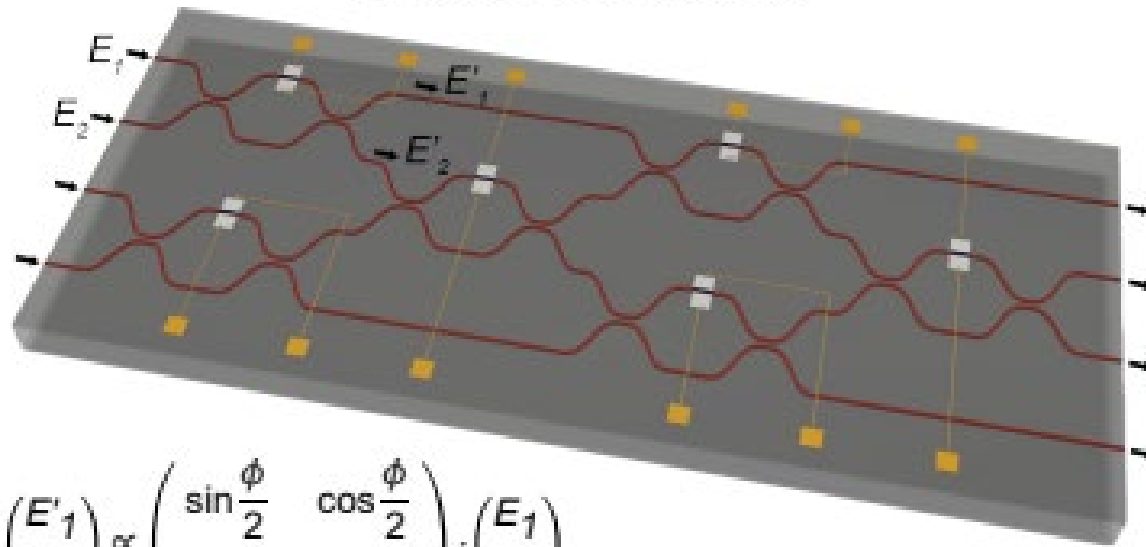


Simulation of Optical Phase Change Modulator for Analog Photonic Applications

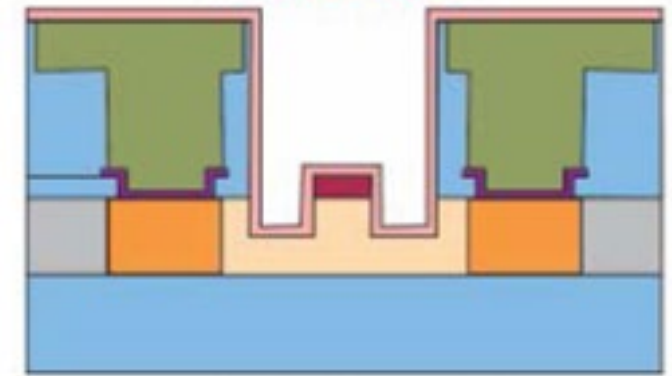
Anthony Donegan, Maarten Peters

Mach Zehnder Mesh



$$\begin{pmatrix} E'_1 \\ E'_2 \end{pmatrix} \propto \begin{pmatrix} \sin \frac{\phi}{2} & \cos \frac{\phi}{2} \\ \cos \frac{\phi}{2} & -\sin \frac{\phi}{2} \end{pmatrix} \cdot \begin{pmatrix} E_1 \\ E_2 \end{pmatrix}$$

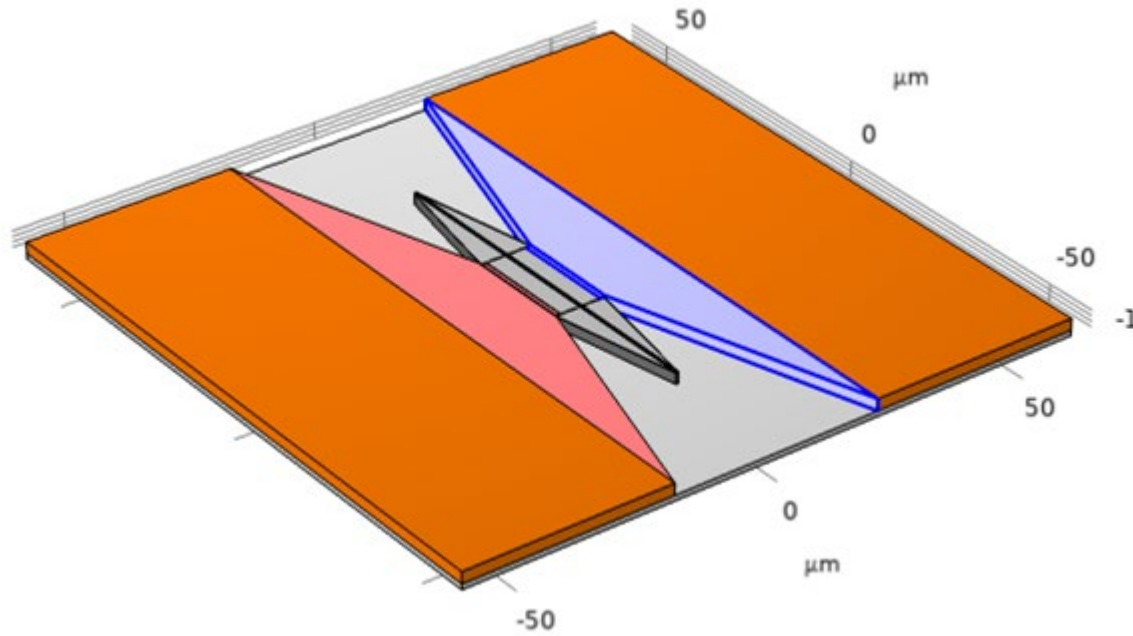
Final device



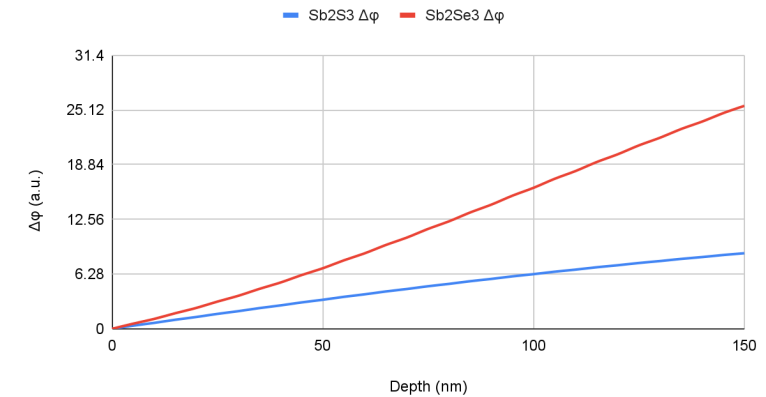
oxide	n- silicon	Sb ₂ Se ₃	metal via/pad
silicon	n+- silicon	PMMA	alumina

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$\Delta\phi$ (300C - AD) vs Depth (nm)



Max Loss (300C - AD) vs Depth (nm)

