



Obituary

Teiji Tsuruta, 1920–2015



Teiji Tsuruta, a professor emeritus at The University of Tokyo and at Tokyo University of Science passed away at the age of 95 on September 18, 2015. We were surprised to hear about his departure with deep regret, as he had been active in good health just until the summer period of the year. He is known to be one of the pioneers in the field of polymer chemistry, and more specifically on anionic/organometallic polymerization and stereochemistry in these processes. He achieved in 1962 together with Shohei Inoue an asymmetric selective polymerization of propylene oxide with a ZnEt_2 /borneol catalyst system, eventually leading to the general concept of an *enantiomorphic catalyst site control mechanism* to comprehend stereospecific polymerization, including a Ziegler–Natta process. He established also a systematic diagram of monomer–initiator reactivity relationship in the anionic polymerization, to provide far reaching insights in the mechanism of anionic polymerizations. Tsuruta is a reputed author of a long-seller text book, *Synthetic Chemistry of Polymers*, the first edition of which was published

as early as in 1959. He has completed regular revisions to update the contents of this textbook, currently reaching its 27th edition, and a number of the translated versions, including Chinese, Russian, and Turkish are also published.

Tsuruta started a new research program of biomedical polymer materials in the late 1970th, and soon became a leading figure through organizing a number of national research projects collaborated with eminent colleagues, including Yasuhisa Sakurai and Toshihiro Akaike, covering wide disciplines from macromolecular to medical science and technologies. Moreover, he, himself as one of living legends of polymer chemistry, contributed significantly in archiving the evolution of academic and industrial polymer researches in Japan with the interaction of global developments. His insightful and liberal views based on his knowledge of authentic classics and his own experiences through the war-time are apparently rooted back to his High School, equivalent to College in the current system, period. He sometimes referred with respects to his influential mentor, Nozomu Yamaoka, who had attracted many students of his college to chemistry fields, and also known by his book, *Stories of Chemistry History*.

Tsuruta served an inaugural Asian regional editor for *Reactive & Functional Polymers* (*Reactive Polymers* at that time) from 1982 until 1986, and continued to provide enormous supports and contributions to the journal for more than 3 decades. A voluminous special issue (vol. 67, November issue in 2008) was organized by invited guest editors and his former students, Yusuke Kawakami, Kazunori Kataoka, and Tokio Hagiwara to celebrate his 88 year old birthday (Beiju). In this issue, Tsuruta himself contributed a memoir article to review historical developments of the journal together with his research activities. Another special issues (vol. 71, March issue in 2011) covering biomedical polymers were organized again by his former students, Mizuo Maeda and Yukio Nagasaki as guest editors, to highlight a new important area of the journal. Thus, Tsuruta and his *mafia* have significantly contributed to the current successful status of the journal.

Tsuruta was born in Kotohira, Kagawa, and completed his graduate diploma at Kyoto Imperial University in 1941, in order to fulfill his three and a half years army service during WW2. After the war, he returned to Kyoto University, and his academic carrier started in 1949 as an assistant professor in Kyoto University. He obtained his PhD from Kyoto University in 1953. He was promoted to an associate professor in the Institute of Chemical Research, Kyoto University in 1951, and moved to Faculty of Engineering in 1956. He was promoted to a full professor in 1962 in Kyoto University, and then accepted the invitation from The University of Tokyo in 1964, to serve for the polymer chemistry chair until 1980 on his first retirement at the age of 60. He decided to continue his academic/research activities in Science University of Tokyo until his second retirement in 1996. He published more than 300 original papers, reviews, and edited/authored books, including a popular text book noted above.

Tsuruta frequently mentioned that he was proud that his students became influential professors in a greatly extended expertise beyond himself. Indeed, a number of prominent university faculty members have been produced by his guidance; those already listed as guest

editors in special issues of this journal. Such an accomplishment is obviously resulted from his mentoring to encourage his students as independent fellow researchers, in contrast to the commander–soldier research group management. Tsuruta's polite and patient attitude to his students during research discussions has been recalled by former students as memorable experiences in their laboratory period. He once told that this respectfully self-disciplined attitude to his students was inherited from his mentor, Ryohei Oda in Kyoto University. Labo alumini meetings (Teiyu-kai) were held annually until the last year (1994), in which Tsuruta himself delivered an hour-long talk over recent activities by his own, together with sometimes critical commentaries over recent trends in research communities as well as in our society life. We shall miss this valuable regular occasion to see Tsuruta, and to hear his deep-sighted and experienced viewpoints for our reflection and inspiration.

Tsuruta received numerous awards and honors, including The Award of Chemical Society of Japan (1977), SPSJ Award for Outstanding Achievement in Polymer Science and Technology (1985). He also served as important functions for many scientific societies, including the president of Chemical Society of Japan (1985–1986), the president of Society of Polymer Science, Japan (1980–1982), and a member of Science Council of Japan (1985–1988).

Tsuruta has strongly inspired his colleagues through his life by his dedication to research and by his sincere and warm personality. He was also known by his very timely response (with e-mails!) to queries and correspondences by fellow colleagues and students. He was also very careful in correcting any typographic or grammatical errors in manuscript texts in Japanese as well as in English, including even conference abstracts. By this way he could show his decent dedication to science and even beyond to his way of life. At the same time, we all remember a lot of episodes of his warm personality and his sense of humor. He enjoyed to talk about the conversation during his visit to Natta's laboratory; asking, "Was *the catalyst* produced in that building?", answered by "That building was produced by *the catalyst*!". Personally, I am also greatly indebted to his kindest encouragements for my PhD study to pursue in Belgium with Eric Goethals, eventually leading to my current academic life. Colleagues and students who experienced any contacts with Tsuruta-sensei should have similar nice memories with him, and will keep them from now on with full respects.

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Yasuyuki Tezuka
Editor in Chief