

Simple CURRICULUM VITAE

PERSONAL DATA

Name: **ADACHI, Motonari**
Sex: Mail
Date of Birth: Feb. 12, 1942
Place of Birth: Osaka, Japan
Citizenship: Japanese
Family Status: Married with two children
Present Address: Fuji Chemical. Co., Ltd. 1-35-1 Deyashiki-nishimachi, Hirakata
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EDUCATION

1960-1964: Department of Chemical Engineering, Kyoto University, Japan, B. Sc.
1964-1966: Department of Chemical Engineering, Kyoto University, Japan, Ms. D.
1966-1969: Department of Chemical Engineering, Kyoto University, Japan, Ph. D. in
Chemical Engineering.

PROFESSIONAL EXPERIENCE

1969-1995: Assistant Professor in Institute of Atomic Energy, Kyoto University, Japan
1995-2002: Lecturer in Institute of Advanced Energy, Kyoto University, Japan
2002-2005 Full Professor in Institute of Advanced Energy, Kyoto University, Japan
2005-2007 Research associate in International Innovation Center, Kyoto University,
Japan
2007-20011 Researcher in Research Center for Transport phenomena, Doshisha
University, Japan
2007- Advisor in Fuji Chemical Co., Ltd

CURRENT RESEARCH THEMES

- (1) Formation of TiO₂ nanoscale materials (network structure of nanowires, nanorods, nanochains) by self-organized methods for dye-sensitized solar cells.
- (2) Measurement of electron transport properties in dye-sensitized solar cells by electrochemical impedance spectroscopy.

SOME PUBLICATIONS

- 1) M. Adachi, Y. Murata, J. Takao, J. Jiu, M. Sakamoto, F. Wang. Highly Efficient Dye-Sensitized Solar Cells with a Titania Thin-Film Electrode Composed of a Network Structure of Single-Crystal-like TiO₂ Nanowires Made by the “Oriented Attachment” Mechanism. *J. Am. Chem. Soc.*, **126**, 14943-14949 (2004)
- 2) J. Jiu, F. Wang, M. Sakamoto, J. Takao, M. Adachi. Preparation of Nanocrystalline TiO₂ with Mixed Template and Its Application for Dye-Sensitized Solar Cells. *J. Electrochem. Soc.*, **151**, A1653-A1658, (2004)
- 3) L. Pei, K. Mori, M. Adachi. Formation Process of Two-Dimensional Networked Gold Nanowires by Citrate Reduction of AuCl₄⁻ and the Shape Stabilization. *Langmuir*, **20**, 7837-7843 (2004)
- 4) J. Jiu, S. Isoda, F. Wang, M. Adachi. Dye-Sensitized Solar Cells Based on a Single-Crystalline TiO₂ Nanorod Film. *J. Phys. Chem. B*, **110**, 2087-2092, (2006)
- 5) M. Adachi, M. Sakamoto, J. Jiu, Y. Ogata, S. Isoda. Determination of Parameters of Electron Transport in Dye-Sensitized Solar Cells Using Electrochemical Impedance Spectroscopy. *J. Phys. Chem. B*, **110**, 13872-13880, (2006)
- 6) T. Kurata, Y. Mori, S. Isoda, J. Jiu, K. Tsuchiya, F. Uchida, M. Adachi. Characterization and Formation Process of Highly Crystallized Single Crystalline TiO₂ Nanorods for Dye-Sensitized Solar Cells. *Curr. Nanosci.*, **6**, 269-276, (2010)
- 7) M. Adachi, K. Noda, R. Tanino, J. Adachi, K. Tsuchiya, Y. Mori, F. Uchida. Comparison of Electrochemical Impedance Spectroscopy between Illumination and Dark Conditions. *Chem. Lett.*, **40**, 890-892, (2011)
- 8) M. Adachi, R. Tanino, J. Adachi, Y. Mori, K. Tsuchiya, S. Isoda, F. Uchida. Verification of necessity of one-dimensional titania nanoscale materials for dye-sensitized solar cells. *J. Power Sources*, **226**, 94-100, (2013)