

List of Dissertation Abstract (Risk Management and Environmental Sciences)

Name	Supervisor	Title	Abstract
Yohei ONISHI	Yoshihito TAKEDA	Study on the method of probabilistic ecological risk assessment	In the ecological risk assessment of chemicals, the application of probabilistic methods to the uncertainty arising when using the extrapolated value of the toxicity and the predicted value by the QSAR model was studied. Furthermore, in the risk assessment of combined toxicity, the applicability of simulation analysis and stochastic method on the uncertainty arising when extrapolated toxicity is used was studied.
Priyanka MITRA	Nobuhiro KANEKO	Methane Mitigation from Paddy Field Ecosystem: Role of Aquatic Earthworms and Farming Practices	Paddy field is a major source of methane (CH ₄) emission. Feeding activities of aquatic earthworms in paddy soil add oxygen in lower soil layers and farming practice may influence densities of aquatic earthworms in paddy soil. Therefore, this study was conducted to reduce CH ₄ emission by integrated farming practices and aquatic earthworms and it was hypothesized that aquatic earthworms may accelerate oxidation of CH ₄ in paddy field. Several field and incubation studies were done to test the hypothesis and it was confirmed that aquatic earthworms can reduce CH ₄ emission from paddy field through enhancing methanotrophs.
Yuko MUTOH	Masaru OYA	Analysis of Chemical Risk Information related to Detergent and Cosmetics in China	In this research, we analyzed the risk information on chemical substances related to detergents in China with reference to research on risk information in Japan., and the result showed that the risk of surfactant tends to be emphasized in Japanese books and the risk of mercury tended to be emphasized in Chinese books. The scale was then proposed as a method to contribute to social improvement that improves the information environment of consumers by objectively evaluating how consumers can understand risk - related expressions.
Ryo KOGA	Shigeki MASUNAGA	A study on accumulation and removal characteristics of dirt inducing fungal growth on the resin surface of household equipment	Fungi are easy to multiply under the high humidity and nutritious environment on the surface of household equipments such as bathroom, toilet, etc. On the purpose of this study, it is to clarify a characteristic of the materials surface to improve adhesion restraint to the materials surface of the dirt, removal efficiency. To achieve the purpose, it is to clarify the kind of the dirt, and to quantity it in prefabricated bathroom. Secondary, it is to clarify a correlation of the density every dirt kind and the fungal density. Third, it is to clarify adhesion mechanism to the materials surface of the dirt.

Kento SHIOTA	Atsumi MIYAKE	The study on method of composition search and performance evaluation for propellants consisting of energetic ionic liquid system	The aim of this study was to establish a method of composition search and performance evaluation for propellants consisting of energetic ionic liquid (EIL) system. This study focused on ammonium dinitramide as base of eutectic EIL. For composition search, EIL-propellants compositions were determined based on melting point depression mechanism and reactivity of the EIL-propellants. Mixing ratio of the propellants were determined from results of melting point prediction and specific impulse calculation. Combustion properties of the propellants were obtained with combustion test for the performance evaluation.
Hiroshi FUJIWARA	Hidetoshi KURAMOCHI	Study on the behavior of radioactive cesium in waste incineration facilities and development of a decontamination technology for contaminated incineration residue	This study aimed to promote proper and smooth incineration treatment for the waste contaminated by radioactive cesium (r-Cs). To understand the behavior of r-Cs during incineration of the waste contaminated by r-Cs, r-Cs distribution ratio to incineration residues and r-Cs leachability from the residues were systematically investigated at actual different incineration plants, and then the impact of waste materials as well as furnace types on the behavior were revealed. In addition, the mechanism of r-Cs distribution to incineration residues and its chemical forms were discussed. Moreover, a thermal treatment technology for removing r-Cs from contaminated incineration residues was developed.