

[54] **LOW TEMPERATURE SYNTHESIS OF VITREOUS BODIES AND THEIR INTERMEDIATES**

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[57] **ABSTRACT**

The disclosure is directed to a method of making glass via solution deposition of a porous self-supporting body by combination of a first solution and a second solution. The first solution containing at least one basic glass forming solute is confined within a porous container, the walls of which are substantially impermeable to the basic solute. The second solution containing at least one acidic solute is diffused into the porous container through its walls which are substantially permeable to the said acidic solute. Within the porous container the combination between the first solution and the second solution takes place leading to the deposition of a self-supporting porous body on the inside walls of the container. The porous body which is crystalline, vitreous or intermediate between the two, is purified by leaching and/or washing, dried and thermally consolidated to a transparent non-porous glass.

39 Claims, No Drawings