

Emerging Technology for 6G Networks

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Abstract : Due to the rapid advancement of technology, there is an increasing demand for wireless connections that are both fast and reliable, with minimal latency. New wireless communication standards are developed every decade, and the year 2030 is expected to see the introduction of 6G. The primary objectives of 6G network and terminal designs are focused on sustainability and environmental friendliness. The International Telecommunication Union-Recommendation division (ITU-R) has established the minimum requirements for 6G, with peak and user data rates of 1 Tbps and 10-100 Gbps, respectively. In this context, Light Fidelity (Li-Fi) technology is the most promising candidate to meet these requirements. This article will explore the various advantages, features, and potential applications of Li-Fi technology, and compare it with 5G networking, to showcase its potential impact among other emerging technologies that aim to enable 6G networks.

Keywords : 6G networks, artificial intelligence (AI), Li-Fi technology, Terahertz (THz) communication, visible light communication (VLC)

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