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# Why Does Halloysite Roll?—A New Model

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**Abstract:** A model is presented to explain why tubular halloysite rolls in preference to tetrahedral rotation to correct misfit of the octahedral and tetrahedral sheets. It is shown that the rolling mechanism operates as it encounters significantly less resistance from Si-Si repulsion in comparison to tetrahedral rotation to correct the same amount of misfit. The model explains the observed and experimental rolling of planar kaolinites to form tubular halloysite upon hydration and exfoliation.

**Key Words:** Coulomb repulsion • Kaolinite • Rolling • Tetrahedral rotation • Tubular Halloysite

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