

Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

©2011. Japan Geoscience Union. All Rights Reserved.



MIS020-05

Room:301A

Time:May 24 15:45-16:00

Crystal growth of Scorodite crystals by UV light irradiation

Ryuichi Komatsu^{1*}, Hideyuki Okamura¹, Masakazu Nagai¹, Hironori Itoh¹

¹Graduate School of Seg.&Sci., Yamaguchi

Considerable amounts of arsenic by-products in metallurgical processes have usually been stored because of its little demand. Stored arsenic is poisonous. Therefore, various stable fixation processes of arsenic have been investigated and in particular, scorodite ($\text{FeAsO}_4 \cdot 2\text{H}_2\text{O}$) synthesis has been paid much attention because of its low solubility. Most important issue in scorodite synthesis is to grow large-sized scorodite particles to keep low solubility.

Fujita et al. reported that the largest scorodite particle is 15 micron m in diameter. In this paper, in-situ observation to reveal growth behavior of scorodite crystals has been performed and growth conditions have been investigated. A novel scorodite synthesis method has been developed. The maximum size of grown scorodite crystal by this method is about 60 micron m.

Keywords: UV light, Scorodite, Crystal growth