NANOINJECTION MOLDING

ABSTRACT

[0045] An injection mold insert with hierarchical structures and a method for method of making such injection mold inserts are provided. The method includes imprinting a primary imprint structure on an article and imprinting a secondary imprint structure on the primary imprint structure on the article. The secondary imprint structure includes a plurality of shapes, each of the plurality of shapes being substantially smaller than shapes of the primary imprint structure. The method further includes bonding the article to a substrate, sputter-coating the article with a metal film as an electroforming seed layer, and electroforming the injection mold insert over the article. Finally, the method includes dissolving the article to define the injection mold insert having a negative replica of the primary and secondary imprint structures.

FIG. 4C