LECTURE 45

Dr. Ryoji Noyori

- **2001 Nobel Laureate in Chemistry**
- **President of The Japan Academy**
- **University Professor at Nagoya University**

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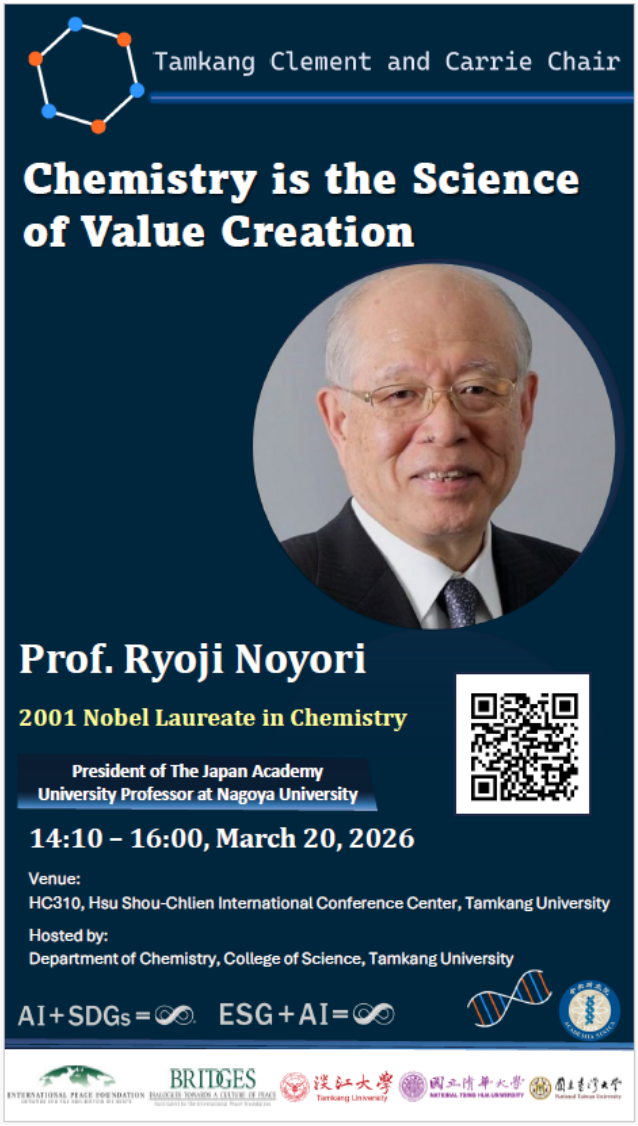

INTRODUCTION

Tamkang Clement and Carrie Chair

Professor Ryoji Noyori is one of the world's most distinguished chemists and a recipient of the 2001 Nobel Prize in Chemistry for his pioneering contributions to asymmetric catalysis. His development of highly efficient chiral catalytic systems revolutionized the synthesis of enantiomerically pure compounds and has had a profound impact on the pharmaceutical, fine chemical, and materials industries.

Beyond his scientific achievements, Professor Noyori has been a strong advocate of green chemistry and sustainable development. He previously served as President of RIKEN and currently serves as President of the Japan Academy. Through his research, leadership, and dedication to scientific education, Professor Noyori continues to inspire researchers worldwide and promote the role of chemistry in addressing global challenges.

Topic ：Chemistry is the Science of Value Creation

ABSTRACT

In his lecture, **"Chemistry is the Science of Value Creation,"** Professor Noyori discussed the fundamental role of chemistry in creating value for society through scientific innovation. Beginning with the origin of molecular asymmetry in nature, he explained how chirality influences biological systems and why asymmetric synthesis has become essential in modern pharmaceutical development.

Professor Noyori also reviewed the development of asymmetric hydrogenation and chiral catalysis, highlighting how fundamental scientific discoveries can lead to transformative industrial applications. He emphasized that chemistry serves as a central science connecting physics, biology, materials science, and environmental science.

Addressing contemporary global challenges, including climate change, resource depletion, and environmental pollution, Professor Noyori advocated for the principles of green chemistry and sustainable development. He encouraged scientists to pursue interdisciplinary collaboration and to transform scientific knowledge into practical solutions that improve human well-being and create long-term societal value.

MINUTES

On March 20, 2026, Tamkang University was honored to host Professor Ryoji Noyori, Nobel Laureate in Chemistry and President of the Japan Academy, as the distinguished speaker of the Tamkang Clement and Carrie Chair Lecture.

The event commenced with welcome remarks by Vice President Hui-Huang Hsu, who introduced the history and mission of the Tamkang Clement and Carrie Chair Program. Dean Hung-Chung Hsueh of the College of Science then introduced Professor Noyori's remarkable academic achievements and his contributions to asymmetric catalysis and green chemistry.

During his lecture, Professor Noyori shared his scientific journey and explained the importance of molecular chirality in chemistry and life sciences. He described the development of BINAP-based asymmetric hydrogenation catalysts and demonstrated how fundamental research can generate significant industrial and societal impacts.

Professor Noyori further emphasized that chemistry is not only a discipline for understanding matter but also a powerful tool for creating value. He highlighted the importance of green chemistry, sustainable innovation, and international cooperation in addressing global challenges such as climate change, energy demand, and environmental protection.

The lecture attracted faculty members, researchers, and students from Tamkang University and other academic institutions. The audience actively participated in the discussion session, raising questions on scientific research, sustainability, and the future development of chemistry. The event provided valuable inspiration for young scientists and further strengthened international academic exchange at Tamkang University.