

Preface

Structure–function relationship in catalytic chemistry



Dr. Tetsuro Seiyama, Emeritus Professor of Kyushu University, Japan, passed away in June 1997. He was a great leader in the field of catalytic science and technology in Japan as well as a pioneer and outstanding leader of chemical sensors in the world. This issue of *Journal of Molecular Catalysis, A: Chemical*, entitled ‘Structure–Function Relationship in Catalytic Chemistry’ was planned as a special issue in memory of him.

Dr. Seiyama was born in Fukuoka in 1920 and was educated at Kyushu University. He

received his diploma in 1943 and Doctor of Engineering in 1948. He was appointed as Associate Professor in the Department of Applied Chemistry, Faculty of Engineering of Kyushu University and was promoted to Professor in 1957. He served in this position for 36 years until he retired as Emeritus Professor in 1984.

During his long academic life, he was active in wide fields of physical chemistry. He made numerous leading and creative contributions not only in catalytic science and technology but also in other fields of science and technology, i.e.,

electrochemistry, solid state chemistry, crystal chemistry and analytical chemistry including chemical sensors. One of the most outstanding contributions which he made in the field of catalysis is the fundamental understanding of the catalytic properties of metal oxides. His background in solid state chemistry led him to pigeonhole catalytic performances of metal oxides on the thermodynamics and structure of solid catalysts. By this achievement, he received the highest Award from the Chemical Society of Japan. As an extension of the investigation of the surface chemistry of metal oxides, he also found the principle of chemical sensor for gas detection in 1962 and 1966. This principle has been developed into a big industry of chemical sensors in the world. He received the Tanahashi Award from the Electrochemical Society of Japan for the achievement of using solid electrolytes and ceramics as gas sensors.

In addition to his scientific contributions, he sent many excellent younger scientists into wide fields of science and technology. Thirty-one

professors from his school are now active in the academic field of science including catalysis. Most of them have become leading professors of the Catalysis Society of Japan. He also worked in many academic societies in Japan including the Chemical Society of Japan, the Catalysis Society of Japan, the Surface Science Society of Japan and the Electrochemical Society of Japan as president and vice-president.

In great esteem of his achievements and deep sorrow for his death, we planned the special issue and invited 20 distinguished scientists to contribute their original papers. It would be of great pleasure to us if this issue eminently contributes to the progress of the science and technology of catalysis.

Guest Editors:

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