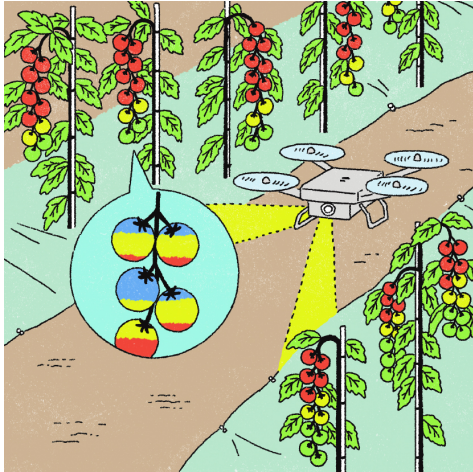


## Hyperspectral imaging with a metalens and AI

IOWN Evolution Project Metaverse – Fusion of Real and Virtual –

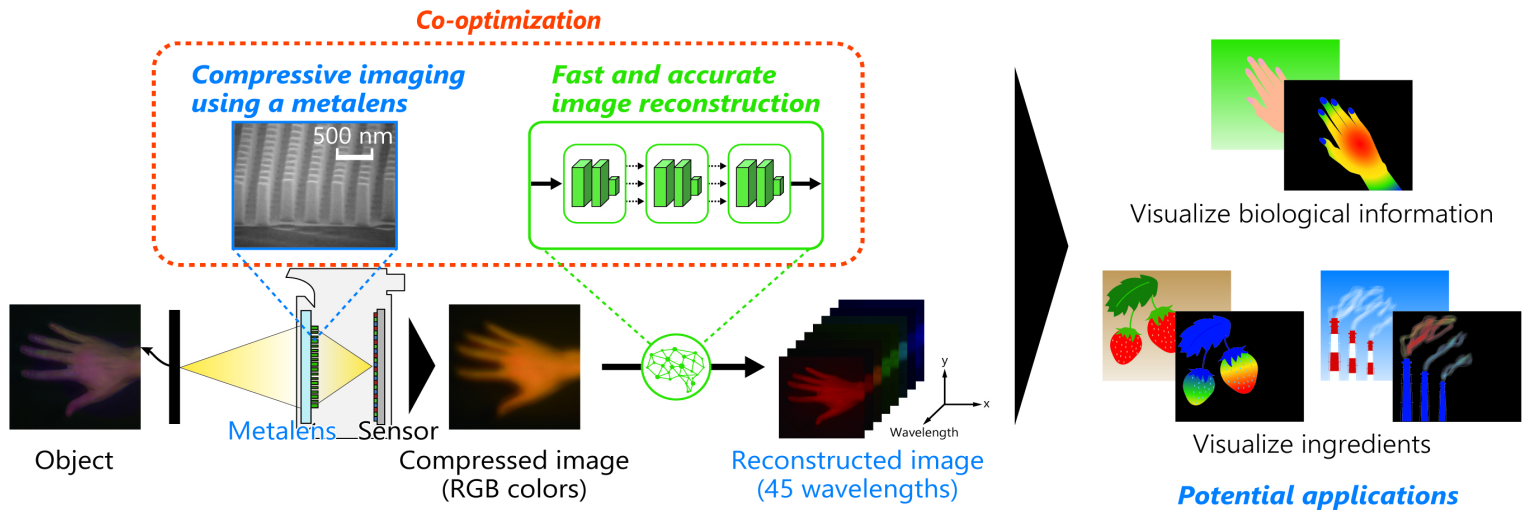


## Background

Light has a wealth of spectral information on objects, which can be used for estimating food freshness and biological information. However, capturing just one spectral image requires a long exposure with a complex camera.

## Summary

Our technology makes it possible to capture spectral images at a video frame rate using a simple camera with a co-optimized metalens and AI-based image processing. This enables spectral imaging of moving objects, which has been difficult.



## Features

- Metalens and AI-based image processing techniques that enable spectral images to be captured at the same size, resolution, and frame rate as a normal color camera
- Original AI-based image processing enabling spectral-image reconstruction at the world's highest level of accuracy and speed
- Integrated and optimized design from a metalens to AI-based image processing to maximize imaging accuracy

## Future\_benefits

This technology will contribute to smarter agriculture, healthcare, and industries by expanding camera functions to acquire information that is difficult for humans to capture.

## Exhibiting Company

NIPPON TELEGRAPH AND TELEPHONE CORPORATION

## Contact

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