



Nomination for LCGC's 2011 Lifetime Achievement Award

Candidate: Daido Ishii

Dr. Daido Ishii is Emeritus Professor at Nagoya University, Japan. He was born on November 23, 1926, in Ichinomiya, Aichi Prefecture, Japan. Immediately after he graduated from Nagoya University in 1950, Dr. Ishii joined the university as a research associate and became a full professor in 1965. Dr. Ishii received his doctorate in engineering from Nagoya University in 1962 by submitting a thesis entitled "Studies on the analysis of trace impurities in uranium metal for nuclear fuel." He continued research and education as a full professor at Nagoya University until 1990. After Dr. Ishii retired from Nagoya University he joined Kumamoto Institute of Technology (now renamed Sojo University) as a professor until 2000.

Professor Ishii has been active in various fields of analytical chemistry. It should be noted that he opened a world for miniaturization of columns in modern liquid chromatography. Dr. Ishii started the work on microcolumn liquid chromatography in the 1970s and first described the use of microcolumns with 0.25-0.5 mm i.d. in 1974. He also demonstrated the possibility of open-tubular capillary columns in liquid chromatography. Dr. Ishii applied the developed techniques to biological trace samples such as steroid hormone, bile acids and catecholamines. He also developed direct combination of microcolumn liquid chromatography with fast-atom bombardment mass spectrometry and applied it to nonvolatile, thermally labile, polar compounds such as peptides and saccharides. Dr. Ishii proposed a concept of "unified chromatography" and demonstrated microcolumns for liquid chromatography could be applied to supercritical fluid chromatography and gas chromatography by controlling the pressure and the temperature of the separation column. In unified chromatography, complex mixtures could be separated with a single system in the consecutively different modes. So far, he has published more than 250 scientific publications in analytical chemistry and greatly contributed to innovation of chromatography.

Dr. Ishii co-organized the U.S.-Japan Cooperative Science Seminar “Microcolumn Separation Methods and their Ancillary Techniques” with Dr. Milos V. Novotny, Indiana University, at Honolulu in 1982. Dr. Ishii was the chairman of the Seventh International Symposium on Capillary Chromatography held at Gifu, Japan, in May 1986. He was also an organizer of “HPLC Danwakai (HPLC Discussion Group)” to contribute to the advancement of HPLC in Japan. He has also been serving for a number of scientific societies as important positions for many years.

Dr. Ishii has received numerous awards over the course of his career, including: The Japan Society for Analytical Chemistry Award in 1979, Tswett Chromatography Medal in 1987, and Marcel Golay Award in 1990.