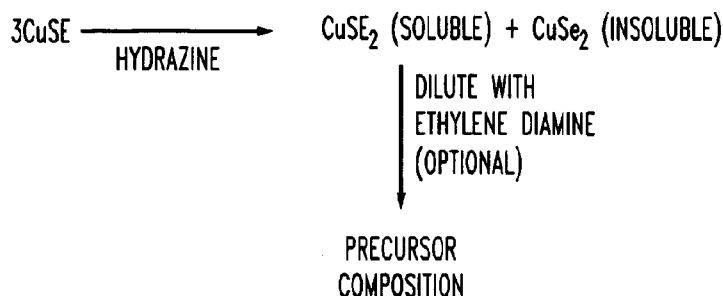




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(54) **Title:** METHODS OF MAKING COPPER SELENIUM PRECURSOR COMPOSITIONS WITH A TARGETED COPPER SELENIDE CONTENT AND PRECURSOR COMPOSITIONS AND THIN FILMS RESULTING THEREFROM

FIG. 1

(57) **Abstract:** Precursor compositions containing copper and selenium suitable for deposition on a substrate to form thin films suitable for semi-conductor applications. Methods of forming the precursor compositions using primary amine solvents and methods of forming the thin films wherein the selection of temperature and duration of heating-controls the formation of a targeted species of copper selenide.