

# Development of Mineral Deposits and Environmental Conservation - Current Research Topics on Acid Mine Drainage Treatment -

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Ore deposits are concentrations of useful elements and/or minerals in the Earth's surface, and the metal resources obtained from these deposits support our life and social infrastructure. While mineral deposits provide many benefits, they are also concentrations of heavy metal elements, which can cause serious damage to the surrounding environment if they are not properly developed and managed. In this presentation, examples of environmental pollution caused by the development of mineral deposits will be presented. Then, recent research topics related particularly with the treatment of acid mine drainage (AMD) generated from mineral deposits will be introduced. The research and development of passive treatment, a method for removing metals from acid mine drainage without any power or energy input which aims at the lower possible cost and environmental impact by utilizing natural energy. In addition, a novel prevention method of acid mine drainage by using limestone or mineral carbonation technique will be also discussed.

Keywords: Environmental Conservation, Acid Mine Drainage, Passive Treatment