Memory of the Late Ichiro Sunagawa

Katsuo Tsukamoto

On the morning of 20th of December 2012, I received a telephone call from Jun Sunagawa, the son of Ichiro Sunagawa that his father had passed away quietly at home in the early morning. Two months before that morning, his family, former students and old colleagues had celebrated his 88th birthday at a quiet Japanese restaurant near the Tokyo tower, which was beautifully illuminated on that night. I heard from his family that he had a new suit made to wear for the occasion, wishing to be active for the coming years. The voice through the telephone was very low and quiet and thus I did not realize the situation for a moment. The time passed quietly for second son the telephone.

Ichiro Sunagawa was invited to Tohoku University as a Professor in Mineralogy in 1971 after 23 years at the Geological Survey of Japan. He became interested in the morphological change of minerals due to the change of environments. In order to understand the morphological change of minerals, he wanted to introduce the concept of ecology in biology to the field of mineralogy. “I was inspired by an ecologist in Tohoku University when I was a student”, he later said to me. This is the reason why he liked the words, “Snow is a letter from sky” given by Professor Ukichiro Nakaya.

He went to London University in 1957 to study crystal growth in the laboratory of Tolansky, who was famous for developing multiple-beam interferometry and Frank who was known for his theory of spiral growth. Ichiro Sunagawa brought an Olympus phase-contrast microscope from Japan to the field of crystal growth in London. Using the microscope, he observed surfaces of various crystals like hematite, quartz, SiC and diamonds. These surfaces were too flat and thus no steps could be seen by other scientists. However he could observe beautiful spiral steps on these crystals with the Olympus microscope. The microscope was therefore jokingly said to be equiped with built-in spiral patterns in the optical path. The Japan Mineralogical Society awarded him the Japan Geological Prize in 1963 for his pioneering works on crystal growth mechanisms through surface observations.

In 1971 he started his new job as a Professor in Tohoku University which he held for the next 17 years. I clearly remember his first lecture when I was a third year student of the undergraduate course. A colorful thin section of the mineral tourmaline attracted me so much during his lecture. This was a memorable slide that led me to work in the field of crystal growth. Without this slide, I would not have come into this field.

While Ichiro Sunagawa was in Tohoku University he studied crystal growth in various fields with students. During this 17 year period, 107 undergraduate and postgraduate students studied in his laboratory. He also activated the crystal growth community by starting the JSPS project “Materials Science in The Depth of the Earth.” This was the first big project in the field of Earth Science in Japan.

In 1982, he was nominated as a Council Member of Japan. He also acted as president in various societies, including the Mineralogical Society of Japan, the Japan Association of Crystal Growth and the Japan Gem Society. For these activities, the University of Marseille awarded him the honorary degree of Doctor of Science. He is also an honorary member of the Bulgarian Academy of Science.
After retiring, he became President of Gem Material School of Yamanashi prefecture. In the meantime, he spent time for the organization of ICCG4 in Sendai. We expected 400 participants before the conference but over 1300 participants attended. That was also an unforgettable memory for us.

He was awarded the Distinguished Service Award from the IOCG in 2007. I still remember the ceremony. The daughter of old Sunagawa accompanied him for assistance. She dressed in a Kimono beside him.

Although he could be strict, Sunagawa’s smile always gave us courage to overcome various barriers and to continue new directions in science and technology. His generosity of spirit affected everyone and we would very much appreciate to see his smile again, we hope.