A Note to the Paper "On the Metallo-organic Compounds. X. Electroisomerism in the Triethyltin Group."

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In the paper "on the metallo-organic compounds. X. Electroisomerism in the triethyltin group," (1) the author reported a difference between the rates of oxidation of two preparations of the triethyltin group in a polymerized form prepared in liquid ammonia by the following two methods:

A I. $2(C_2H_5)_3SnX+2Na = ((C_2H_5)_3Sn)_2+2NaX (X = halogen)$

II. $((C_2H_5)_2 SnNa)_2 + 2 C_2H_5X = ((C_2H_5)_2 SnC_2H_5)_2 + 2 NaX$

Kraus and Greer⁽²⁾ also observed that a similar behavior exists between the following two dimethyltin preparations:

B I. $(CH_3)_2 SnX_2 + 2 Na = (CH_3)_2 Sn + 2 NaX$

II. $(CH_3)_2 SnNa_2 + (CH_3)_2 SnX_2 = ((CH_3)_2 Sn)_2 + 2 NaX$

that is, the latter (B II) preparation is much more sensitive to oxygen than that of the former (B I). In accounting for the difference between the rates of oxidation of the preparations (A I) and (A II), the present author believed that an explanation may be found by assuming the cause to be due to the method of preparation or the difference in their electronic constitutions (electroisomers). However, such assumption must now be withdrawn since it is not only hasty but is inconceivable that the triethyltin group can exist in two isomeric forms with present knowledge. The different rates of oxidation in question can not be explained satisfactorily at present but it may be correct to assume that the difference might be due to some contaminating trace of impurity in the preparation. Further investigation on this point was not carried out because it is not within the scope of this original investigation. (3)

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⁽¹⁾ T. Harada, this Bulletin, 15 (1940), 481.

⁽²⁾ Kraus and Greer, J. Am. Chem. Soc., 47 (1925), 2568.

⁽³⁾ Kraus and T. Harada, *ibid.*, **47** (1925), 2416; T. Harada, Sc. Pap. I. P. C. R., **38** (1940), 146.