



About the cover: *Advanced Photonics* Volume 4, Issue 3

Lithium niobate (LN) has various characteristics superior to other optical materials, such as a wide transparency window and large electro-optic/nonlinear-optic/acousto-optic/pyroelectric coefficients, as well as stable chemical and physical properties. Based on these qualities, various kinds of photonic devices incorporating LN have been demonstrated during the past decades. Among them, bulk LN-based devices are the most deeply explored, but their large size is incompatible with desired trends in energy efficiency and integration. Recently developed high-quality thin-film LN has changed the situation and gained much attention in academia and industry, inaugurating a new era of LN photonics.

The image on the cover for *Advanced Photonics* Volume 4 Issue 3 illustrates a roadmap of the development of LN

photonics, from the typical bulk LN photonics to the newly developed thin-film LN photonics, as well as various functional devices.

The image is based on review work presented in the article by Guanyu Chen, Nanxi Li, Jun Da Ng, Hong-Lin Lin, Yanyan Zhou, Yuan Hsing Fu, Lennon Y. T. Lee, Yu Yu, Ai-Qun Liu, and Aaron J. Danner, “Advances in lithium niobate photonics: development status and perspectives,” *Adv. Photon.* 4(3) 034003 (2022), doi [10.1117/1.AP.4.3.034003](https://doi.org/10.1117/1.AP.4.3.034003). In this review paper, the researchers detail advances in LN photonics, including integrated LN photonic devices as well as selected bulk LN-based devices and related processing technologies. The review is summarized here, with a helpful video by Prof. Danner: <https://spie.org/news/advances-in-lithium-niobate-photonics>