

Membrane structures based on free two-layer porous alumina films

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Abstract: The 73 – 216 μm thick nanostructured membranes based on free two-layer films of nanoporous anodic alumina with pore diameters ~ 55 nm are discussed to be formed by the two-side anodization in the electrolyte of oxalic acid and further bipolar anodizing. The volume growth coefficient in the conversion of Al to Al_2O_3 was 1.44 – 1.46. The membranes obtained demonstrated high resistance to cracking and the ability to save the form at high temperature exposures.

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