

Fabrication of Gold Electrodes for Bio-Based Applications

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Objectives of work

- ◆ Fabricate various gold electrodes, grow bacterial film
- ◆ Characterize effects of bacterial film on RF circuit performance



Wide Ground CPW



Narrow Ground CPW



Thin-fingered electrode



S=50 um, w=8 um

Major observations

- ◆ Fabrication process for various types of gold electrodes has been developed:
 - Wide Ground CPW
 - Narrow Ground CPW
 - Thin-fingered electrode

	Wide Ground CPW	Narrow Ground CPW
Conductor width (um)	414	78
Conductor-Ground Spacing (um)	200	50
Line length (mm)	51.2	50.6

CPW Dimensions, $Z_0 = 50$ ohms