

Figure S1. AFM image of an as-prepared 8-layer titanium phosphate films prepared by replacing PS-1 solution with 0.1 M H_2SO_4 . 10 mM $\text{Ti}(\text{SO}_4)_2$ aqueous solution with the addition of 0.1 M H_2SO_4 and PS-2 solution with a pH of 4.0 was used for the preparation of the titanium phosphate films.

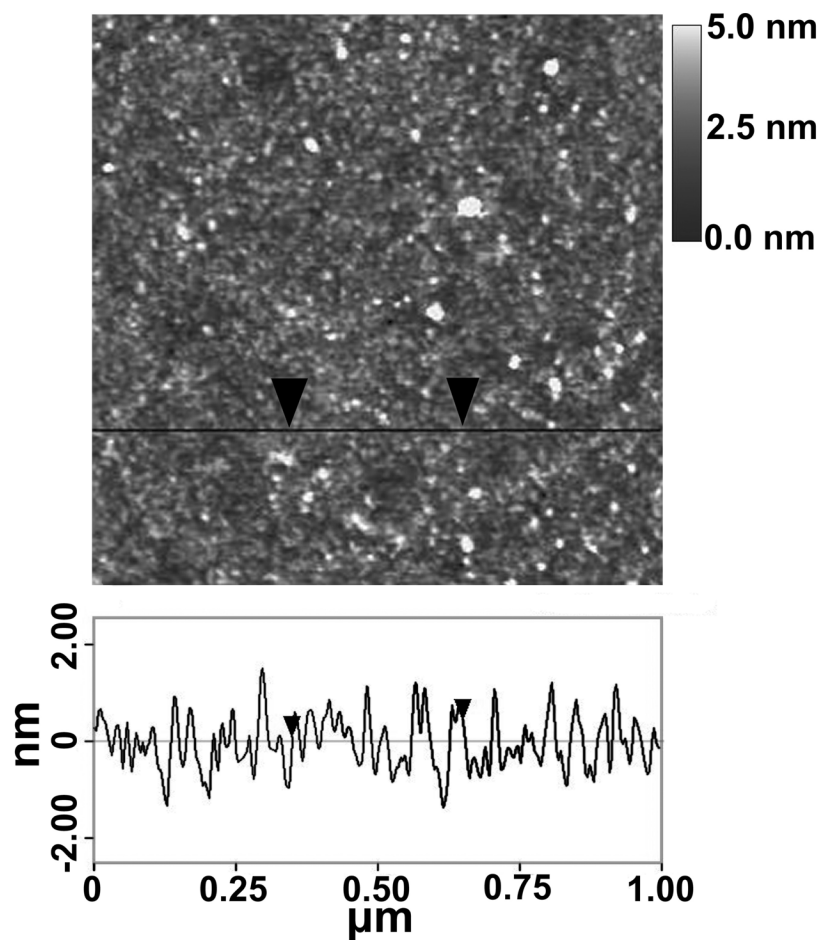


Figure S2. QCM frequency decrease ($-\Delta F$) of successive growth of zirconium phosphate films.

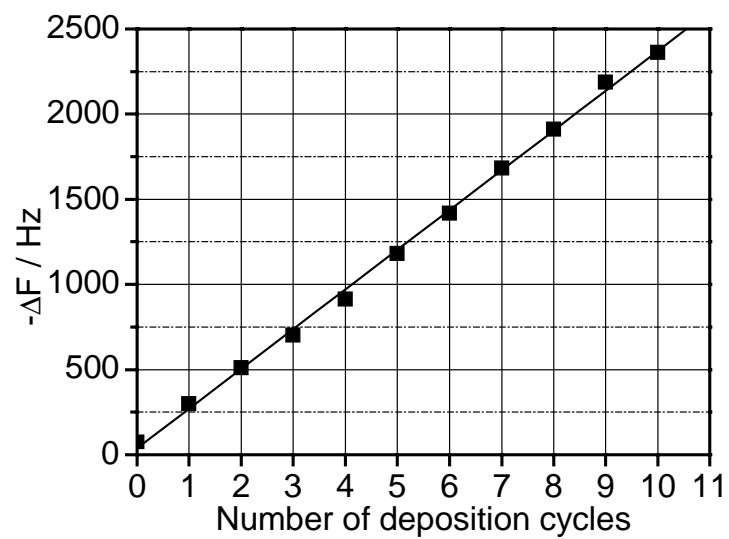


Figure S3. XPS spectrum of the as-prepared zirconium phosphate film

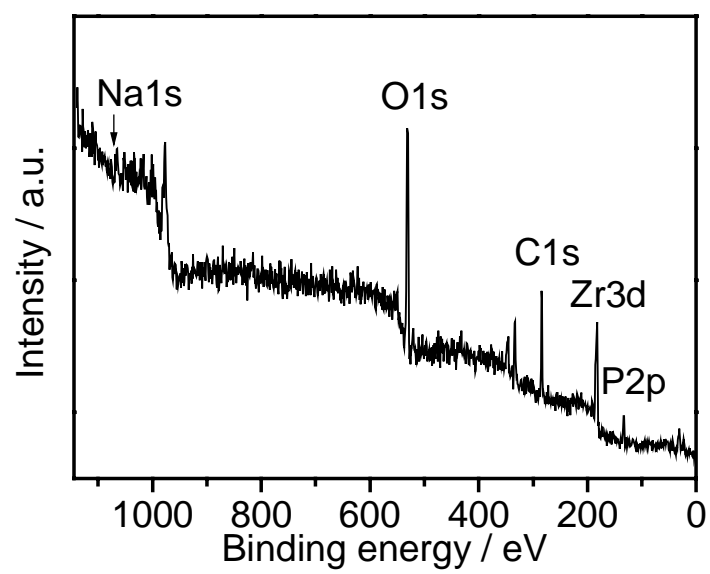


Figure S4. SEM image of the as-prepared zirconium phosphate films deposited on Ag-coated quartz crystal resonator.

