CLAIMS

1. A method of forming a film with a lenticular lens array, the method comprising

providing a substrate;

providing a mold having a plurality of nano-scale to micro-scale cavities that form the lenticular lens array on the substrate ;

having the mold contact the substrate; and

forming the lenticular lens array by adjusting viscosity of the substrate by bringing the substrate to around its glass transition temperature ~~allowing~~so that portions of the substrate ~~to~~ partially fill the plurality of cavities.~~,~~

~~2. The method of claim 1,~~ wherein an aspect ratio of each lens of the lenticular lens array is adjusted by controlling an extent to which the portions of the substrate partially fill the plurality of cavities so that each lens of the lenticular lens array has an optimum focal length.

~~3~~2. The method of claim ~~2~~1, further comprising varying a duration over which the lenticular lens array is formed to control the extent to which the portions of the substrate partially fill the plurality of cavities.

~~4~~3. The method of claims ~~2~~ 1 or ~~3~~2, wherein the aspect ratio of each lens is less than or equal to 0.04.

~~5~~4. The method of any one of the preceding claims, wherein each lens of the lenticular lens array has a symmetric cross-sectional profile.

~~6~~5. The method of claim ~~5~~4, wherein each lens is generally symmetric about a longitudinal axis extending along a centre and intersecting a base of the respective lens.

~~7~~6. The method of any one of the preceding claims, wherein the formation of the lenticular lens array occurs at a range of around 10° below or above the glass transition temperature of the substrate.

~~8~~7. The method of claim ~~7~~6, wherein the formation of the lenticular lens array occurs at a pressure of around 10 Bar to 60 Bar.

~~9~~8. The method of any one of the preceding claims, wherein the mold comprises polydimethylsiloxane (PDMS).

~~10~~9. A film fabricated from the method of any one of the preceding claims, comprising a lenticular lens array, wherein each lens has a width of less than 300μm.

~~11~~10. The film of claim ~~10~~9, wherein each lens has an aspect ratio of less than or equal to 0.04.

~~12~~11. The film of claim ~~10~~ 9 or ~~11~~10, wherein each lens has a smooth surface.

~~13~~12. The film of claims ~~10~~ 9 to ~~12~~11, wherein the lenticular lens array is provided on a substrate fabricated from flexible material.

~~14~~13. The film of claim ~~13~~12, wherein the substrate comprises any one or more of the following materials: plastic, polymethylmethacrylate, polycarbonate and polyethylene.

~~15~~14. A display configured for two dimensional and three dimensional content, the display comprising a film of any one of the claims ~~10~~ 9 to ~~14~~13, the film for spectacles-free three dimensional viewing of the three dimensional content.