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(54) Title: EFFICIENT GALLIUM THIN FILM ELECTROPLATING METHODS AND CHEMISTRIES

(57) Abstract: The present invention relates to gallium (Ga) electroplating methods and chemistries to deposit uniform, defect free and smooth Ga films with high plating efficiency and repeatability. Such layers may be used in fabrication of electronic devices such as thin film solar cells. In one embodiment, the present invention provides a solution for application on a conductor that includes a Ga salt, a complexing agent, a solvent, and a Ga-film having submicron thickness is facilitated upon electrodeposition of the solution on the conductor. The solution may further include one or both of a Cu salt and an In salt.

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