

SUPPLEMENTARY MATERIAL

Wet treatment and the behavior of electroless Ni-P deposition at 40 °C on polished alumina

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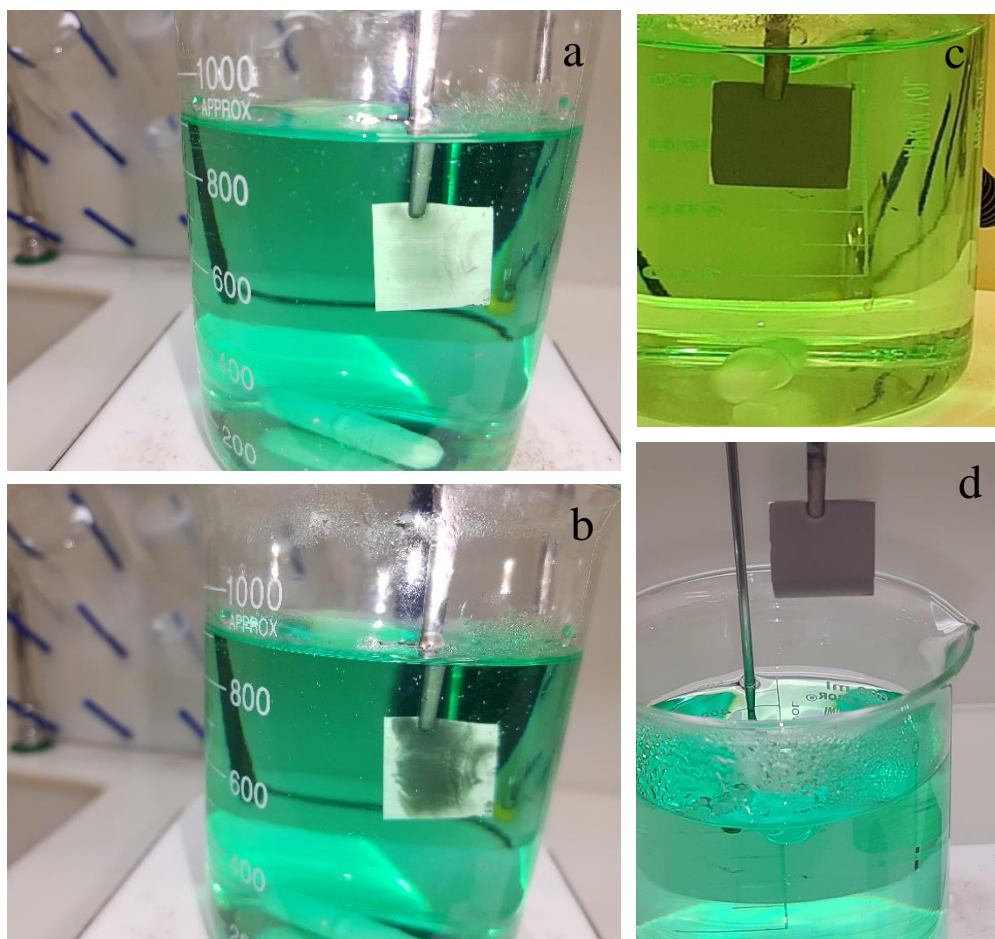


Figure 1S. (a) Initial Ni-P deposition; (b) Ni-P growing; (c) during deposition and (d) electroless Ni-P surface after plating

The plating was carried out using a Pyrex glass (Becker) and a magnetic stirrer. To heat the solution, a hot plate with a digital thermometer coupled was used and metal tweezers were used to hold the substrate.

Figure 1S(a) shows the Al_2O_3 surface after being immersed for 30 s, in Figure 1S(b) the immersion time is 45 s, in Figure 1S(c) after 1 min of plating the surface is completely covered with the metallic film alloy.

Analysis of scanning electron microscopy (SEM-FEG) model Mira 3 \times MU from TESCAN (Brno, Czech Republic) was obtained directly from the Ni-P film, as can be observed on Figure 2S. Energy dispersive spectroscopy (EDS) analysis was obtained in SEM-FEG model Mira 3 \times MU from TESCAN coupled with Bruker Quants System

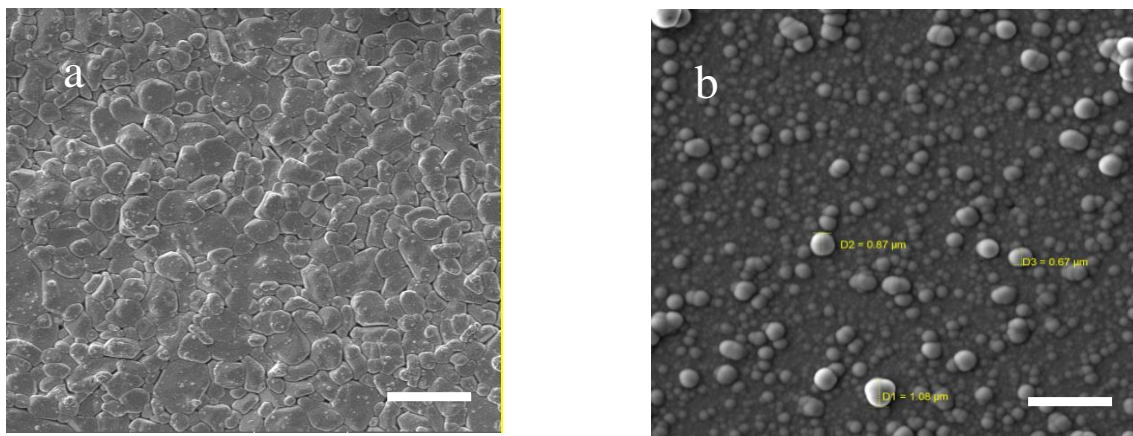


Figure 2S. SEM images 2D of Ni-P morphology thin film plating Al_2O_3 , deposited at 40 °C. Scale bar: (a) 20 μm and (b) 5 μm