Electron microscopic studies on bur-shaped pyrite aggregate from the SK050 volcanic ash (Uonuma Formation).

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Bur-shaped mineral aggregate has rarely known in nature, besides a native arsenic from Akatani Mine (Fukui Prefecture). We discovered an additional bur-shaped example, bur-shaped pyrite aggregate from the SK050 volcanic ash bed (Uonuma F.) at Oguni town, Niigata Prefecture, Japan. SEM observations revealed that the pyrite aggregate is 30 ~ 50 um in diameter and shows a exterior appearance of many pyramidal spines which are composed of octahedral pyrite crystals. Examining the section of the pyrite aggregate, every bur-shaped pyrite aggregate contains a framboidal pyrite grain in its core, and the surrounding pyrite develops radially from the surface of the framboid. Thus, the bur-shaped pyrite aggregate is interpreted as a result of overgrowth of secondary pyrite on the framboid core.