

## 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)

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|--------------|--|
| 1. 6/10 Mon. | Syntheses and molecular structure of biomaterials-1    |
| 2. 6/17 Mon. | Syntheses and molecular structure of biomaterials-2    |
| 3. 6/24 Mon. | Solid-state structure and properties of biomaterials-1 |
| 4. 7/1 Mon.  | Solid-state structure and properties of biomaterials-2 |
| 5. 7/8 Mon.  | Surface structure and functions of biomaterials-1      |
| 6. 7/22 Mon. | Surface structure and functions of biomaterials-2      |
| 7. 7/29 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.