

# A new index of chemical weathering for granitic rocks

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Evaluation of the chemical weathering degree of rocks is important for various fields, such as engineering geology and environmental geology. A chemical weathering of rocks generally proceeds by water-rock interaction. This reaction brings about the dissolution of some alkaline and alkali-earth elements in rocks, and the formation of secondary minerals from residual elements. This is a fundamental system with the chemical weathering of rocks. The system has so far been applied for the determination of the chemical weathering indices of rocks.

However, the classical chemical weathering index cannot be used for granitic rocks because the magmatic compositional variation always overlaps with the chemical evolution due to weathering. In this study, we have proposed a new index of the chemical weathering of granites on the basis of the magmatic compositional variation.

The new chemical weathering index should be also applicable for not only granites but also other igneous, sedimentary, and metamorphic rocks with wide compositional variation.