



ultraviolet properties of polysilanes<sup>6-11</sup> are useful in characterizing these compounds because the  $\lambda_{max}$  has been found to increase with chain length. A compound which has a  $\lambda_{max}$  (288  $m\mu$ ) and melting point (205–207°), both of which are greater than those of Kumada's compound  $(CH_3)_3Si[(CH_3)_2Si]_{10}Si(CH_3)_3$ , has been isolated from a reaction of (II) with lithium and (I). The infrared of this sample shows only the presence of methyl on silicon.

The reaction with methylethyldichlorosilane, carried out similarly to the preparation of (III), except that this reaction was heated to reflux, gave a 65.6% yield of a product that has not been rigorously identified but appears to be 2-ethylheptamethyltrisilane, b.p. 67°/5 mm,  $n_D^{20.3}$  1.4679,  $d_4^{20.3}$  0.7984 (Found:  $MR_D$  76.70. Calcd.:  $MR_D$  76.93). The infrared spectrum is consistent with the assigned structure.

Surprisingly, the reaction with methylphenyldichlorosilane, under the same conditions, afforded only 25% of the known<sup>12,13</sup> heptamethyl-2-phenyltrisilane. Kumada *et al.*<sup>12</sup> obtained a 32% yield of this compound from the sodium coupling of these same reactants. In addition, our reaction gave a crystalline product, m.p. 120–121°, which has not been identified as yet. The infrared of this solid does not show the presence of a phenyl group.

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