

1/11

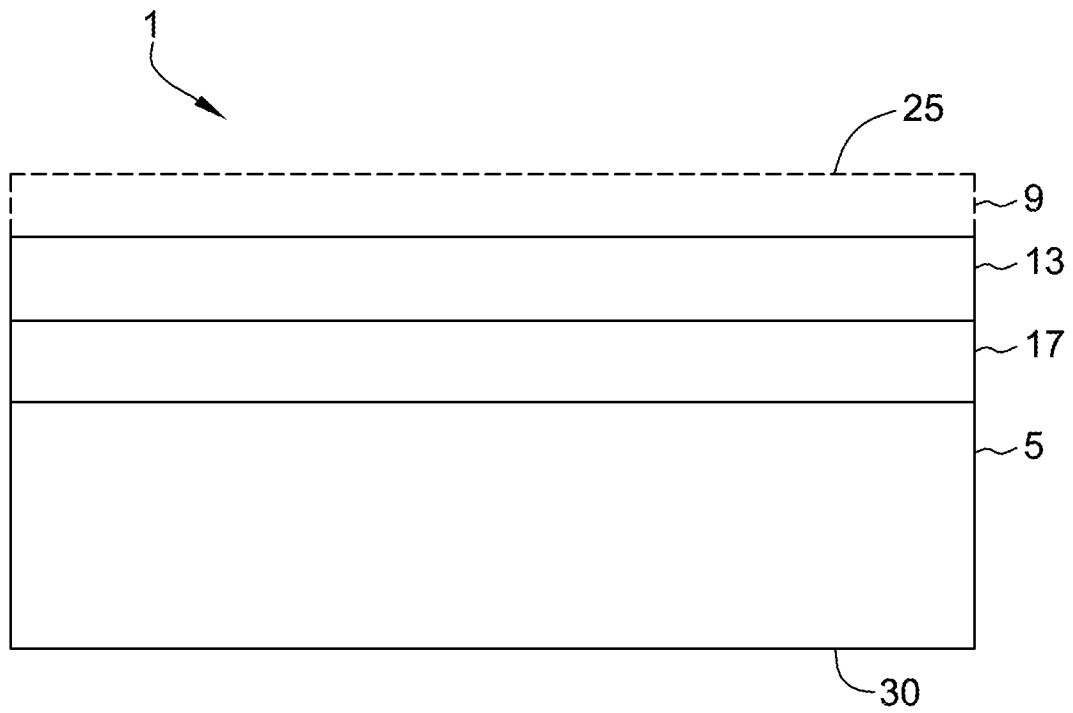


FIG. 1

2/11

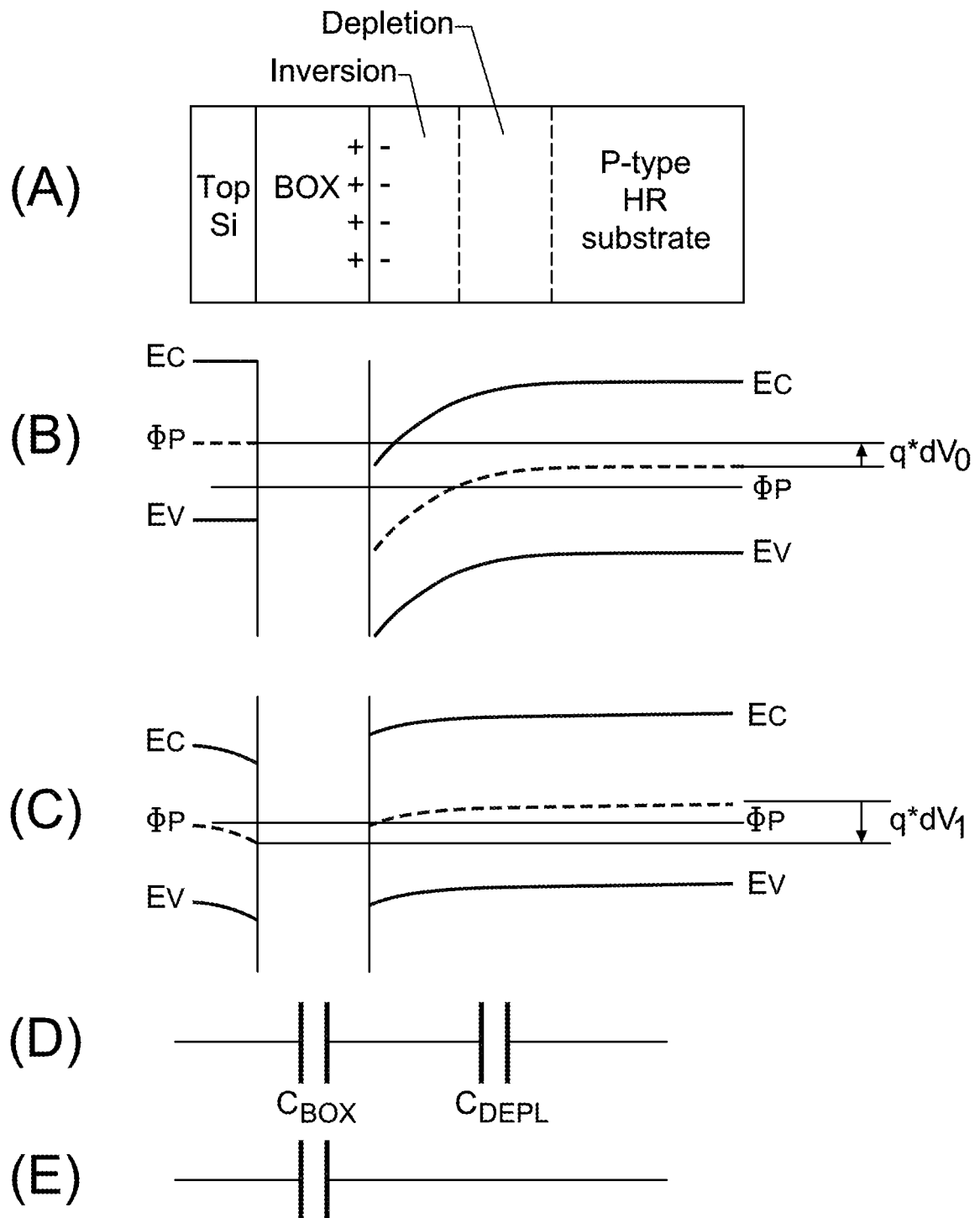


FIG. 2

3/11

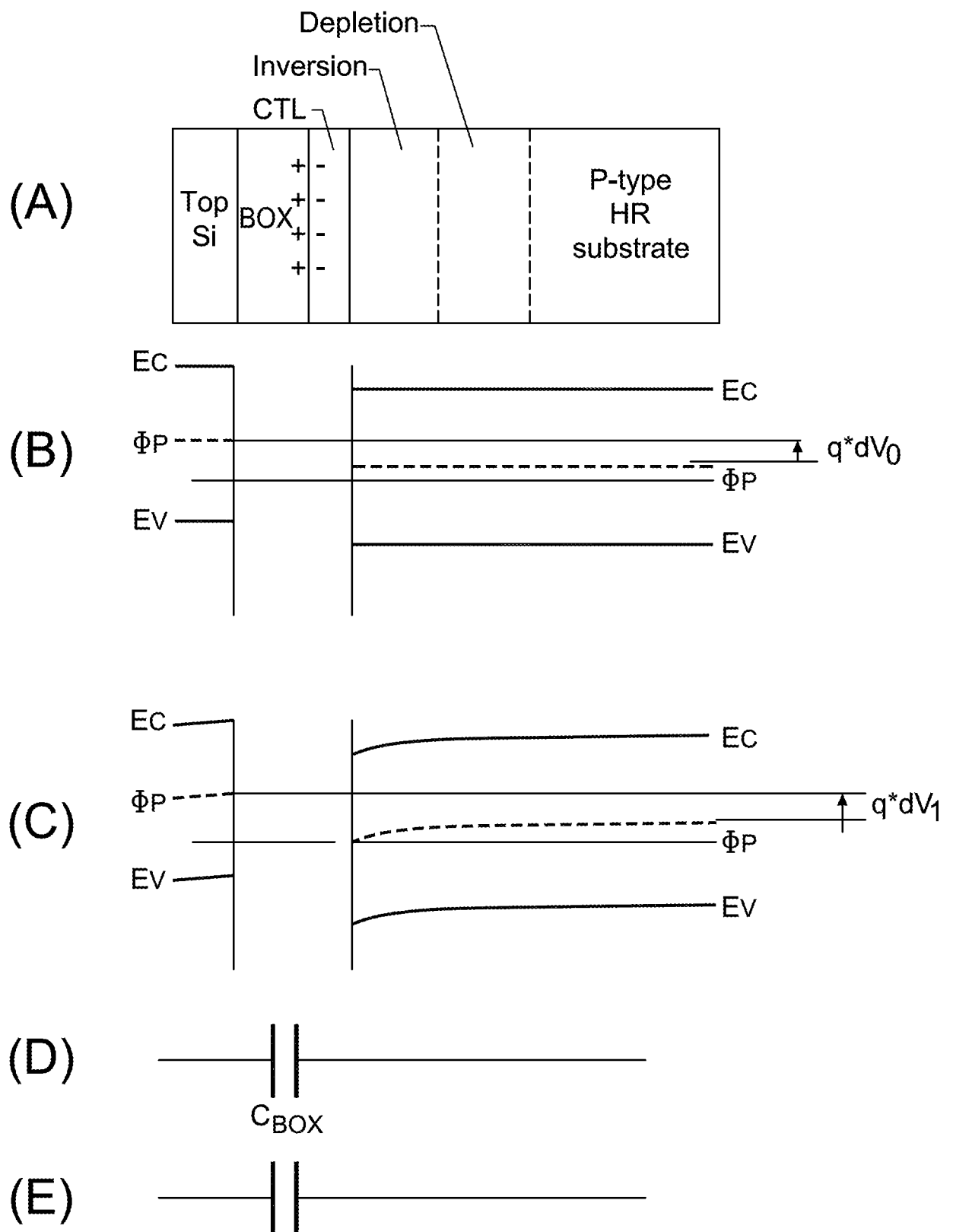


FIG. 3

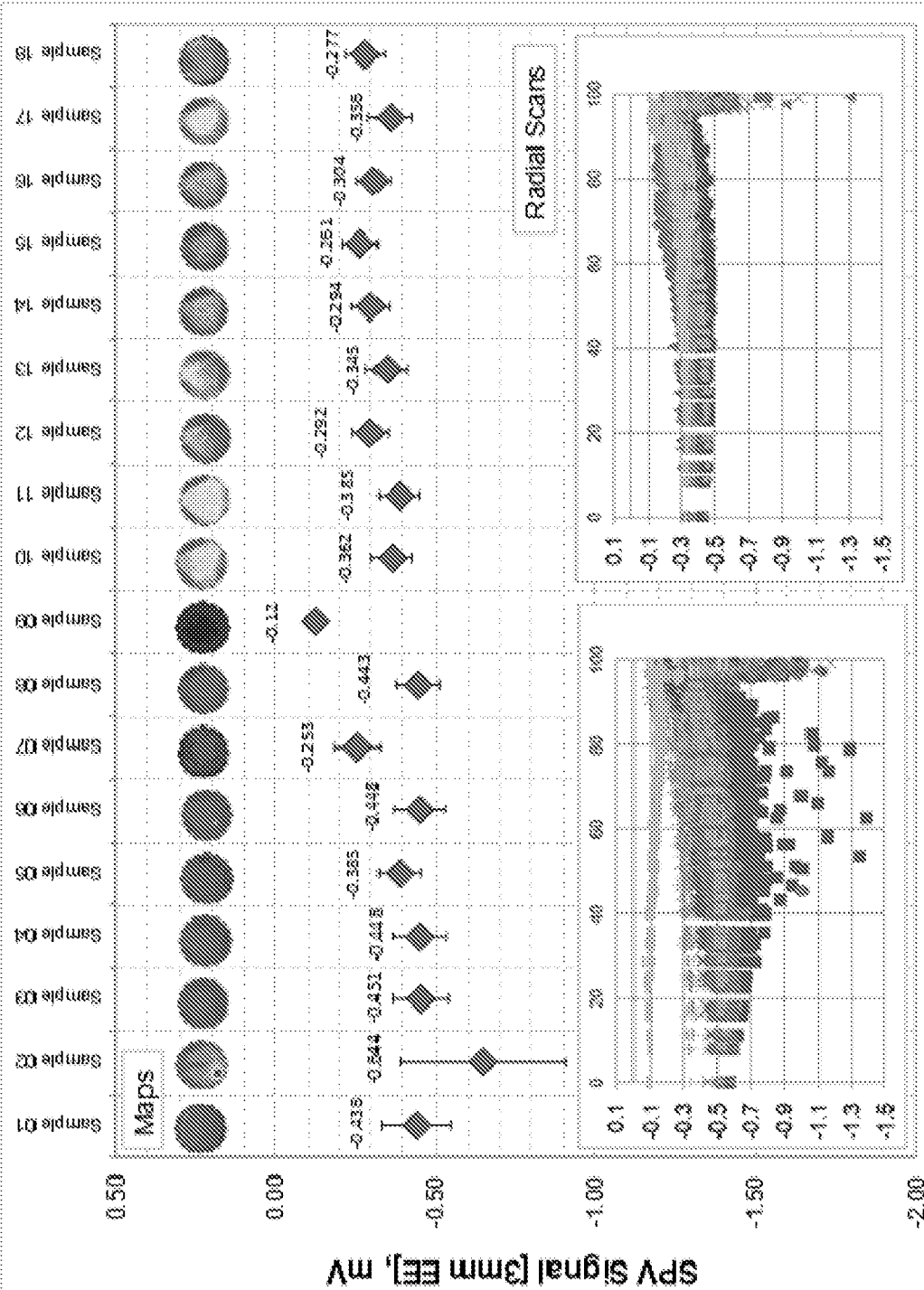


FIG. 4

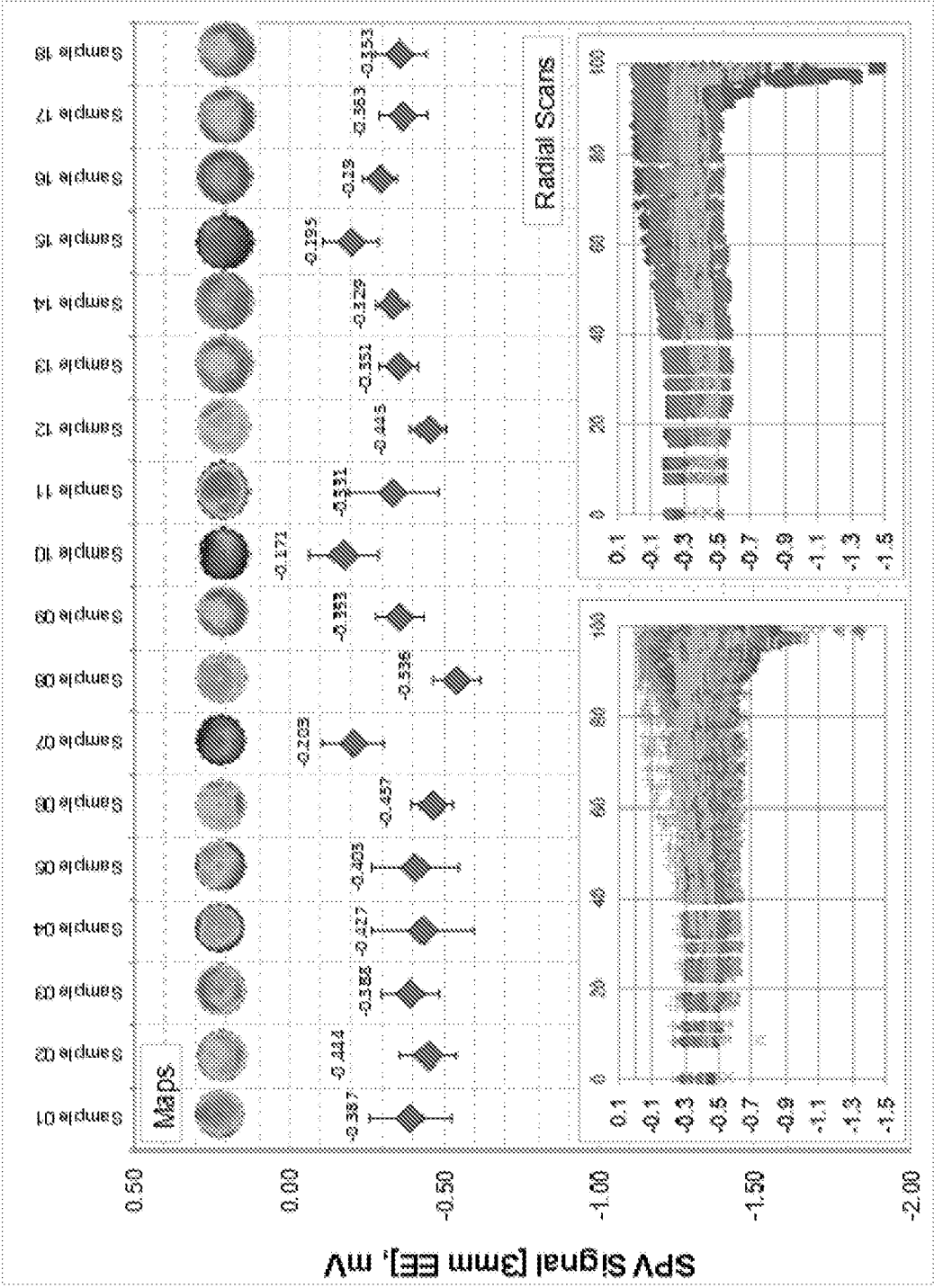


FIG. 5

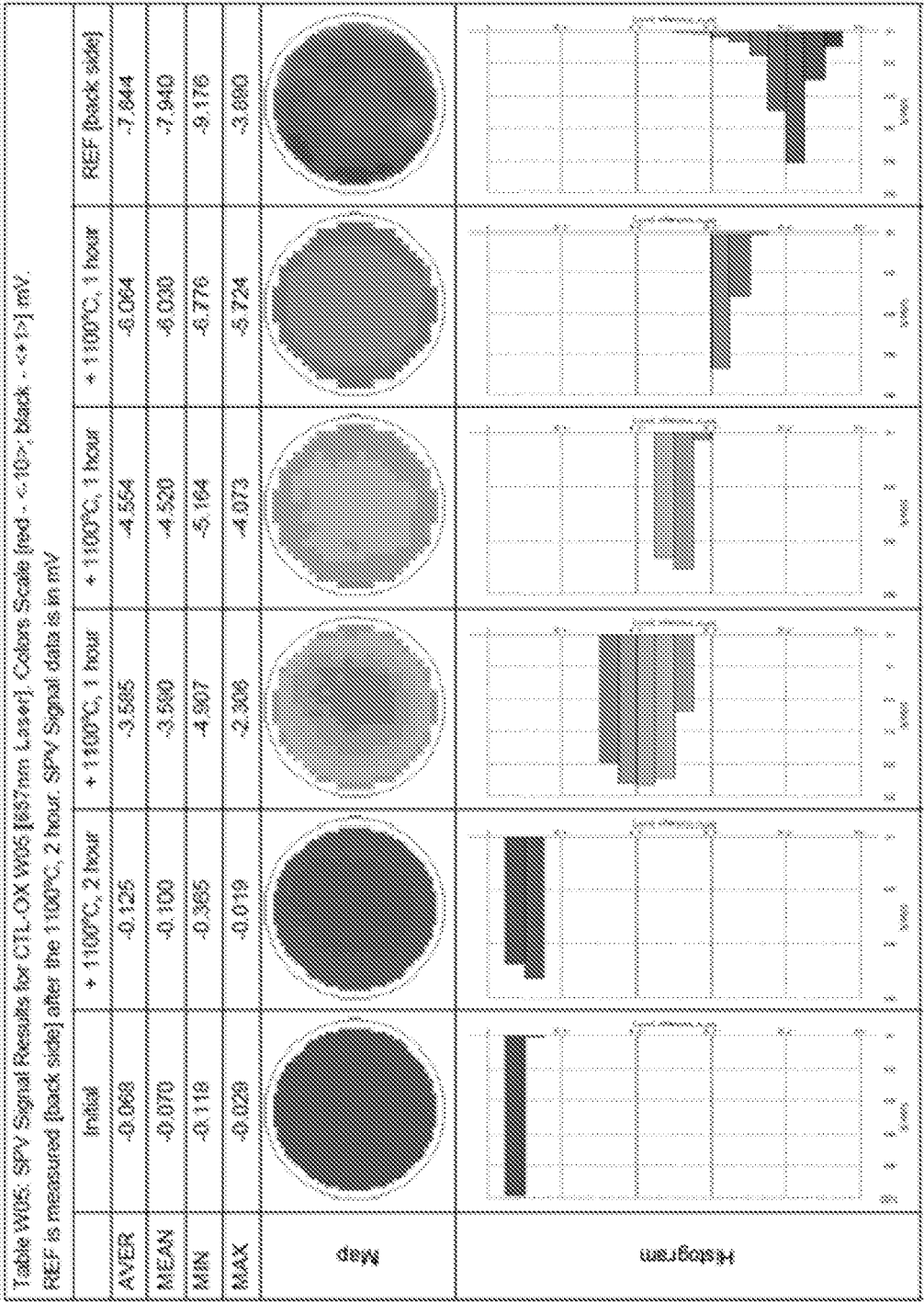


FIG. 6

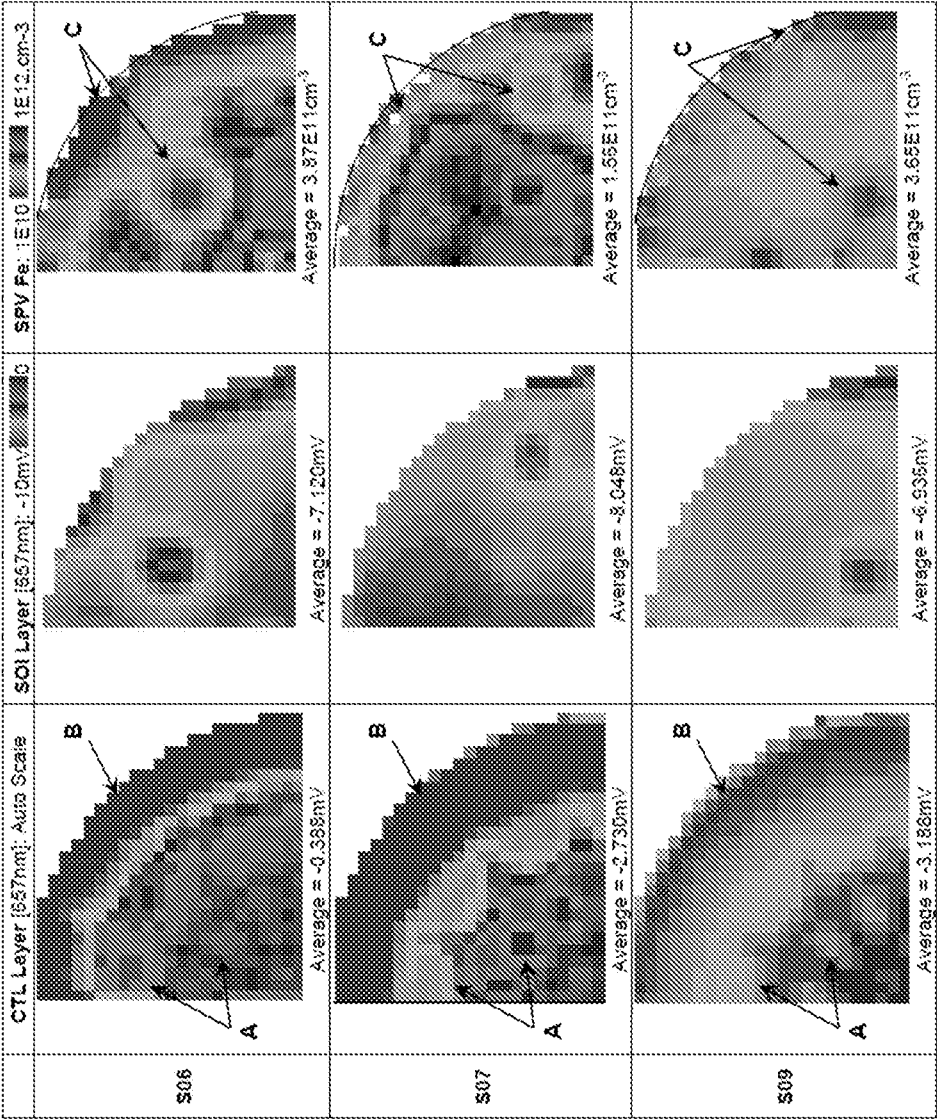


FIG. 7

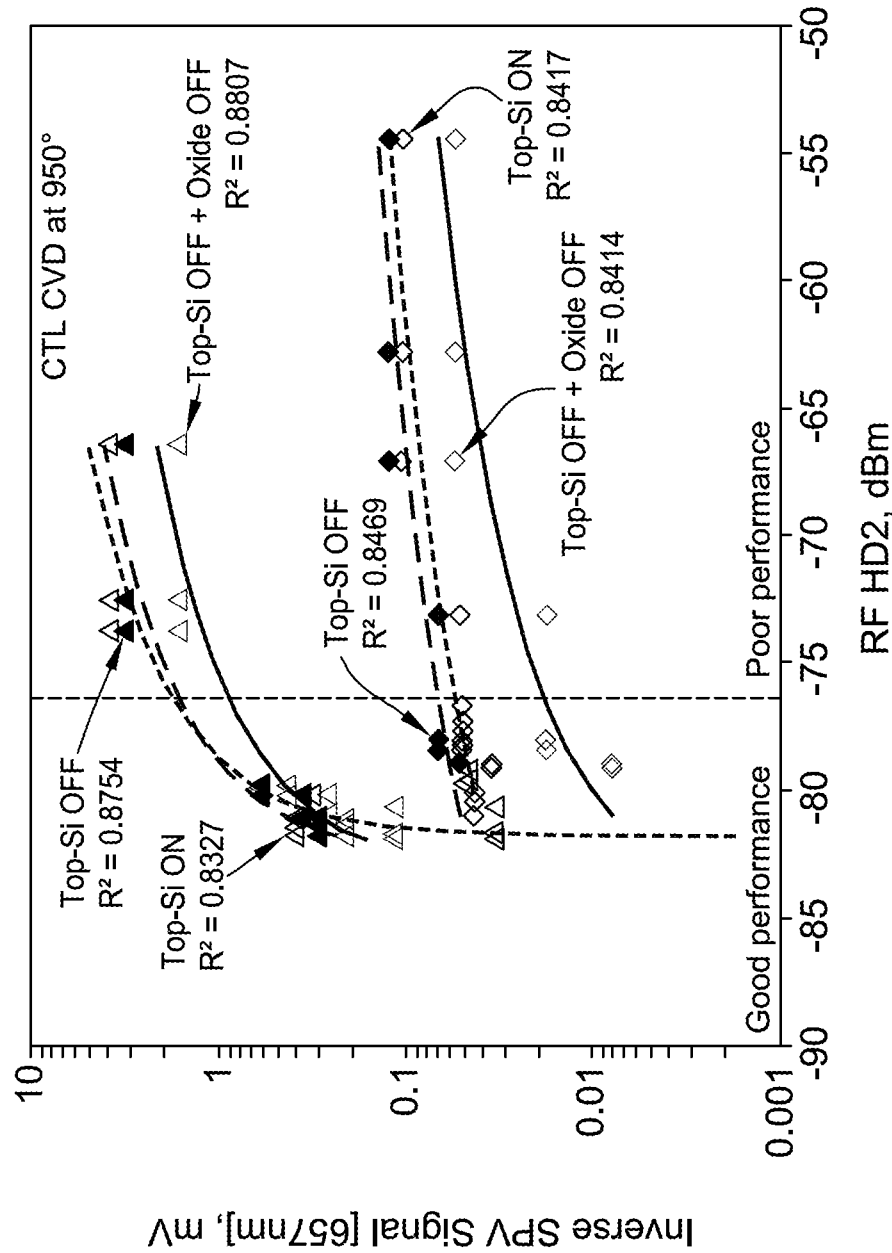
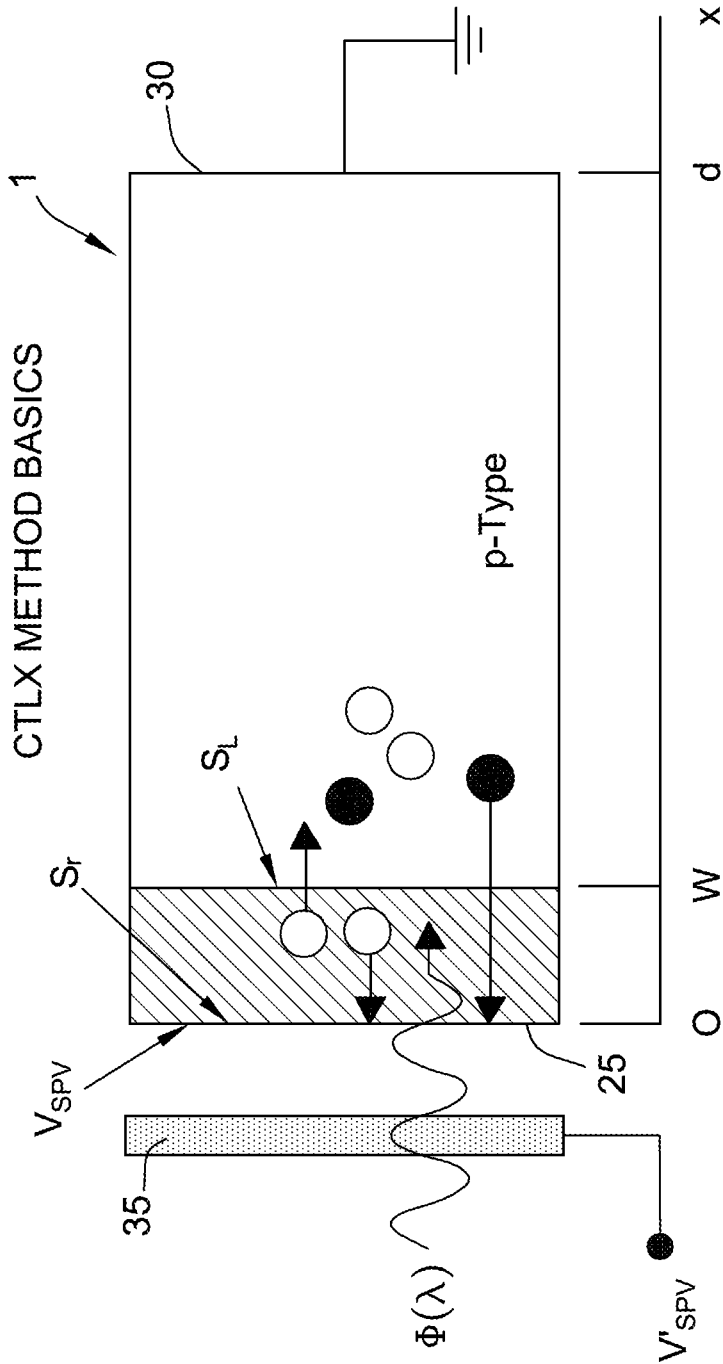


FIG. 8



OPERATION SCHEMATICS FOR THE CTLX EXPRESS BY SPV METHOD:

- TRANSPARENT ELECTRODE TO MEASURE SPV SIGNAL V_{SPV}
- LIGHT FLUX $\Phi(\lambda)$ IS CONSTANT AND APPLIED AT DIFFERENT LASER WAVELENGTHS [IN OUR CASE AT 657nm AND 1013nm]
- DEPLETED LAYER W , ~ TO THE LIGHT PENETRATION DEPTH
- SURFACE RECOMBINATION VELOCITY [SRV] AS S_L [INTERFACE]
- HERE WE USE THE FOLLOWING FORMULAS FOR SPV SIGNAL

FIG. 9

$$V_{SPV} = \frac{(kT/q)(1 - R) \Phi L_n}{N_{PO} (S_L + D_n/L_n)(L_n + 1/\alpha)}$$

CTLX Recipe Tuning: Lasers Power Parametric Scan

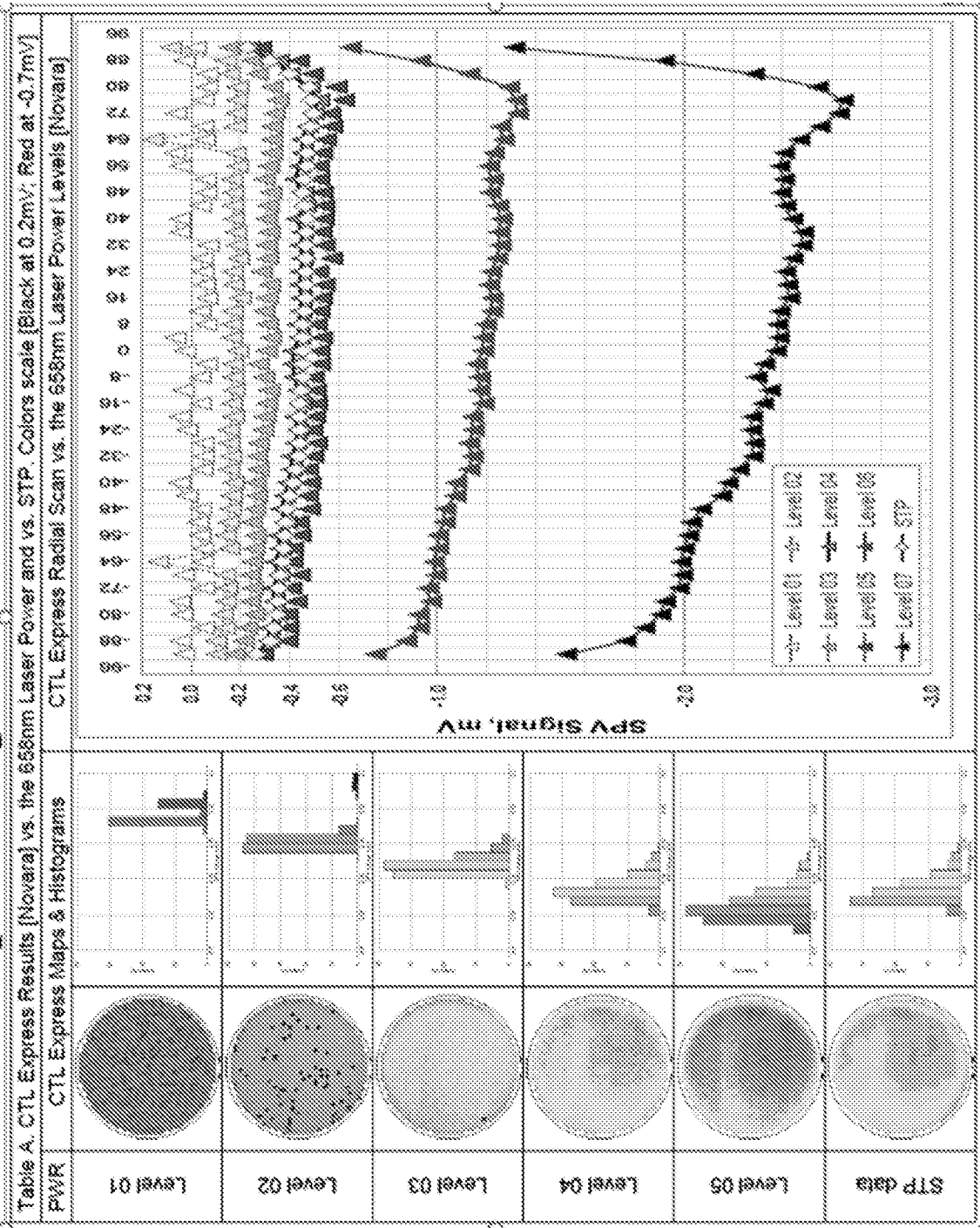


FIG. 10

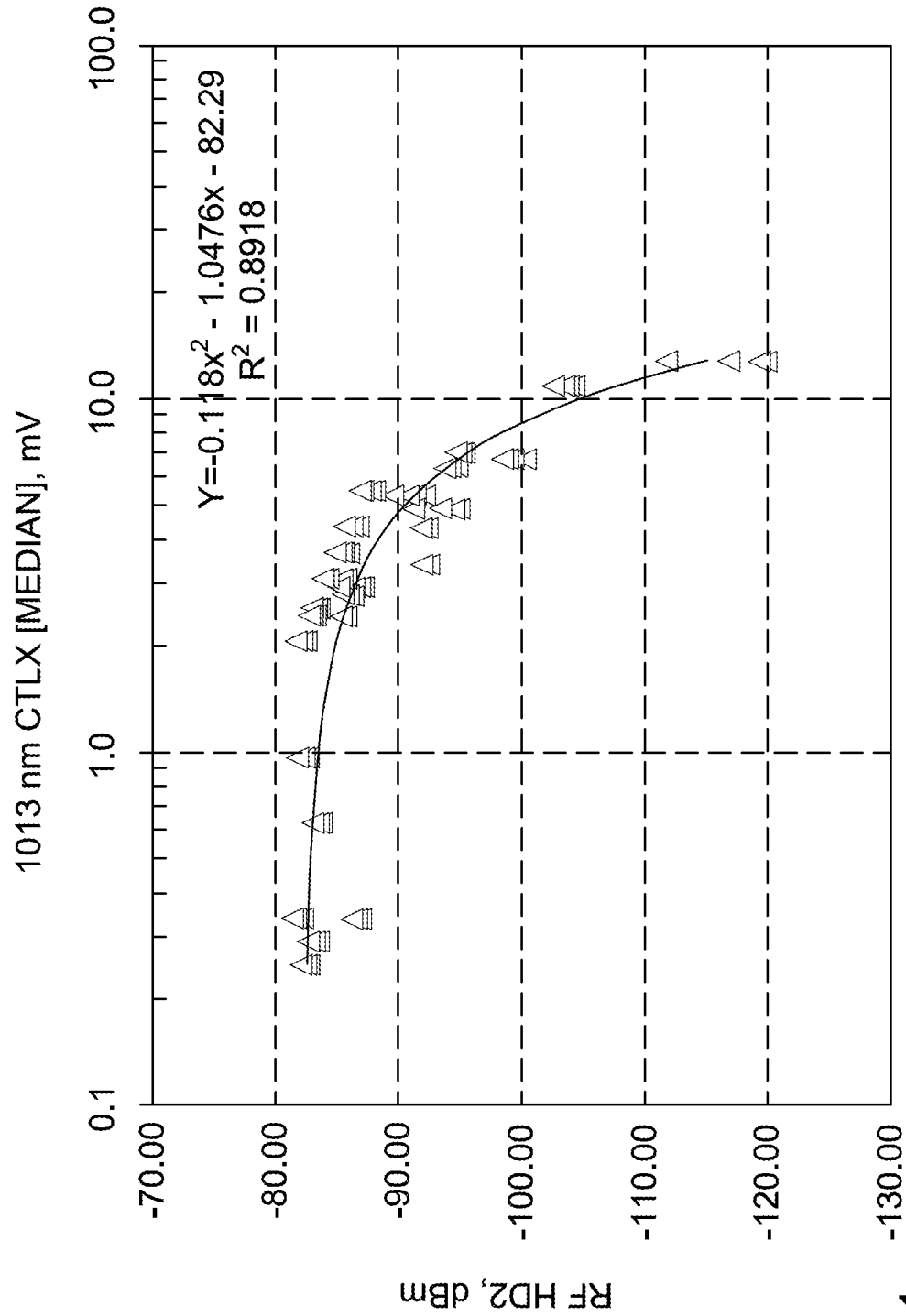


FIG. 11