

Crystallographic preferred orientation (CPO) of amphibole in epidote-amphibolite: part 2, the implication of orthorhombic CPO

Toru Takeshita[1]

[1] Dept. Earth and Planet. Sys. Sci., Hiroshima Univ

Crystallographic preferred orientation (CPO) of amphibole in epidote-amphibolite samples from the Sambagawa belt was analyzed. The pole figures of all the principal axes of the optical indicatrix and c-axis show orthorhombic symmetry. The orthorhombic amphibole CPO was possibly caused by oriented growth and rigid body rotation in dissolution-precipitation creep, because no microstructure indicating crystal plasticity such as kink bands is observed in the amphibole. Since only coaxial deformation can be created by dissolution-precipitation (diffusion) creep, the bulk non-coaxial deformation could have been achieved by coaxial spinning deformation in the epidote-amphibolite.