

List of Dissertation Abstract (Environment and Natural Sciences)

Name	Supervisor	Title	Abstract
Hiroyuki HAGIWARA	Kazuyuki HIRATSUKA	Studies on systemic acquired resistance activity of the fungicide, tolprocarb	Host resistance inducing activity of tolprocarb (TPC) which was known to polyketide synthase inhibitor on melanin biosynthesis (MBI-P) was unraveled as the second mode of action. The practicability of TPC was indicated as host defence inducer for horticultural crops.
Jae-Young LEE	Shinya MATSUMOTO	Synthesis and physicochemical properties of 2,5-diamino-3,6-dicyanopyrazine dyes with alkyl substituents on the amino groups	π -conjugated compounds such as organic dyes have been actively studied for application as highly efficient organic light emitting materials and semiconductor materials. In this study, we investigated the molecular structure that can generate liquid state among pyrazine dyes, and examined the influence of the position and length of the substituent on the melting point and emission characteristics of the molecule. Specifically, dyes in which linear alkyl chains of various lengths were introduced to the 2,5-diamino-3,6-dicyanopyrazine were examined.

Yasuhiko OHARA	Takashi AMEMIYA	The reaction mechanism of noble metal nanoparticle synthesis by polyphenols and benzendiols	Polyphenols are promising raw materials for synthesizing nanoparticles with low environmental impact nonetheless, their reaction mechanisms as reductants have not been clarified. In this study, we investigated the reaction mechanism of catechol (CC), a constituent unit of polyphenols, in order to elucidate the reaction mechanism of noble metal nanoparticle synthesis by polyphenols. Through the calculation of the stoichiometric ratio by quantitative analysis of gold ions, this study demonstrated a new reaction mechanism for the synthesis of noble metal nanoparticles, which can contribute to the reduction of environmental load by optimizing the amount of reductant, improving the yield, and reducing waste liquid.
-------------------	--------------------	---	---

Yuta KOBAYASHI	Akira MORI	Reconsidering Terrestrial Biological Conservation Towards Balancing between Biodiversity and Ecosystem Services	Halting the loss of global biodiversity and protecting ecosystem services are urgent and challenging tasks facing global human society. This thesis 1) examined ways of improving the quality of biodiversity conservation through the reconsideration of conservation framework of existing protected areas and priority areas and 2) identifies notable characteristics of ecosystem services and discusses practical methods for balancing the two dimensions of conservation relating to biodiversity and ecosystem services. Based on these findings, I outline some of the implications for future biological studies and the framing of new biodiversity targets.
-------------------	------------	--	--

Takuma HIRATA	Tomohiko KIKUCHI	Taxonomic studies on Leptostracain adjacent waters of Japan	Leptostracans are small crustacean with a total length of several millimeters, which is classified into the Malacostracan subphylum Crustacea. This species is an important species in considering the evolutionary history of crustaceans closest to evolutionary crustaceans due to morphological characteristics among primitive crustaceans, but taxonomic study has not progressed, and even in Japan exact distribution and diversity have not been revealed. In this study, we re-evaluated the distribution and diversity of leptostracans based on specimens collected from the waters around Japan.
------------------	---------------------	---	---