# Abstracts

## Integrated 119-µm Linear Corner-Cube Array

*S.S. Gearhart, C.C. Ling, G.M. Rebeiz, H. Davee and G. Chin. "Integrated 119-µm Linear Corner-Cube Array." 1991 Microwave and Guided Wave Letters 1.7 (Jul. 1991 [MGWL]): 155-157.*

An integrated corner-cube antenna has been designed, fabricated, and measured at 119 µm. The structure consists of a traveling-wave antenna integrated on a 1-µm dielectric membrane and suspended in a longitudinal cavity etched in silicon wafers. The patterns at 119 µm agree well with millimeter-wave patterns measured on a scaled antenna at 222 GHz. A directivity of 18 ± 0.5 dB is calculated from E- and H-plane measurements. This work demonstrates that high-efficiency integrated corner-cube antennas are easily scalable to terahertz frequencies and could be used for radio-astronomical and plasma-diagnostic applications.

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