



Motivation

Millimeter and terahertz waves are promising for ultrahigh-speed wireless transmission and see-through imaging with millimeter-order spatial resolution and good penetration in dry nonmetallic materials.



Originality

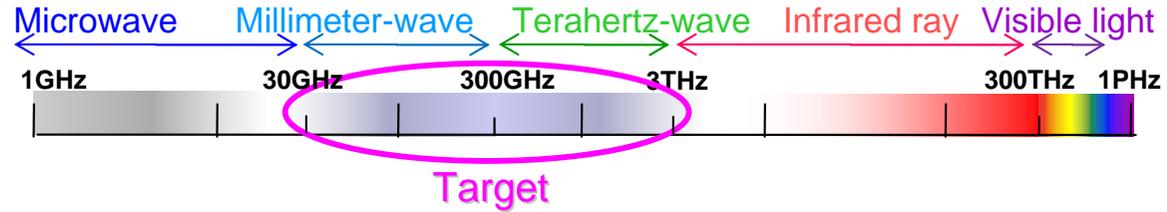
To enable practical use of millimeter-wave and terahertz-wave applications, we are developing devices and systems that use photonics and electronics technologies.



Impact

120-GHz-band wireless link can handle 10-Gbit/s-class transmission for protocols, such as 10Gb Ethernet, and multiplexed uncompressed HDTV signals.

Millimeter/terahertz imaging technology is suitable for non-destructive testing and security surveillance to provide our social safety.



120-GHz-band Wireless Link



Real-time millimeter-wave imaging system



Our technologies

Electronics

High-speed MMIC
Reactive-near-field radar

Terahertz sensors spectroscopy
EO probe
Photonics