

## Single Crystals of Dilute Solid Solutions of Iron in Zinc

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To Bunker Hill zinc, which is exceptionally pure, was added small known percentages of iron. From these solid solutions single crystals of zinc were grown by the Czochralski-Gomperz method. The growth conditions as a function of percentage of iron present were noted. Previous work<sup>1</sup> has shown that the addition of iron has a peculiar effect upon the micro structure of the pure single zinc crystals. Photomicrographs were prepared of typical samples of various orientations of each concentration of the iron. Lantern slides showing the results of these photographs have also been prepared which correlated with the width of the growth conditions lending additional support to the idea that the iron takes a preferred spot in the zinc lattice. Additional experimentation may give some more definite clue regarding the exact crystalline structure of the compound.

<sup>1</sup> "Micro-Photographs of single crystals of dilute solid solutions in zinc," by Way, H. E., DeVries, John, and Furrow, C. L., *Ill. Acad. Sci. Transactions*, Vol. 30, No. 2, 1938.