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(54) Title: ARTICLES AND METHODS FOR MODIFYING CONDENSATION ON SURFACES

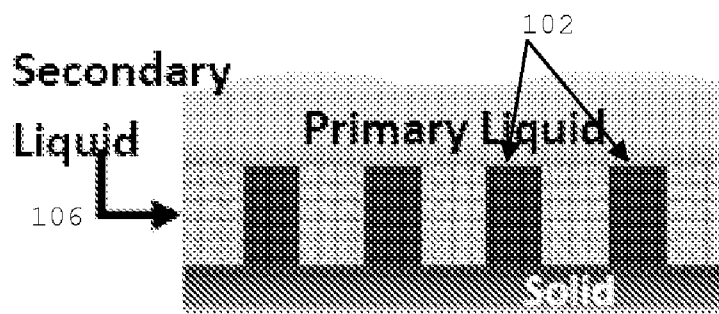


FIG. 1c

(57) Abstract: The articles and methods described herein provide a way to manipulate condensation on a surface by micro/nano-engineering textures (102) on the surface and filling the spaces between the texture features (102) with an impregnating liquid (106) that is stably held therebetween or therewithin. The articles and methods allow droplets of water, or other condensed phases (101), even in micrometer size range, to easily shed from the surface, thereby enhancing contact between a condensing species and the condensing surface. It has been found that dropwise condensation is enhanced by the use of an impregnating (secondary) liquid (106) that has a relatively high surface tension, and, even more preferably, an impregnating liquid that has both a high surface tension and a low viscosity.



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