

Unique porous alumina formed in phosphoric acid electrolytes at high anodic voltages

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2017

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Keywords: Optical interconnect, nanosize silicon clusters, alumina matrix, silicon microchannel plate.

Abstract: Anodic formation of porous alumina has been carried out at the anodic voltages up to 230 V in phosphoric acid electrolytes. The high anodic voltages have been achieved leading to new parameters of porous alumina such as interpore distance up to 420 nm, forming cell factor up to 1.7 nm/V, volume expansion factor up to 2.4 and porosity down to 1 %. Formation of porous alumina with multilayer walls has been demonstrated.

Published in:

Proceedings of International Conference “Nanomeeting – 2017” in “Physics, Chemistry and Application of Nanostructures”, ed. by V. E. Borisenko, S. V. Gaponenko, V. S. Gurin, C. H. Kam, p. 381-385. – https://doi.org/10.1142/9789813224537_0088.

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