

CURRICULUM VITAE

Masaki Ujihara, PhD

Birth bay: 1970.9.24 / Male / Single

Citizenship: Japan

Affiliation: Assistant professor of Graduate Institute of Engineering,
National Taiwan University of Science and Technology

Education

February 2006

PhD in Science, Nagoya University, Aichi/Japan
Major in Physical Chemistry

January-March 2004

Research in Miami University, Miami/USA
The 21st Century COE Program (No. 14 COEB01-00) of Nagoya
University for financial support of a research assistant fellowship

April 2002-March 2005

PhD candidate in Science, Nagoya University, Aichi/Japan
Major in Physical Chemistry

April 1994-March 1996

Master's course in Agriculture, Kyoto University, Kyoto/Japan
Major in Wood Chemistry

April 1990-March 1994

Bachelor program in Agriculture, Kyoto University, Kyoto/Japan
Concentration in Wood Chemistry

Work Experience

2009-present	National Taiwan University of Science and Technology, as an assistant professor
2008-2009	Keio University, as a doctoral research fellow
2007	Keio University, as a doctoral research fellow
2000-2008	Hitec co. (leave of absence 2002-2005)
1996-2000	NOF CORPORATION

Research History

2009-present: National Taiwan University of Science and Technology

Nano-architecture design for green materials using carbon-nanotubes and nanoparticles

2007-2009: Keio University

Interaction between detergents and lipid mixtures, observation of characteristic swelling process of the mixtures

2002-2005: PhD course

Fabrication of dendrimer/metal-nanoparticle hybrid film with LB method,

designing a bifunctional monolayer with metal surface and dendrimer-modified surface

1996-2000: NOF CORPORATION

R&D of detergents for mild shampoo and body-wash, mainly synthesis process

R&D of methacrylates and manufacturing process of them

1994-1996: Master's course

Synthesis of model compounds of lignin, and designing a novel cleavage method of them at a mild condition for efficient pulping process

Research Interests

Nano-materials

Shape-controlling of nanoparticles, fabrication of nanofibers

Hybridization of nanomaterials, e.g. core-shell structures, surface modification, and combination of different materials

Mass-production of nano-materials with eco-friendly and low cost process

Nano-composite

Organic-inorganic nano-composites, sol-gel method

Reinforcement of bulk-materials with nano-materials for high-strength

Ordered structures of nano-materials on/in polymer films to utilize their functions (transparency, conductivity and so on)

Functional films

Energy devices (e.g. solar battery) with nano-structures that have optimized structures for energy transfer pathway consisted of nano-fibers, nanoparticles and the others

Mesoporous materials for filtration systems

Publications

Book

1. Toyoko Imae, Masaki Ujihara, Mariko Hayashi, Ed. by Toyoko Imae, "Advanced Chemistry of Monolayers at Interfaces : Trends in Methodology and Technology " (Interface Science and Technology), Chapter 9, 219-245, Academic Pr, 2007

Journal articles

1. Masaki Ujihara, Koji Mitamura, Naoya Torikai, Toyoko Imae, "Fabrication of Metal Nanoparticle Monolayers on Amphiphilic Poly(amido amine) Dendrimer Langmuir Films", *Langmuir*, 2006, 22, 3656-3661.
2. Masaki Ujihara, Toyoko Imae, "Adsorption Behaviors of Poly(amido amine) Dendrimers with an Azacrown Core and Long Alkyl Chain Spacers on Solid Substrates", *J. Colloid Interface Sci.*, 2006, 293, 333-341.
3. Masaki Ujihara, Jhony Orbulescu, Toyoko Imae, Roger. M. Leblanc, "Film Structures of Poly(amido amine) Dendrimers with an Azacrown Core and Long Alkyl Chain Spacers on Water or Ag Nanoparticle Suspension", *Langmuir*, 2005, 21, 6846-6854.
4. Omprakash Yemul, Masaki Ujihara, Norio Maki, Toyoko Imae, "Synthesis and Film Formation of Poly(phenylene sulfide) Dendrimers and Dendrons", *Polym. J.*,

2005, 37, 82-93.

5. Omprakash Yemul, Masaki Ujihara, Toyoko Imae, "Synthesis and Characterization of Novel Azacrown Core Dendrimers and Functional Dendrons with Long Alkyl Chain Spacers", *Trans. Mater. Res. Soc. Jpn.*, 2004, 29, 165-168.
6. Rui Katahira, Masaki Ujihara, Fumiaki Nakatsubo, "A Novel Selective Cleavage Method for β -O-4 Substructure in Lignins Named TIZ Method. I. Degradation of Guaiacyl and Syringyl Models", *J. of Wood Chemistry and Technology*, 2003, 23, 71 – 87.

Proceeding

1. Koji Mitamura, Masaki Ujihara, Naoya Torikai, Toyoko Imae, "Neutron Reflectometric Investigation of a Dendrimer/Nanoparticle Hybrid Film at Air/water Interface", *KENS REPORT XV*, 2003-2006, 194

International activity

Presentation

1. Masaki Ujihara, Japan-Taiwan Joint Symposium on Innovations on Frontier Nanomaterials, Hakone (Japan), July, 2007 (as a member of the program committee and an oral speaker)
2. Masaki Ujihara, Johnny Orbulescu, Toyoko Imae, Roger M. Leblanc, Asian Conference on Recent Trends in Colloid and Surface Science(ACCASS), Nagoya (Japan) December, 2005
3. Masaki Ujihara, National ACS Meeting, San Diego, CA (USA), March, 2005
4. Masaki Ujihara, Toyoko Imae, International Symposium on Functional Colloids and Surfaces, Yokohama (Japan), January, 2005
5. Masaki Ujihara, KanaTamano, Omprakash Yemul, Toyoko Imae, IUMRS-ICAM 2003, Yokohama (Japan), October, 2003

Patents

Japanese published examined application

1. P4022910, "Composition of detergents"
2. P3630264, "Composition for hair shampoo"

Japanese published unexamined application

1. Published 2008-066193, "Cross-linked micro-porous membrane"
2. Published H11-029788, "Composition of detergents"
3. Published H10-316544, "Composition for hair shampoo"
4. Published H10-245591, "Composition of detergents"
5. Published H10-245589, "Composition of detergents"
6. Published H10-245588, "Composition of detergents"