252.Title: A metal-metal Fabry-Peacuterot cavity photoconductor for efficient GaAs terahertz photomixers

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Abstract: The low responsivity of the low-temperature-grown GaAs based planar photoconductors used in the photomixing experiments can be improved by using a metal-metal Fabry-Peacuterot cavity. This resonant cavity photoconductor exhibits a dc-responsivity above 0.1 A/W and current density higher than 50 kA/cm2 with a low-temperature-grown-GaAs epitaxial layer presenting a subpicosecond carrier lifetime. Based on these results, up to 100 muW output power at 1 THz could be expected if this photoconductor is used in a photomixing experiment with a resonant antenna