

## Obituary for Hatsujiro Hashimoto

Professor Hatsujiro Hashimoto, Emeritus Professor of Kyoto Institute of Technology and Osaka University passed away on 15 April 2017. We have lost one of our finest microscopists. His life was a fulfilling one, full of passion for all sorts of topics and many accomplishments.

He was born on 26 December 1921 in Shiga prefecture in Japan. He already found his first passion while researching for his bachelor degree on using an electron diffraction method under Professor Hideo Tazaki at Hiroshima University of Arts and Science (OES). On the 6th of August in 1945, the entire city of Hiroshima was devastated by the atomic bomb. Since the distance from the blast center to the university was only 1.4 km, he was exposed to radiation and suffered injuries from the bombing. All facilities at the university were heavily damaged. However, his experimental devices were saved from the fire by a fireproof water tank which he had built along the window. He graduated from Hiroshima University in September 1945.

Professor Hashimoto was conferred a doctorate of Science from Kyoto University in 1953 for 'a Study of thin crystalline films by universal electron diffraction microscope' and started his academic career in the field of electron microscopy. The details of his research were already reported by Professor Makoto Shiojiri ([Microscopy, 66, 301-302 \(2017\)](#)). In 1972, Professor Hashimoto was appointed to a professorship at Osaka University. The second achievement of Professor Hashimoto was based on the research for the direct observation of the movement of atoms. He concentrated on the in-situ observation of the displacement around lattice imperfections in gold crystals using TV systems. This research resulted in the construction of a 400 kV analytical high-resolution electron microscope in 1985. It is a well-known and successful microscope for the observation of atoms and lattices images. It is commercially available from JEOL.

His third achievement is the contribution to the promotion of electron microscopy in Asia, particularly in China. He was elected as the president of the International Federation of Societies for Electron Microscopy (IFSEM) in 1982, and held this office until 1986. Together with Professor Gareth Thomas of the United States, re-elected General Secretary, Professor Hashimoto was one of the most enthusiastic advocates for the Chinese Electron Microscope Society joining the IFSEM. He sent letters to the societies on the mainland and in Taiwan as well as their respective government departments. He also consulted a number of ICSU (International Council for Science) subordinate societies and found that they took the same approach, that is to say naming the mainland society with 'Chinese', while suffixing 'located in Taipei, China' for the Taiwanese society. After repeated exchange of views, it was agreed that the change in name was confined to the IFSEM and did not serve any other purpose, nor did it affect other operations. In order to accept both as members, the proposal for some amendments of the charter was confirmed at the IFSEM committee meeting in Kyoto, Japan, on 31 August 1986, and announced at the IFSEM General Assembly on 2 September. The detail of his activity was already reported by Professor Hengqiang Ye et. al. ([Microscopy, 66, 303-304 \(2017\)](#)). The interactions between Japanese and Chinese scholars in electron microscopy were frequent, and a new initiative was already established in 1981. Professor Hashimoto organized the first Chinese-Japanese Electron Microscopy Seminar in Dalian, China with Professor K. H. Kuo. A series of this seminar lasted until the 10th one in 1999. The DNA of the activity extended to include Korea and Taiwan and to establish a series of the East-Asia Microscopy Conference (EAMC).

Professor Hashimoto was endowed with many talents, not only in electron microscopy but also in painting. This was his fourth accomplishment. He always carried a sketch book in his bag when he attended microscopy meetings. In 1998 after the IFSEM meeting in Cancun, there was a workshop of "Towards Atomic Resolution Analysis (TARA-98)" at Port Ludlow in Washington, USA. On this occasion, we, Professor Hashimoto, Dr. Minghui Song and I, visited Mt. Rainier by car. Professor Hashimoto was so impressed by the scenery of Mt. Rainier that he made it into a sketch. This painting was included in a book, 'Scenery in the World Seen by a Microscopist – journey through sketch for 23 years –' was published in 1999 (ISBN4-9980747-1-7 C0071), to celebrate his seventy-seventh birthday. The book comprises 205 beautiful paintings of landscapes from Asia, Australia, Europe, and North, Central and South America. He also used sketches in his New Year greeting cards and sent them to many of electron microscopists annually. We feel very sorry that we can no longer expect a greetings card from him.

The fifth and last accomplishment is related to his greeting cards, particular to His Majesty the Emperor. When the Japanese Society of Microscopy (JSM) organized the 16th International Microscopy Congress (IMC16) in Sapporo, Japan on 3-8 September 2006, the organizing committee decided to send the invitation to Their Majesties the Emperor and the Empress. Professors Sumio Iijima (Chair of IMC16), Shohei Yamashina (JSM President at that time) and I visited the Imperial Palace to meet Their Majesty the Emperor and the Empress in the summer of 2006, and told them about our IMC16 meeting. Surprisingly, the first words by His Majesty the Emperor was about Professor Hashimoto. They know all about him due to the New Year greeting cards. Therefore, I arranged for Professor Hashimoto to talk with Their Majesties the Emperor and the Empress at the reception of the IMC16.

After several years has passed from the IMC16. I suddenly received a phone call from the Imperial Household Agency and was asked about Professor Hashimoto's health because they did not receive a New Year greeting card that year. Then, I went to visit Professor Hashimoto in Shiga prefecture to check on his condition and reported to the Agency. Therefore, when I heard that Professor Hashimoto has passed away, the first thing I have to do was to inform the Imperial Household Agency of this sad news. I pray from the bottom of my heart that his soul may rest in peace and find a place for electron microscopy in the other world.

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Mt. Rainier by Professor Hashimoto (1998)



Professor Hashimoto with Prof. Eiichi Sukedai and Dr. Zhi-Quan Liu at the welcome party of the IMC16 (2006)