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Energy, Waste and the Environment: a Geochemical Perspective

Edited by
R. Gieré and P. Stille

This book provides incentives for further development of sustainable fuel cycles through a novel and interdisciplinary approach to an Earth science-related topic. The main focus is on geochemical concepts in immobilizing, isolating or neutralizing waste derived from energy production and consumption. The book also addresses the issue of using some types of energy-derived waste as alternative raw materials. Moreover, it highlights research on how certain wastes can be used for energy production, an increasingly important aspect of modern integrated waste management strategies. The main objectives are to: (a) identify the most serious environmental problems related to various types of power generation and associated waste accumulation; (b) present strategies, based on natural analogue materials, for the immobilization of toxic and radioactive waste components through mineralogical barriers; (c) discuss modern procedures for reuse of waste or certain waste components; and (d) review the importance of geochemical modelling in describing and predicting the interaction between waste and the environment.

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