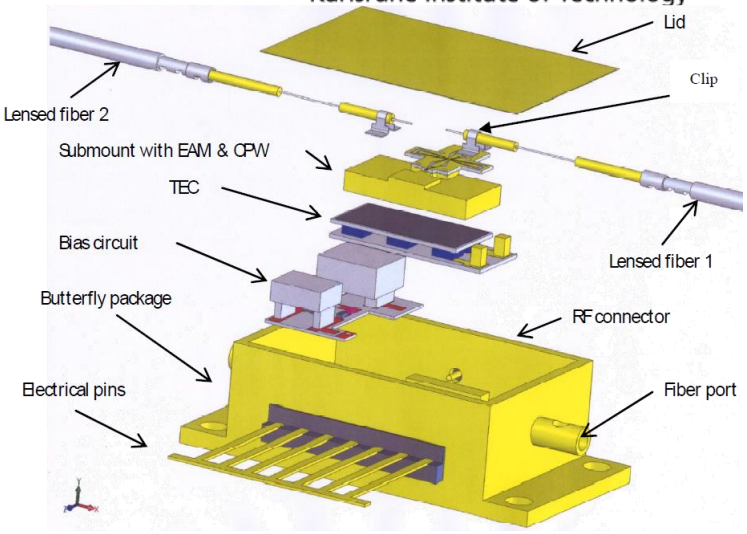
Bachelor / Master Thesis:
Silicon-Organic Hybrid based Modulator Module

Karlsruhe Institute of Technology

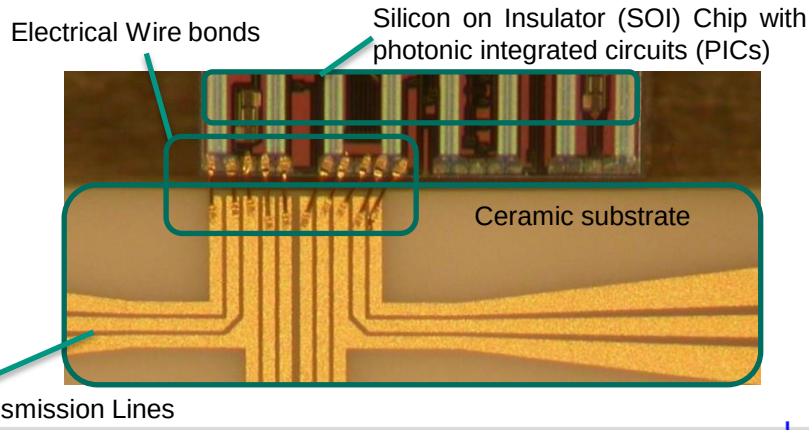
The goal of this work is to demonstrate a packaging concept for Silicon-Organic hybrid (SOH) electro-optic modulators. The main focus lies on the design, simulation, fabrication and testing of a high-bandwidth microwave frequency interposer board with an integrated bias-tee. This work includes analytical and numerical analysis prior to fabrication of the interposer board. After characterization and iterative improvements of the board a complete demonstrator will be assembled.



Example of package for an elctro-optic modulator
Tan, Songsheng, et al. "Design and development of a package for a diluted waveguide electro-absorption modulator." *SPIE Defense and Security Symposium*. International Society for Optics and Photonics, 2008.

Your tasks:

- Identification of suitable housing and form factor
- Design and simulation of RF interface including PCB, wire bonds and RF connectors
- Fabrication and characterization of PCB board
- Demonstration of functionality of electrically packaged SOH chip
- Tasks and topics can be adapted to your own interests



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