Brief Biography of Professor Ko Sugihara (杉原硬)

Japanese Theoretical Physicist
Born: January 2, 1924, died: August 16, 2016
Wife: Mihoko Sugihara (杉原美保子, born; January 13, 1927, died October 21, 2001)

Professor Ko Sugihara was a distinguished Japanese theoretical physicist known for his contributions to resonance phenomena and applied research in solid-state physics and materials physics. He was born on January 2, 1924. His father was a faculty member at Keijō Imperial University (located in present-day Seoul, Korea), where Professor Sugihara spent part of his early life.

After returning to Japan following World War II, he enrolled in Kyoto University and graduated in 1948 with a degree in physics. He began his academic career the same year as a research associate in the Department of Physics at Nagoya University.

In 1960, at the age of 36, he earned his Ph.D. in Physics from Nagoya University. His dissertation, titled "Higher Order Transitions in Double Resonance," was a pioneering study in quantum transitions and was published in the Journal of the Physical Society of Japan (J. Phys. Soc. Jpn. 14, 1054, 1959). His Ph.D. thesis adviser was Prof. Shoichi Sakata.

Following his doctoral work, Professor Sugihara transitioned into industrial research. From 1960 to 1982, he held key positions at Matsushita Electric Industrial Co. Ltd. (now Panasonic), working in the Technical Research Laboratory, Central Research Laboratory, and Materials Research Laboratory. He worked during this period on advanced materials science and wireless technologies.

He retired from Matsushita Electric Industrial Co. Ltd in 1982. At the same year, Professor Sugihara was invited as a visiting scientist to the Department of Physics at the Massachusetts Institute of Technology (MIT), where he collaborated with two renowned physicists: Professor Mildred S. Dresselhaus and Professor Gene F. Dresselhaus, both leading experts in condensed matter physics.

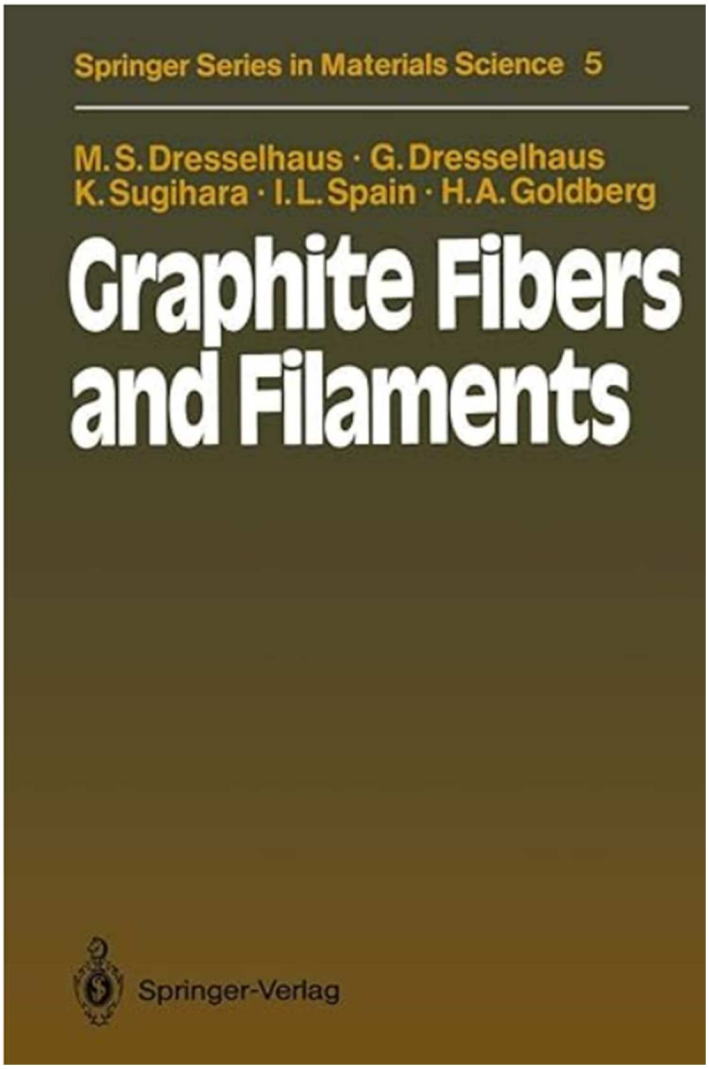
In 1988, he returned to academia as a full professor at the College of Pharmacy, Nihon University, where he continued teaching and research until his retirement in 1994.

Professor Ko Sugihara passed away on August 16, 2016, at the age of 92. His career bridged both academic and industrial research, and he remained a dedicated physicist throughout his life.

Professor Sugihara's research significantly contributed to understanding and exploiting carbon nanomaterials (including graphite fibers and filaments) and intercalated layered materials laid the ground works for further discoveries in this field, impacting various areas of technology.

((Book written))

H. A. Goldberg M.S. Dresselhaus, and G. Dresselhaus, K. Sugihara, I. L. Spain, *Graphite Fibers and Filaments* (Springer Series in Materials Science, January 1, 1988).



Prof. Ko Sugihara was a co-author with Prof. Mildred S. Dresselhaus and Dr. Gene F.Dresselhaus on the book "Graphite Fibers and Filaments". The book focuses on the structure and properties of carbon fibers and filaments and compiles research from a range of fields, including physics, chemistry, materials science and engineering, and polymer science.

((**Photo of Prof. Ko Sugihara**))

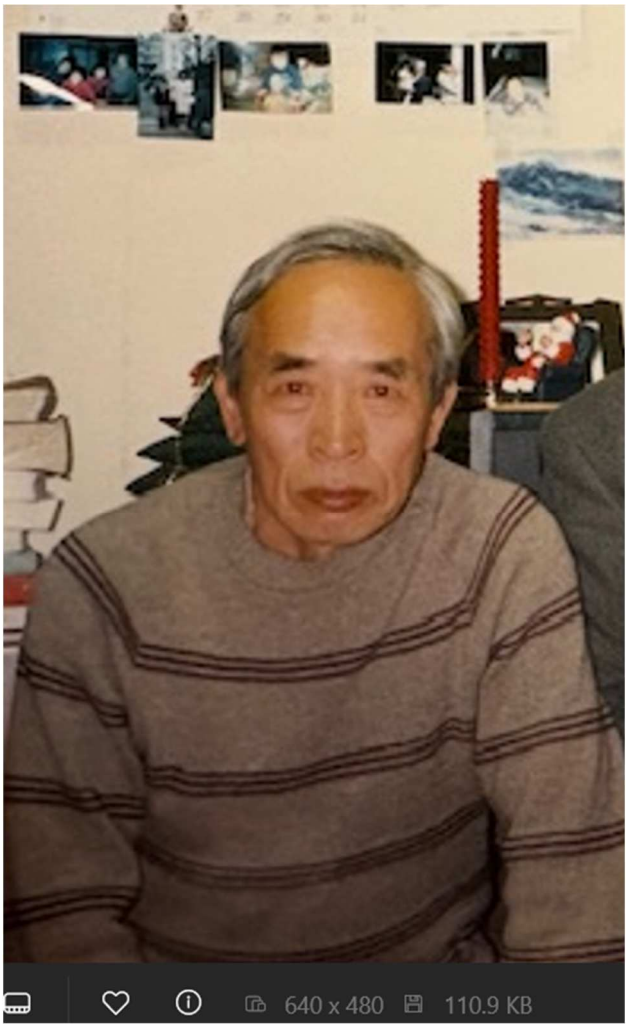


Fig.1 Picture of Prof. Ko Sugihara at his home (Funabashi, Japan) (ca. 1988).

Fig.2 Picture of Prof. Ko Sugihara (left), Mrs. Sugihara (Mihoko Sugihara), Dr. Itsuko S. Suzuki and Prof. Masatsugu Sei Suzuki (from the left to right) at Ithaca, New York. August 13, 1991. Taughannock Falls.

Fig.3 Picture of Prof. Ko Sugihara (left), Mrs. Tanuma (Tokiyo Tanuma, center) and Prof. Seiichi Tanuma (University of Tokyo, right, passed away at 10-02-2007) at the International Symposium of Graphite Intercalation Compounds, Vancouver, Canada (May, 1995)

Works of Prof. Ko Sugihara (Researchgate)

Ko Sugihara's research while collaborated with Tokyo Institute of Technology and other places
https://www.researchgate.net/scientific-contributions/Ko-Sugihara-2006407964
Ko Sugihara's research while affiliated with Nihon University and other places
https://www.researchgate.net/scientific-contributions/Ko-Sugihara-2002777053

((**Note**))

This brief biography of Prof. Ko Sugihara was filed in collaboration with Dr. Keiko Matsubara (Nihon University), Prof. Toshiaki Enoki (Tokyo Institute of Technology), Dr. Itsuko S. Suzuki, and Prof. Masatsugu Sei Suzuki (Binghamton University, NY) in August 06, 2025.

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Ko Sugihara

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