found to change with the initial emf according to Henry's law even in the range of relatively low oxygen concentration in liquid lead."

Page 567:

The light black areas in Fig. 2 were in error. The correct Fig. 2 is shown here.

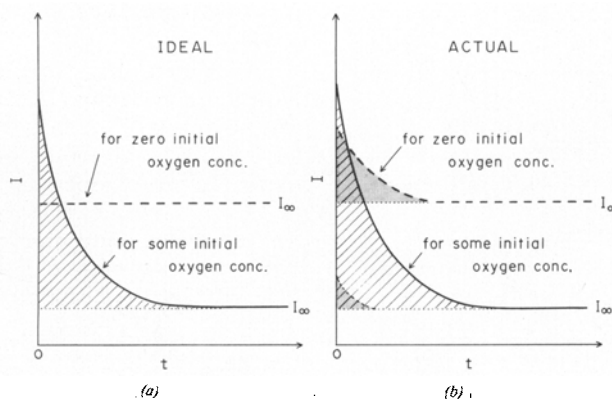


Fig. 2—Under the condition of a constant ΔE value, dependence of decay curve of electric current on initial oxygen concentration in liquid metal, in the potentiostatic pump-out experiments using an ideal and an actual electrolyte: (a) ideal, (b) actual.