



Shinji TAKEOKA, PhD (D.Eng.)

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Affiliation:

Department of Life Science and Medical Bioscience, School of Advanced Science and Engineering, Waseda University
Major in Life Science and Medical Bioscience, Graduate School of Advanced Science and Engineering, Waseda University
Joint Institution for Advanced Biomedical Sciences (TWIns), Tokyo Women's Medical University and Waseda University

Education:

1991 Dr. Eng., Maj. Applied Chemistry, Graduate School of Science and Engineering, Waseda University
1988 M. Eng., Maj. Applied Chemistry, Graduate School of Science and Engineering, Waseda University
1986 B. Eng., Department of Applied Chemistry, School of Science and Engineering, Waseda University

Appointments:

2008-present Associate Director of Research Promotion Division, Waseda University
2005-present Professor, Faculty of Science and Engineering, Waseda University
1998-1999 Visiting Fellow, U. Pennsylvania School of Medicine
1995-2004 Associate Professor at Waseda University School of Science and Engineering
1993-1994 Assistant Professor at Waseda University School of Science and Engineering
1991-1993 Research associate at Waseda University School of Science and Engineering
1990-1991 Fellow, Japan Society for Promotion of Science

Research Histories:

2009- Research of design and synthesis of functional molecular probes for bio-imaging
2006- Actively involved in the development of new nanosheets in biomedical application
2004- Actively involved in the development of new carriers including protein or gene carriers
1999- Actively involved in the development research of artificial platelets through a medical-engineering collaboration with Keio University School of Medicine. In particular, achieved high hemostatic ability in carriers of phospholipid bilayer vesicles encapsulating ADP
1998-1999 Research of the possibility of emergence of active oxygen species from artificial oxygen carriers as well as the interaction between active oxygen species and artificial oxygen carrier at University of Pennsylvania.
1997-2004 Development research of surface modification and artificial oxygen carriers utilizing polyethylene glycol chain of high-purity / high-concentration

- 1991-1996 hemoglobin-encapsulating bilayer vesicles. Development research of artificial oxygen carriers using hemoglobin-encapsulating phospholipid bilayer vesicles utilizing polymerizable phospholipids.
- 1988-1991 Research of application for lithium batteries through compounding of new ion conductive polymers and electron conductive polymers by phase separation structure control.
- 1985-1988 Research of selective polymerization within liposome utilizing polymerizable phospholipids.

Activities in Academic Societies

- 2013- The Society of Blood Substitutes, Japan, President.
- 2006- Japanese Society for Biomaterials: Trustee
- 2002- The Chemical Society of Japan: Annual conference general secretary (2002-2005); Kanto Branch Director (2007-2009)
- 2003-2008 Japanese Society for Artificial Organs: Trustee (2003-2008)
- 1998-2006 The Society of Polymer Science, Japan: Member of editorial board of journal (1998-2000); Member of events committee (2002-2004); Kanto Branch Director (2004-2006).
- 1999-2005 The Society of Blood Substitutes, Japan: Trustee (1999-); Director (2002-); Head of editorial board of journal (2002-); President of annual meeting (2005).

Honors:

- 1991 Mizuno Award (Waseda University)
- 1996 the Cosmetology Research Foundation
- 2003 Shorai Foundation for Science and Technology
- 2011 Okuma Award (Waseda University)

Research Subjects:

Biomedical Engineering/Biological Material Sciences, Molecular Assembling Science and Engineering, Macromolecular Chemistry/Supramolecular Chemistry/Liposome Technology/Artificial Cells/Artificial Platelets/Drug or Gene Delivery Systems/Polymer Ultra-thin Films/Nanosheets/Bio-imaging/Molecular Recognition Systems/