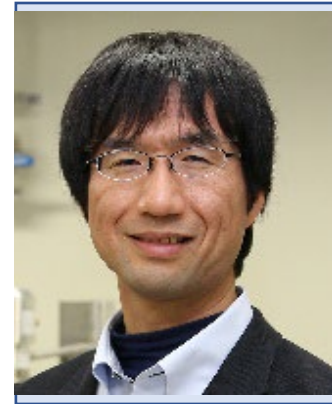


Realization of common platform technologies, facilities and equipment that create innovative knowledge and products

R&D Project Title (Registered) Establishment of customizable optical sensing and creation of advanced use of optical information that brings new value to society and daily life

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Summary :

Internal visualization of any object is essential for understanding the state of the object. X-ray CT, for example, is used to more accurately measure internal conditions, but the equipment is expensive and large, making in-situ observations impractical. This research is aimed at developing the following technologies based on the ultra-wide band sensing method:

1. Improvement of sensor sensitivity to enable accurate measurement of objects susceptible to optical damage with very low light irradiation.
2. Image sharpening under low light irradiation to enable damage-free measurement
3. Internal image reconstruction to enable non-destructive and non-invasive identification of internal structures

As for applied research, we will verify the effectiveness of this technology for analysis of food, skin, and works of art, which have been difficult to measure in a nondestructive manner.

After this project, we will widely disseminate this technology as a visualization tool for everyday use, and contribute to improving quality of life, realizing a safe and secure society, and creating new value.

Future Society: Anytime, Anywhere Visualization of Structure and Condition from Surface to Interior

