





Foreword

This Japan–EU Joint Workshop on the Frontiers of Catalytic Science and Technology for Energy, Environment, and Risks Prevention (JECAT'97) was held at the research complex of the Agency of Industrial Science and Technology (AIST) belonging to the Ministry of International Trade and Industry (MITI) in Tsukuba, Japan, from 25 to 28 November 1997. This workshop was the third in a series; the first workshop (JECAT'91) was held from 2 to 4 December 1991, in Tokyo, Japan, and the second (JECAT'95) from 26 to 28 April, 1995 in Lyon, France.

JECAT'97 workshop was held under the auspices of several organizations. From the Japanese side:

- Agency of Industrial Science and Technology, Ministry of International trade and Industry (AIST/MITI).
- National Institute of Materials and Chemical Research (NIMC).
- National Institute for Resources and Environment (NIRE).
- Osaka National Research Institute (ONRI).
- New Energy and Industrial Technology Development Organization (NEDO).
- Research Institute of Innovative Technology for the Earth (RITE).
- Petroleum Energy Center (PEC).
- Catalysis Society of Japan (CATSJ).

From the European side:

- European Federation of Catalysis Societies (EFCATS).
- European Commission.

Catalysts are viewed as a key form of fundamental technology in areas of resources, the environment and energy, which can be applied in the manufacture of

chemical products, developing new types of energy, the effective use of energy and resources, reducing and eliminating substances harmful to the environment, and producing clean fuels. Accordingly, as the 21st century draws near, new findings in catalytic technology are fervently hoped for. This workshop focused on three major topics for discussion: simple chemical processes that aim at reducing the burden on the environment and the diversification of resources; catalytic technology that aims at reducing internal combustion engine emissions to ensure cleaner air; catalytic technology to clean the fuel supplied to these engines. The aim of this workshop was to provide the scientific communities of Japan and EU a fruitful opportunity to discuss the recent advances in environmental catalysis and identify future issues, and also stimulate further collaboration between Japanese and European scientists toward more efficient catalyst development as well as the formulation of guidelines for future research in environmental catalysis.

The scientific program of this workshop included plenary lectures, keynote lectures, oral and poster presentations in three major topics of simple chemical processes, clean environments and clean fuels. Each major topic includes the following subtopics.

- * Simple chemical processes:
- Alkane oxidation to basic chemicals.
- Solid acid and bases.
- * Clean environments:
- Catalytic combustion.
- DeNO_x.
- CO₂ fixation.
- CFC decomposition.
- Water treatment.
- Photo catalysis.

- * Clean fuels:
- Clean fuel production.
- Biomass conversion.

In the scientific and technical presentation sessions, 35 were oral presentations and 55 were poster presentations. 155 people attended this JECAT'97 from government, academia and industry: 122 participants

from Japan and 33 from Europe. Scientists from 10 EU communities were present and in addition representatives of three outside of the EU were also present.

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