Advanced Biomaterials

1. Staffs and Students (April, 2009)
Associate Professor  Hidekazu TAKAHASHI
Assistant Professor  Hideo NAKAMURA
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Research Student   Mitsufumi ASAKURA
Research Student   Ken-ichi BABASONO

2. Purpose of Education
Dental material science is not only one of basic medical and dental science but also one of clinical dental science. In our department, we will educate students to obtain practical knowledge of the dental materials and devices used in dentistry and to improve skill how to deal with these materials and devices. Our goals of education is to achieve high quality of dental practice with well-understanding dental material and devices.

The aim for undergraduate education is to obtain the basic knowledge of dental material science and technology. The lecture is simultaneously provided with the laboratory instructions within the limit of the possible.

The main program for graduate student is composed of the lecture and laboratory instructions for understanding physical and chemical properties of new materials and technology for dental use. Recent researches in our department will be also introduced.

3. Research subjects:
1. Evaluation of various factors on mechanical properties of teeth substance.
2. Evaluation of fatigue properties of dentin and dental materials using miniature testing pieces
3. Measurement of characteristics of dental ceramic materials and establishment of new testing methods for dental ceramics
4. Measurement of precise deformation using non-contact methods
5. Development of new composite resin with similar machinability of dentin
6. Study on dental root fracture mechanism
7. Application of various types of fiberglass for dentistry
8. Evaluation of composite resin mechanical properties and improvement their bonding efficiency to various materials.
9. Evaluation of impact force absorption of mouthguard and face protect materials

4. Publications
Original Articles
9. Iwaki M, Akiba N, Minakuchi S, Takahashi H: Influence of methyl mercaptan at early setting stages on the...