

Preface



It is a great privilege and pleasure for us as guest editors to publish this special issue of the *Journal of Photochemistry and Photobiology A: Chemistry* dedicated to Professor Iwao Yamazaki, who has carried out a lot of creative works in this field on photochemistry and photobiology, in honor of his retirement from Hokkaido University in March 2005, following his 63rd Birthday.

Professor Iwao Yamazaki was born in Sapporo on January 16, 1942. He received Ph.D. from Hokkaido University in Molecular Photophysics and Photochemistry in 1972, and then worked at Hokkaido University as a Research Associate. In 1980, he got a professorship (Associate Professor) of Institute of Molecular Science (IMS) in Okazaki, Japan, and in 1988 he was appointed to a full Professor at Hokkaido University, Department of Chemistry, School of Engineering. He has served for the Japanese Photochemical Association as a director board member (1991–1994 and 1997–1998), for Laser Society of Japan as a director board member (2001–present) and as a regional president of Tohoku-Hokkaido Branch (1999–2001), for Spec-

troscopical Society of Japan as a regional president of Hokkaido Branch (2004–present), and for International Union for Photobiology as a vice president (2004–present).

His research career in the field of photophysics and photochemistry was started with a molecular energy level calculation by configuration analysis in the Ph.D. course and with a study of excited state dynamics of aza-aromatic compounds as a Research Associate in the group of Professor Hiroaki Baba, a leader of quantum chemistry and molecular spectroscopy, at Hokkaido University. One of his most distinguished scientific achievements in this period is that he could observe weak fluorescence of pyridine in the vapor phase, which was believed to be non-fluorescent, in 1977 for the first time using a single-photon counting emission measurement technique. At IMS, he has developed a time-correlated single-photon counting apparatus for the measurement of picosecond time-resolved fluorescence spectra in collaboration with Hamamatsu Photonics. With this apparatus, he could measure the fluorescence lifetimes of single vibronic bands of azines including pyrazine, pyrimidine, pyridine and s-triazine (1982–1983). After these works, he extended his research interest to condensed-phase dynamics such as energy transfer or electron transfer in Langmuir–Blodgett monolayer films or in photosynthetic reaction system, and published tremendous amounts of reports on these systems in collaboration with many scientists all over the world (1984–1988). At Hokkaido University he extended these works leading to the comprehensive understanding of energy transport phenomena in various molecular assemblies including synthetic linked organic compounds. His research group also developed novel apparatuses such as an electric-field-modulation fluorescence spectroscopic system (1994), femtosecond up-conversion fluorescence measurement system (1996), and, more recently, quantum-coherence manipulation system with attosecond-phase-controlled double-pulse laser excitation (2003). His recent research interest is ultrafast photochemical processes in organized molecular systems and its application to a quantum mechanical switching device or quantum computing device. Professor Yamazaki's distinguished scientific harvest has been published in nearly 280 papers, all in the international journals. He has received Distinguished Research Award, Chemical Society of Japan, in 1990 and Advanced Research Award from Yazaki Science Foundation

in 1994 in the field of time-resolved fluorescence spectroscopy of molecular photophysics, photochemistry and photobiology.

Currently, he is Professor Emeritus at Hokkaido University.

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