



Design and Fabrication of a High-Frequency Lithium Niobate (LN) Resonator



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Purpose and aim

Acoustic filters are a key enabling part of wireless communication systems. Over the past few years, there has been a growing research interest in laterally excited bulk acoustic wave resonators (XBARs), which offer a large bandwidth at high-frequencies utilized in 5G applications. This project aims to design and fabricate an XBAR using direct laser writing lithography, enabling faster and more efficient research and development at USN's cleanroom.

Results, important findings

This is a one-semester project that is currently in progress. The initial results are promising, with 300nm electrodes successfully implemented using the maskless aligner at USN's clean room.

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