



ENEOS Signs License Agreement for Organic Catalyst Manufacturing Technology for Pharmaceutical Production

ENEOS Corporation (President: Saito Takeshi; "ENEOS") announces that it has entered into an agreement with Tokyo Chemical Industry Co., Ltd. (President: Asakawa Naoyuki; "TCI") to license its technology for the manufacturing of organic catalysts*¹ which is assumed for pharmaceuticals.

ENEOS is committed to discovering and developing new innovative technologies (high performance, new functionality, low cost, SDGs) in the field of catalyst development with the aim of achieving both a "stable supply of energy and materials" and the "realization of a carbon neutral society."

In recent years, there has been increasing regulation on permissible levels of metals considered harmful when contained in a final product due to catalysts used in the pharmaceutical manufacturing process. ENEOS has been actively working on the development of organic catalysts that meet or exceed the performance of existing catalysts and remain cost competitive, while also complying with stricter regulations on contained metals. ENEOS has now succeeded in developing three organic catalysts that satisfy these requirements*². As these three catalysts are expected to be used with manufacturing technologies used in various pharmaceuticals, like hypertension medication, ENEOS has applied for patents and licensed the technology to TCI, a leading domestic reagent manufacturer, which will be responsible for the manufacturing and distribution of these catalysts. New development efforts are ongoing, and ENEOS will pursue licensing agreements and commercialization of these developments as appropriate.

In the future, ENEOS will also take on the challenge of molecular design of organic catalysts using Materials Informatics (MI)*³ to advance the development of innovative technologies that contribute toward the stable supply of energy and materials.

*1 Organic catalyst is a general term for organometallic catalysts and organocatalysts.

*2 The organic catalysts to be launched address various requirements of current pharmaceutical production catalysts (performance that meets or exceeds that of current catalysts, cost competitiveness, high chemical selectivity, compliance with content regulations, environmental friendliness, ease of handling at manufacturing facilities, etc.).

*3 Materials Informatics (MI) is a promising field of study where vast amounts of materials data are processed

by AI and deep learning. Although materials R&D activities have long been carried based on extensive experiments and researchers' intuition, the scope of MI applications is rapidly expanding.

ENEOS' goal is to discover and develop innovative materials for a sustainable low carbon future in the fields of renewable energies, catalysts, functional materials and lubricants. By integrating experiments, simulations and AI, ENEOS aim to realize materials development through "physicochemical laws" and "statistical analysis".

Development Process

