

100

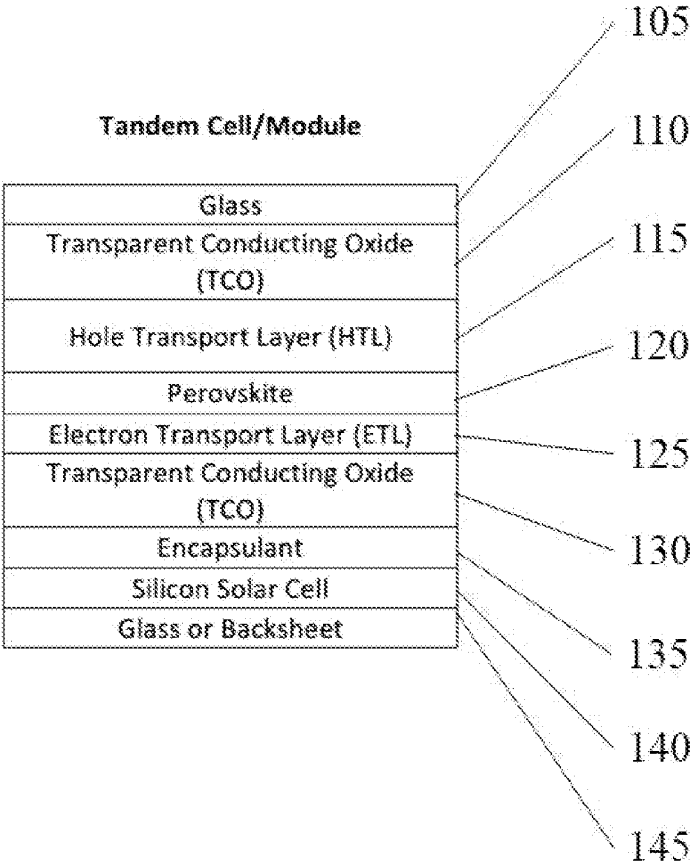


FIG. 1

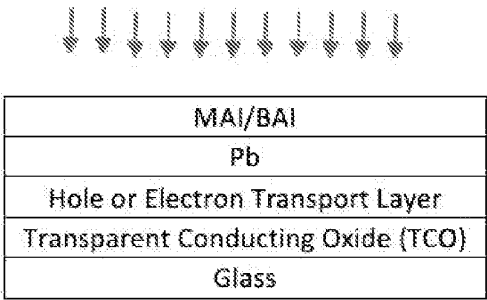
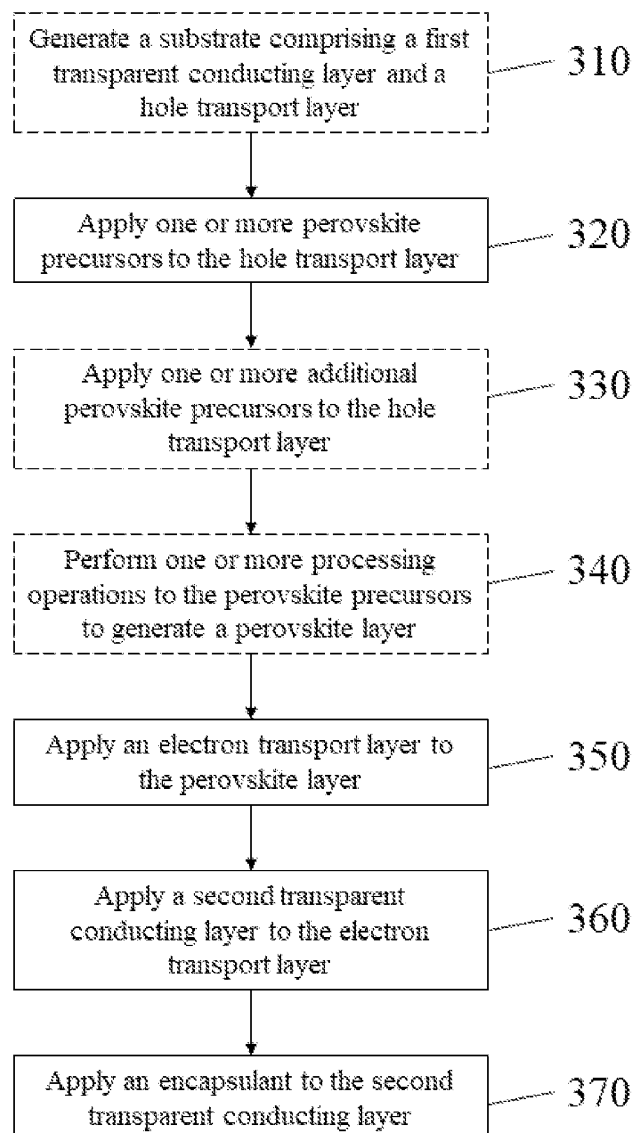
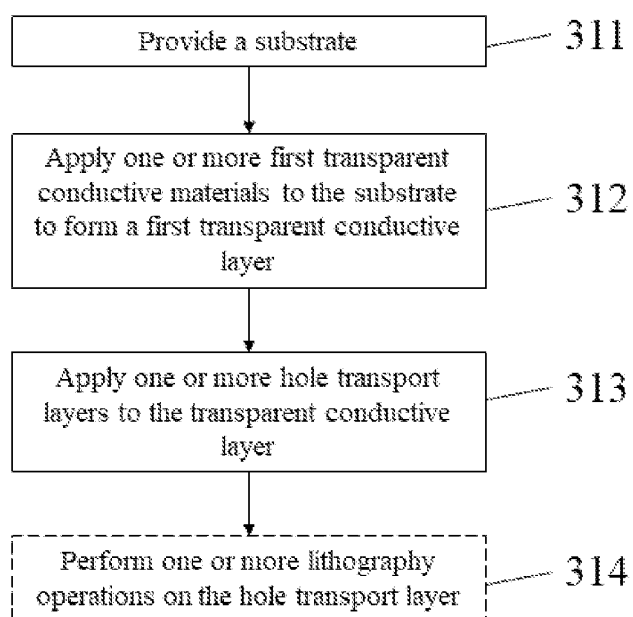
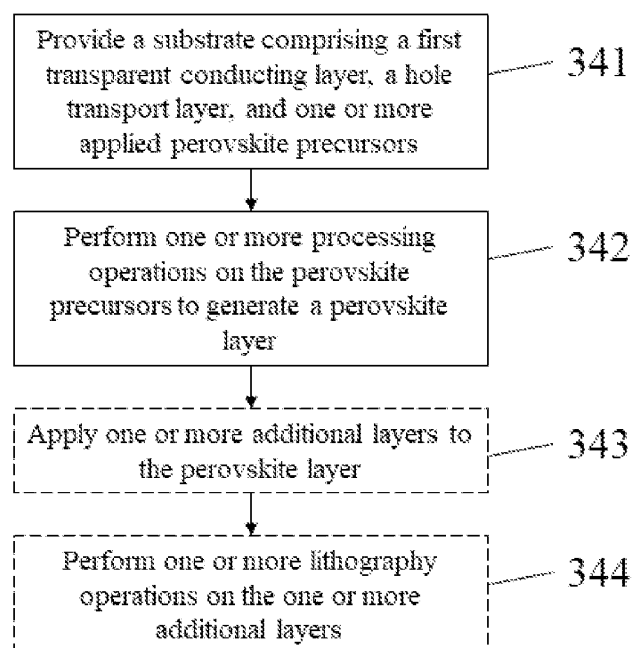
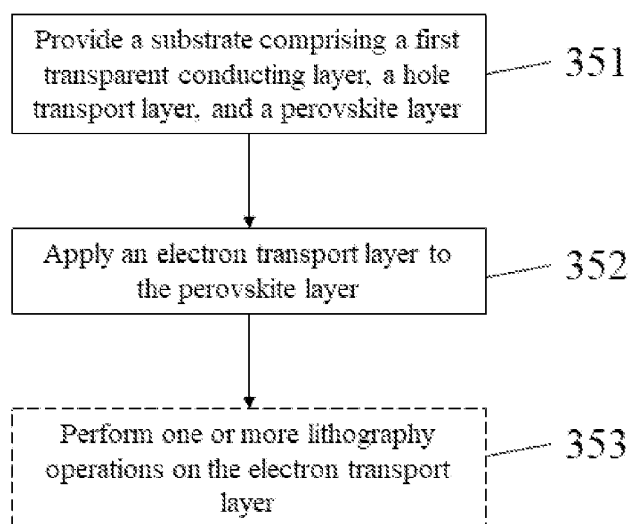


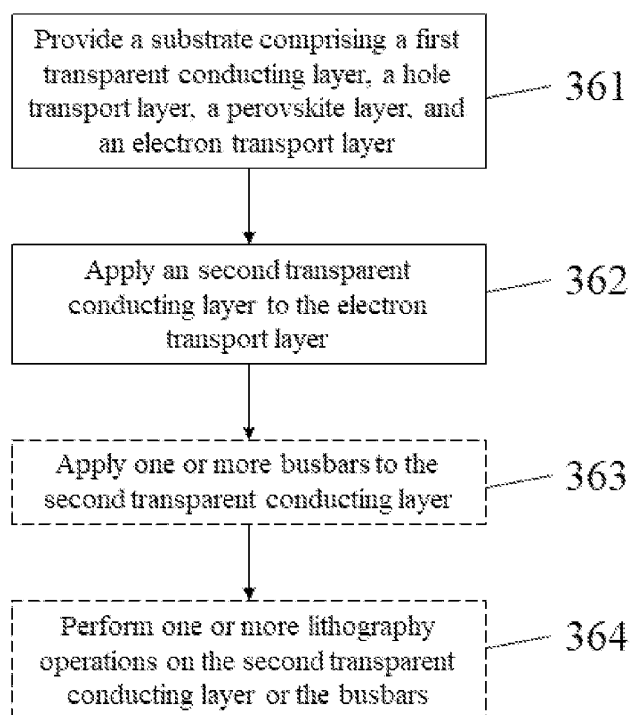
FIG. 2

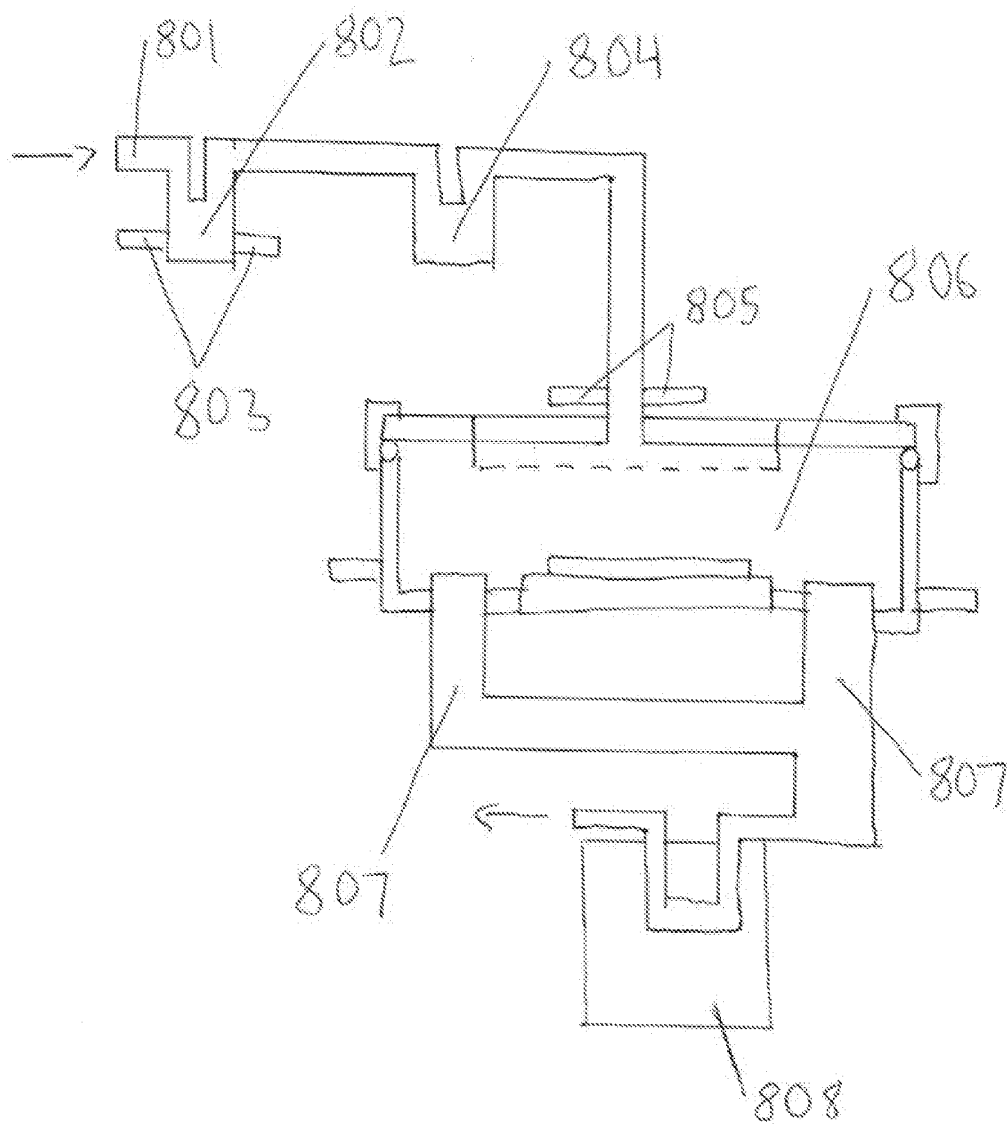
300***FIG. 3***

310***FIG. 4***

340***FIG. 5***

350***FIG. 6***

360***FIG. 7***

**FIG. 8**

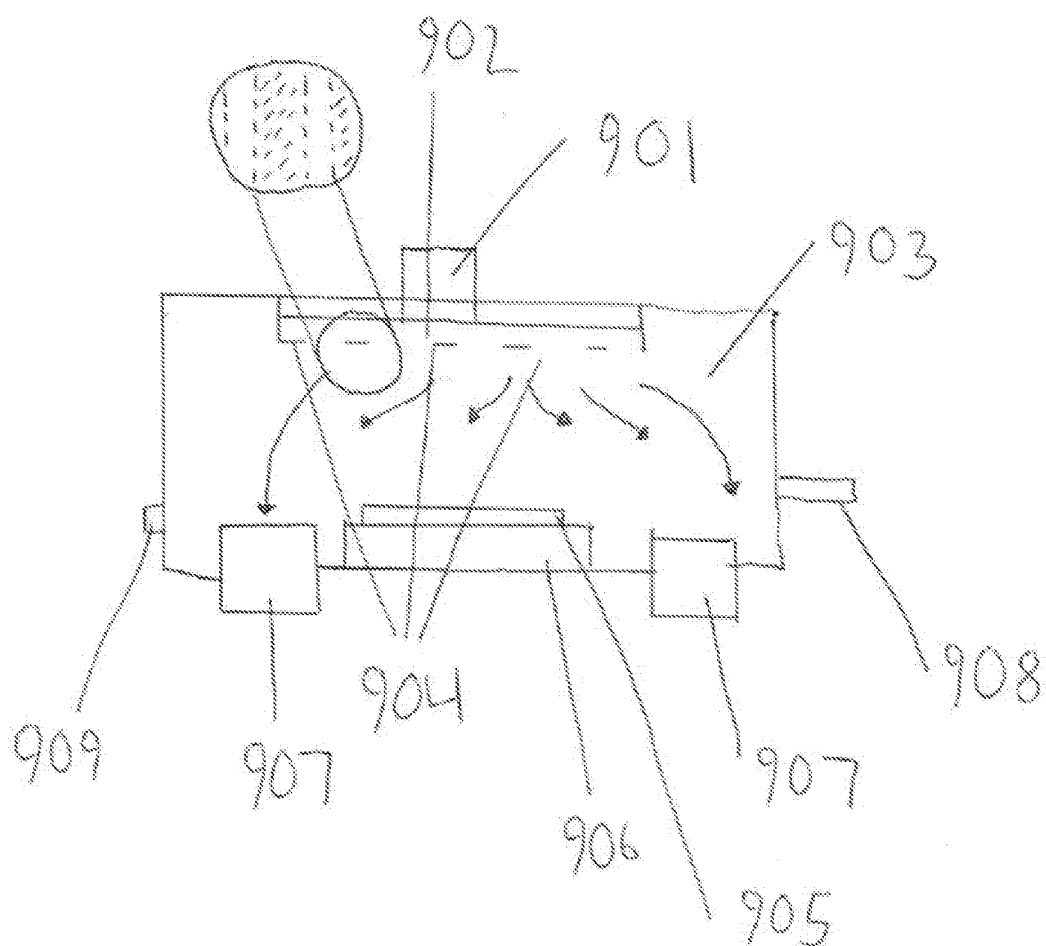


FIG. 9

Integrated Production Flow		
Category	Top Cell	Toolsets
Incoming + Scribe	Glass + ITO + NiO + P1	Tool1
Spray-on + Scribe	Pbl2+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

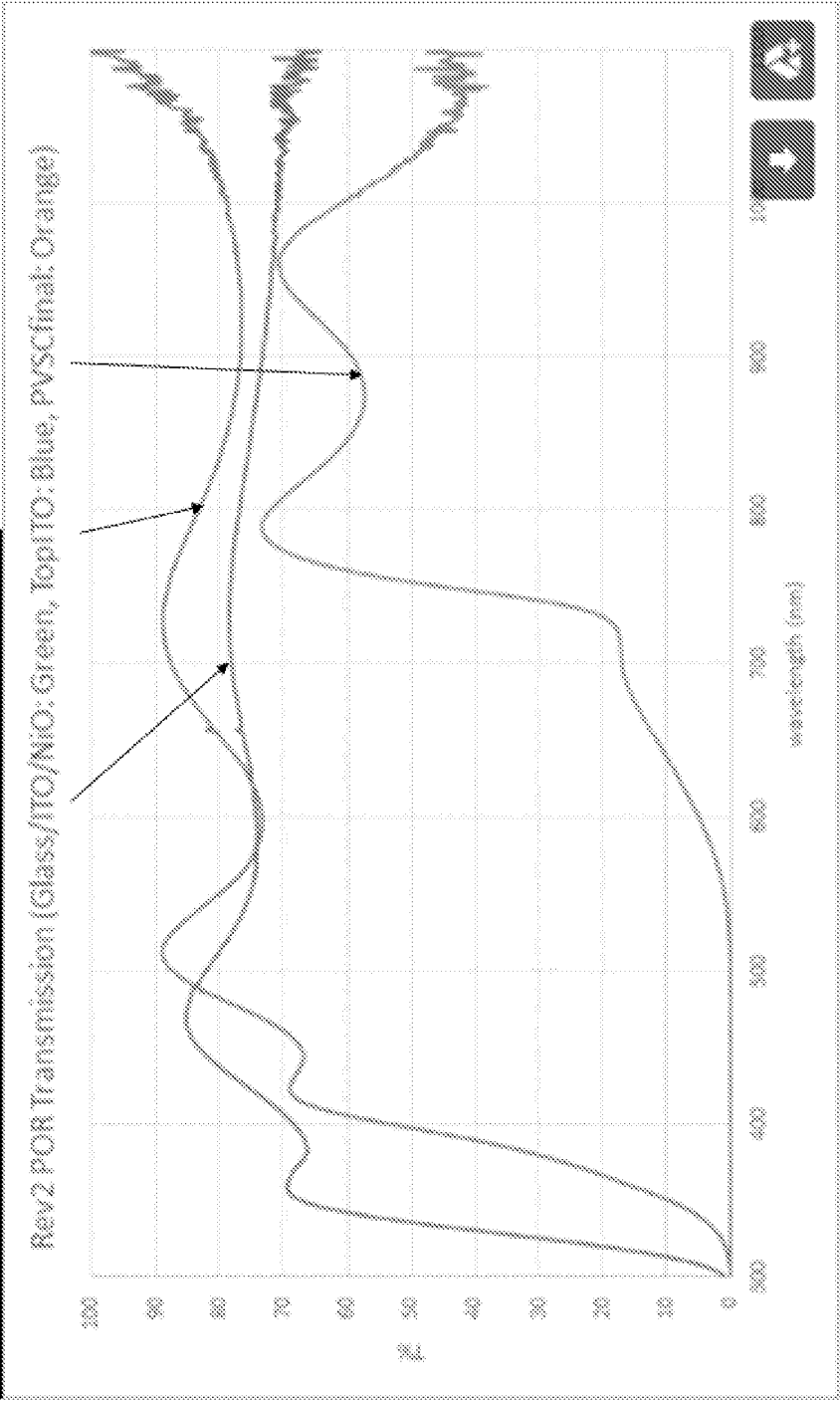
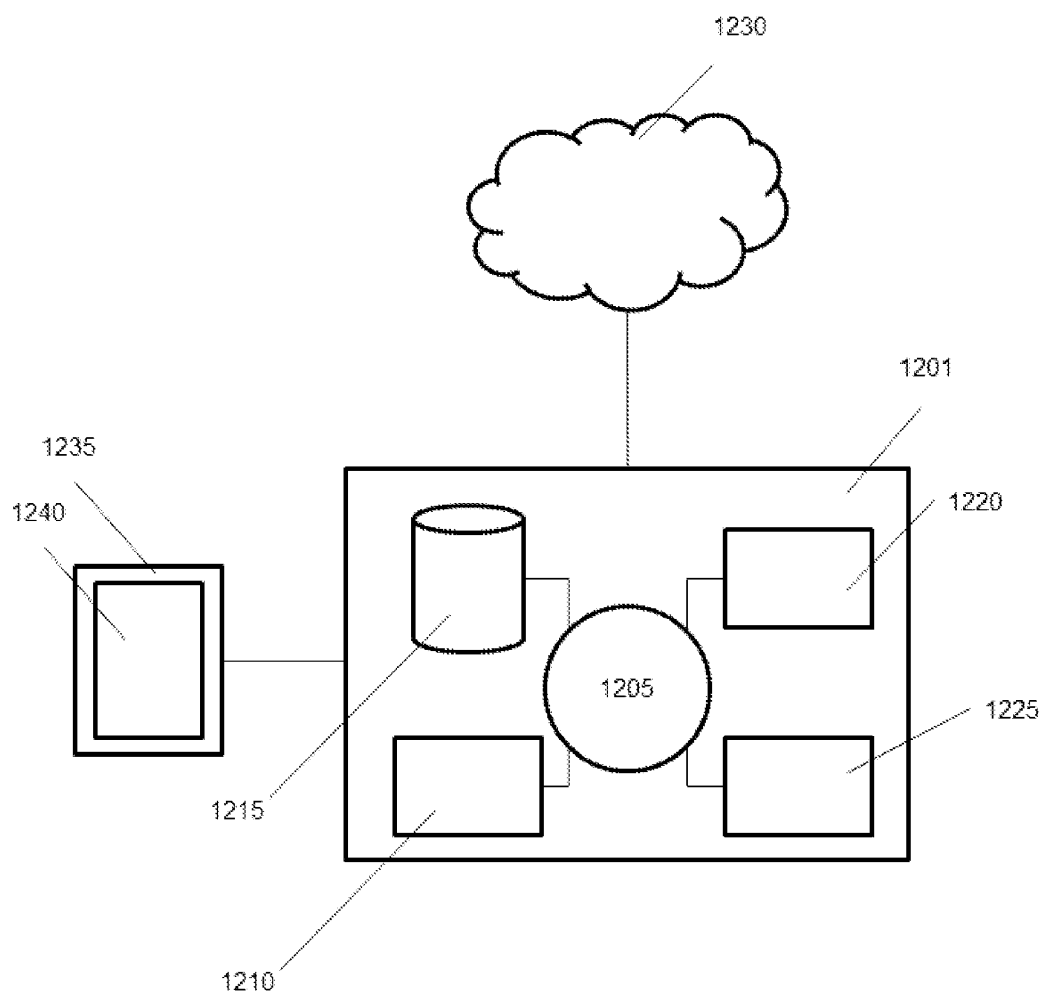


FIG. 11

**FIG. 12**

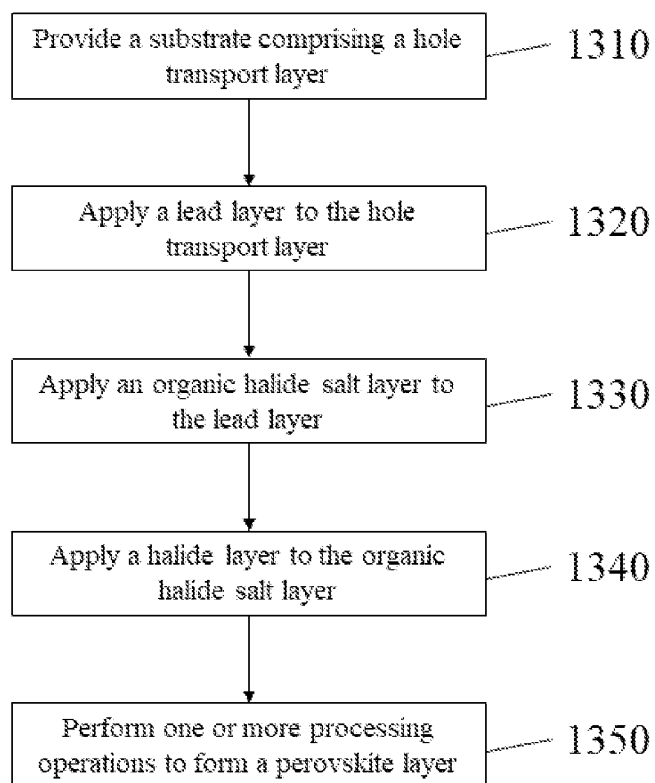
1300***FIG. 13***



FIG. 14

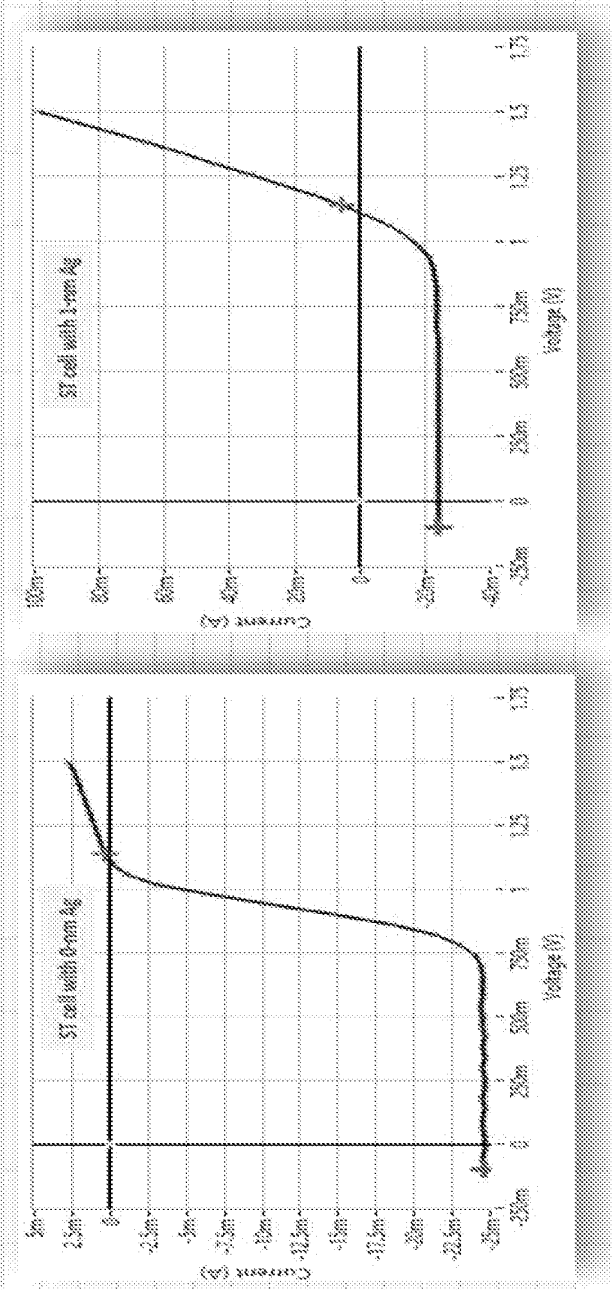


FIG. 15

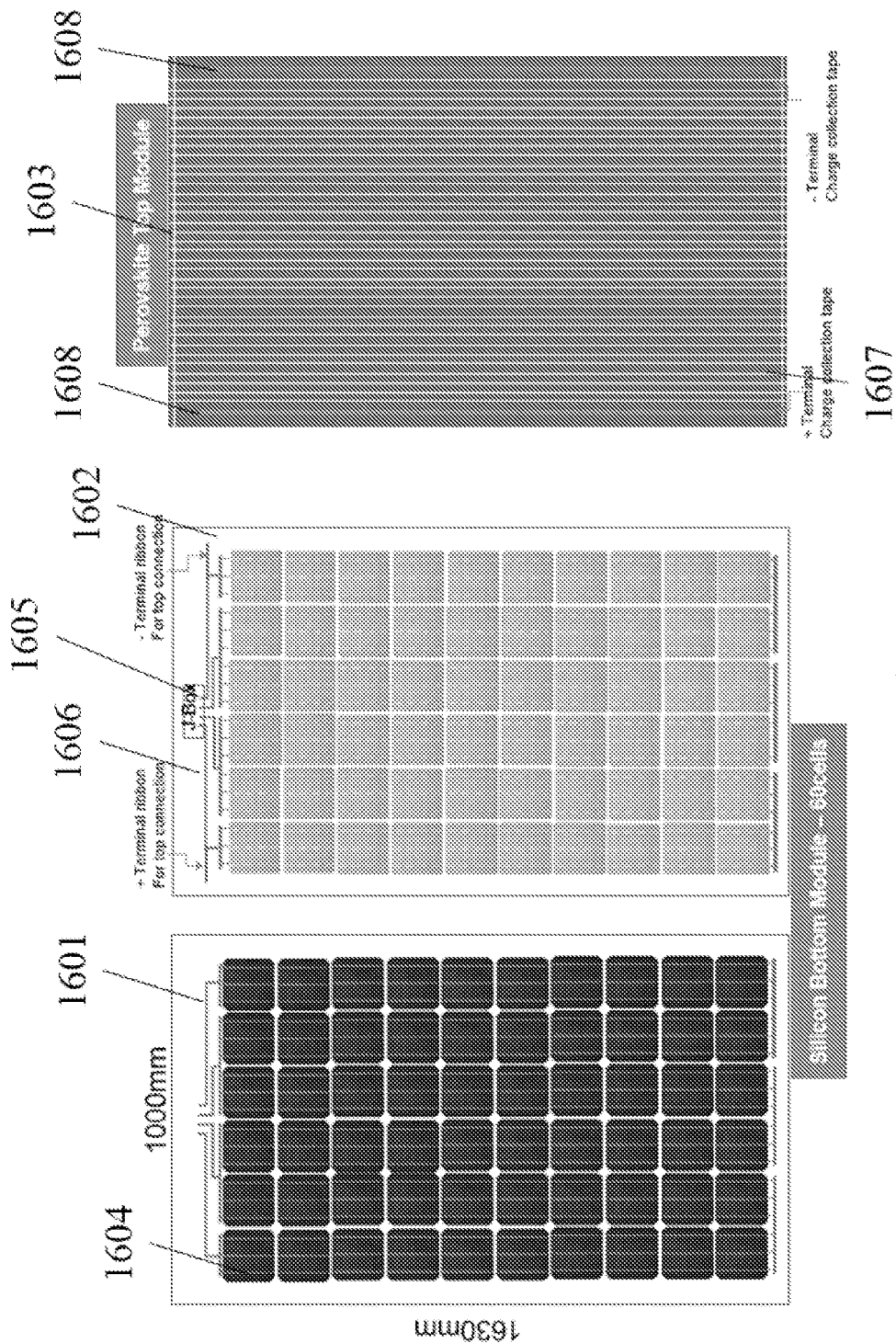


FIG. 16

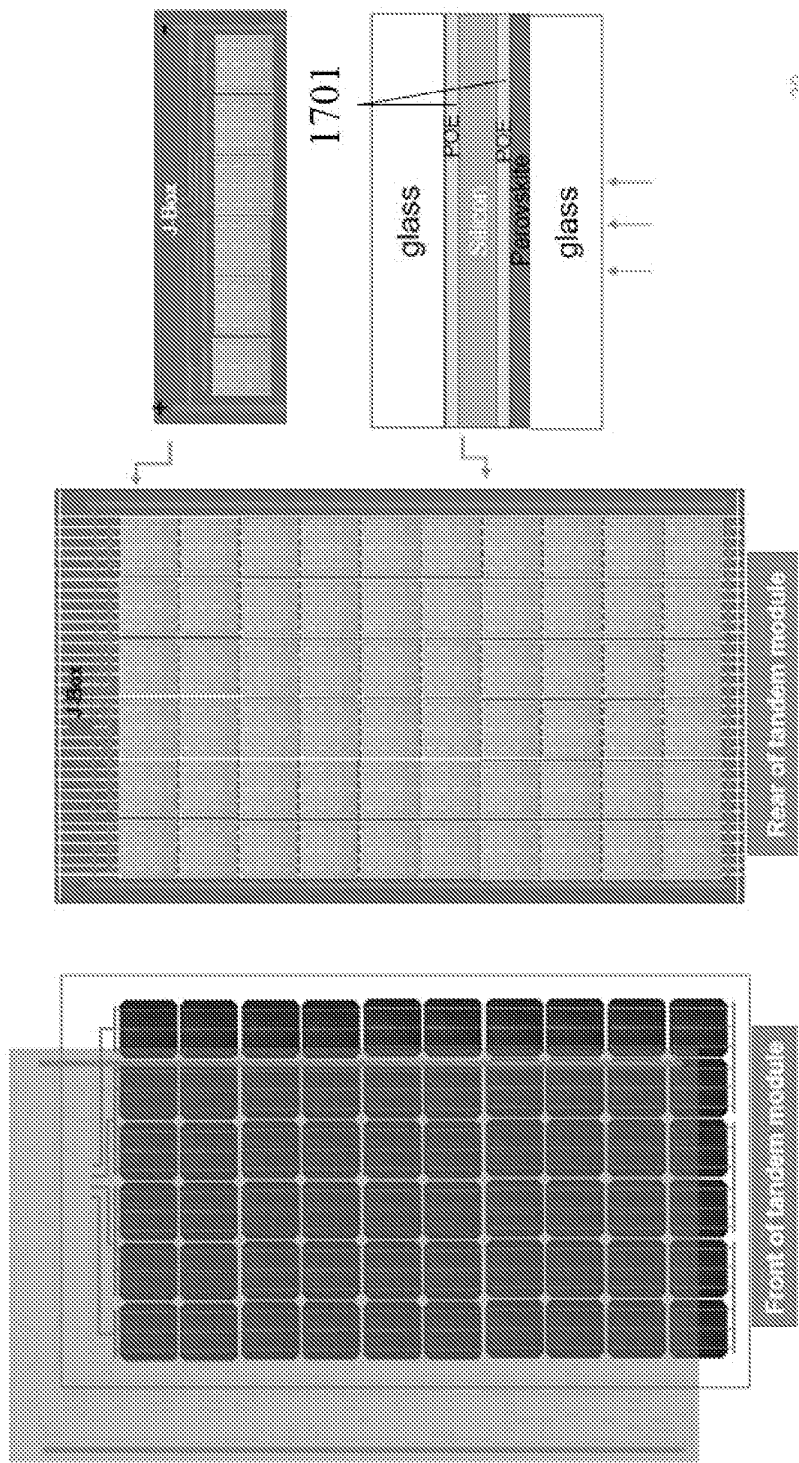


FIG. 17

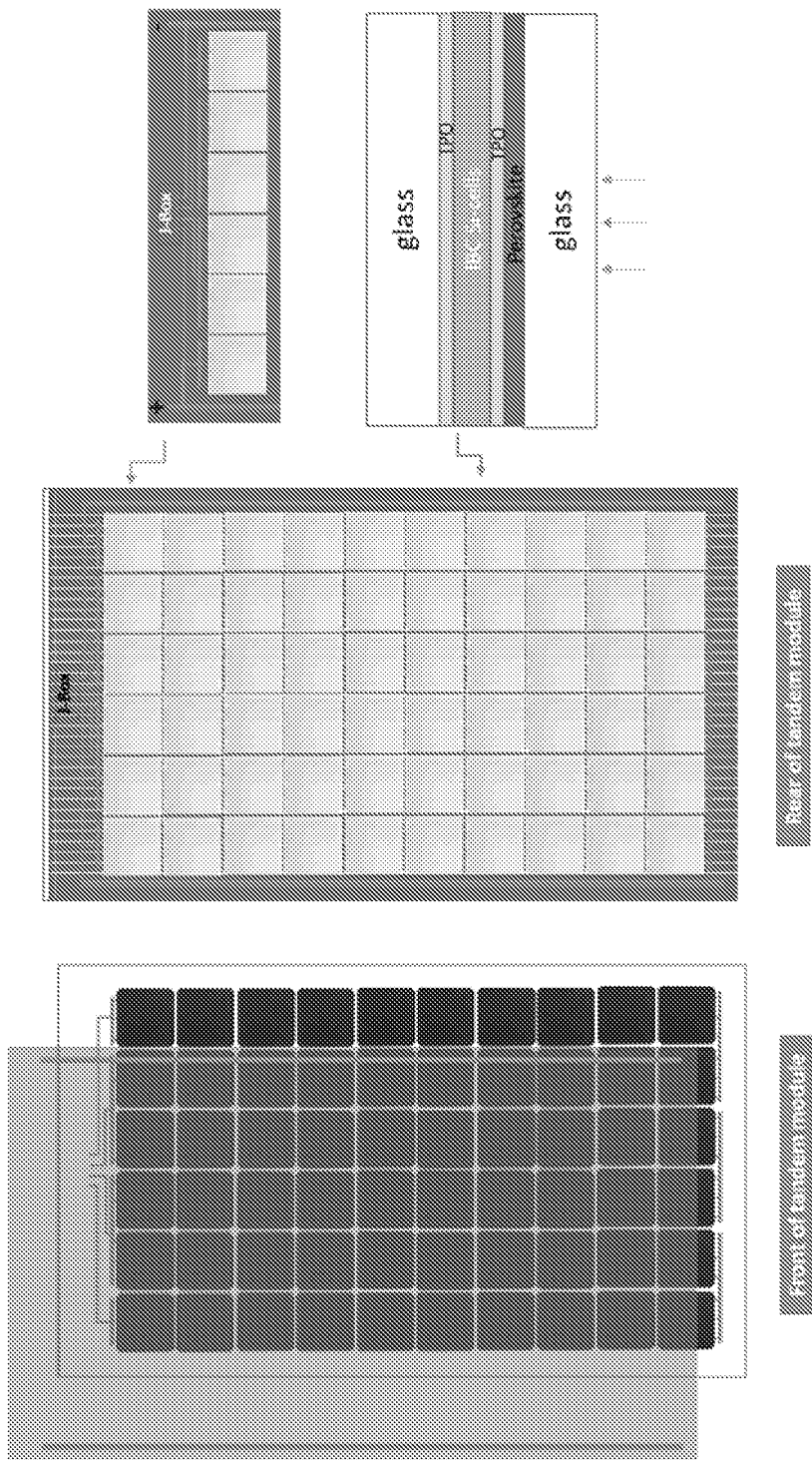


FIG. 18

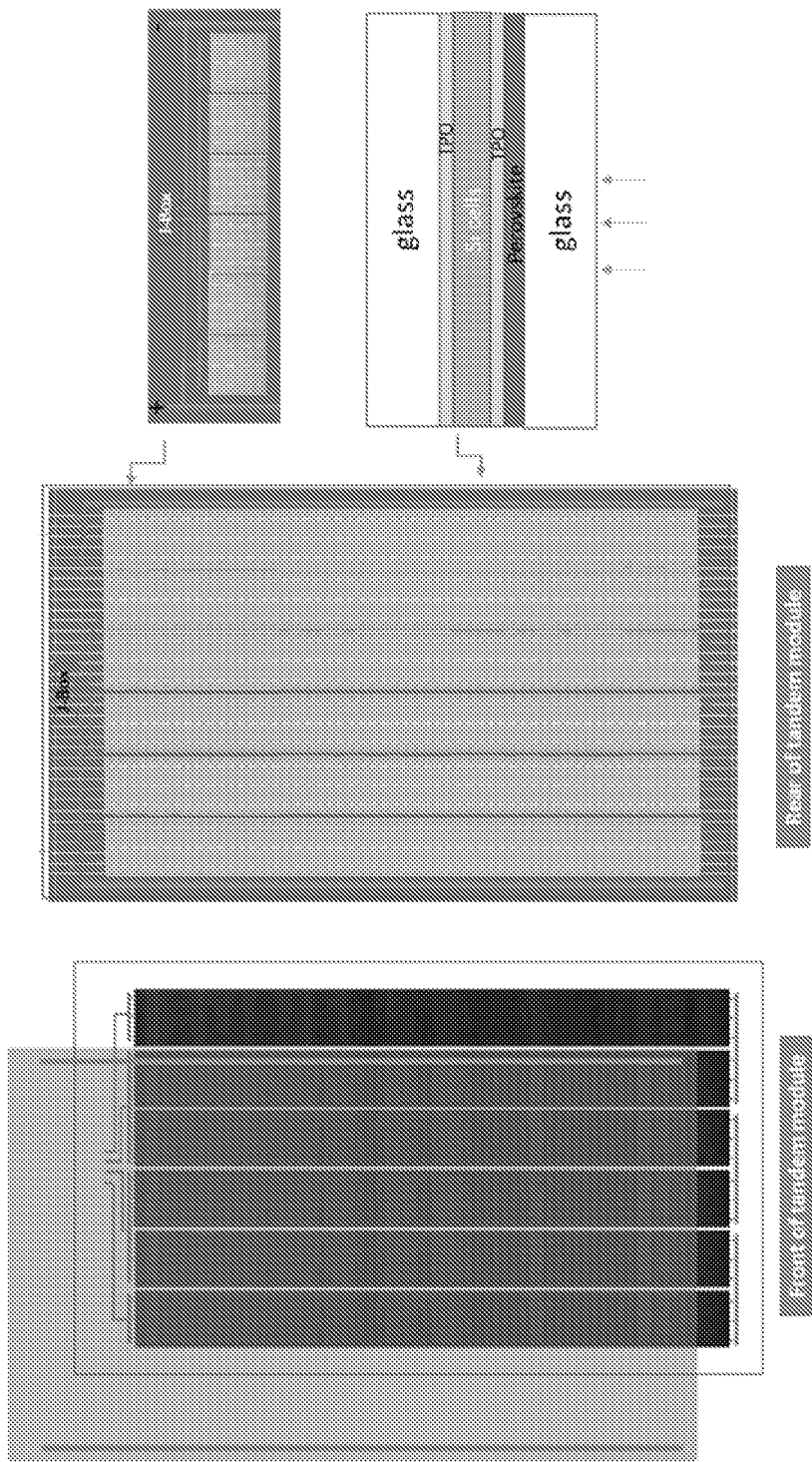
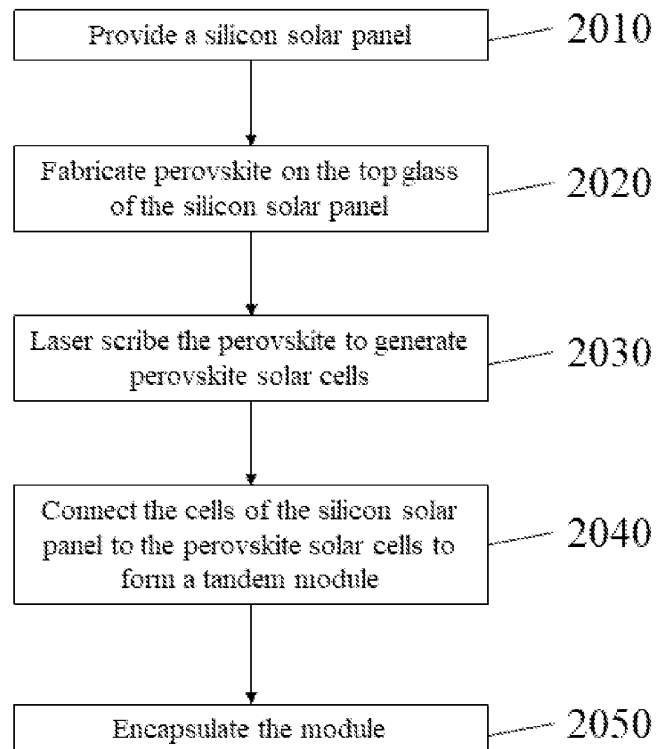
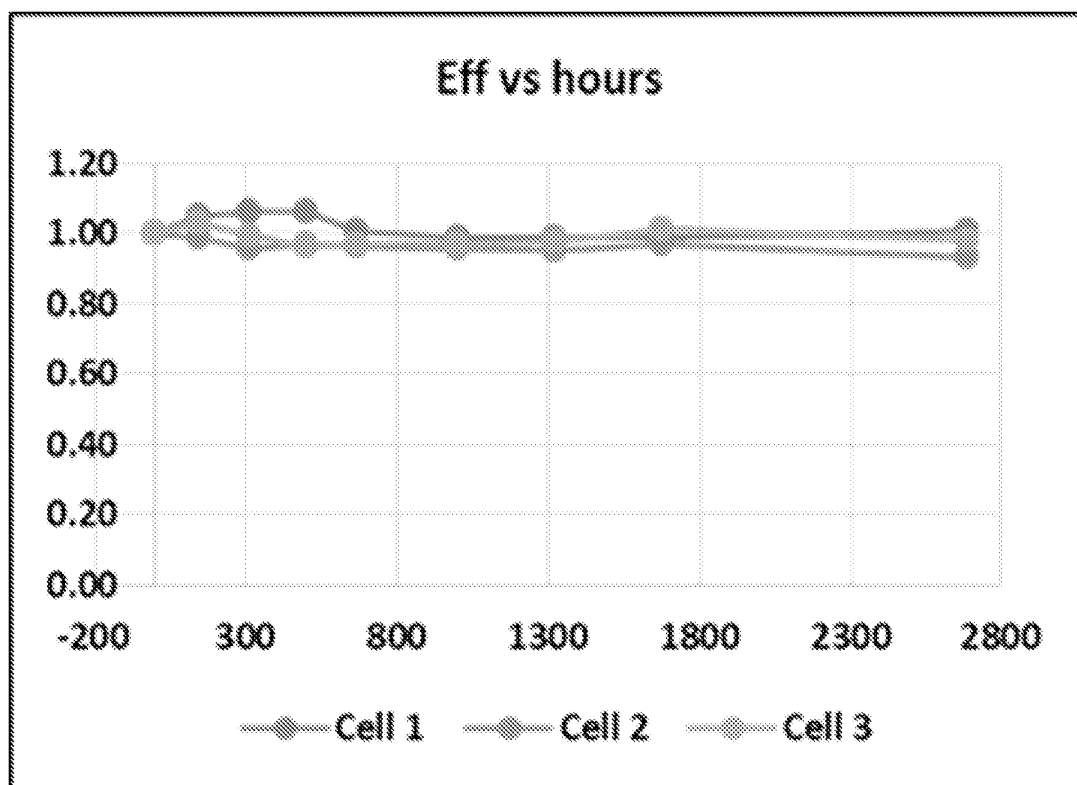
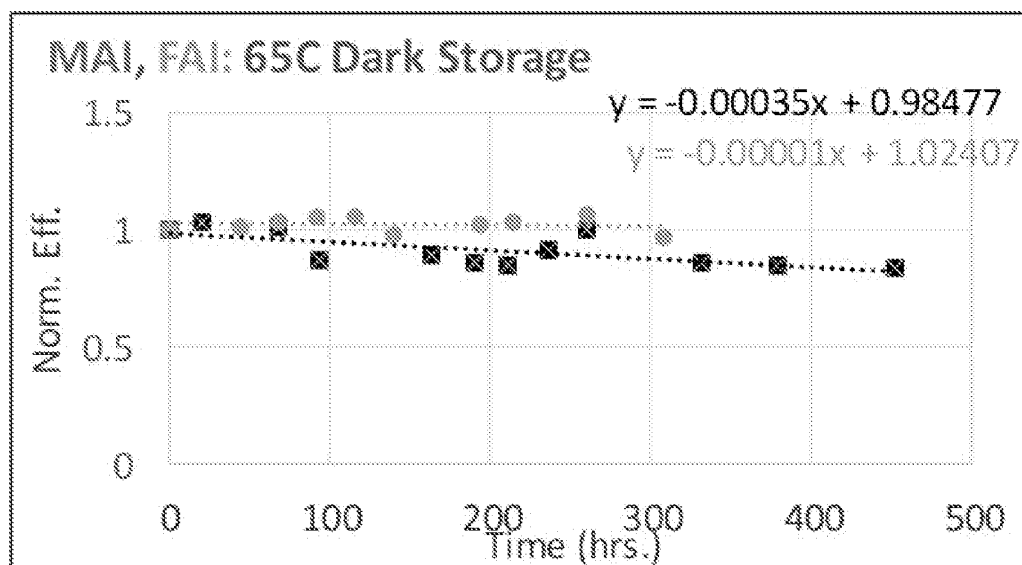
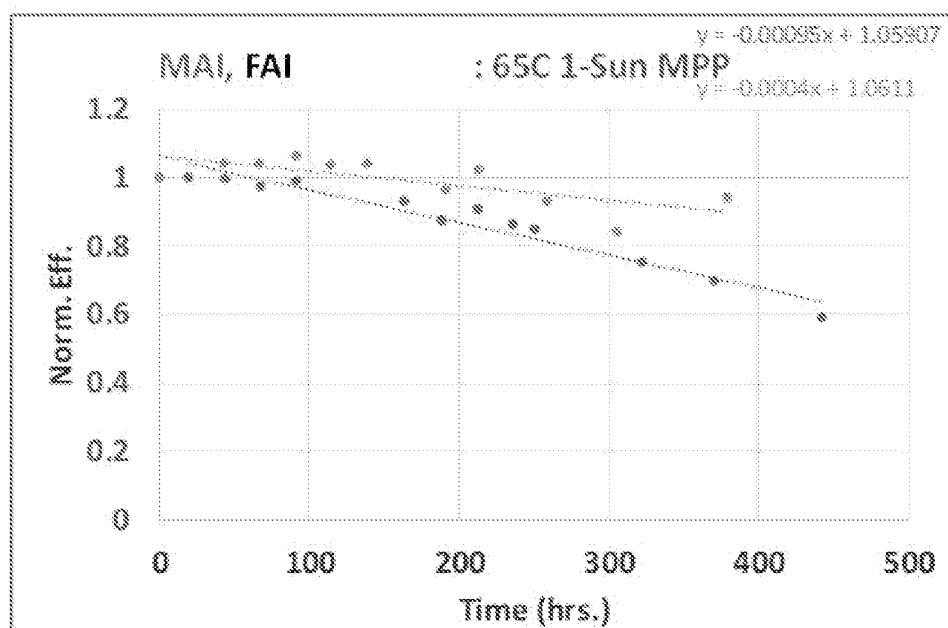
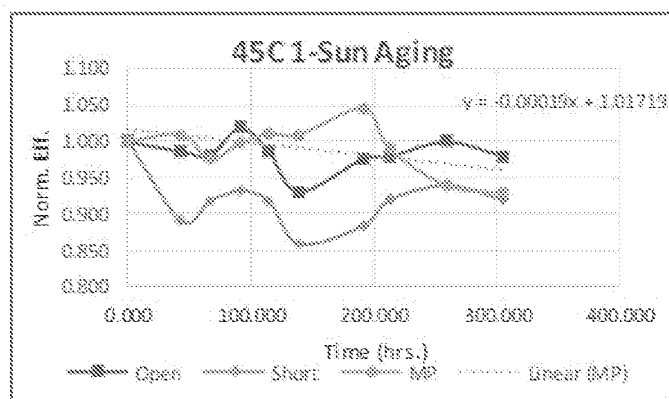
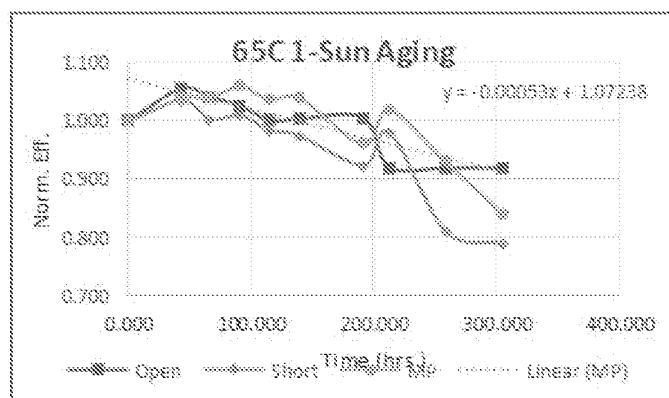
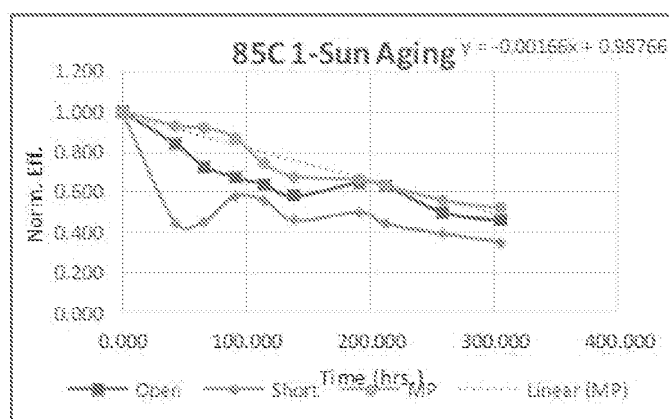


FIG. 19

2000***FIG. 20***

**FIG. 21**

**FIG. 22A****FIG. 22B**

**FIG. 23A****FIG. 23B****FIG. 23C**

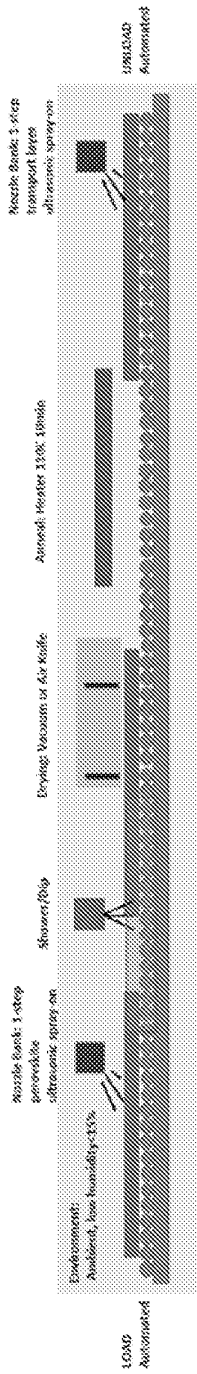


FIG. 24A

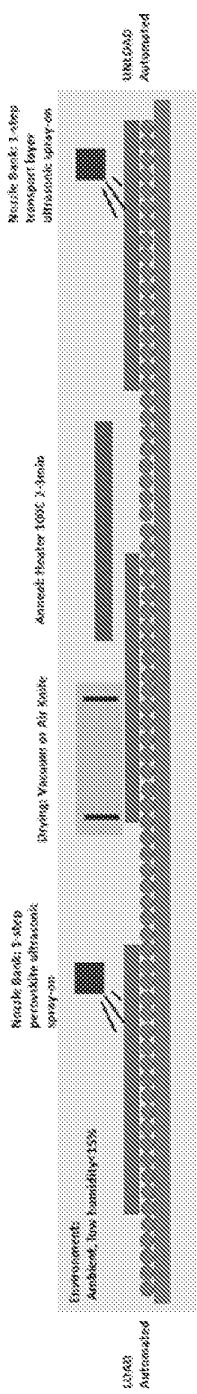
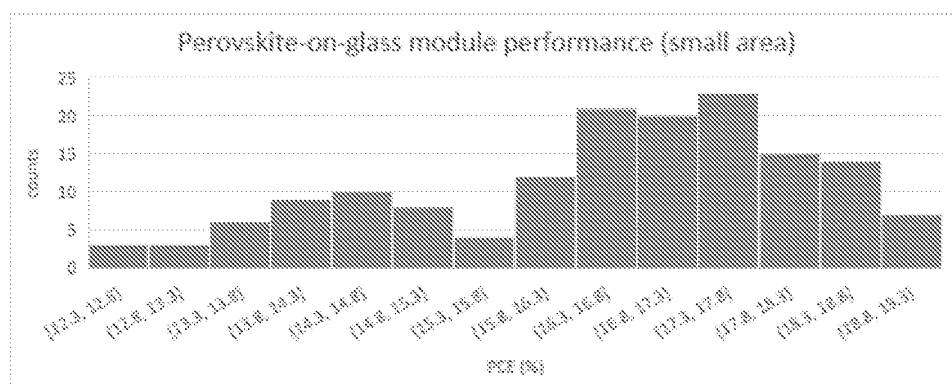


FIG. 24B

**FIG. 25**

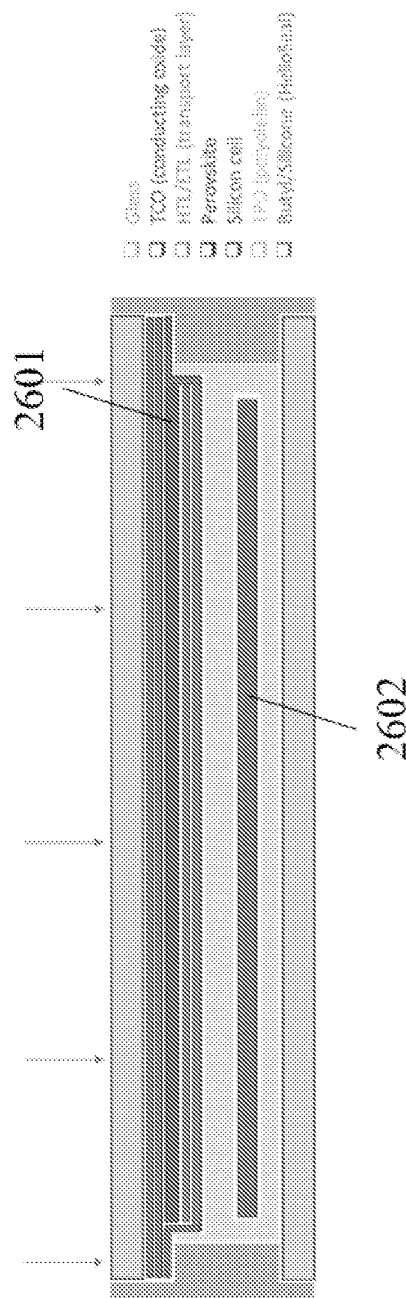
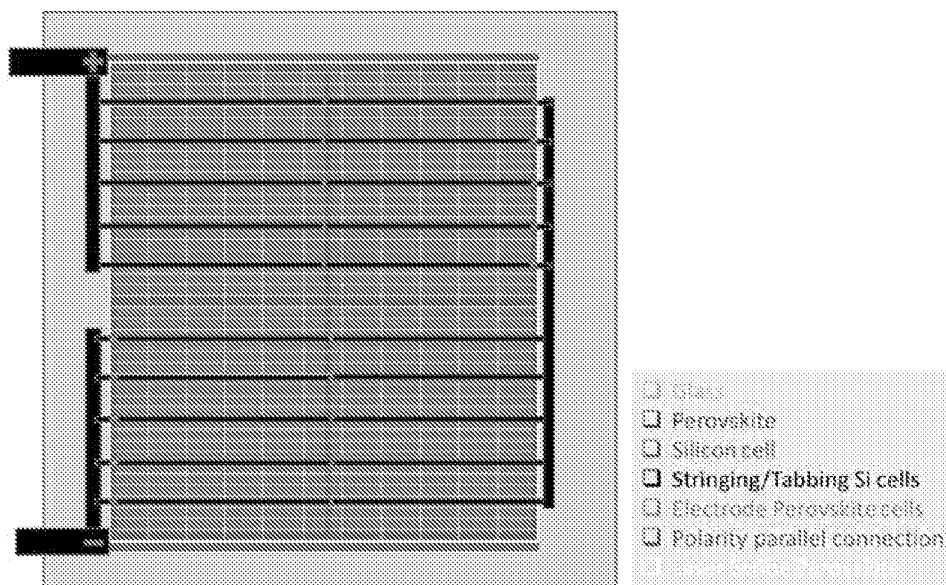


FIG. 26

**FIG. 27**