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Research fields : heterogeneous catalysis by gold nanoparticles

1970 BS from Nagoya Institute of Technology, Department of Industrial Chemistry
1976 Doc. Engng. from Department of Industrial Chemistry, Graduate School of Kyoto University
1976 Research Scientist, **O**saka **N**ational **R**esearch **I**nstitute
1981-82 Visiting Scientist at Universite Catholic de Louvain(Belgium)
1990 Head of Catalysis Section, ONRI
1994 Principal Researcher, Director of Interdisciplinary Basic Research Center, ONRI
1994 Guest Professor of Technical University of Vienna
1994-2001 Adjunct Professor, Faculty of Science, Graduate School of Osaka University
1999 Director of Department of Energy and the Environment, ONRI
2001 Director of Research Institute for Green Technology, Nat. Inst. Advanced Industrial Sci. & Technol.
2005-Present Professor of Tokyo Metropolitan University

Recent Publications

1. "When Gold is not noble: Catalysis by nanoparticles", M. Haruta, *Chem. Rec.* **3** 75-87 (2003).
2. "A Three-Dimensional Mesoporous Titanosilicate Supported for Gold Nanoparticles: Vapor-Phase Epoxidation of Propene with High Conversion", A.K. Sinha, S. Seelan, S. Tsubota and M. Haruta, *Angew. Chem. Int. Ed.* **42** (2004) 1546-1548.
3. "Vital Role of Moisture in the Catalysis of Supported Gold Nanoparticles", M. Daté, M. Okumura, S. Tsubota and M. Haruta, *Angew. Chem. Int. Ed.* **43** (2004) 2129-2132.
4. “In Situ UV-vs and EPR Study on the Formation of Hydroperoxide Species during Direct Gas Phase Propylene Epoxidation over Au/Ti-SiO_2 Catalyst”, B. Chowdhury, J. J. Bravo-Suarez, N. Mimura, J. Lu, K. K. Bando, S. Tsubota, M. Haruta, J. Phys. Chem. B110(2006)22995-22999.
5. “Gold Catalysts: Towards Sustainable Chemistry”, T. Ishida and M. Haruta, Angew. Chem. Int. Ed. 46(2007)7154-7156.
6. “Low-temperature Oxidation of CO Catalyzed by Co_3O_4 Nanorods”, X. Xie, Y. Li, Z.-Q. Liu, M. Haruta, W. Shen, Nature (in press) DOI: 10.1038/nature07877, (2009).