

As the ratio of In/Te decreases, the percentage of In^{3+} ions in the crystal increases. When $\text{In/Te} = 0.82$, the average valence of In is 2.44, implying that 72% of the In atoms are trivalent. It would appear that as the percentage of In^{3+} ions increases (with decreasing In/Te), the superconducting transition temperatures should decrease. The curve of T_c vs $(1-x)$ in Fig. 1, indicates that T_c does tend to approach 0 as $(1-x)$ approaches 0.67 at which point all In atoms would be trivalent.

We wish to thank T. H. Geballe for suggesting that the superconductivity tests be made on powdered specimens. We wish also to thank R. G. Maines for technical assistance.

¹M. D. Banus, R. E. Hanneman, M. Strongin, and K. Gooen, *Science* **142**, 662 (1963) and pertinent references therein.

²H. E. Bömmel, A. J. Darnell, W. F. Libby, B. R. Tittman, and A. J. Yencha, *Ibid.*, **141**, 714 (1963).

³W. Klemm and H. U. v. Vogel, *Z. anorg. Chem.* **219**, 45 (1934). See also M. Hansen, *Constitution of Binary Alloys*, (McGraw Hill Book Company, Inc., New York, 1958), p 863.

⁴G. C. Kennedy, A. Jayaraman, and R. C. Newton, *Phys. Rev.* **126**, 1363 (1962).

⁵S. Geller and J. H. Wernick, *Acta Cryst.* **12**, 46 (1959).

⁶A. L. Schawlow and G. E. Devlin, *Phys. Rev.* **113**, 120 (1959).

⁷K. Schubert, E. Dörre, and M. Kluge, *Z. Metallk.* **46**, 216 (1955).

⁸J. A. A. Ketelaar, W. H. t'Hart, M. Moerel, and D. Polder, *Z. Krist.* **A101**, 396 (1939).
