

Materials Science Colloquia 2022-23

Wonders in small world visited by microscopy*

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Abstract

There are so many things waiting to be discovered underneath our daily life. Even inside an apparently innocent middle-age alloy, when revisited by recent technologies, one is surprised with the richness of nature. In this talk, I will first take magnetic materials as an example how subtle microstructural differences give rise to the substantial improvement in the performance. Along the line, it must be emphasized that the basic understanding on the characterization technique is also the prerequisite, so I will describe them from time to time. In addition, recent progresses in sample preparation techniques, such as focused ion beam, and in transmission electron microscopy, such as an aberration corrected microscope, will be addressed together with their limitations. Finally, I will conclude the seminar by referring to the nationwide program, which allows everyone to take advantage of the state-of-the-art facilities.

* The lecture will be delivered in Japanese.

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