

***International Workshop on Technology Foundation for
Practical Bioadhesion Engineering***

November 26, 2015.

at

UEDA PALEO 2F CONFERENCE ROOM

A workshop hosted by Institute for Fiber Engineering (IFES), Interdisciplinary Cluster for Cutting Edge Research (ICCER), Shinshu University, Japan, in collaboration with Marine BioMaterials Research Center (MBMRC), Pohang University of Science and Technology (POSTECH), South Korea. This workshop focuses on the history and futures of the “*Bioadhesion Engineering*”, as the multidisciplinary science frontier, which leads to the global innovation and sustainability in the quality of life, the advanced medicine, and social security. The workshop encourages/promotes the active research networking on “*Bioadhesion Engineering*”, involving biochemistry, biotechnology, molecular biology, fiber engineering, and medical technology, based on the “Cutting Edge” ideas and the state-of-art research works and discoveries.

— *Morning* —



9:30 – 9:45 (presentation 15 min):

Welcome Address and Brief Introduction of IFES/ICCER, Shinshu University, Japan.

Kousaku Ohkawa, *on behalf of Prof. Dr. Hideaki Morikawa*

Research Liaison Office, Institute for Fiber Engineering (IFES),

Interdisciplinary Cluster for Cutting Edge Research (ICCER), Shinshu University, Japan.



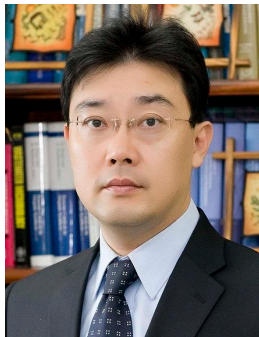
9:45 – 11:00 (presentation 60 min + discussion 15 min):

(Keynote #1)

Mussel adhesion: From basic science to applications

Herbert Waite

*Marine Science Institute & Materials Research Laboratory,
University of California, Santa Barbara, CA, USA.*



11:00 – 12:15 (presentation 60 min + discussion 15 min):

(Keynote #2)

Practical medical applications of protein bioadhesives derived from marine mussel

Hyung Joon Cha

*Marine BioMaterials Research Center, Department of Chemical
Engineering, Pohang University of Science and Technology,
Republic of Korea.*

12:20 – 13:20

Lunch Break

— *Afternoon* —



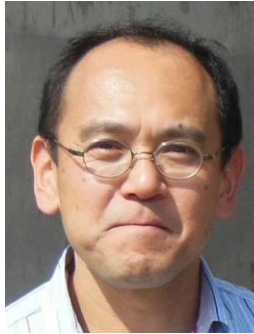
13:30 – 14:20 (presentation 40 min + discussion 10 min):

(Workshop Talk #1)

Sweet bionic interface of *Atrina pectinata*

Dong Soo Hwang

*School of Environmental Science and Engineering,
Division of Integrative Bioscience and Biotechnology,
Pohang University of Science and Technology, Republic of Korea.*



14:20 – 15:10 (presentation 40 min + discussion 10 min):

(Workshop Talk #2)

Barnacle adhesive and adhesion with unsolved mechanism

Kei Kamino

*National Institute of Technology and Evaluation, and
Research Institute for Science and Technology,
Tokyo University of Science, Japan.*



15:10 – 16:00 (presentation 40 min + discussion 10 min):

(Workshop Talk #3)

Biochemistry of silk proteins from caddisfly larva,

Stenopsyche marmorata

Kousaku Ohkawa

*Division of Biological and Medical Fibers (DBMF), IFES, ICCER,
Shinshu University, Japan.*

16:00 – 16:10

Green Tea/Coffe Break



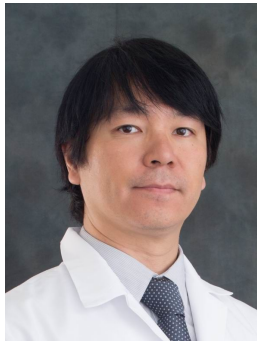
16:10 – 17:00 (presentation 40 min + discussion 10 min):

(Workshop Talk #4)

**New findings on caddisfly silk revealed by transcriptome analysis -
protein compositions, expressions, and translational regulation.**

Takaomi Nomura¹, Ryoichi Arai^{1,2}, Kousaku Ohkawa³, Kimio
Hirabayashi^{1,4}, Masuhiro Tsukada¹

*¹ Division of Applied Biology, Faculty of Textile Science and
Technology; ² Institute for Biomedical Sciences; ³ IFES; ⁴ Institute of
Mountain Science, ICCER, Shinshu University, Japan.*



17:00 – 17:50 (presentation 40 min + discussion 10 min):

(Workshop Talk #5)

Silk protein from larvae of caddisfly as a novel liquid embolic material for the neuro endovascular treatment

Ichiro Yuki¹, Kousaku Ohkawa², Ayako Ikemura¹, Issei Kan¹, Yukinao Kambayashi¹, Yuichi Murayama¹

¹ Department of Neurosurgery, The Jikei University Hospital, Japan,

² DBMF, IFES, ICCER, Shinshu University, Japan.

Workshop Location: UEDA PALEO 2F CONFERENCE ROOM



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