

List of Dissertation Abstract (Department of Artificial Environment)

Name	Supervisor	Title	Abstract
<p>FUKUSAKI Yukiko</p>	<p>NAKAI Satoshi</p>	<p>Source area identification and source estimation of alkenes in the Tokyo Bay coastal area, Japan</p>	<p>Photochemical oxidants are generated via the photochemical reaction of the volatile organic compounds with OH radicals. Source area identification and source estimation of alkenes which significantly contribute to the photochemical reaction were conducted by PMF analysis. It was indicated that the petrochemical industry in the Kawasaki coastal area was the major alkene source. Moreover, it was estimated that Ox concentration could be reduced by up to about 30% by controlling emissions from the petrochemical industry.</p>
<p>FUJITA Michiya</p>	<p>MIYAKE Atsumi</p>	<p>Thermal runaway hazard assessment based on reactivity analysis of polymerizing monomers</p>	<p>The purpose of this study is to elucidate the reaction mechanism of polymerizing monomers and to understand the phenomena of hazardous reactions and thermal runaway in chemical processes based on the reaction analysis. The chemical kinetics of Michael addition reaction and spontaneous thermal polymerization of acrylic acid and methyl acrylate were</p>

			<p>clarified, and the heat balance equation, which can predict the thermal runaway process was formulated. The reaction products during thermal runaway were identified by evolved gases analysis, and the risk scenarios in the thermal runaway process were identified.</p>
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