

● Growing Stage

(Fiscal Year 2003-2005)



Shonan and Central Kanagawa Area

Application of Photo-Functional Materials to Improvement of the Suburban Environment

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Core Research Organizations

Kanagawa Agricultural Technology Center, Kanagawa Prefectural Institute of Public Health, Kanagawa Academy of Science and Technology

- Major Participating Industry ··· SEIWA Industrial Co., Ltd.
- Research Organizations Academia ··· Keio University
- Government ··· Kanagawa Agricultural Technology Center

Main Results of City Area Program

1. Highly Effective and Low-Cost Matt-Type Photo-catalyst Carrier

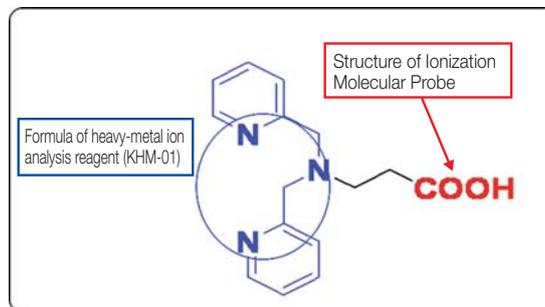
As a key technology for a wide range of practical uses in agriculture, we investigated an inexpensive, high-efficiency, lightweight and easy-to-handle photo-catalyst carrier. As a result, we developed a photo-catalyst carrier of bonded textile materials, which is available at about 10% of the cost of ceramics.



Photocatalytic mats with various characteristics

2. Molecular Ionization Reagents for Mass Spectroscopy of Heavy Metals

We developed the mass spectroscopy ionization reagent KHM-01, which enables the safe, highly sensitive, highly selective, and easy identification and quantitative determination of multiple heavy metal ions.



Heavy-metal ion recognition site

Approaches after Completion of Project

In Kanagawa prefecture in 2006, we established the “Kanagawa Prefectural Government Guideline on the Promotion of Intellectual Property Exploitation” based on the experience obtained in carrying out the present project. At the same time, we have been constructing a new model for cooperation and partnership among industry, academia, and the Prefectural Government, closely related to the “Kanagawa R&D Network Concept.”

Two kinds of “Outcome Developing Programs” have been successfully conducted by two professors: Dr. Kazuhito Hashimoto and Dr. Koji Suzuki in the “Special Research Laboratories” of KAST (Kanagawa Academy of Science & Technology). To examine and assess the photocatalyst-related functional devices, the “Photocatalyst Open Laboratory” was launched in 2007 at the Material Characterization Center of KAST. A study entitled “Development of the Circulative Purification System Utilizing Photocatalytic Functions” was carried out as part of “Active Promotion & Coordination Program of Intellectual Resources” in 2006. This theme was also adopted as one of the research projects for advanced technologies of the Ministry of Agriculture, Forestry, and Fisheries. KAST is now established as a key coordination organization among the Kanagawa Agriculture Technology Center, industry partners, and the Research Center for Advanced Science & Technology of The University of Tokyo.