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キーワード

Biocompatibility/ Nanobiomaterials/ Hydroxyapatite/
Problem-solving methods/ Thinking and communication skills /SDGs

分野等

Material Science

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職名

特命助教

学位

博士(工学)

研究分野

Study on Preparation of Hydroxyapatite Nanoparticle films and their Biocompatibility Evaluation for Biomedical Applications

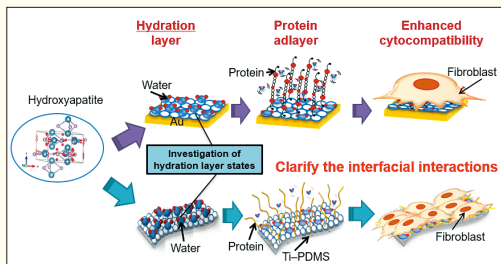


Figure 1. Preparation of HAP NPs films and their protein mediation ability for cell adhesion

In biological environment, the adequate cell response to biomaterials such as hydroxyapatite nanoparticles (HAp NPs) are determined by the hydration layer and the adsorbed proteins on the surface. In order to improve the biocompatibility of these HAp NPs for biomedical applications, it is necessary to investigate the hydration layer-protein-cell interfacial interactions.

Education duty

Improve students' logical and critical thinking and communication skills as they develop various projects related to the Sustainable Development Goals (SDGs) by applying innovative and creative problem-solving methods while learning and practicing English.

興味のあること・技術 PR

I am interested in the synthesis, characterization and biological evaluation of nabiomaterials.

I am interested in supporting students to improve the communication and English abilities. I would like to motivate them to participate in English events like speech contest.

企業との連携実績

We are in a globalized world. To be part of globalization, it is necessary to incubate a new generation of global engineers with the ability to communicate effectively in English with developed logical, critical and design thinking that allows them to solve problems innovatively and creativity leading to improvements in sustainable technologies and the general well-being of society.

Problem-solving is the core essence of the Engineering field, so let's learn and practice innovative methods of problem-solving in a fun and interactive class! The projects developed in class will allow students to understand the problems related to the SDGs and find solutions while improving their English language skills. The development of thinking skills will allow students to organize their ideas in a more structured form, which will be very useful when writing reports, posters and thesis. In addition, the development of communication skills will greatly improve the level of their presentations and speeches. I am certainly sure you will enjoy this class as much as I do!



Fig. 2. Nagaoka's prototype



Fig.3. Nagaoka's prototype



Fig. 4. English prototype