Bunsho Ohtani

Summary:

A research work on photocatalysis by Professor Ohtani started in 1981 when he was a Ph. D. course student in Kyoto University. Since then he has been studying photocatalysis and relating topics for more than 30 years and published more than 200 original papers (h-index: 55) and two single-author books. After getting Ph. D. degree in Kyoto University in 1985, he became an assistant professor in the university. In 1996, he was promoted to an associate professor in Division of Chemistry, Graduate School of Science, Hokkaido University and then got a full professor position in Catalysis Research Center (presently Institute for Catalysis), Hokkaido University in 1998. For education of graduate students, Professor Ohtani's laboratory belongs to Graduate School of Environmental Science, Hokkaido University since 1999. He was awarded 2005 Scientific Achievement Award of The Electrochemical Society of Japan, The Japanese Photochemistry Association Award 2006 and Catalysis Society of Japan Award for 2013 for his works on photocatalysis.

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Education: BS Hydrocarbon Chemistry, Kyoto University, March 24, 1979
MS Hydrocarbon Chemistry, Kyoto University, March 23, 1981
Ph.D. Hydrocarbon Chemistry, Kyoto University, March 23, 1985 (thesis title: Photocatalytic Redox Reactions by Aqueous Suspension of Titanium Dioxide)

Professional Appointments:

Assistant Professor, Department of Hydrocarbon Chemistry, Kyoto University, February 16, 1985—March 31, 1996
Associate Professor, Division of Chemistry, Graduate School of Science, Hokkaido University, April 1, 1996—August 31, 1998
Professor, Catalysis Research Center (Institute for Catalysis from October 1, 2015), Hokkaido University, September 1, 1998—present
Professor, Division of Environmental Materials Science, Graduate School of Environmental Science, Hokkaido University, February 1, 1999—present (concurrently)

Awards:

2005 Scientific Achievement Award of The Electrochemical Society of Japan

The Japanese Photochemistry Association Award, 2006

Catalysis Society of Japan Award for 2013

Publications:

More than 250 original papers in total (Web of Science). Hirsh index (h-index): 55

Selected Representative Publications:

1) Kuncewicz, J. and Ohtani, B. (2015) Titania photocatalysis through two-photon band-gap excitation with built-in rhodium redox mediator. *Chem. Commun.*, **51** (2), 298-391.
2) Ohtani, B. (2014) Revisiting the Original Works Related to Titania Photocatalysis: A Review of Papers in the Early Stage of Photocatalysis Studies. *Electrochemistry*, **82**(6), 414-425.
3) Ohtani, B. (2014) Revisiting the Fundamental Physical Chemistry in Heterogeneous Photocatalysis: Its Thermodynamics and Kinetics. *Phys. Chem. Chem. Phys.*, **16** (5), 1788-1797.
4) Ohtani, B. (2013) Titania Photocatalysis Beyond Recombination: A Critical Review. *Catalysts*, **3** (4), 942-953.
5) Ohtani, B. (2010) Photocatalysis A to Z—What We Know and What We Don't Know. *J. Photochem. Photobiol. C Photochem. Rev.*, **11**(4), 157-178.
6) Kowalska, E., Prieto-Mahaney, O.-O., Abe, R. and Ohtani, B. (2010) Visible-light-induced photocatalysis through surface plasmon excitation of gold on titania surfaces. *Phys. Chem. Chem. Phys.*, **12** (10), 2344-2355.
7) Abe, R., Shinmei, K., Hara, K. and Ohtani, B. (2009) Robust Dye-sensitized Overall Water Splitting System with Two-step Photoexcitation of Coumarin Dyes and Meal Oxide Semiconductors. *Chem. Commun.*, **45**, 3577-3579.
8) Amano, F., Yasumoto, T., Prieto-Mahaney, O.-O., Uchida, S., Shibayama, T. and Ohtani, B. (2009) Photocatalytic Activity of Octahedral Single-Crystalline Mesoparticles of Anatase Titanium(IV) Oxide. *Chem. Commun.*, **45**, 2311-2313.
9) Kowalska, E., Abe, R. and Ohtani, B. (2009) Visible light-induced photocatalytic reaction of gold-modified titanium(IV) oxide particles: action spectrum analysis. *Chem. Commun.*, **45**, 241-243.
10) Ohtani, B. (2008) Preparing Articles on Photocatalysis—Beyond The Illusions, Misconceptions and Speculation. *Chem. Lett.*, **37** (3), 217-229.