
Mineralogy of Dickite and Nacrite from Northern Taiwan

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Abstract: Nacrite and dickite are found in two localities in northern Taiwan. One, containing nacrite and dickite, is associated with a gold-enargite deposit as a vug-filling clay in the Chinkushih (CKS) mine district near the northern coast. The other is the occurrence of dickite in the interstices of a Miocene coarse-grained quartzose sandstone in the Nanshihchiao (NSC) area, near Taipei city. X-ray diffraction (XRD), differential thermal analysis (DTA), scanning electron microscope (SEM), and petrographic examinations were used to characterize the mineralogical features. Nacrite most often takes the unusual form of rhombic platelets, and dickite is commonly elongated in habit with the shapes possibly related to their origin. Based on geological evidence, we believe that both nacrite and dickite are of hydrothermal origin. In the CKS area, the formation of nacrite and dickite is related to the hypogene gold-enargite mineralization. In contrast, the transformation of dickite in the NSC area is due to the influence of the raised temperatures of sandstone formation, resulting from volcanic activity during the Kungkuan stage after the deposition of the sandstone.

Key Words: Alteration • Dickite • Hydrothermal • Nacrite • Taiwan

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