

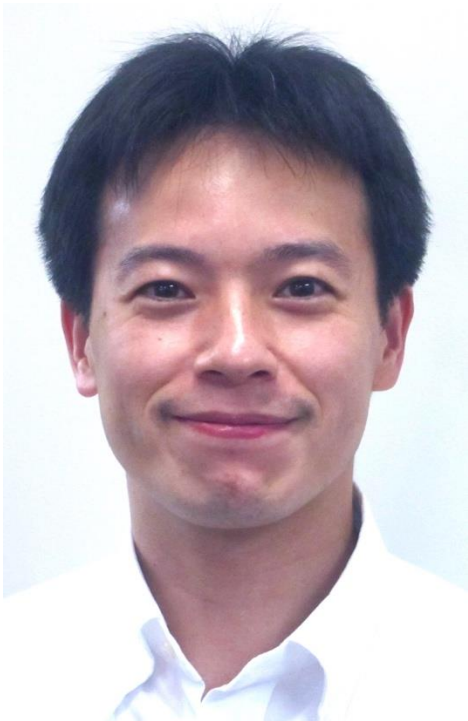
Interfacial water endowing materials with bioinertness

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Water has been speculated to play an essential role in the interactions of proteins and cells with artificial biocompatible materials for a long time. The current question is how water molecules at the interfaces affect the adsorption of proteins and the adhesion of cells. To answer this question, we introduce our recent works that investigated the interfacial behavior of water near self-assembled monolayers (SAMs) by different types of analytical techniques. By combining these findings, we discuss how interfacial water affects the protein and cell resistance of various bioinert SAMs.



CV

Education and degrees

Ph.D. May 2003, Ruprecht-Karls-Universität Heidelberg, (University of

Heidelberg), Germany (Supervisor: Prof. Michael Grunze)

Current and previous positions

2003-2006

Postdoctoral Fellow:

Tokyo Institute of Technology

Guest Researcher, Local Spatio Temporal Lab in RIKEN

2006 Apr- 2007 May

Researcher

National Metrology Institute of Japan: NMIJ

National Institute of Advanced Industrial Science and Technology: AIST

2007 June-2010 June

Assistant professor:

Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology

2010 July-Present

Associate professor:

Department of Materials Science and Engineering, School of Materials and Chemical Technology, Tokyo Institute of Technology