coatings

Article

Supplementary Materials: Porous and Ag-, Cu-, Zn-Doped Al_2O_3 Fabricated via Barrier Anodizing of Pure Al and Alloys

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S1. AES surface of AlCu4 oxide thin films obtained by BA anodizing.

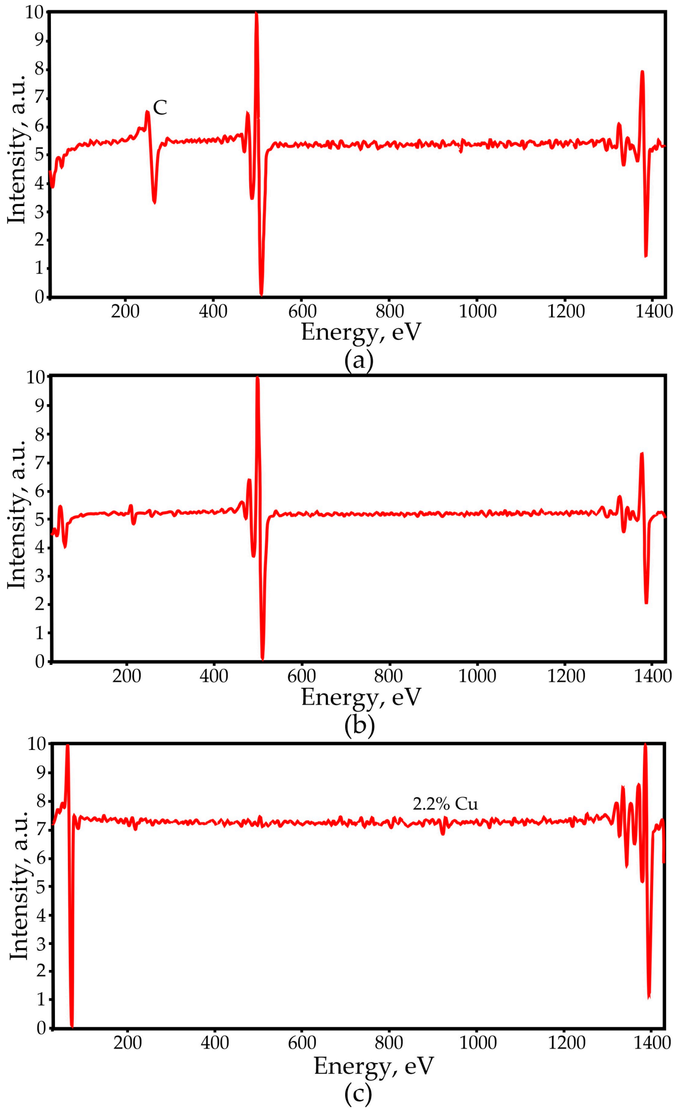

Figure S1. AES surface of AlCu4 oxide obtained by BA 100V anodizing of 1.43 mA·cm^{-2} anodic current density: (a) before sputtering, (b) 13 min sputtering and (c) 23.36 min sputtering.

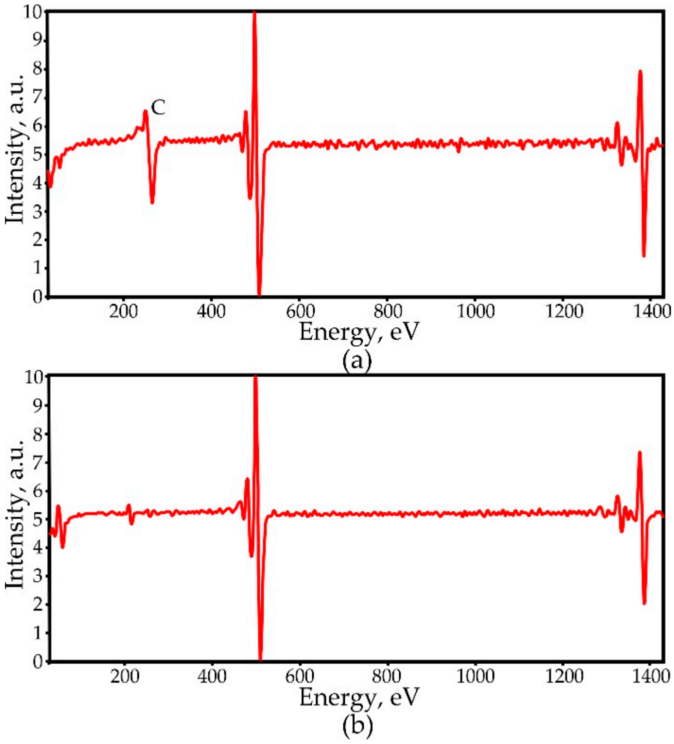

Figure S2. AES surface of AlCu4 oxide obtained by BA full anodizing of 1.43 mA·cm^{-2} anodic current density: (a) before sputtering and (b) 30 min sputtering.

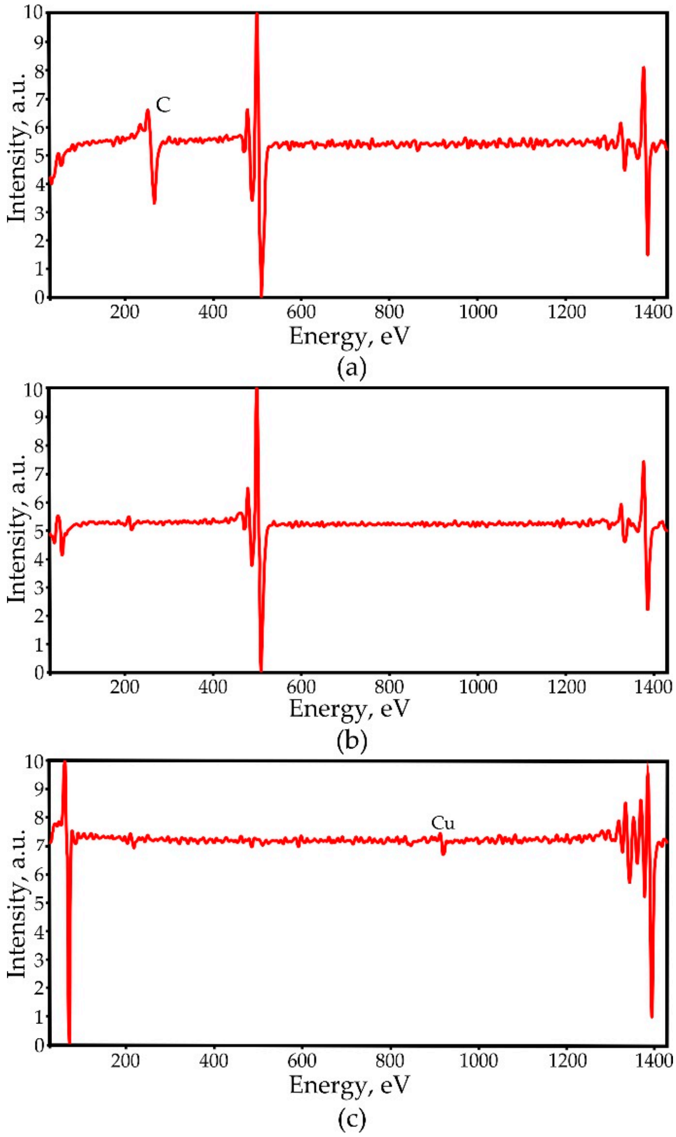

Figure S3. AES surface of AlCu4 oxide obtained by BA full anodizing of 9.1 mA·cm^{-2} anodic current density: (a) before sputtering, (b) 10 min sputtering and (c) 28.40 min sputtering.

S2. AES surface of AlCu4 oxide thin films obtained by CB anodizing.

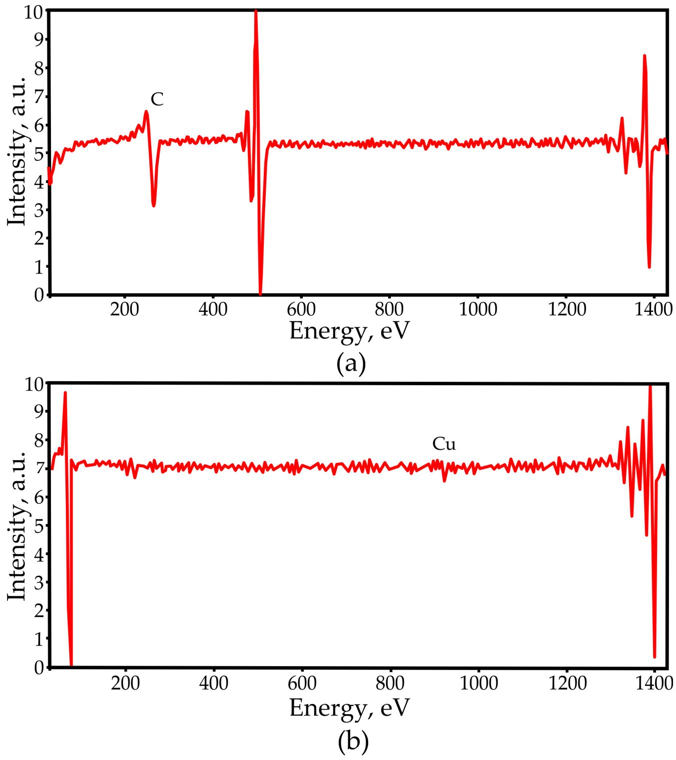

Figure S4. AES surface of AlCu4 oxide obtained by CB 100V anodizing of 1.72 mA·cm^{-2} anodic current density: (a) before sputtering and (b) 25.40 min sputtering.

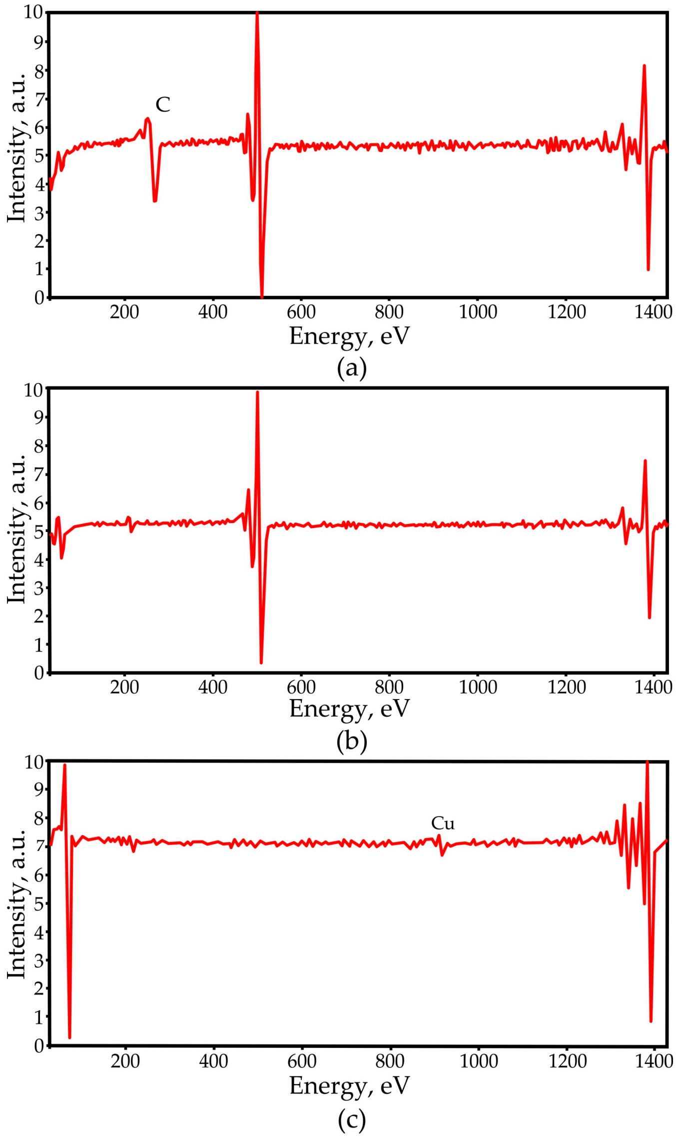

Figure S5. AES surface of AlCu4 oxide obtained by CB full anodizing of 1.65 mA·cm^{-2} anodic current density: (a) before sputtering, (b) 11 min sputtering and (c) 30 min sputtering.

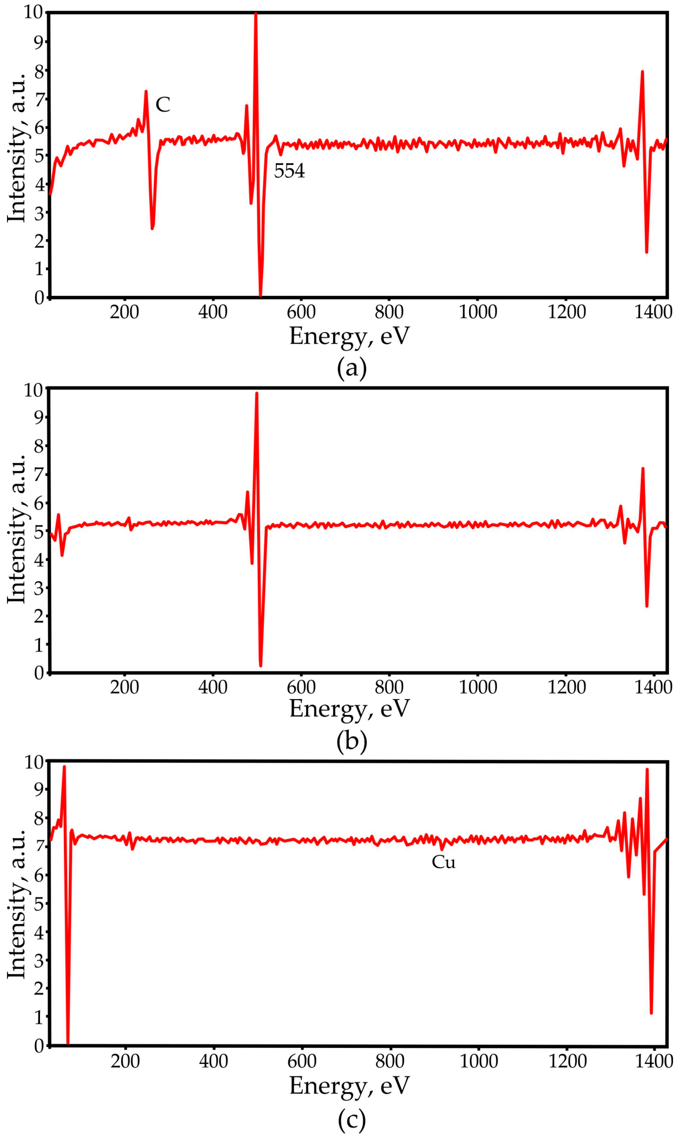

Figure S6. AES surface of AlCu4 oxide obtained by CB 100V anodizing of 12.05 mA·cm^{-2} anodic current density: (a) before sputtering, (b) 9 min sputtering and (c) 25 min sputtering.

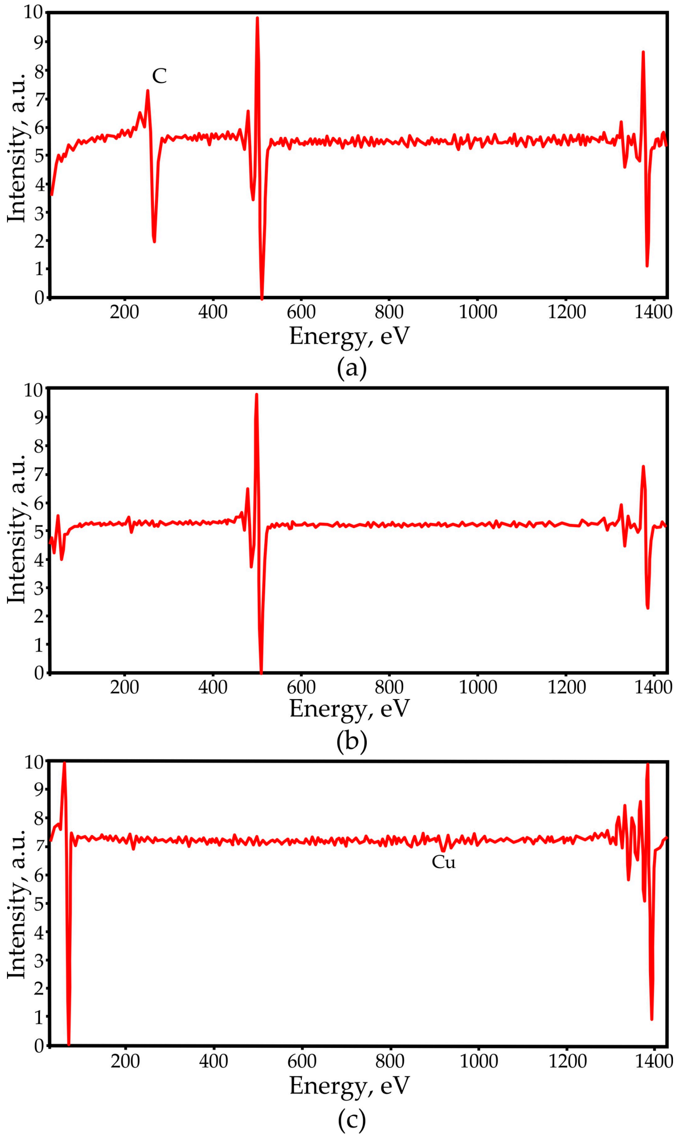

Figure S7. AES surface of AlCu4 oxide obtained by CB full anodizing of 11.21 mA·cm^{-2} anodic current density: (a) before sputtering, (b) 13 min sputtering and (c) 30 min sputtering.

S3. SEM of alumina obtained by BA and CB anodizing

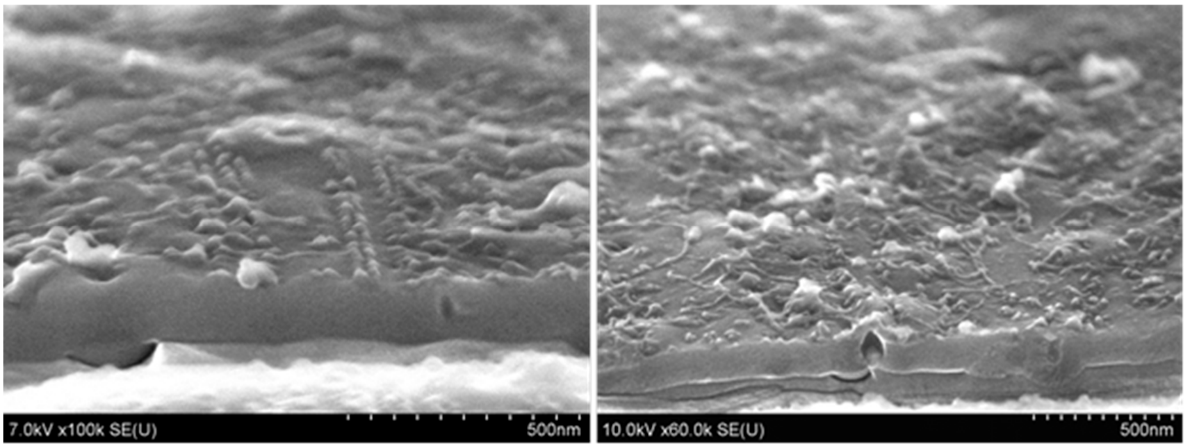

Figure S8. Surfaces and cross-sections of alumina obtained by BA 100 V galvanostatic anodizing of 0.4 mA·cm^{-2} anodic current density.

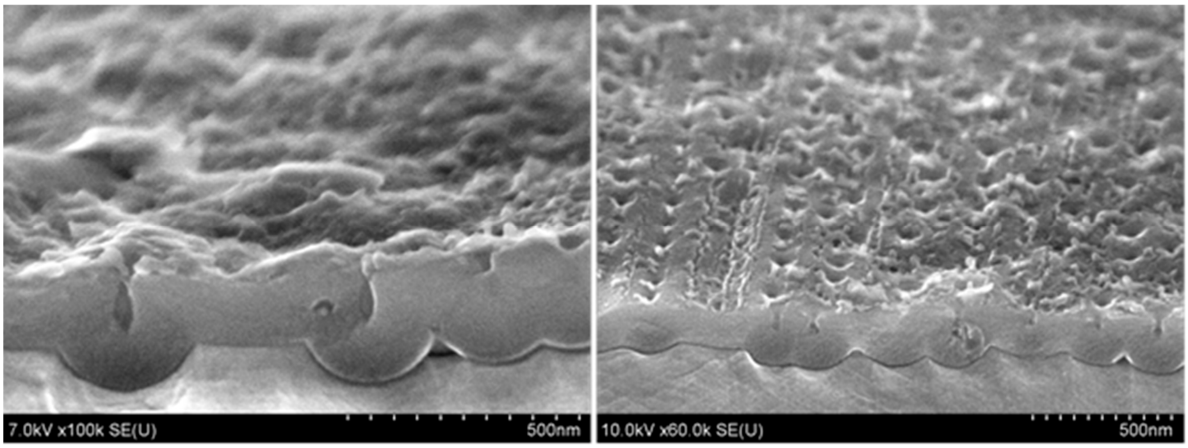

Figure S9. Surfaces and cross-sections of alumina obtained by BA full galvanostatic anodizing of 0.4 mA·cm^{-2} anodic current density.

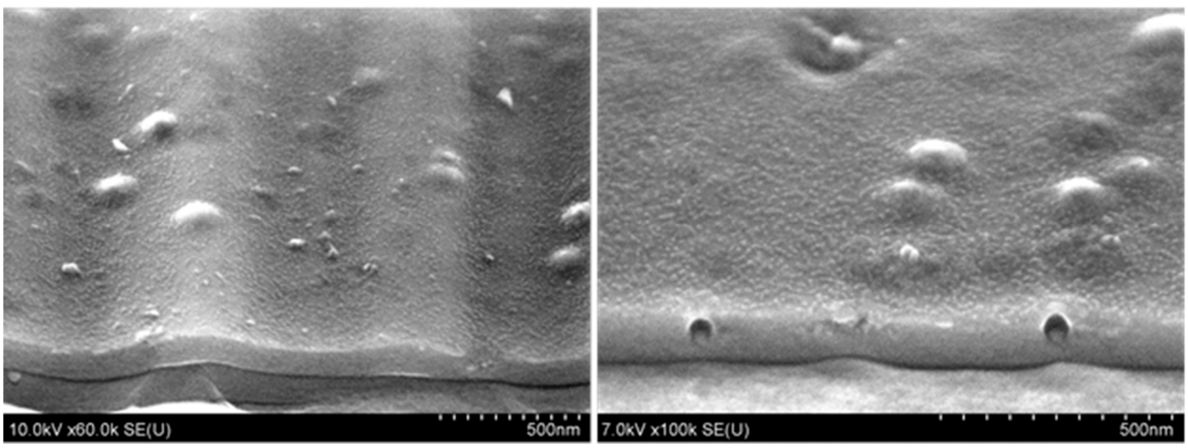

Figure S10. Surfaces and cross-sections of alumina obtained by CB 100 V galvanostatic anodizing of 0.4 mA·cm^{-2} anodic current density.

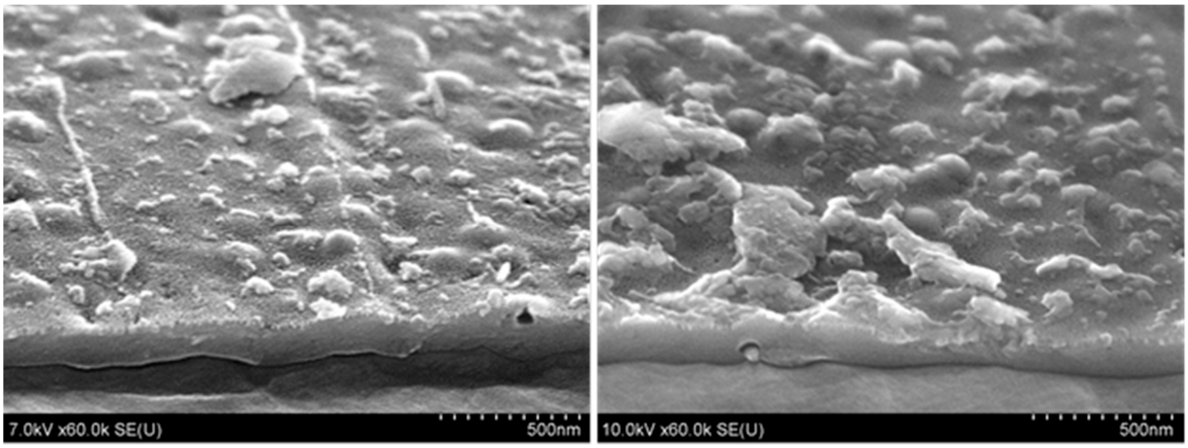

Figure S11. Surfaces and cross-sections of alumina obtained by CB full galvanostatic anodizing of 0.4 mA·cm^{-2} anodic current density.

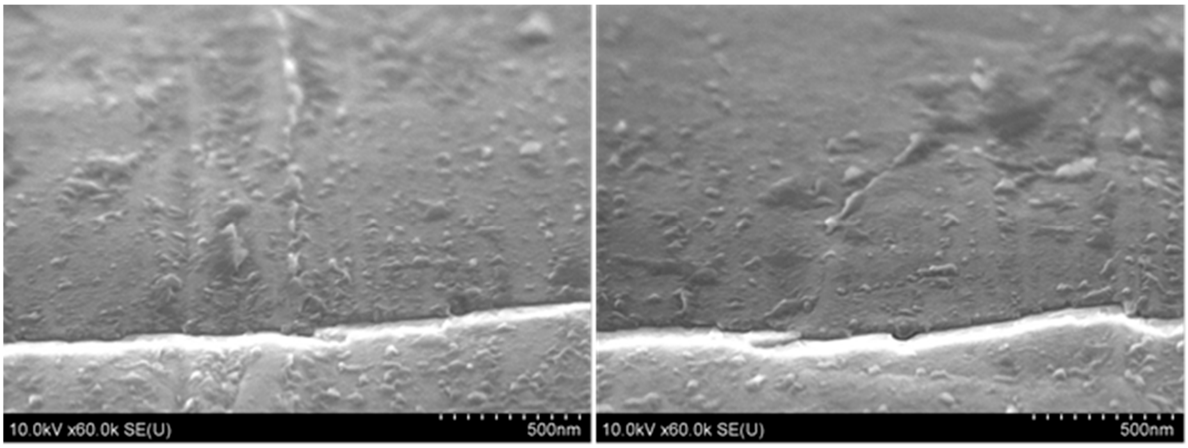

Figure S12. Surfaces and cross-sections of alumina obtained by BA 100 V galvanostatic anodizing of 7.0 mA·cm^{-2} anodic current density.

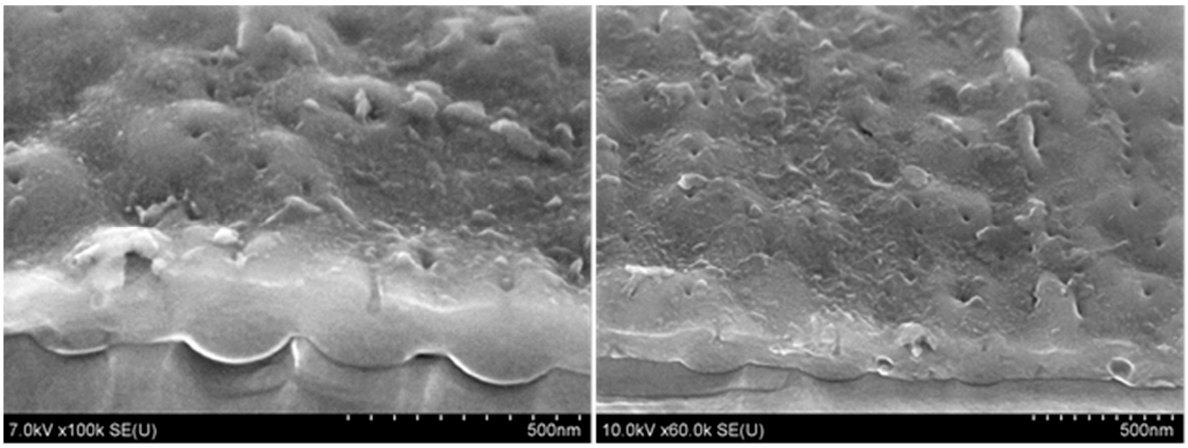

Figure S13. Surfaces and cross-sections of alumina obtained by BA full galvanostatic anodizing of 7.0 mA·cm^{-2} anodic current density.

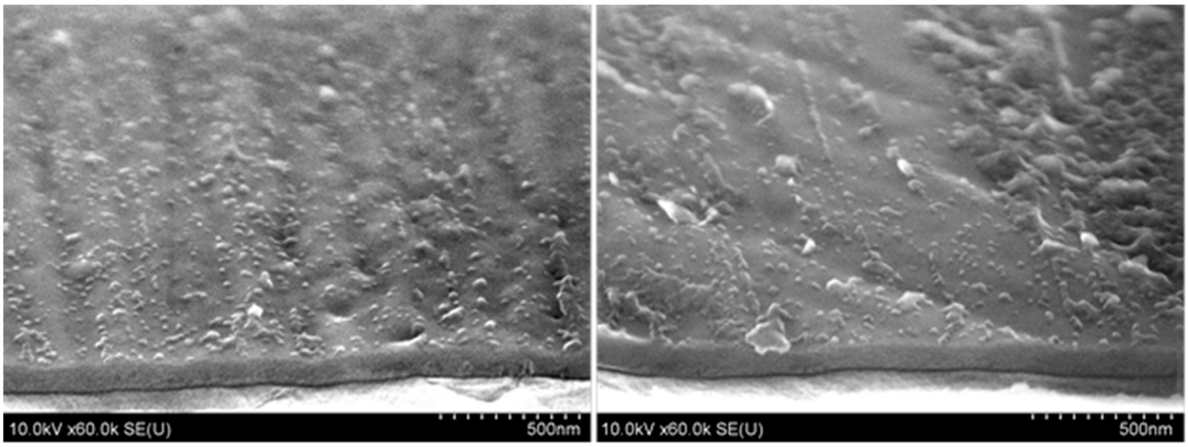

Figure S14. Surfaces and cross-sections of alumina obtained by CB 100 V galvanostatic anodizing of 7.0 mA·cm^{-2} anodic current density.

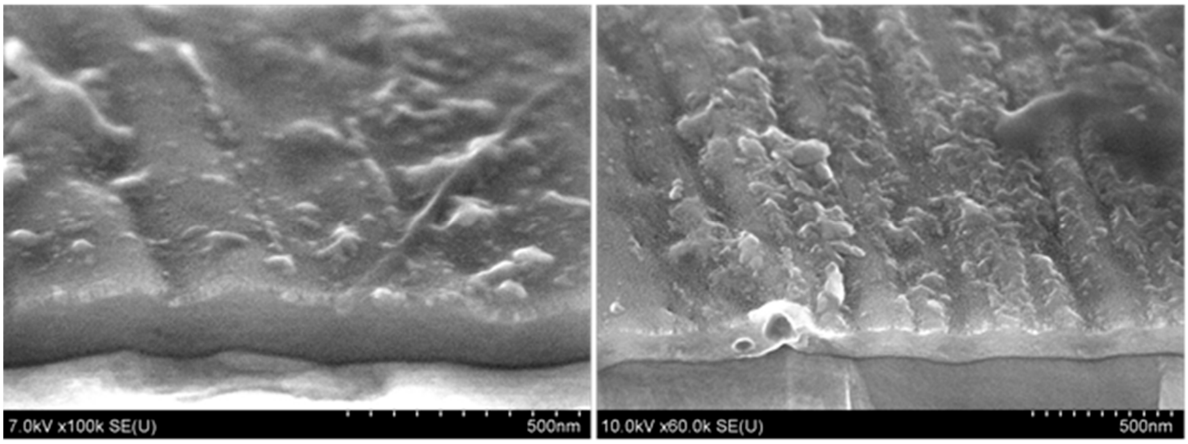

Figure S15. Surfaces and cross sections of alumina obtained by CB full galvanostatic anodizing of 7.0 mA·cm^{-2} anodic current density.