

“Micro-mirrors for a multifocus terahertz imaging system”, pp.300-304

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Abstract – We present concave micro mirrors for the use in a future multifocus terahertz (THz) imaging system. The optical design of the micro mirrors is carried out using the ray tracing software ZEMAX. The mirrors are fabricated out of aluminium on a computer controlled milling machine. We experimentally verify our simulation results at different frequencies between 100 GHz and 2.52 THz using different THz emitter receiver systems. The agreement between the experiment and the simulation gets better, if the frequency increases. Furthermore, the experimental data for the pulsed THz system fit very well to the results of a second simulation obtained by electromagnetic calculations with the software GRASP.