

Pacifichem Selected Abstracts

Sunday, Dec. 18 PM - Poster Presentations				
Presentation Time/ Session Start Time	Location	Prog. #/Type	Authors Institutions	Abstract Title Session #/Title
Sunday, Dec. 18, 8:00 PM - 10:00 PM/ 8:00 PM	Hilton Hawaiian Village - Coral Ballroom 3/5	749 Poster	<u>M.Sugii</u> ¹ ; K.Ohta ¹ ; H.Katsumata ¹ ; S.Kaneco ¹ ; T.Suzuki ² 1. Department of Chemistry for Materials, Mie University, Tsu, Mie, Japan; 2. Environmental Preservation Center, Mie University, Tsu, Mie, Japan	Degradation of pesticides in aqueous solution by goethite 695 Treatment of Persistent Organic Pollutants (POP) (#165) [PS]

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Degradation of pesticides in aqueous solution by goethite

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Program Number: 749

Presentation Time: Sunday, Dec. 18, 8:00 PM - 10:00 PM

Location: Hilton Hawaiian Village - Coral Ballroom 3/5

Recently, the environmental pollution, especially marine ecosystem, by pesticides has become a serious problem. Due to their heavy use in agriculture and to their persistence, many of these compounds are present in surface and ground waters and have to be considered a potential risk for marine life as well as for drinking water quality. Various pesticides have been found as contaminants in surface and ground waters and microbial degradation is considered to be the primary mechanism for their dissipation from soil. In general, biological methods commonly require a long time for the wastewater containing pesticides at high concentration. Therefore, the rapid and simple wastewater treatment of pesticides is now required urgently. A variety of effective treatment techniques for aqueous pesticides have been proposed by ultrasonic irradiation, direct photolysis, UV irradiation in the presence of ozone or Fenton reagent and TiO₂ as a photocatalyst. Iron oxide and hydrogen peroxide are common constituents of natural and atmospheric waters. Hence, we have investigated the degradation and mineralization of pesticides in water using the goethite/H₂O₂ system. The many factors, such as pH value and initial concentrations of goethite and H₂O₂, affected on the degradation were evaluated.

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