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With the rapid development of mobile communications and fields like artificial intelligence, the demand for higher bandwidth in optical communication systems has surged, particularly in short-range optical interconnects. Low-power, ultrawideband optical waveguide amplifiers have become critical to driving technological advancement. However, current rare-earth-doped optical waveguide amplifiers still lack high-performance matrix materials. Lanthanum aluminate glass, with its high rare-earth solubility, along with the enhanced absorption efficiency of Yb^{3+} for 980 nm laser and the overlapping and extension effects of Er^{3+} and Tm^{3+} emission bands, has become an ideal matrix material and solution for achieving low-power-consumption, ultrawideband optical waveguide amplifiers.

The image on the cover for *Advanced Photonics Nexus* Volume 3 Issue 6 illustrates an optical waveguide amplifier based on Er^{3+}-Yb^{3+}-Tm^{3+} tri-doped lanthanum aluminate glass. The efficient pump light utilization and wide-band photoluminescence spectrum make it an ideal matrix material for realizing low-power-consumption ultrawideband on-chip amplifiers.

The image is based on original research presented in the article by Zhengkai Li, Mingjie Zhang, Yuanzhi Chen, Junchang Lu, Zhanbo Wen, Banghu Wei, Mengyi Wang, Jiayue Xu, Qingli Zhang, "Er^{3+}-Yb^{3+}-Tm^{3+} tri-doped La_2O_3-Al_2O_3 glasses for low-power-consumption ultrawideband on-chip optical waveguide amplifiers," *Adv. Photon. Nexus* **3**(6), 066013 (2024), doi: 10.1117/1.APN.3.6.066013.