



Directly-Modulated Lasers

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Message from the Guest Editors

Dear Colleagues,

With the recent rise of data traffic, owing to big-data and AI applications, more emphasis is placed on photonics technologies due to their superior bandwidth and energy-efficiency capabilities. In this Special Issue, we welcome submissions related to all aspects surrounding DMLs, from device design to transmission and systems. Particular focus will be given on high-speed operation and energy-efficiency, but complimentary aspects such as high-temperature operation, AI-assisted design, and novel applications of DMLs are also strongly encouraged. Topics of interest include, but are not limited to, the following areas:

- DML design for bandwidth enhancement;
- Low-operating-power and novel DML structures;
- High-temperature operation;
- Novel materials and fabrication methods;
- Machine-learning-assisted DML design;
- WDM and SDM transmitters based on DMLs;
- DML-specific digital and analogue signal processing;
- Novel applications of DMLs in AI and computing;
- DMLs for Satellite Communications and emerging applications;
- DMLs role in neuromorphic processing and reservoir computing.

