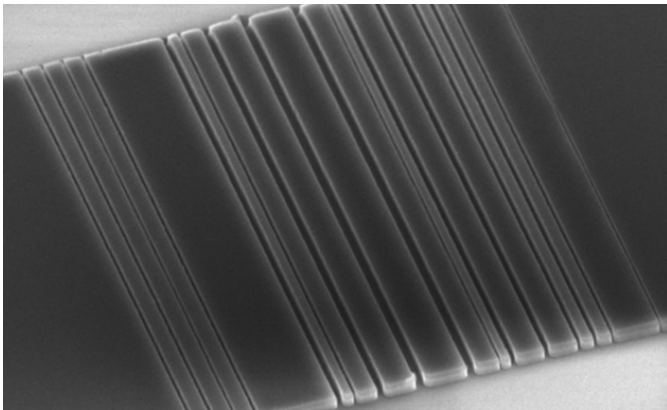


## An Optical Link for Light-Based Computers

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Stanford University researchers devise an algorithm to design and build a prism-like silicon structure able to bend light at right angles-- an "optical link" for the building of the super-fast light-based computers of the future.



As the researchers put it, the optical link is a tiny slice of silicon etched with a barcode-style pattern. Much like a tiny prism the link splits light into 2 different wavelengths (or colours) at right angles to the input, forming a "T" shape.

Allowing the creation of such a structure is the algorithm, which automated the design process behind such a "previously unimaginable" nanoscale structure, one taking advantage of the differences in the speed of light as it passes from from air and silicon.

The algorithm also allows the design of other devices, such as "Swiss cheese" structures able to route light to different outputs based not on colour but on mode (as in how they look)-- creating a potentially important "mode router."

The next step for the researchers is to create an optical link compatible with current fibre optic networks.

Go [Stanford Engineers Take Big Step Towards Using Light Instead of Wires Inside Computers](#)