Structural Factors Controlling Stacking Sequences in Dioctahedral Micas

Necip Güven

Department of Geology, University of Illinois, Urbana, III.61801, U.S.A.

Abstract: Deviations in the symmetry of mica single layers from the ideal arrangement with all atoms in hexagonal arrays are caused by the structural factors such as compositional variation (substitutions), order-disorder, and distortions. The derivative crystal structure theory as applied to mica polymorphism, implies that the ideal symmetry of the mica single layer ($C2/m$) can be altered to one of its standard subgroups by these structural factors. The " derivative structure " of the single layer may allow a unique interlayer and a specific intralayer configuration and result in a regular stacking sequence.

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