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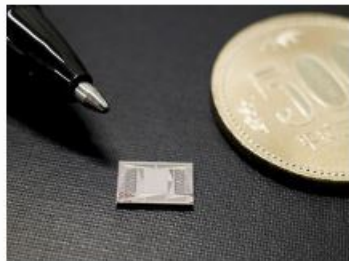
RESEARCH NEWS

Could “Slow Light” Accelerate Solid-State Lidar?

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In principle, lidar systems can act as 3D sensors for applications ranging from autonomous vehicles and robots to security and mapping. In practice, though, the complex moving parts in many lidar systems can make them bulky, unreliable and expensive, limiting their utility.

Researchers at Yokohama National University, Japan, have now used a photonic crystal that supports a “slow light” mode to develop a small silicon-photonics chip that allows for non-mechanical 2D beam steering (Optica, doi: [10.1364/OPTICA.381484](https://doi.org/10.1364/OPTICA.381484)). While the proof-of-principle device has further to go in achieving resolution comparable to mechanically steered systems, the team sees several possible ways to surmount that hurdle—putting another candidate in the race for practical solid-state lidar.



A research team at Yokohama National University, Japan, has prototyped small-sized silicon-photonics chip that can be used for non-mechanical lidar beam steering and scanning. [Image: Yokohama National University]