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# Challenges and Opportunities in Wireless Optical Communication

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## Message from the Guest Editors

Dear Colleagues,

Wireless optical communication (WOC) is an emerging field that leverages light for high-speed data transmission, being a promising partner and, in some special situations, a reliable alternative to traditional radio frequency (RF) communication systems. The rapid growth of data demand, driven by the proliferation of internet-connected devices and services, has imposed the exploration of new communication paradigms. WOC presents several significant opportunities, including huge bandwidth availability, high data rates, enhanced security, and immunity to electromagnetic interference.

Exploring these challenges and opportunities will be essential for realizing the full potential of WOC in next-generation communication networks. Topics include, but are not limited to, the following:

- Indoor positioning systems based on VLC;
- OWC systems applied in industry;
- OWC systems applied in medical facilities and devices;
- Underwater OWC systems;
- FSO between ground and unmanned aerial vehicles (UAV);
- Current implementation and further developments of Li-Fi technology;
- OCC technology with its key characteristics and further developments.

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