

# Continuous Advances in Innovative Research are Highly Valued inside and outside Japan

## Prize Winners for 2007 (April 2007 - August 2008)

### Order of Culture

Awarded in November 2007

#### For Great Contribution in Bio-organic Chemistry and Natural Products Chemistry with Structure Determination of Ginkgolide

**Koji Nakanishi**, Professor Emeritus, Graduate School of Science

Professor Emeritus Koji Nakanishi, was awarded the Order of Cultural Merit of 2007 for his achievements in determining the structures of ginkgolide and brevetoxin, and in developing the nuclear Overhauser effect (NOE) method and exciton chirality method, which made a great impact on bio-organic chemistry and natural products chemistry. Professor Nakanishi is a world-renowned authority in organic chemistry, and has achieved many great things, including his elucidation of the mode of action of physiologically active substances at molecular structure level and his discovery of causal substances for ocular fundus degeneration. He has been honored domestically and internationally with the Japan Academy Prize in 1990, the U.S. Science Academy Prize for Chemistry in 1994, the Robert Welch Award for Chemistry in 1996, and the King Faisal International Prize in 2002. He is now conducting research in the structures of functional natural organic compounds and in vivo functional expression.



### Person of Cultural Merits

Elected in November 2007

Achievement in Study of International Laws  
Contribution as a Judge of the International Court of Justice

**Shigeru Oda**, Professor Emeritus, Faculty of Law



Professor Emeritus ODA, who taught international law was known already in the 1960's and 1970's as a pioneer in the Law of the Sea among international lawyers. In 1976, he was elected by the United Nations as Judge of the International Court of Justice, and served three nine-year terms until 2003.

### Person of Cultural Merits

Elected in November 2007

Opened a New Phase for Organosilicon Chemistry  
Highly Evaluated for Achievements to Lead the World

**Hideki Sakurai**, Professor Emeritus, Faculty of Science



Professor Emeritus Sakurai, who established organosilicon chemistry as an academic system having an important extent, was elected as a Person of Cultural Merit in November 2007. He was highly evaluated carrying out research in organosilicon chemistry playing a leading role at the world level.

### Japan Academy Prize

June 2007  
March 2008

Awarded the Japan Academy Prize  
Honored with the Tribology Gold Medal

Highly Evaluated in Domestic and International Academic Communities, and by Industry for Study on Tribology

**Koji Kato**, Professor Emeritus, Graduate School of Engineering

Koji Kato, Professor Emeritus, was awarded the Japan Academy Prize in 2007 for his joint "Studies on Tribology" with Yukio Hori, Professor Emeritus, the University of Tokyo. Professor Kato elucidated the mechanism of generating static friction coefficient by means of visualization methods, and the microscopic mechanisms of friction and wear. He succeeded in creating wear maps for the first time by integrating those elucidations. The map has made it possible to diagnose and predict wear condition, which is a great contribution to the development of anti-wear design. Tribo-coating lubrication that he invented was subjected to exposure tests in the international space station, and is under development for long-term practical use in space. Professor Kato was also honored with the Tribology Gold Medal of 2007. It is considered to be a great honor in the field of tribology, equivalent to the Nobel Prize.



### Medal of Honor with Purple Ribbon

Awarded in April 2007

Invention of Flash Memory that Changed the Semiconductor Field in the World

Research Institute of Electrical Communication

**Fujio Masuoka**, Professor Emeritus



Professor Emeritus Masuoka was awarded with a Medal of Honor with Purple Ribbon in the spring of 2007 for his great invention of flash memory. Flash memory has spread worldwide as a data storage medium in mobile phones, digital cameras, personal computers, etc.

### Medal of Honor with Purple Ribbon

Awarded in November 2007

Created and Elucidated Silicon Compounds of with New Structures

Graduate School of Science

**Mitsuo Kira**, Professor Emeritus



Professor Emeritus Kira was awarded with a Medal of Honor with Purple Ribbon in the autumn of 2007 for his achievements in researching and elucidating the properties of silicon compounds with new structures. Professor Kira has created stable divalent silicon compounds and various silicon "double bonds."

### Medal of Honor with Purple Ribbon

Awarded in April 2008

Great Contribution to the Academic Community and Industry with Research in Fluid Engineering

Institute of Fluid Science

**Kenichi Nanbu**, Professor Emeritus



In recognition of his achievement in fluid engineering research, Professor Emeritus Kenichi Nanbu was awarded with a Medal of Honor with Purple Ribbon in the spring of 2008. His achievement is not only important in academic terms, but also a great contribution to the industry, e.g., in space and aeronautics, semiconductor plasma process, and vacuum machinery.

### Topics

Successively Selected as the "No. 1 University," from Overall Ranking, by Japanese High School Teachers

In the "University Ranking 2008" published by the Asahi Shimbun Company, Tohoku University was ranked top for four consecutive years, from an overall rating of responses to questionnaires. The newspaper conducted a questionnaire survey of high school teachers in charge of educational guidance from across Japan and compiled the results. Tohoku University was first favorite for "In which university did the students show improvements in performance after entering?" and third favorite for "Which university do you recommend to your students?"

- No. 1 | Tohoku University
- No. 2 | The University of Tokyo
- No. 3 | Keio University
- No. 4 | Ritsumeikan University
- No. 5 | Tsukuba University

### Topics

"Materials Science" Ranked Third in the ESI's List of Most Cited Papers in the World.

As of May 2008, the Institution Rankings based upon Essential Science Indicators (ESI) which provides data of citation frequencies, published by Thomson Scientific, USA, indicated Tohoku University's publications in the field of "Materials Science" ranked 3rd in the world. It is ranked 1st in Japan, while that in the field of "Physics" ranked 2nd in Japan.

- 3rd in the world (1st in Japan) | Materials Science
- 9th in the world (2nd in Japan) | Physics
- 15th in the world (4th in Japan) | Chemistry
- 40th in the world (3rd in Japan) | Engineering