

Interdisciplinary Research Fundamentals II (4) [Biomaterials]

Instructor: Prof. Hideki Abe

Course description and aims:

Biomaterials have been used as functional materials in various application fields. Both the chemical structure (molecular structure) and the aggregate structure (solid-state structure and surface structure) of biomaterials act as an important factor in regulating their properties and functions. By this lecture, I survey it about the relationships between properties and functions of biomaterials and the molecular structure, solid-state structure, and surface structure, and also explain it about the basic way of thinking for designs of biomaterials having appropriate performance.

Day/Period (Room No.) Mon 3-4 (Zoom)

1. 6/15 Mon. Syntheses and molecular structure of biomaterials-1
2. 6/22 Mon. Syntheses and molecular structure of biomaterials-2
3. 6/29 Mon. Solid-state structure and properties of biomaterials-1
4. 7/6 Mon. Solid-state structure and properties of biomaterials-2
5. 7/13 Mon. Surface structure and functions of biomaterials-1
6. 7/23 Thu. Surface structure and functions of biomaterials-2
7. 7/27 Mon. Recent topics and development trends of biomaterials

Textbook(s): None required. Notes/slides will be distributed.

Grading:

The score is evaluated by the homework assignments.

Notice: Insufficient attendance to the lectures or no submission of the homework assignments is judged as a failure.