

Next-Generation Vertical-Cavity Surface-Emitting Lasers

Guest Editors:

Dr. Yun Sun

Institute of Microelectronics,
Chinese Academy of Sciences, 3
Beitucheng West Road,
Chaoyang District, Beijing
100029, China

Dr. Qiang Kan

Institute of Semiconductors,
Chinese Academy of Sciences,
A35 Qinghua East Road, Haidian
District, Beijing 100083, China

Deadline for manuscript
submissions:

10 December 2024

Message from the Guest Editors

Dear Colleagues,

Vertical-cavity surface-emitting lasers (VCSELs) have become light sources of great importance for industrial, sensing and consumer applications. They offer many inherent advantages, such as efficient high-speed modulation at low currents, superior fiber coupling efficiency, wafer-level fabrication and scalability in high-density array architectures.

At present, the growing bandwidth demands for data communication and new applications under research, including autonomous vehicle systems (LiDAR in particular), gas detection, biomedical sensing, imaging, quantum computing, chip-scale atomic devices, etc., drive the significant development of VCSEL technology. Novel trends and concepts in the design, configuration and fabrication of VCSELs emerge to meet the specification requirements of the next generation of photonic systems.

