Small

Laser-fabricated porous alumina membranes (LF-PAM) for the preparation of metal nanodot arrays


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Contents

Figure S1  Scanning electron microscopy micrograph of silica microspheres

Figure S2  Average height distribution of the objects seen in the AFM image shown in Fig. 4b
Figure S1  Scanning electron microscopy micrograph of silica microspheres.
There are 38 objects protruding out of the plane of the substrate, and the variation of the average height of these objects is displayed in Fig. S2. An object is defined as having a dimension of at least 4 nm in the x-y plane and a height exceeding at least three times the half width at half maximum of the height distribution defining the plane of the substrate (the average height of the substrate is -1.4 nm and its half width at half maximum is 0.65 nm). These objects have been classified in two categories, namely nanodot or defect. As seen in Fig. S2, there is a very clear distinction between the average height of a nanodot and a defect (two objects have been excluded...
since they fall close to the image boundaries). The mean value of the average height of the nanodots is 10.3 nm, compared to 0.68 nm for the defects. The average surface area of a nanodot is 22,900 nm$^2$, compared to 2,712 nm$^2$ for a defect, and the average volume of a nanodot is 240,990 nm$^3$, compared to 15,575 nm$^3$ for a defect. The total surface area occupied by all the defects (35,243 nm$^2$) represent less than 7% of the total surface area occupied by the nanodots (526,700 nm$^2$). Finally, the total volume occupied by all the defects (32,240 nm$^3$) represents less than 0.6% of the total volume occupied by the nanodots (5,542,793 nm$^3$).