Exploring THz band for high speed wireless communications

We overview recent trend in developing high speed wireless communication systems by exploring large bandwidth available in the THz band, and we also present our recent experimental achievements on 400 GHz wireless transmission with a data rate of up to 60 Gbit/s by using a uni-travelling carrier photodiode (UTC-PD) as emitter and a Schottky diode as receiver. This system is foreseen to be capable of accommodating faster data rates beyond 100 Gbit/s, and would find application in bandwidth hungry scenarios.