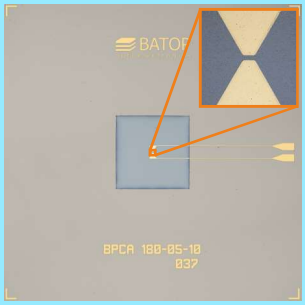
BATOP optoelectronics

PCA - Photoconductive Antenna

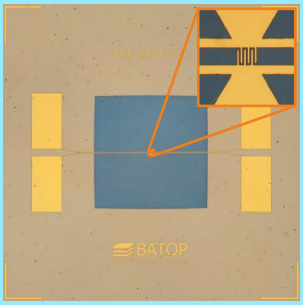
Single Gap Photoconductive Antenna - PCA

- use as terahertz (THz) emitter / receiver antenna
- wavelengths: 800 nm / 1064 nm / 1550 nm
- unmounted PCA chip or mounted on silicon substrat lens

Bow-tie antenna



Finger-gap antenna

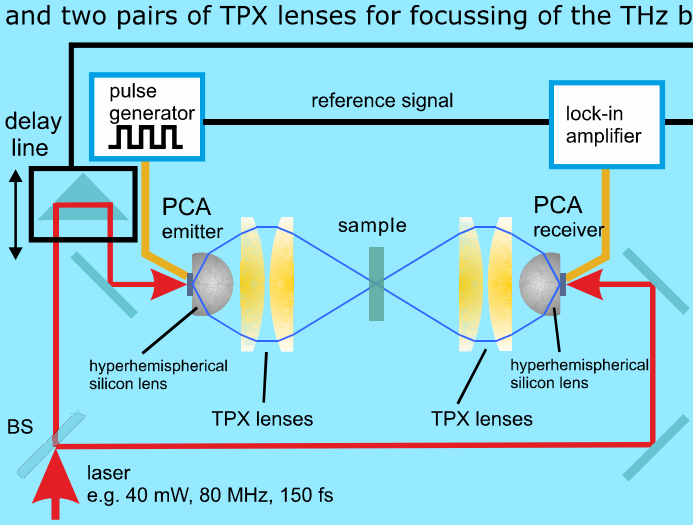


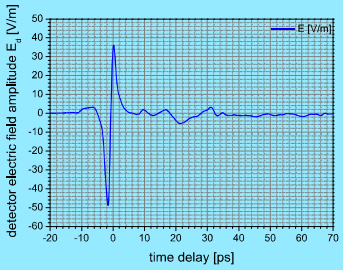
Parallel line antenna

Spiral antenna

THz Time Domain Spectrometer Setup

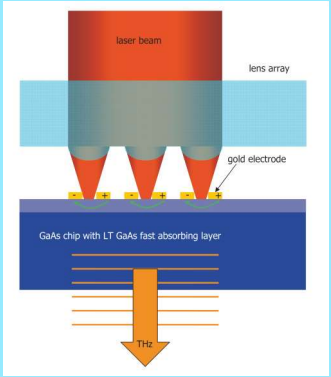
- free space setup with two antennas having a hyperhemisperical silicon lens and two pairs of TPX lenses for focussing of the THz beam



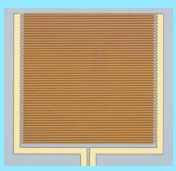


Interdigital Photoconductive Antenna (iPCA)

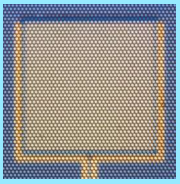
- large area photoconductive emitter / receiver
- with microlens array for optimal use of laser power
- wavelength: 800 nm

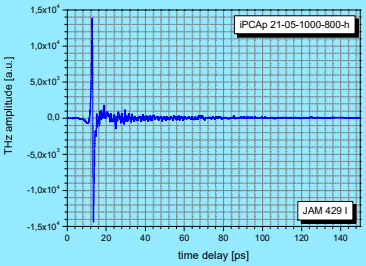


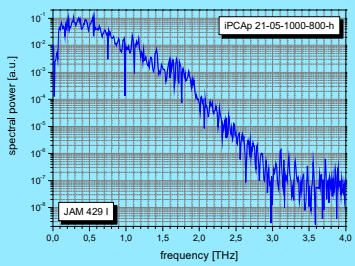
electrode structure of iPCA



top view of iPCA with microlens array







measured by Gabor Matthäus, Institute of Applied Physics, University of Jena, Germany

mounted PCAs

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