Accomplishments by University Professors Dr. Noyori and Dr. Akasaki

As a research-intensive university, we have promoted world-class research along with the concept in the Academic Charter “to study various phenomena of the humanities, society, and nature from an all-inclusive viewpoint, respond to contemporary issues, and adjust and enrich its education system to generate a new sense of values and body of knowledge founded on human nature.”

A few of such examples are the achievements of Dr. Ryoji NOYORI the Nobel Prize winner in chemistry in 2001, and Dr. Isamu AKASAKI, who developed GaN blue-light-emitting diode. In recent years, the creation of innovations has come into the spotlight, and the development of GaN blue-light-emitting diode is a successful example of Industry-Academia-Government cooperation.

Dr. Noyori’s sincere commitment, philosophy, and passion earned him a Nobel Prize, the greatest honor for a scientist.

In October 2001, the Royal Swedish Academy announced that Dr. R. Noyori and Dr. W. S. Knowles (USA) had been awarded the Nobel Prize in Chemistry for ‘Their work on chirally catalyzed hydrogenation reactions’ and Dr. K. B. Sharpless for ‘His work on chirally catalyzed oxidation reactions.’ This research had made possible artificial and preferential production of the ‘Enantiomer’ which exists in many organic compounds, and had comprised a very important subject of study in the 20th century. Dr. Noyori et al. realized their dreams.

University Professor Isamu Akasaki and Blue-Light-emitting Diodes - Producing a new light source for the 21st century

While many researchers abandoned the development of high-performance blue-light-emitting devices, Nagoya University Professor Isamu Akasaki remained undeterred and pressed forward in his research over 20 years and, in 1989, succeeded in being the first to achieve this goal and produced “a new light source for the 21st century.”

Professor Akasaki accomplished this through the use of a compound semiconductor: gallium nitride (GaN) and with that became the man who revolutionized the field of semiconductor research. Blue-light-emitting diodes (LEDs) can be utilized in a wide range of technologies, including traffic lights, large-scale display monitors, and Blu-ray disc players, and the contributions of this invention to the society are immeasurable. The applicability of GaN-based semiconductors in technology does not end with its use in light sources. There is also a high expectation that they can be applied to technologies such as high-speed and high-output power transistors and ultra-violet detectors that will be indispensable to the future information technology-based society.

In his life as a researcher, Professor Akasaki held fast to his idea that “once you have resolved to accomplish something, never give up.”

Due to his achievements in research based on this unwavering resolve, in 2004 he was acknowledged as Person of Cultural Merits, and has also received numerous awards.