

Table III. Experimentally Determined Vapor Pressures of Antimony

T, ° K.	P, mm. of Hg, × 10 <sup>4</sup>
763.7	12.69
766.2	14.17
777.0	22.66
782.6	28.72
794.8	50.21
798.8	50.65
807.0	73.58
809.6	86.90
817.0	111.9

The data are represented by the equation  $\log_{10} P(\text{mm. of Hg}) = 11.539 - (11025/T)$ .

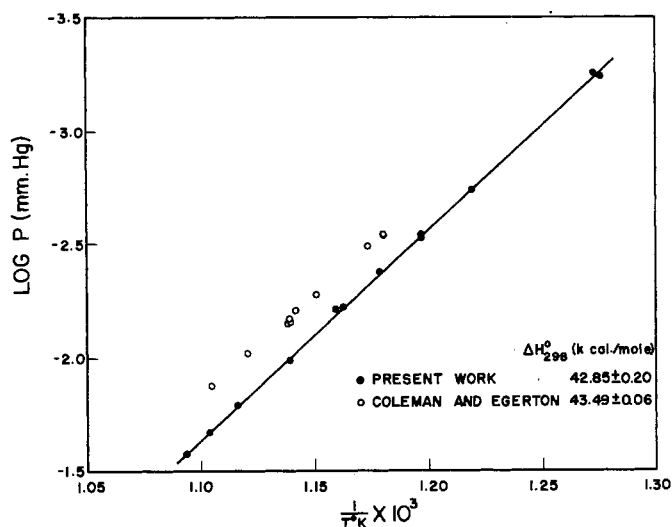


Figure 3. Comparison of reported vapor pressure values for thallium. Full line is least squares fit to present data

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#### CORRECTION:

In the Article "Physical Properties of Diarylkanes" by Richard J. Best [J. CHEM. ENG. DATA 8, 267(1963)] the second and third paragraphs on page 270 should have read.

Dixon and Clark (5) reported correlation of the physical properties of high molecular weight alkylbenzenes and alkylcyclohexanes with their structure and showed that methyl groups attached to the benzene ring increased the density and viscosity of the compound. The fusing of rings causes the same effects. The interpretation proposed is that the rigidity of a molecule is increased by the fusing of rings or by the addition of methyl groups to a phenyl ring. They suggested that hyperconjugation of the methyl groups attached to the ring created a significant double bond character in the C—C bond between the ring and methyl group and raised the barrier to wagging of the methyl group. Hydrogenation of the ring eliminated this hyperconjugation, and the anomalous density, viscosity and molecular attraction disappeared. Steric hindrance of the substituents did not seem to be the cause of the anomalous properties in their series.

Table IV. Experimentally Determined Vapor Pressures of Thallium

T, ° K.	P, mm. of Hg, × 10 <sup>4</sup>
783.4	5.768
785.6	5.585
820.0	18.20
835.4	29.85
835.8	28.91
848.1	41.98
860.1	60.26
862.2	61.52
878.3	103.0
896.0	162.2
906.0	216.3
914.3	263.6

The data are represented by the equation  $\log_{10} P(\text{mm. of Hg}) = 8.536 - (9247/T)$ .

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#### CONCLUSIONS

For the physical properties of the six isomers—density, refractive index, surface tension, and viscosity—there is a continuous change as a function of the structure. The order of the properties is as follows:  $pp' < mp' < mm' < op' < om' < oo'$ . The least compact structure,  $pp'$ -DTE, has the lowest values of these properties, and  $oo'$ -DTE, the most compact structure—i.e., the methyl groups are in as close to the ethane chain as possible—has the highest values. In addition it was not known *a priori* whether  $mm'$ -DTE or  $op'$ -DTE would be the denser, optically or by weight, but the measurements definitely establish that  $op'$ -DTE is the more dense. Figure 2 shows the variation of the physical properties on an arbitrary scale, which, however, is proportional to the true values for each property.