

The 8th International Workshop on Biomaterials in Biosis-Abiosis Intelligent Interface Science

- Innovative Research for Biosis-Abiosis Intelligent Interface Summer Seminar 2013 -

Developments of biomaterials have recently become a crucial issue because of strong demands for replacing various parts in human-body with artificial products. The experts, researchers and students from different fields related to biomaterials gathered at the 8th International Workshop on Biomaterials in Biosis-Abiosis Intelligent Interface Science 2013 on Aug. 29th–30th at Sendai, Japan. The invited lectures by 6 experts from abroad and 22 papers provided valuable opportunity for cross-over discussion, interdisciplinary idea sharing and new collaboration to develop and establish the intelligent interface science on biomaterials.

Interdisciplinary and international activities are necessary to develop the biomaterials, such as artificial bone and tooth, because the biomaterials should meet the various demands to control biofunctionalities and mechanical properties in a wide range from nano- to micro-scale, as well as compatibility with human body. Three Institute in Tohoku University, namely Institute for Materials Research (IMR), Graduate School of Dentistry and Graduate School of Biomedical Engineering, have been collaborating and involved the 5-year project on Biomaterials in Biosis-Abiosis Intelligent Interface Science. As the series of international forums in the frame this project, the 8th International Workshop on Biomaterials in Biosis-Abiosis Intelligent Interface Science 2013 in conjunction with Innovative Research for Biosis-Abiosis Intelligent Interface Summer Seminar 2013 was held on Aug. 29th–30th, 2013, at Miyagi Zao, Sendai.

The 2-days technical program in this workshop included 28 papers in which 6 invited lectures were given by experts on biomaterials from Korea, China and Australia. About 62 participants of professors, researchers and students attended in the workshop.

Prof. Qing Li provided a lecture on soft tissue driven bone remodelling. The lecture by Prof. Jeong-Tae Koh was on roles of orphan nuclear receptor COUP-TFII in osteoblast differentiation. The state-of-the-art research on surface modifications of biomaterials was provided by Prof. Yongsheng Zhou, entitled "the effects of novel surface modifications on bone regeneration", and by Prof. Young-Jun Lim, entitled "Ultraviolet-light induced photocatalytic bactericidal effects on modified titanium surfaces". Prof. Xing-quan

Jiang gave a lecture on Tissue engineering and regeneration medicine for bone deficiency and dental implantation, while the lecture by Prof. Bangcheng Yang was on Ti metals with bioactivity and antibacterial properties. In addition to the invited lectures, presentations by speakers with various academic backgrounds provided valuable opportunity for sharing updated and interdisciplinary viewpoints and ideas to the all participants. The collaborative discussion had great contributions to the development on the intelligent interface science on biomaterials.



Fig. 1 A group photo at 8th International Workshop on Biomaterials in Interface Science (Innovative Research for Biosis-Abiosis Intelligent Interface Summer Seminar 2013) at the conference hall, Miyagi Zao, Sendai.



Fig. 2 One shot in an invited lecture. Participants from various fields, such as dentistry, medical science and material engineering, eagerly listen to the lecture.