

**[ABSTRACT]**

The present invention is related to a manufacturing method of high purity and refined Ru(Ruthenium) powder produced by using a waste Ru target. Yield of the target and physical properties of a thin film are improved by producing tremendously refined in which oxygen content of the target is decreased, and a crystal particle size is reduced.

In order to obtain these merits, powder having a hollow inside is produced by applying plasma to a waste Ru target. Carbon impurities are selectively removed through a atmospheric heat process and Ru powder is oxidized. Thereby, Ru oxide(RuOx) powder is produced. High purity and refined Ru powder is acquired through a hydrogen atmospheric heat process after pulverizing the produced Ru oxide(RuOx) powder into refined shape.

Fig. 1.