ABSTRACT OF THE DISCLOSURE

The present invention is a process for forming an air gap within a substrate, the process comprising: providing a substrate; depositing a sacrificial material by deposition of at least one sacrificial material precursor; depositing a composite layer; removale of the porogen material in the composite layer to form a porous layer and contacting the layered substrate with a removal media to substantially remove the sacrificial material and provide the air gaps within the substrate; wherein the at least one sacrificial material precursor is selected from the group consisting of: an organic porogen; silicon, and a polar solvent soluble metal oxide and mixtures thereof.