

**Keio University 150th Anniversary Commemorative Event
KEIO 150/ UK-JAPAN 2008 British Nobel Laureate Lecture Series
Final Lecture by Sir Harold W. Kroto, Nobel Prize Winner in
Chemistry
Theme: “Science, Society and Sustainability”
Conferment Ceremony of the Honorary Degree of Doctor of
Science also to be held**

As the first modern comprehensive higher education institution in Japan, Keio University is celebrating its 150th anniversary in 2008. To commemorate the 150th anniversary of the founding of Keio University and also of 150 years of diplomatic relations between Japan and the UK, Keio University and the British Embassy in Tokyo are co-hosting a series of public lectures by British Nobel Prize laureates, with a focus on those who have made outstanding achievements in the fields of science and innovation. The final lecture of the series, entitled “Science, Society and Sustainability”, will be delivered by Sir Harold W. Kroto. Sir Harold is a leading scientist in the field of nanotechnology and nanoscience. He shared the 1996 Nobel Prize in Chemistry for the discovery of carbon compounds called “Fullerenes”. Besides his research, he also co-founded the Vega Science Trust with Dr Patrick Realms in 1994, and conducts workshops to facilitate “public understanding of science” for youths in Japan, USA, Mexico and other countries. In appreciation of these achievements, Keio University confers the Honorary Degree of Doctor of Science upon Sir Harold W. Kroto.

1. About Sir Harold W. Kroto’s Research

“Fullerenes” and other carbon molecules discovered by Sir Harold Kroto are expected to be utilized in new medical equipment, in new energy-generating materials for the 21st century, as well as various other fields.

Just as diamond is, “Fullerenes” are carbon allotropes (different physical forms of a single element). Excluding water 2/3 of the human body weight is carbon in compounds such as protein, sugars and amino acids. It thus has a vital role in maintaining the healthy human body.

In 1985, Sir Harold W. Kroto and colleagues Professor Richard Smalley and Professor Robert Curl from Rice University discovered a new soccer-ball shaped, highly symmetrical molecule with sixty carbon atoms, which was generated by vaporizing graphite with a laser in an atmosphere of helium. When presenting the paper, Sir Harold, who also has a passion for graphic art, suggested naming this molecule Buckminsterfullerene, after the American architect Richard Buckminster Fuller who designed the geodesic dome that has a similar spheroid structure. Today, carbon allotropes with a hollow construction are commonly called “Fullerenes”. For the discovery of “Fullerenes”, in 1996, Sir Harold, Professor Smalley and Professor Curl were awarded the Nobel Prize in Chemistry. Sir Harold also received the Royal

Society's Michael Faraday Award in 2001 and its Copley Medal in 2002. In 2007, he was elected as a foreign associate to the National Academy of Sciences in the United States. He also made several other discoveries in the process of discovering the C60 molecule, such as compounds with carbon phosphorus double bonds and the identification of long carbon chain molecules in interstellar gas clouds (Cyanopolyyne chain).

2. Conferment Ceremony and Lecture

Time and Date: Friday, 11 July, 10:20 – 12:10

Venue: Keio University Mita Campus (2-15-45 Mita, Minato-ku, Tokyo)

Access to the site:

http://www.keio.ac.jp/english/about_keio/campus_info/accessmaps.html

(1) Conferment Ceremony

Time: 10:20 – 11:00

Venue: Public Speaking Hall "Mita Enzetsu-kan"

Language: English only

(2) Lecture

Time: 11:10 – 12:10

Venue: North Building Hall

Language: English with Japanese interpretation

Lecture Title: Science, Society and Sustainability

Lecture Abstract: Development of science and technology has led to a better life in developed countries, however, we are also facing depletion of the earth's natural resources. To create a sustainable society, nanotechnology and nanoscience have important roles such as controlling atomic and molecular arrangement at the nanoscale and developing new material and functions.

3. References

(1) Profile of Sir Harold W. Kroto

Chemist (nanoscience), Francis Eppes Professor, Florida State University

The discovery of Buckminsterfullerene led to a share of the Nobel Prize in Chemistry in 1996.

He received the Michael Faraday Award in 2001 and Copley Medal in 2002. In 2007, he was elected as a foreign associate to the National Academy of Sciences of the United States.



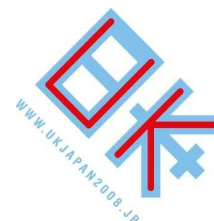
Main Publications and Papers

Y Q Zhu, W K Hsu, H W Kroto and D R M Walton. An alternative route to NbS₂ nanotubes. *Journal of Physical Chemistry B*, 106 (31), 7623-7626 (2002).

R L D Whitby, W K Hsu, H W Kroto and D R M Walton. Conversion of amorphous WO₃-x into WS₂ nanotubes. *Physical Chemistry Chemical Physics* (4), 3938-3940 (2002).

(2) About UK-Japan 2008

UK-Japan 2008 is a year-long campaign organized by the British Embassy and the British Council to celebrate 150 years of diplomatic relations between the UK and Japan. More than 250 accredited events will be held throughout the year to showcase the best of the contemporary UK's creativity in the field of arts, science and innovation, and creative industries, and to encourage greater bilateral partnership and collaboration of Japan and UK.



www.ukjapan2008.jp

*To cover the event, please contact us in advance.

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