

Natural zeolites and clays as ion-exchanger

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Natural zeolites and clays constitute an exciting research area for many scholars over many years. Although some concepts on natural zeolites and clays are well established, there are still issues that need to be solved and supported by individual studies. This session aims to discuss the latest ion exchange studies on clays and natural zeolites. As it is known, ion exchange is the substitution of ions on the solid with counter ion in the solution. Natural zeolites are known to be cation exchangers since they exhibit exchangeable cations in their porous structures. Although clays are also known to be cation exchangers, to some extent, they can also act as anion-exchangers. Ion exchange property allows these materials with reactive surfaces for several applications without endangering the environment. Because of their favorable ion-exchange selectivity for certain cations, zeolites, especially the heulandite-clinoptilolite group, are of interest for use in various ion-exchange applications. This session focuses on the natural zeolites, clay minerals and their modified types of different geological environments. An extensive contribution can be expected to this session on subjects such as the treatment of nuclear wastewaters, municipal and industrial wastewaters, and acid mine drainage waters. Also, studies focusing on the relationships with ion exchange results and geological environment, geochemistry, and mineralogy of the parent materials are also expected.

Keywords: Natural zeolites, Environment, Geochemistry, Ion exchange.

Potential Journals: Mesoporous and Microporous Materials, Applied Clay Science.

