

The 11th International Workshop on Biomaterials in Interface Science

- Innovative Research for Biosis-Abiosis Intelligent Interface Summer Seminar 2016 -

Biosis-abiosis intelligent interface science has been developed as a concept to explore materials and systems between human constituents and biomaterials. Forefront researchers and students from various fields related to biomaterials gathered at the The 11th International Workshop on Biomaterials in Interface Science on Aug. 30–31st at Sendai, Japan. The invited lectures by seven experts and nineteen contributed papers provided valuable opportunity for cross-over discussion, interdisciplinary idea sharing and new collaboration to develop and establish the intelligent interface science on biomaterials.

To develop biomaterials that can adopt in human bodies in a short time and be used over a long term, highly functional and autonomic intelligent interface is necessary to be created by combining the various topics of biomaterials, the technology of an evaluation and a control of the interface, innovation for oral science and application, regenerative oral science, and medical engineering [1]. Therefore, interdisciplinary and international research activities are necessary to understand complex phenomena occurring at the biosis-abiosis interface and to develop and biomaterials, such as artificial bone and tooth, optimizing the material design and systems. 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 in the 5-year project on Biomaterials to establish a new concept, Biosis-Abiosis Intelligent Interface Science. As the series of international forums in the frame this project, the 11th International Workshop on Biomaterials in Interface Science in conjunction with Innovative Research for Biosis-Abiosis Intelligent Interface Summer Seminar 2016 was held by a new collaborative project "Creation of Life Innovation Materials for Interdisciplinary and International Researcher Development" on Aug. 30th–31st, 2016, at Tohoku University in Sendai.

The 2-days technical program in this workshop included 26 papers in which 7 invited lectures were given by distinguished professors and experts on biomaterials from Taiwan, China, Russia and Japan. 64 participants of professors, researchers and students attended in the workshop. Prof. Ming-Lun HSU who is the dean of School of Dentistry, National Yang-Ming University provided an invited lecture on prei-implant

bone biomechanics. The invited lecture by Prof. Lenan SHAO was on lymphatic network and cancer metastasis. Prof. Kensuke KURODA gave a lecture on osteoconductivity and protein adsorbability of hydrophilic and hydrophobic titanium implants surface using hydroprocessing. The state-of-the-art research on odontogenic keratocyst was provided by Prof. Tie-Jun LI. Prof. Youfa WANG gave an invited lecture on PRGD/PDLLA/n-HAP composites for peripheral nerve regeneration. From the side of material science, two professors, Prof. Wei ZHANG and Prof. Yu ZADOROZHNYI, introduce their updated research on metallic glasses and Ti-based materials. Contributed papers by speakers from a various fields, such as dentistry, bioengineering and biomaterials, provided their updated research. These invited lectures and oral presentations gave the all participants a valuable opportunity for sharing interdisciplinary viewpoints and ideas. These collaborative discussion had great contributions to the development on the intelligent interface science on biomaterials.



Fig.1 Group photo and shots in lectures.

References

[1] K. Sasaki, O. Suzuki, N. Takahashi Ed., Interface Oral Health Science 2016, (2016).

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