

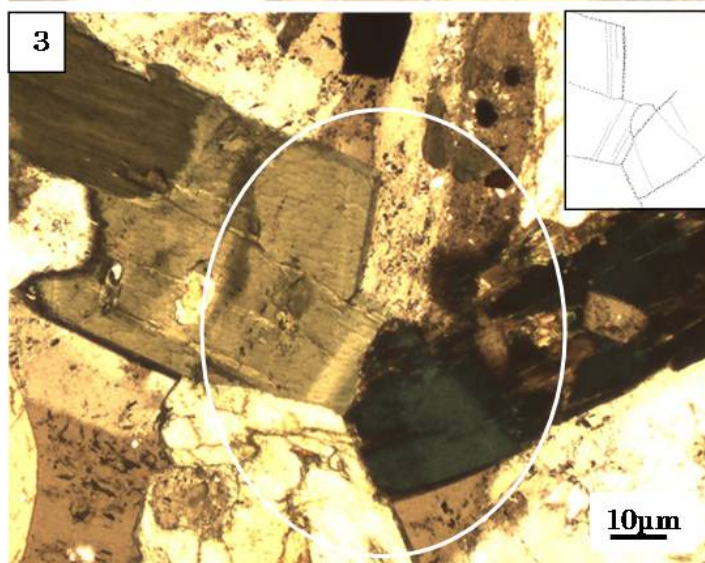
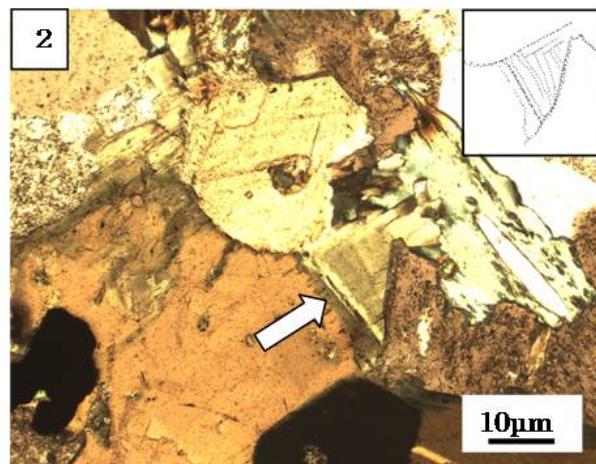
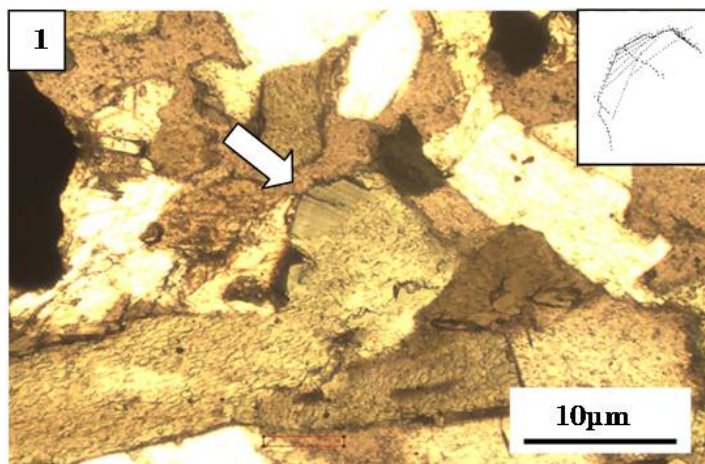
Circulation of residual magma during consolidation of granitoid magma

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The Harima granites which are spotted between Himeji and Kakogawa city, and the Rokko granites which are widely distributed in Kobe city, intruded rhyolite tuff in the late Cretaceous. We have found that the amphiboles of the Harima granites has an oscillatory zonal structure with a width of several micrometers. We estimated the environments at the latest magma differentiation process based on the features of this structure. This structure is not found in Rokko granite amphiboles. The Harima granites are considered to be the periphery of the rock body because the surrounding tuff is thermally metamorphosed. The oscillatory zonal structure of amphibole was formed by secondary ion replacement by circulation of the residual magma. On the other hand, this structure was not found in the Rokko granites, indicating that the circulation of magma residue does not occur in the center of the huge rock body.

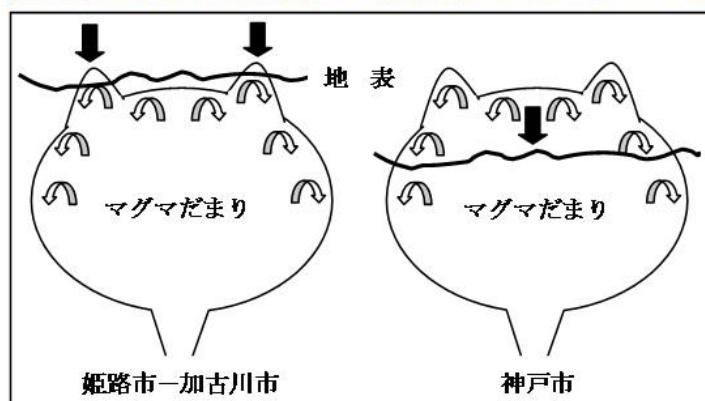
Keywords: Harima granites, oscillatory zonal structure, circulation of the residual magma



(1) 姫路市の花崗閃緑岩の角閃石の波状累帯構造 (オープンニコル×100)

(2) 加古川市の花崗閃緑岩の角閃石の波状累帯構造 (オープンニコル×100)

(3) 加古川市の花崗閃緑岩の角閃石の波状累帯構造 (オープンニコル×100)



マグマ残液の循環の仮想モデル図
(矢印は熱水の循環を表わす)