Komperito-like growth of metamorphic minerals and microprobes of metamorphic fluid flow

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Grain growth of the metamorphic process is basically governed by precipitation from grain boundary thin fluid film and dissolution of preexisting minerals. Morphology of metamorphic minerals appears as a variety between euhedral and anhedral shapes, although it sometimes shows the irregular shape likely to amoeboid but not to dendrite. Amoeboid grains of garnet and albite are very common in the regional metamorphic rocks and are considered as unstable growth by coupling of growth from thin film of boundary solution and fluid flow along the thin film.
The similar grain growth from thin film of flowing solution reveals the Kompeito of sucrose and hails which show the spherical ball having many rounded horns (spikes). Such feature is considered to be derived from growth instability from flowing boundary fluid film (1).
In this paper, I will talk about the occurrence of Kompeito - like grains of garnet, albite, and quartz in the regional metamorphic rocks and discuss the robustness of the spacing of rounded horns on the cross section. He also suggests the possibility of microprobes of metamorphic grain boundary fluid flow inferred from the instability of Kompeito -like growth of these metamorphic minerals.
(1) Sakai I., and Y. Hayakawa, 2006, JPSJ, 75, 10, 104802

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