

Supporting Information

Fig. S1A

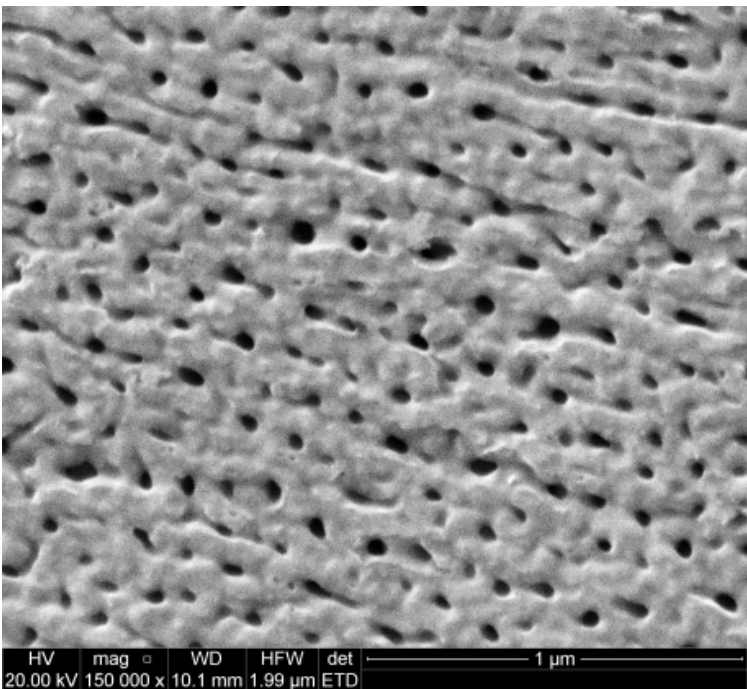


Fig. S1B



Figure S1. (A) SEM image of freshly etched uniform pAl substrate prior to gradient formation (etching conditions: 100 V, 2 min, 0°C). (B) Photo of pAl gradient. Maximal incubation condition (180 min, 5% phosphoric acid, 25°C) was on the left-hand side.

**Fig. S2**

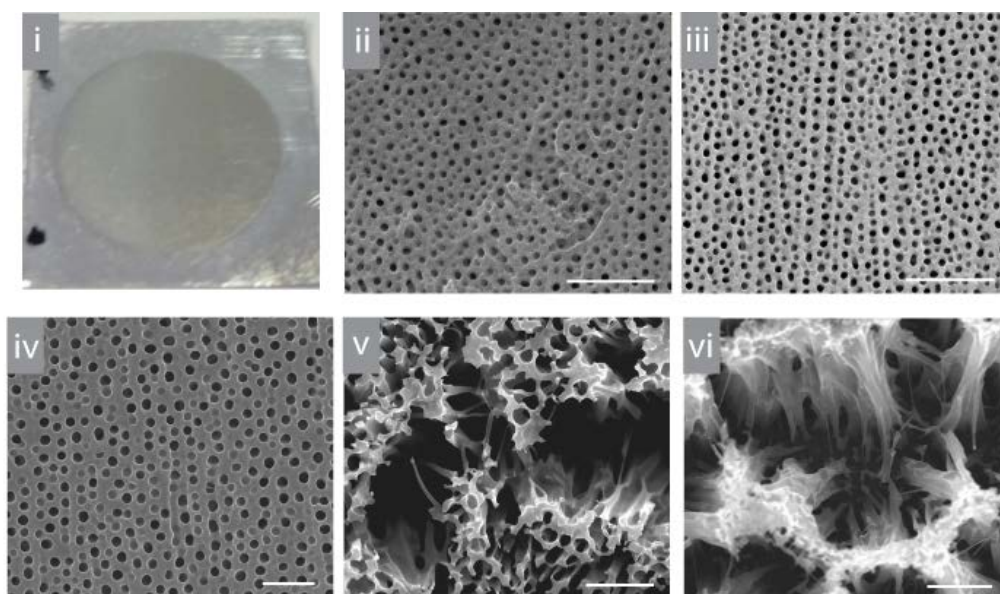


Figure S2. Characterisation of pAl gradient after incubation in PBS at 37°C for 21 days. (i) Photo of pAl gradient. (ii-vi) Scanning electron microscopy (SEM) analysis of pAl gradient at distances (ii) 2 mm, (iii) 5 mm, (iv) 8 mm, (v) 10 mm, and (vi) 12 mm along the pAl gradient. Scale bar = 1  $\mu\text{m}$ . Images were captured 90° to the substrate surface.