

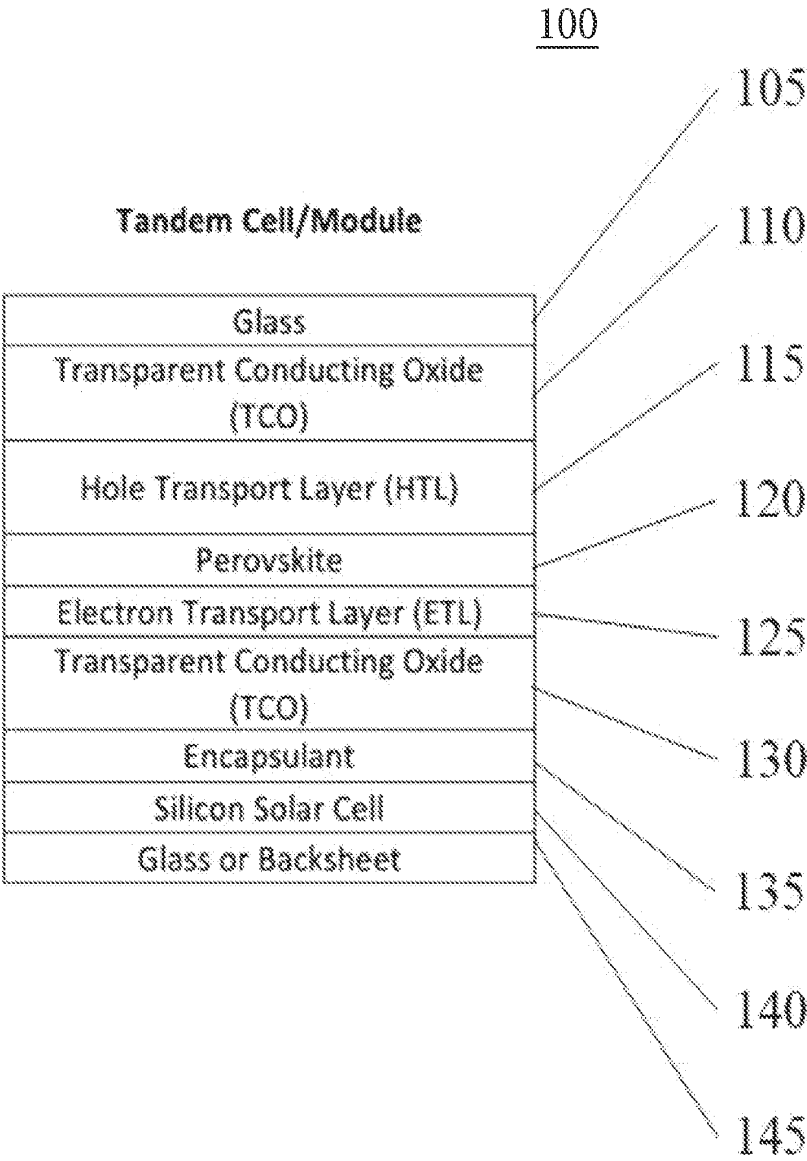


FIG. 1

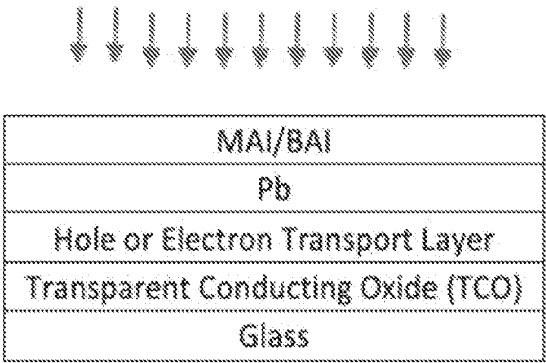
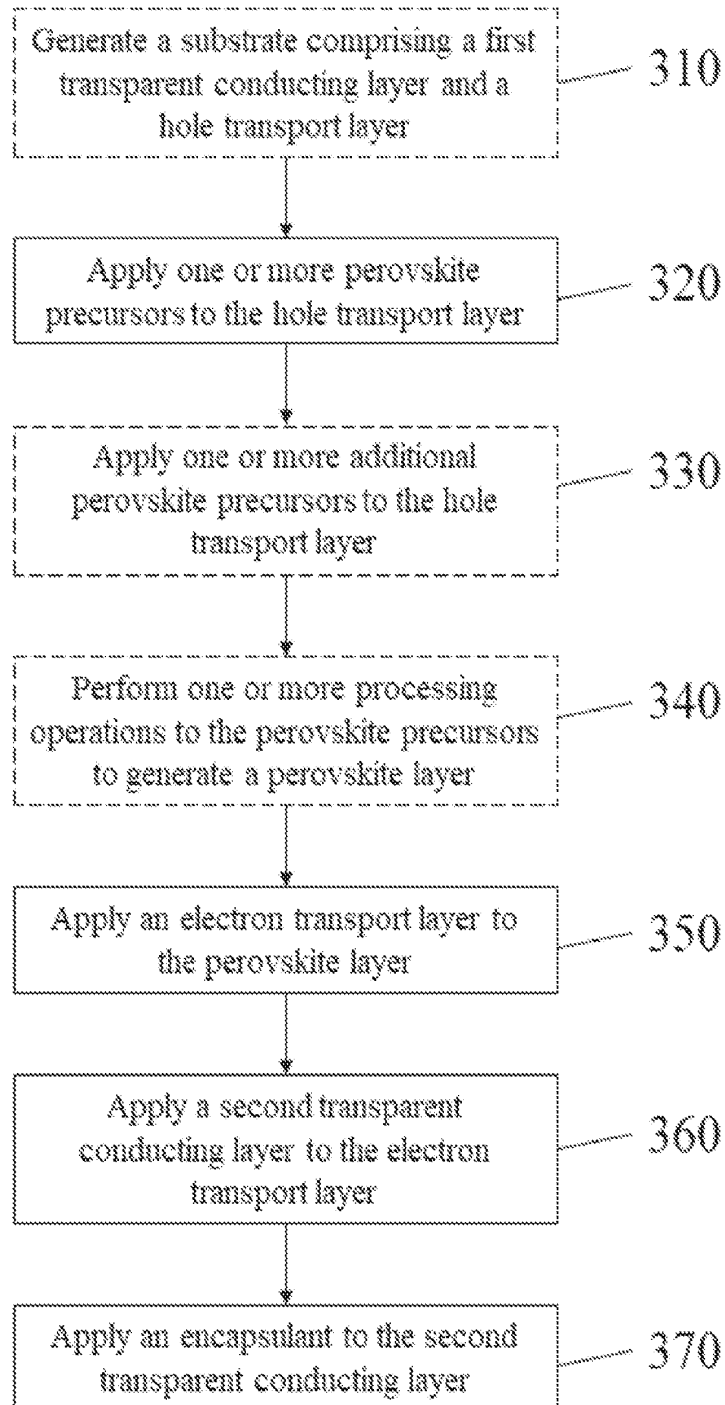
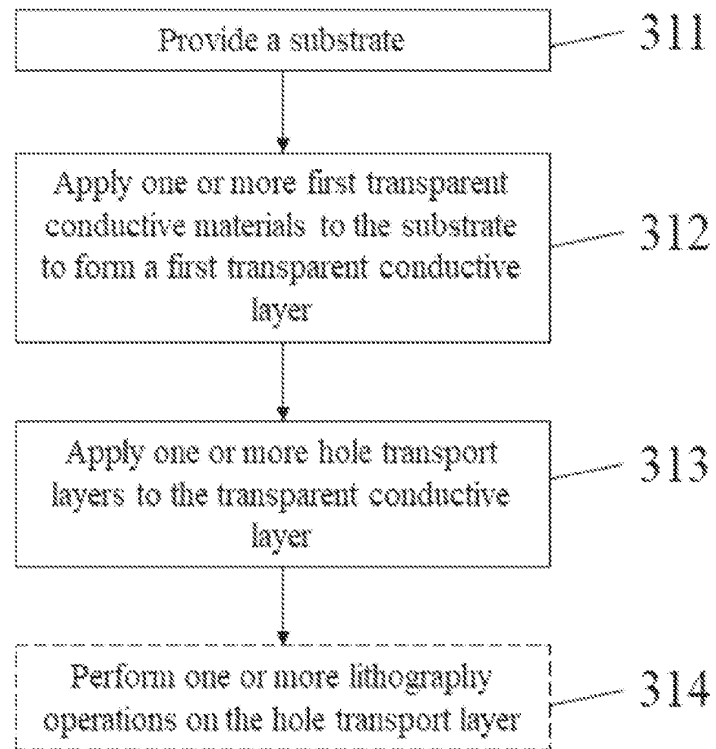
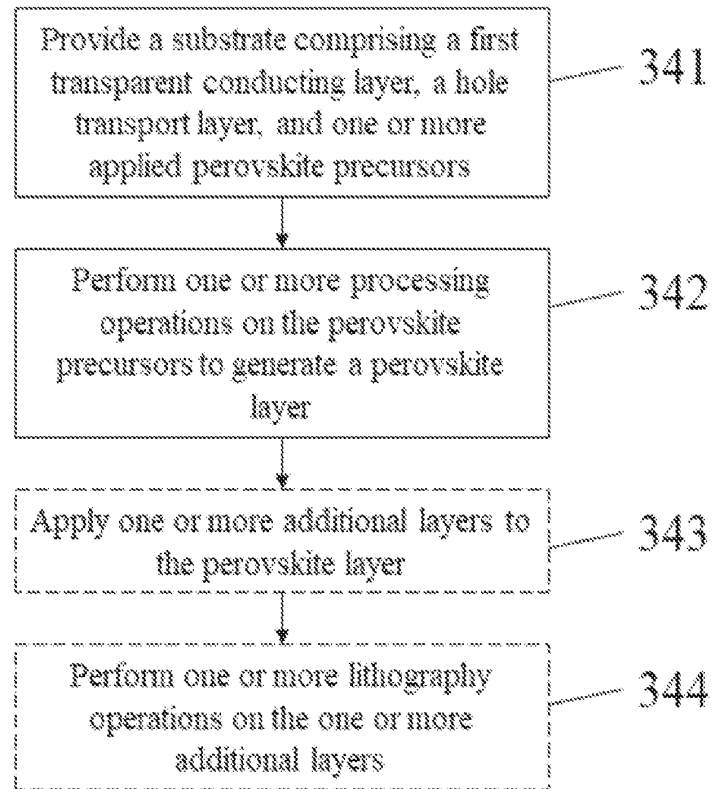


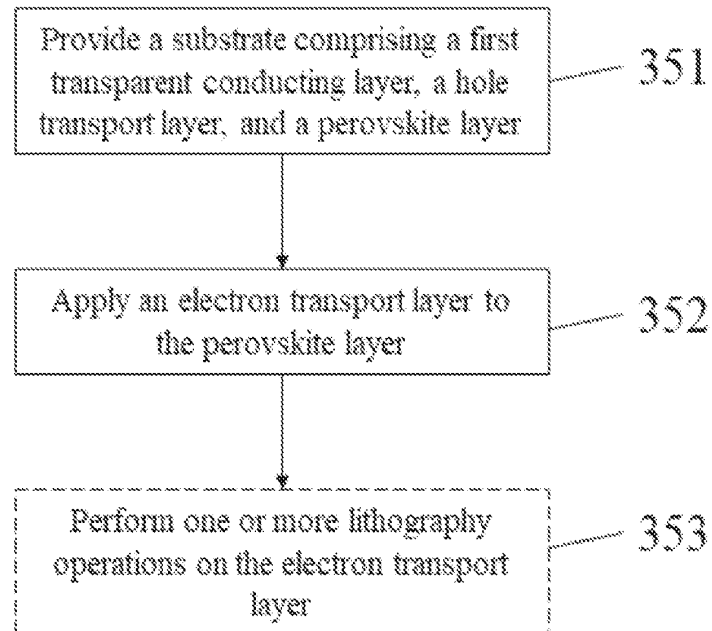
FIG. 2

300***FIG. 3***

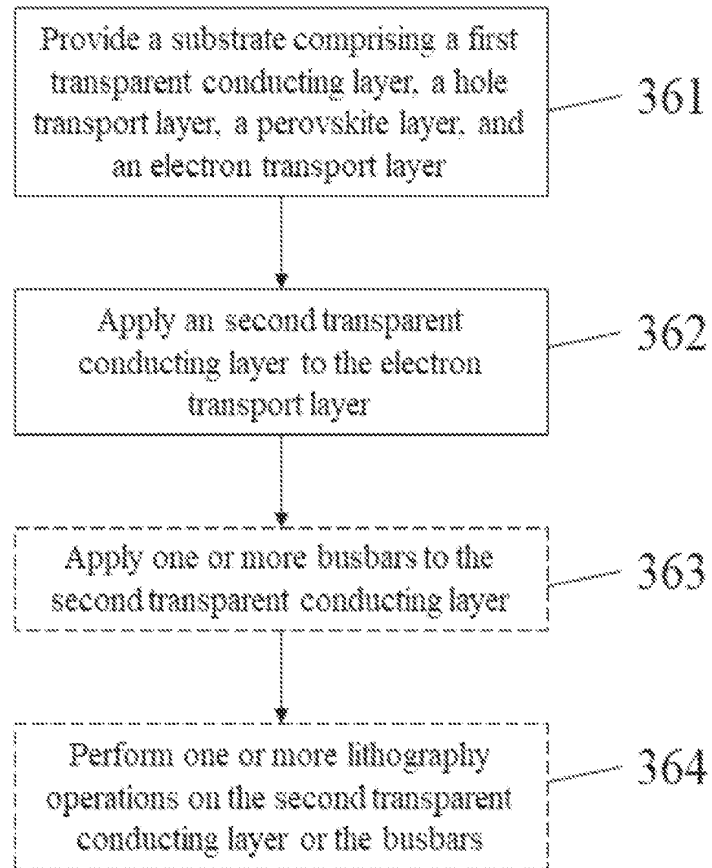
SUBSTITUTE SHEET (RULE 26)

310***FIG. 4***

340**FIG. 5**

350***FIG. 6***

SUBSTITUTE SHEET (RULE 26)

360*FIG. 7*

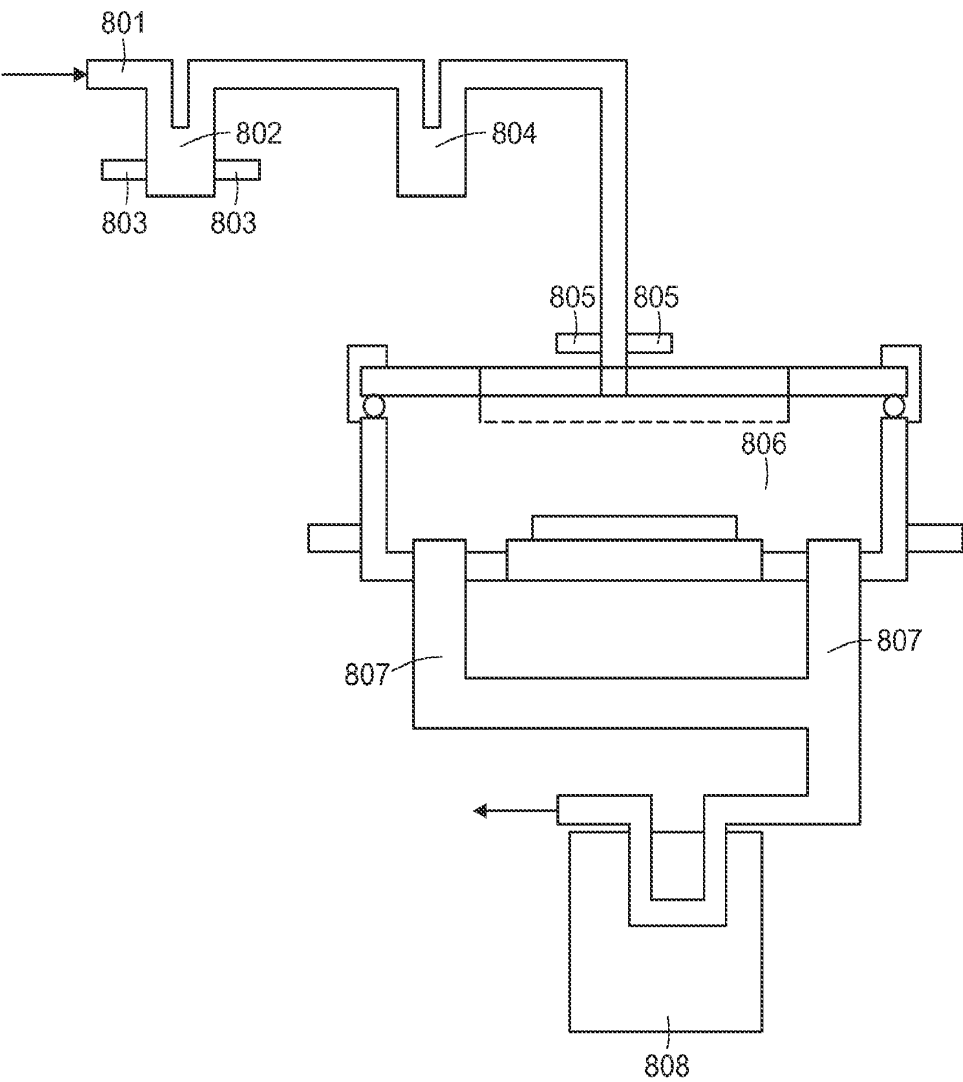


FIG. 8

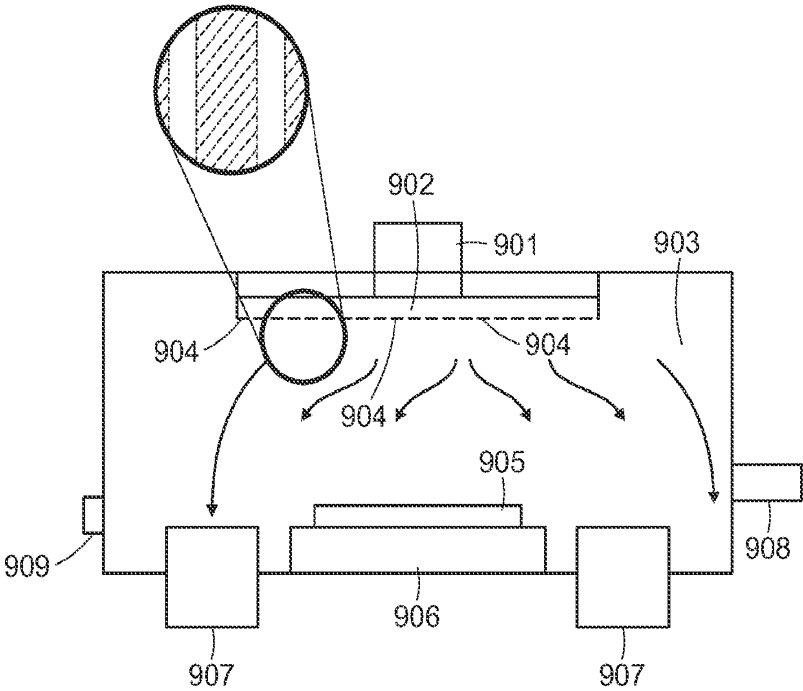


FIG. 9

Integrated Production Flow		
Category	Top Cell	Toolsets
Incoming + Scribe	Glass + ITO + NiO + P1	Tool1
Spray-on + Scribe	PbI2+MAI+Anneal+PCBM+P2	Tool2
PVD + Scribe	ITO + P3 + Ag + Iso	Tool3
Category	Module (Standard)	Toolsets
Incoming check	Perovskite-on-Glass	Tool1
Encapsulant	Encapsulant (low moisture)	Tool2
Stringing/Tabbing	Mono/Multi-Si	Tool3
Busbar Layout	2-terminal + 2-terminal	Manual
Soldering	Connecting matched network	Manual
Encap + Backsheet	Low moisture material	Manual
Lamination	Low temp	Tool4
Jbox	Standard 2 cable 3-4diodes	Manual
Edge Sealant	Low moisture material	Tool5
Frames	Standard	Tool6

FIG. 10

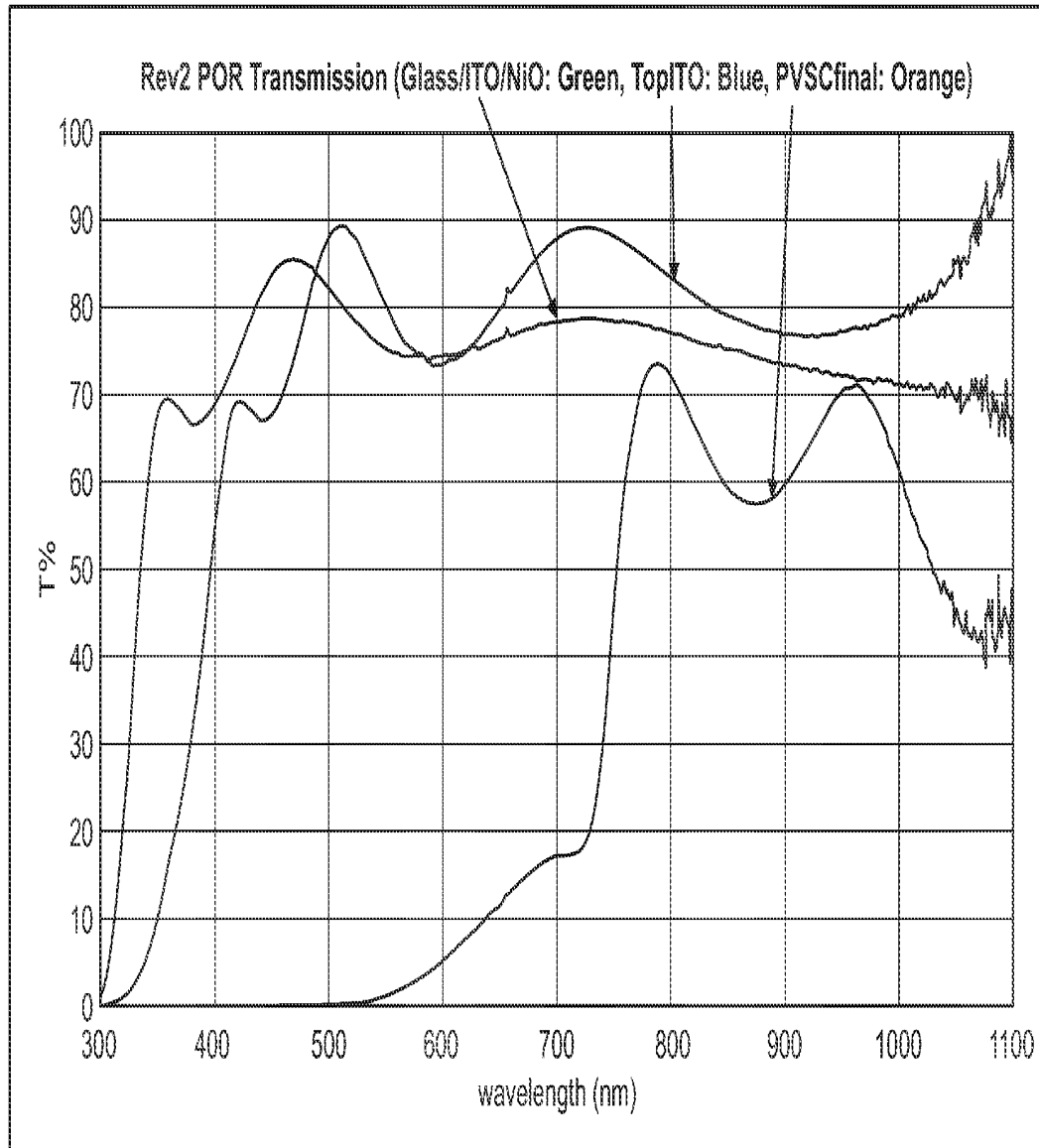


FIG. 11

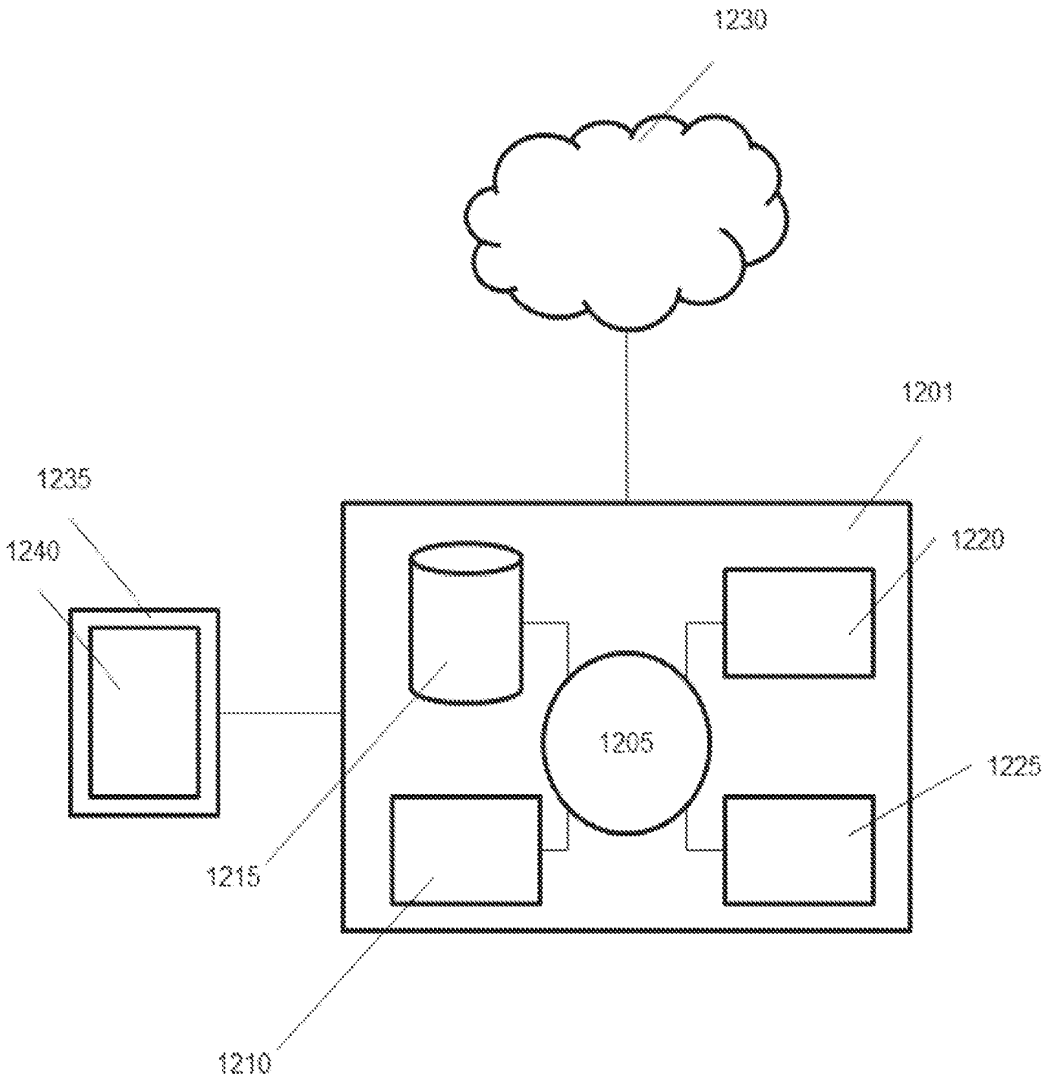
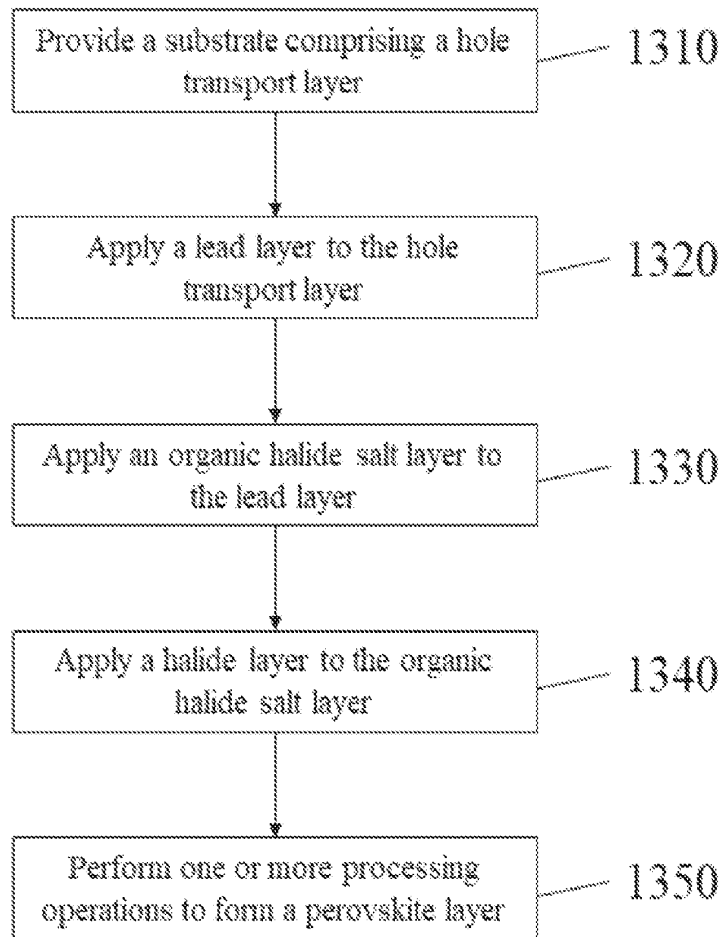
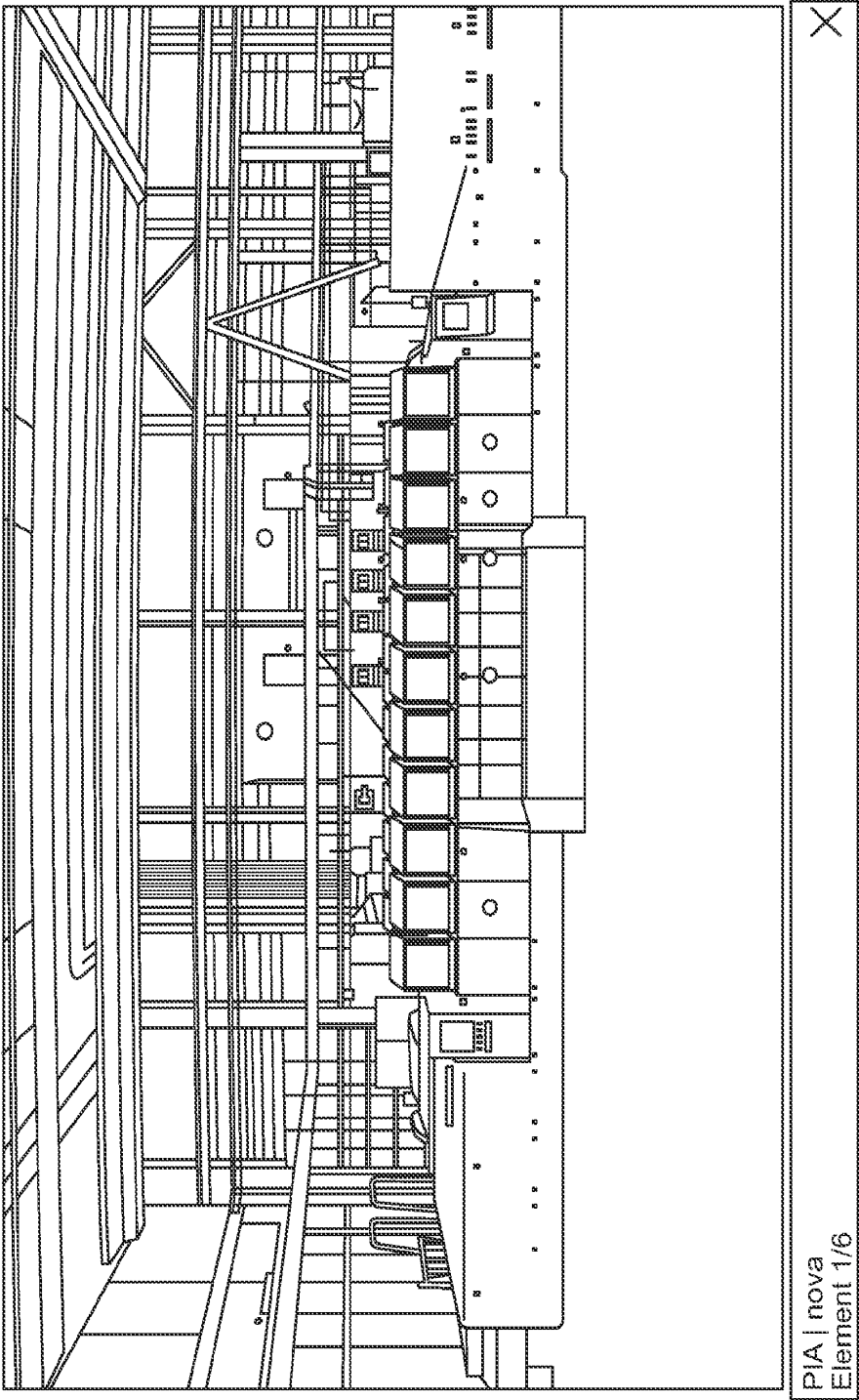


FIG. 12

1300**FIG. 13**



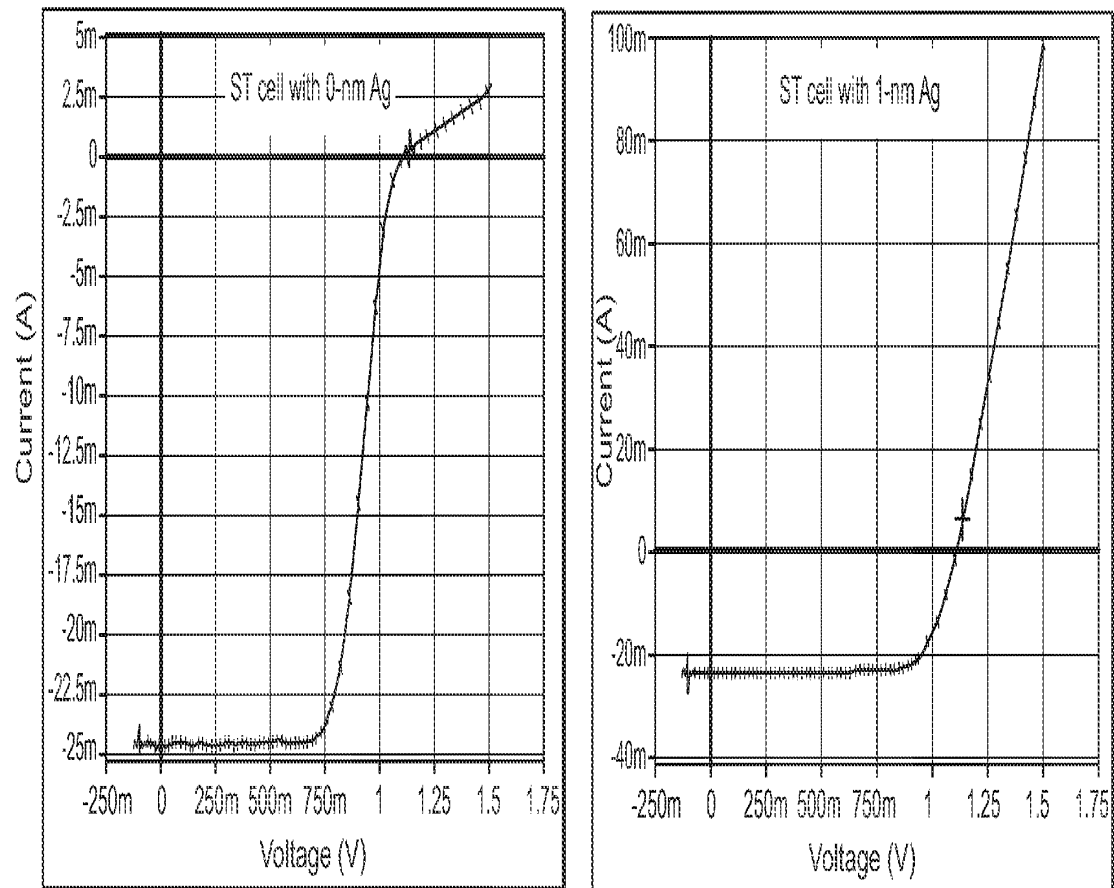


FIG. 15

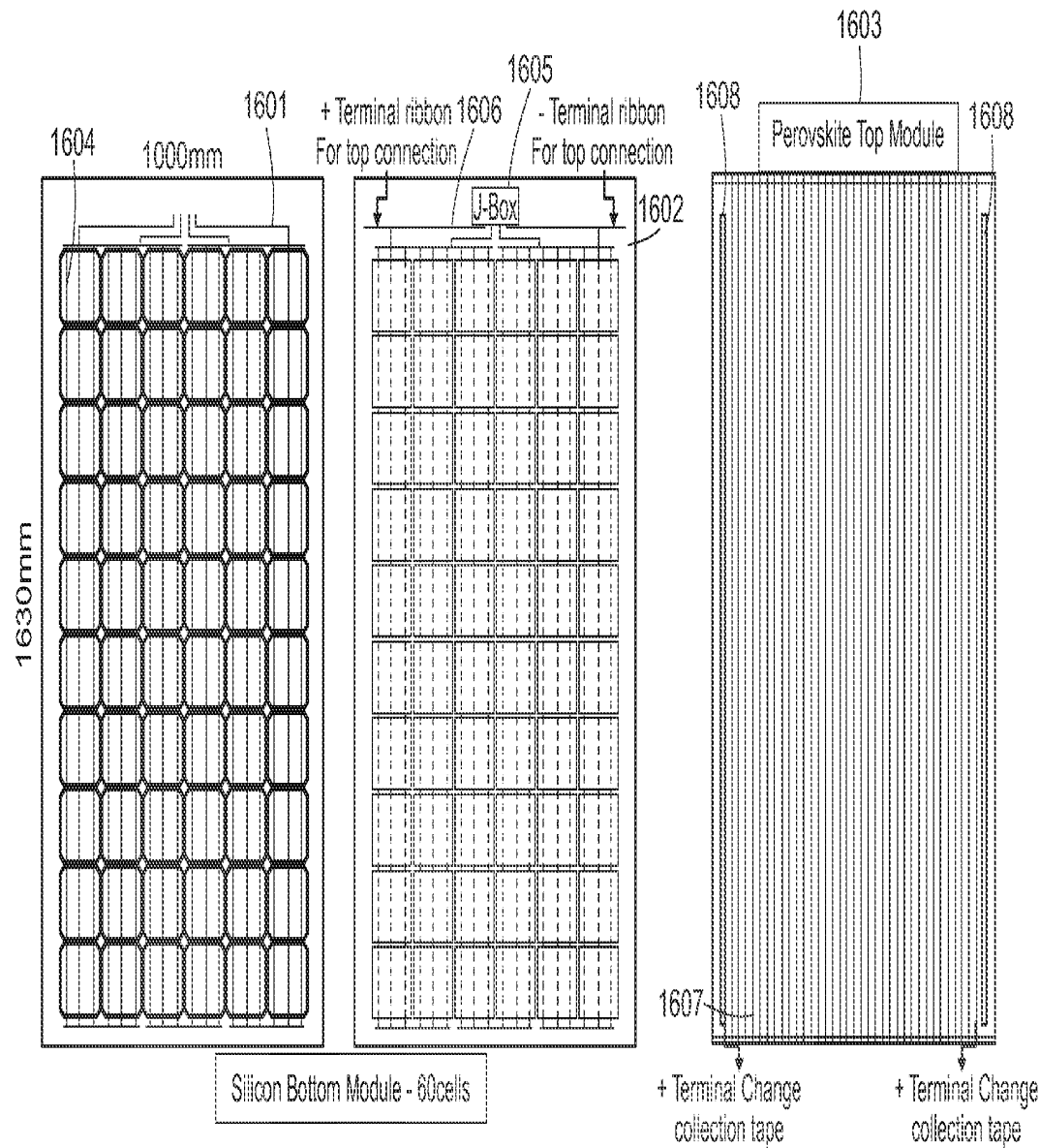


FIG. 16

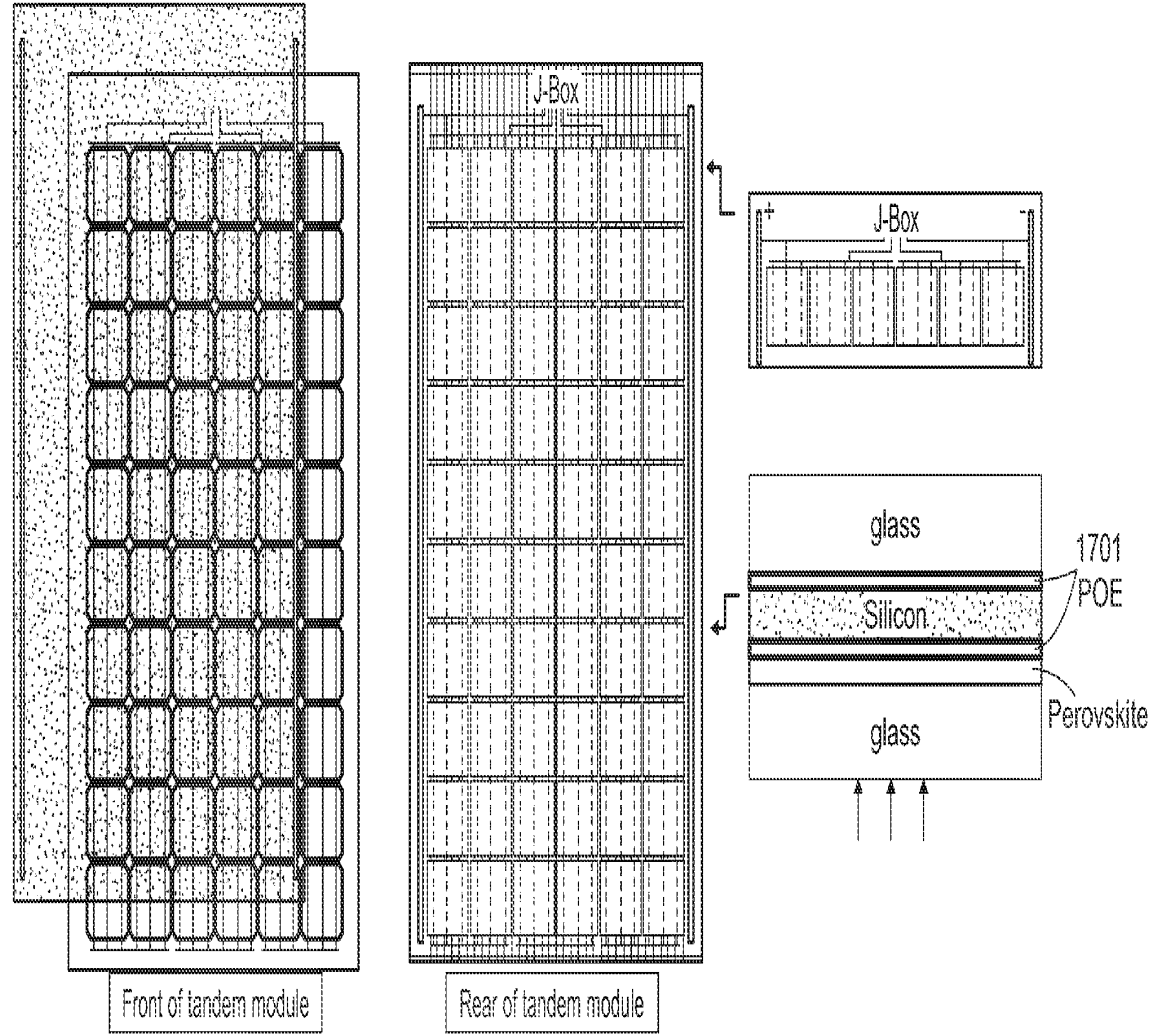


FIG. 17

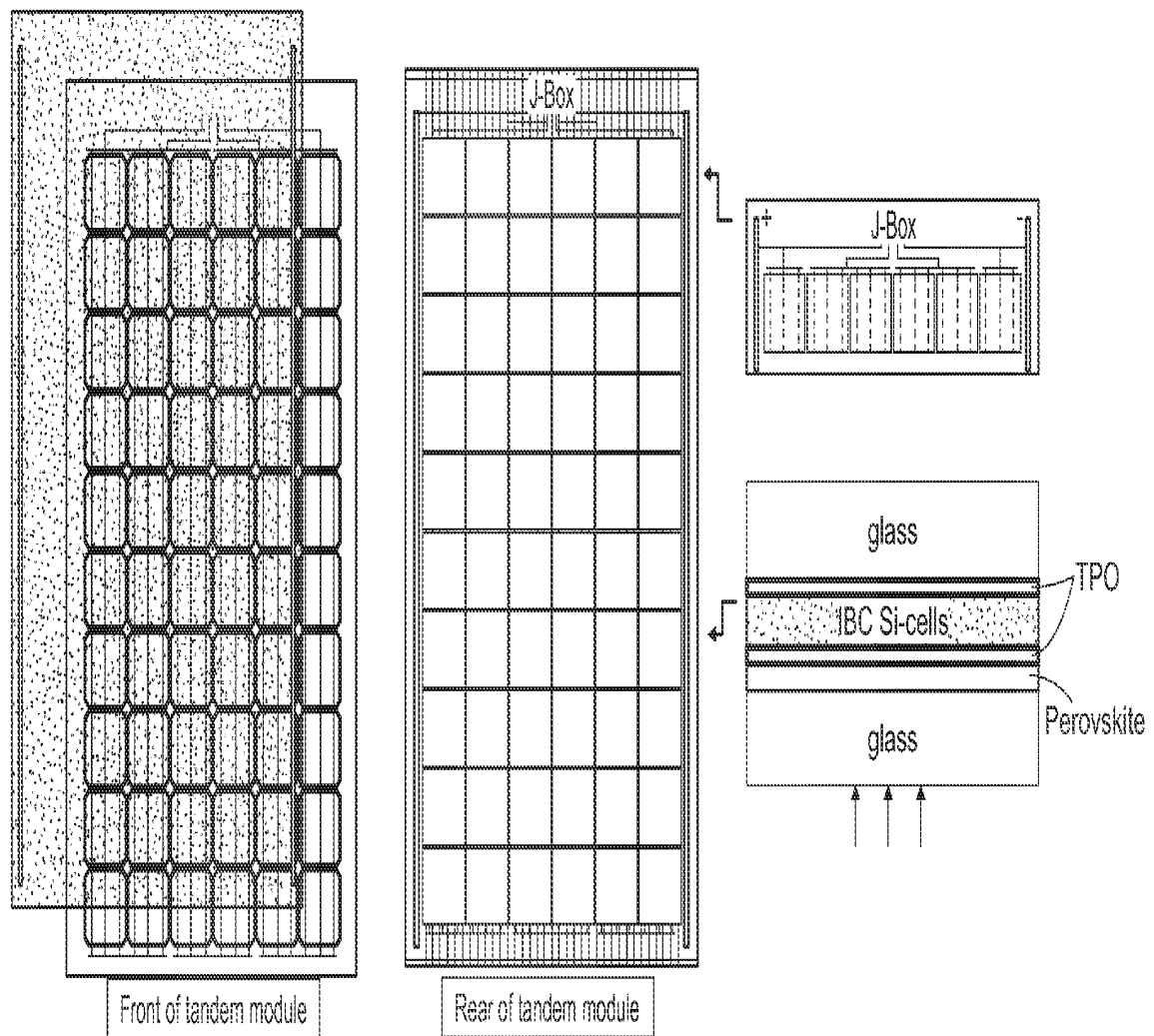


FIG. 18

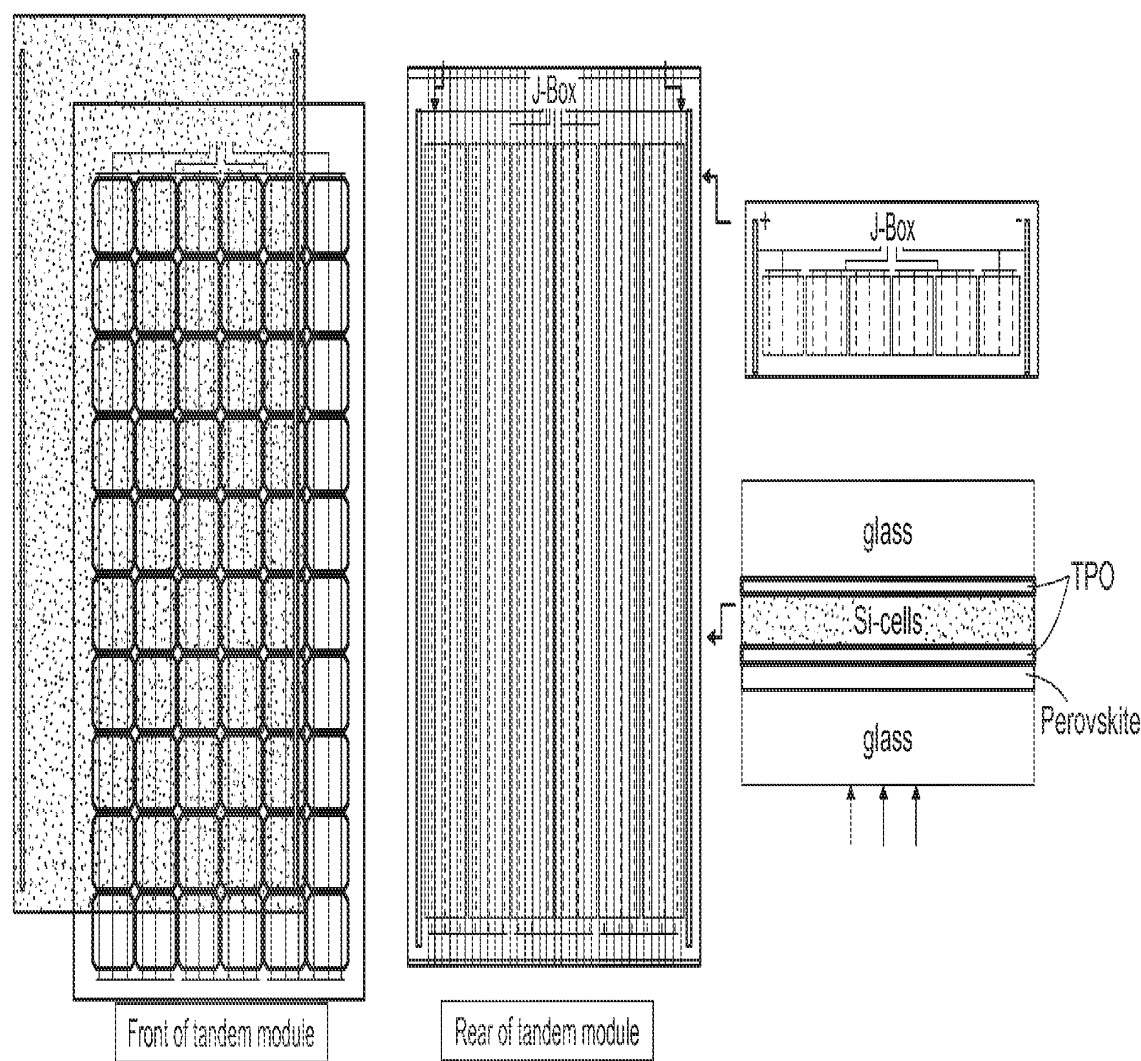


FIG. 19

2000

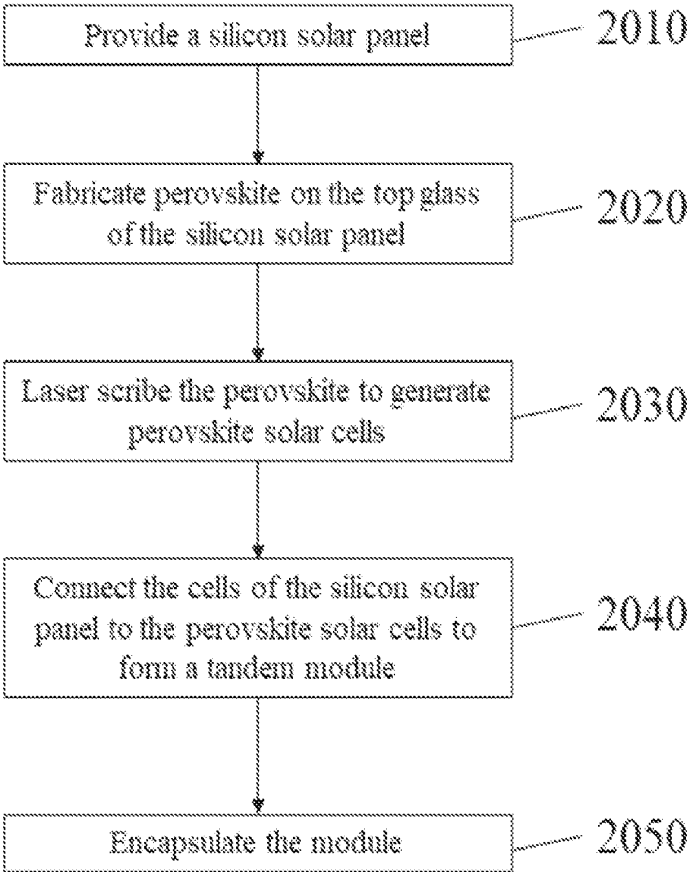
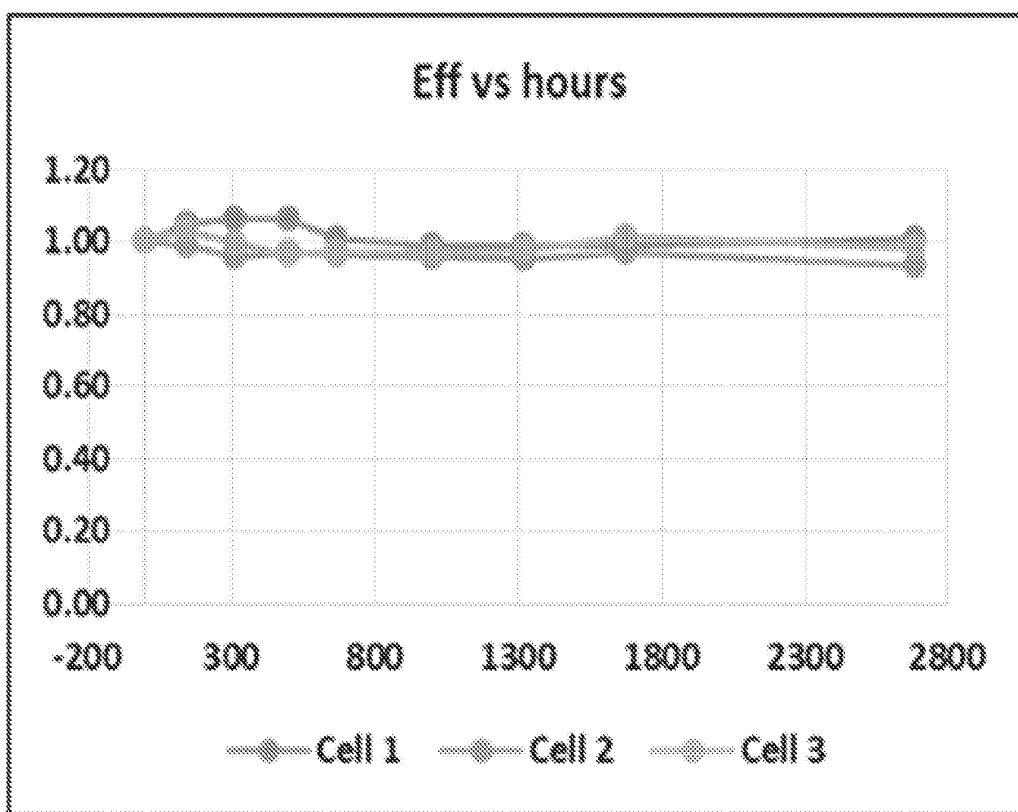


FIG. 20

*FIG. 21*

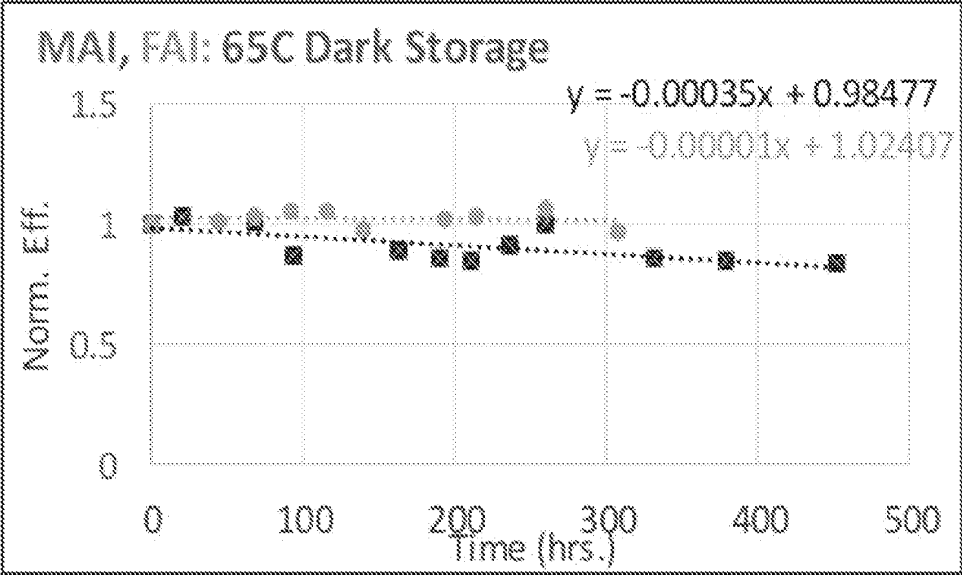


FIG. 22A

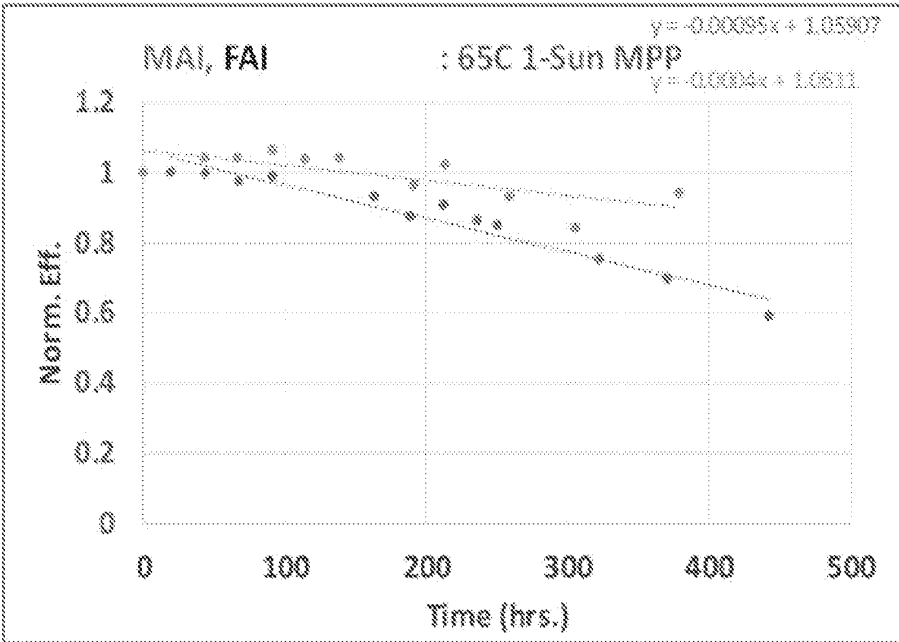


FIG. 22B

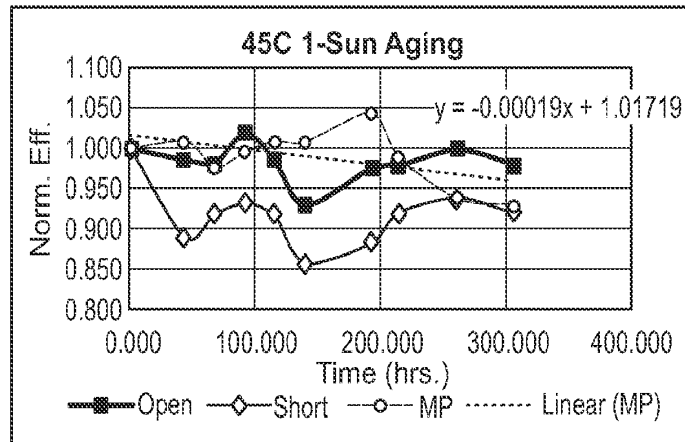


FIG. 23A

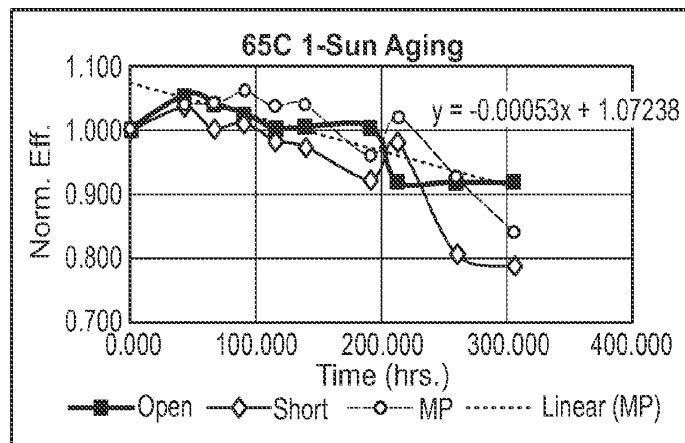


FIG. 23B

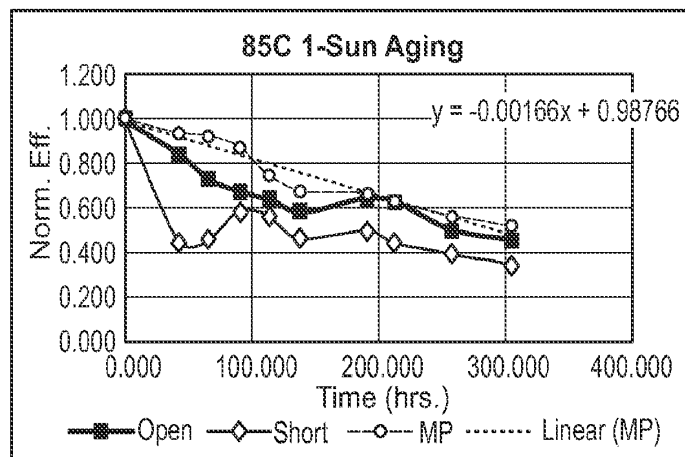


FIG. 23C

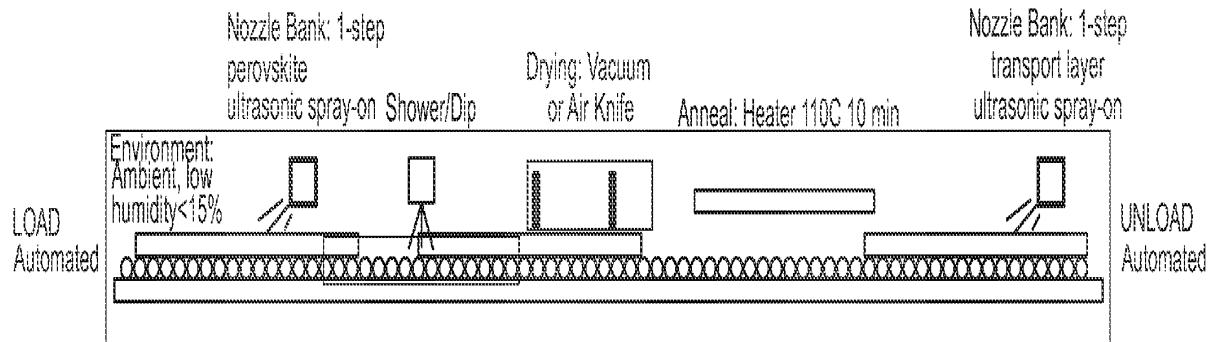


FIG. 24A

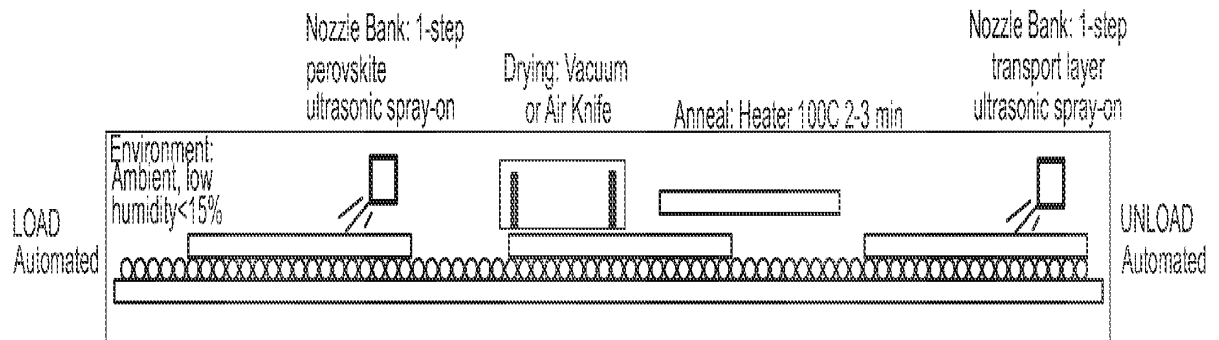


FIG. 24B

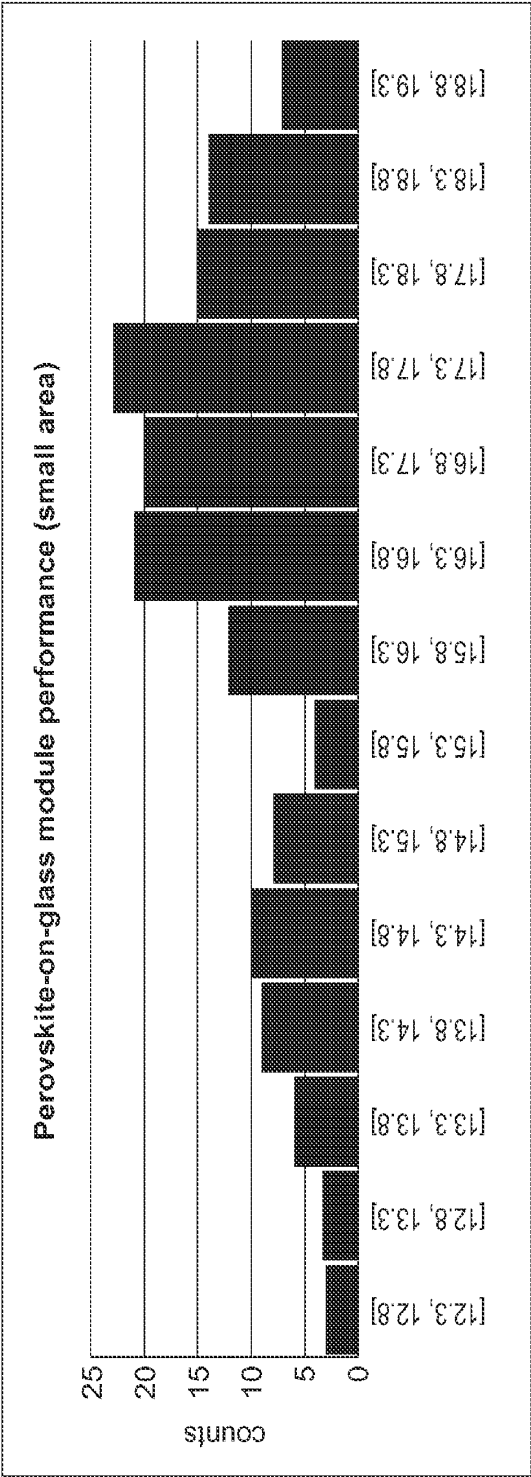


FIG. 25

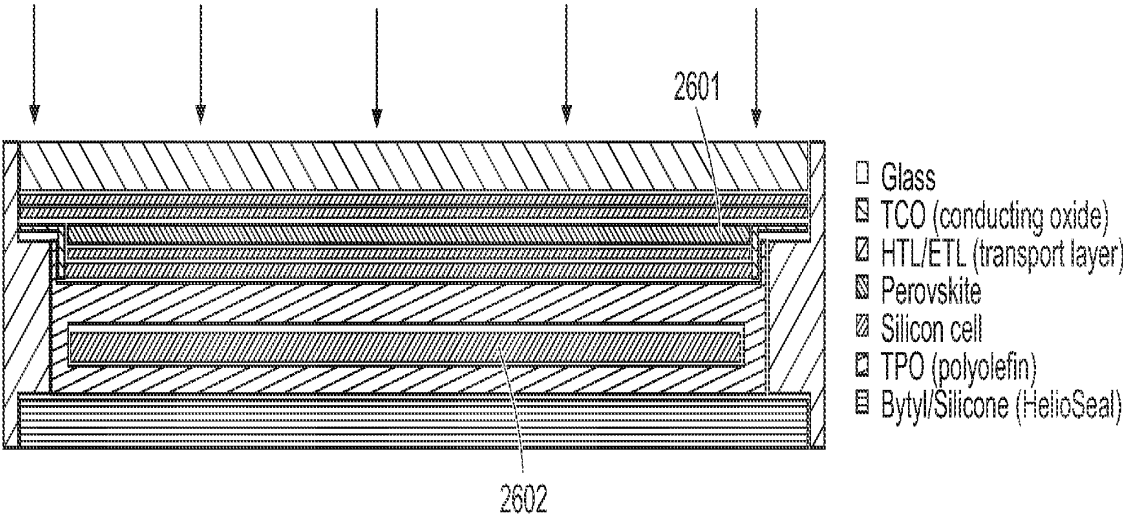


FIG. 26

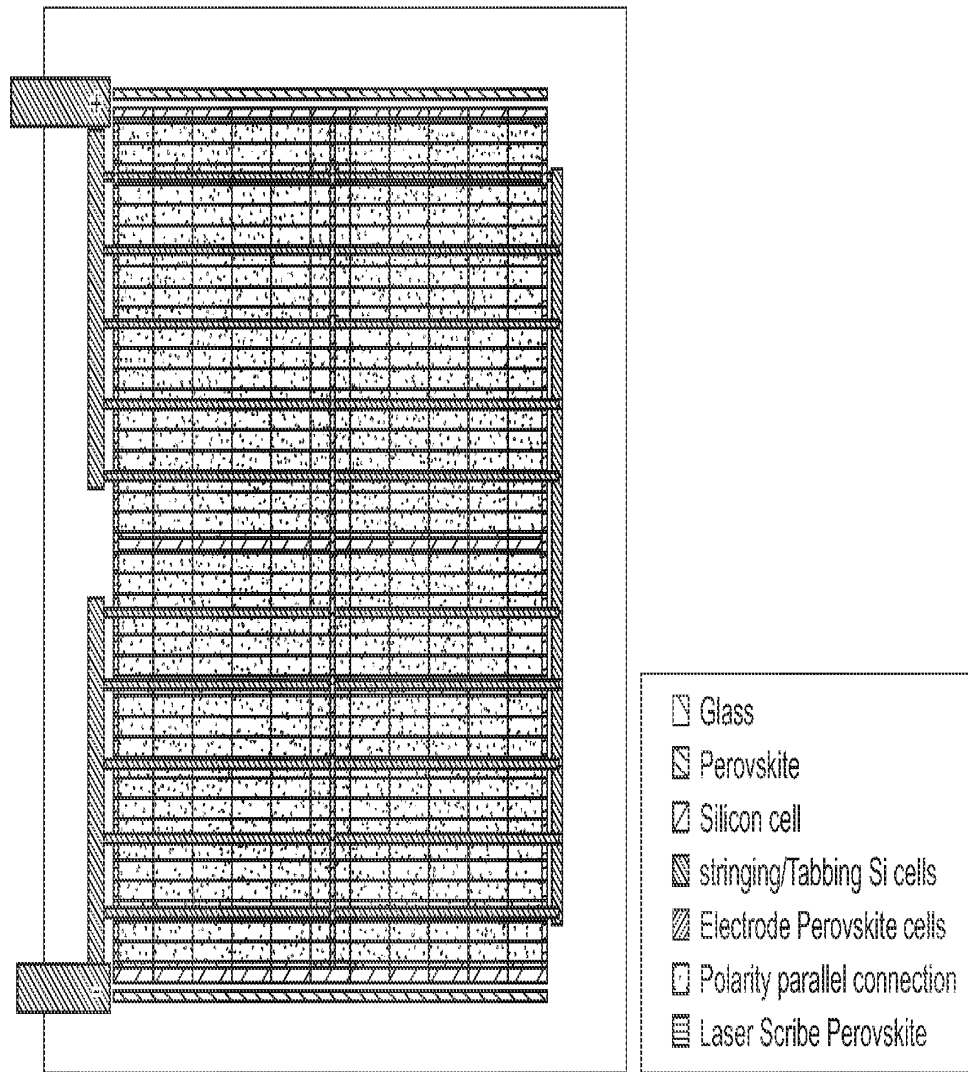


FIG. 27

IZTO & ITO Trans. vs wavelength, 0.6% O₂, 200W, 800W, no anneal

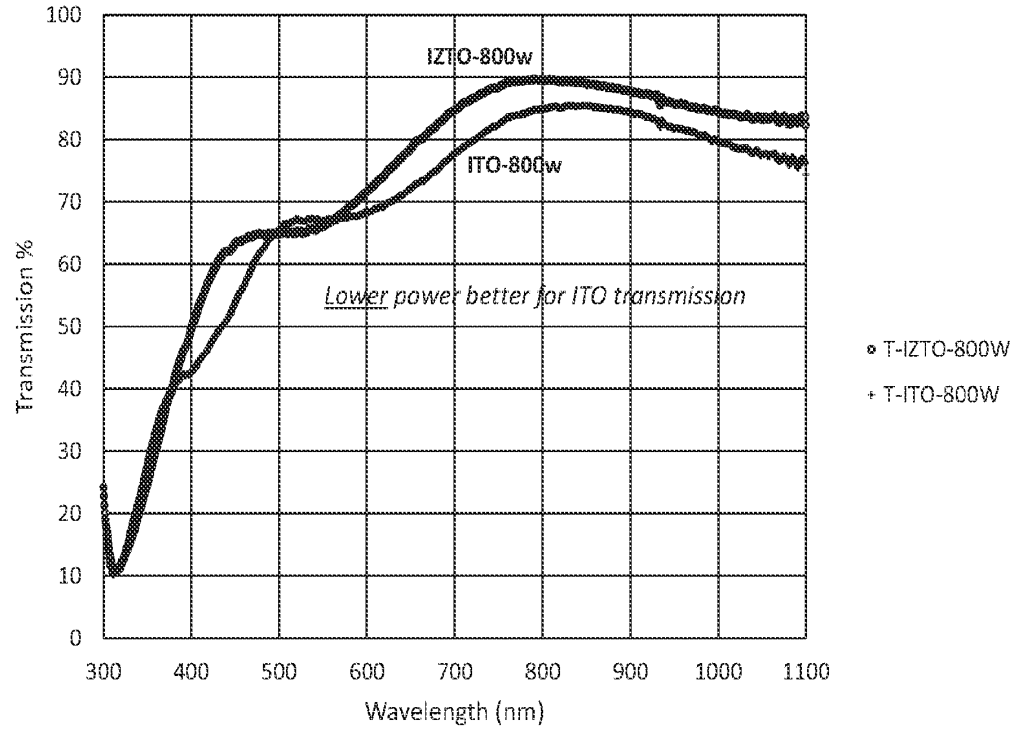


FIG. 28