Electronic Supplementary Material (ESI) for RSC Advances.
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Supporting Information (SI)

Fabrication, characterization and water wetting behavior of mesoscale 1D/2D periodic structured silica-zirconia sol-gel thin films

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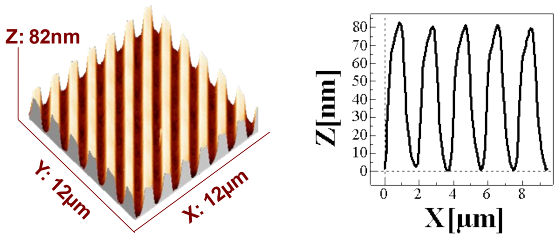


Figure S1: *(a) AFM image with height profile (HP) of 1st imprinted gel film.*

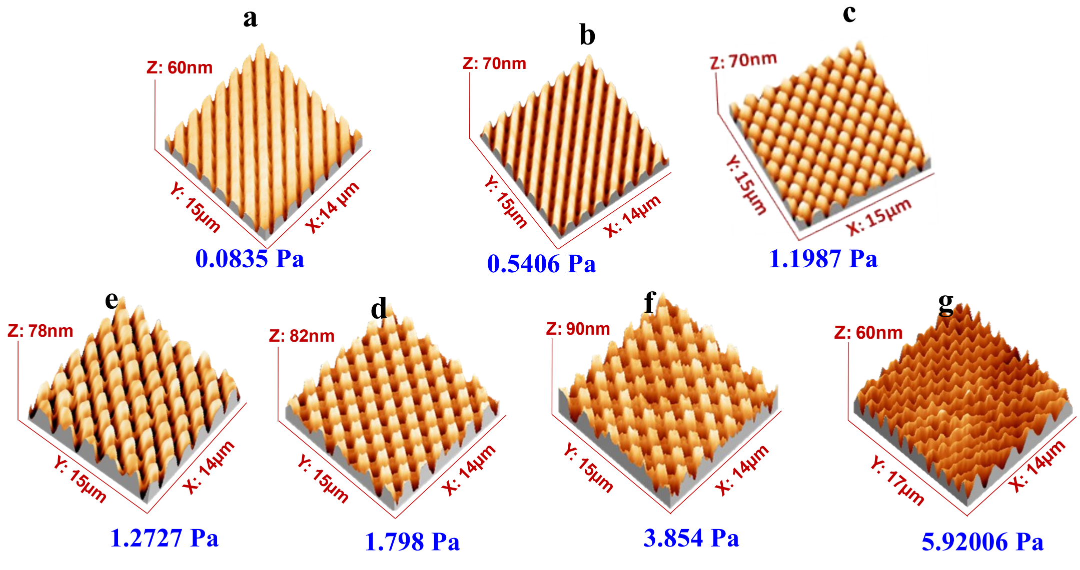
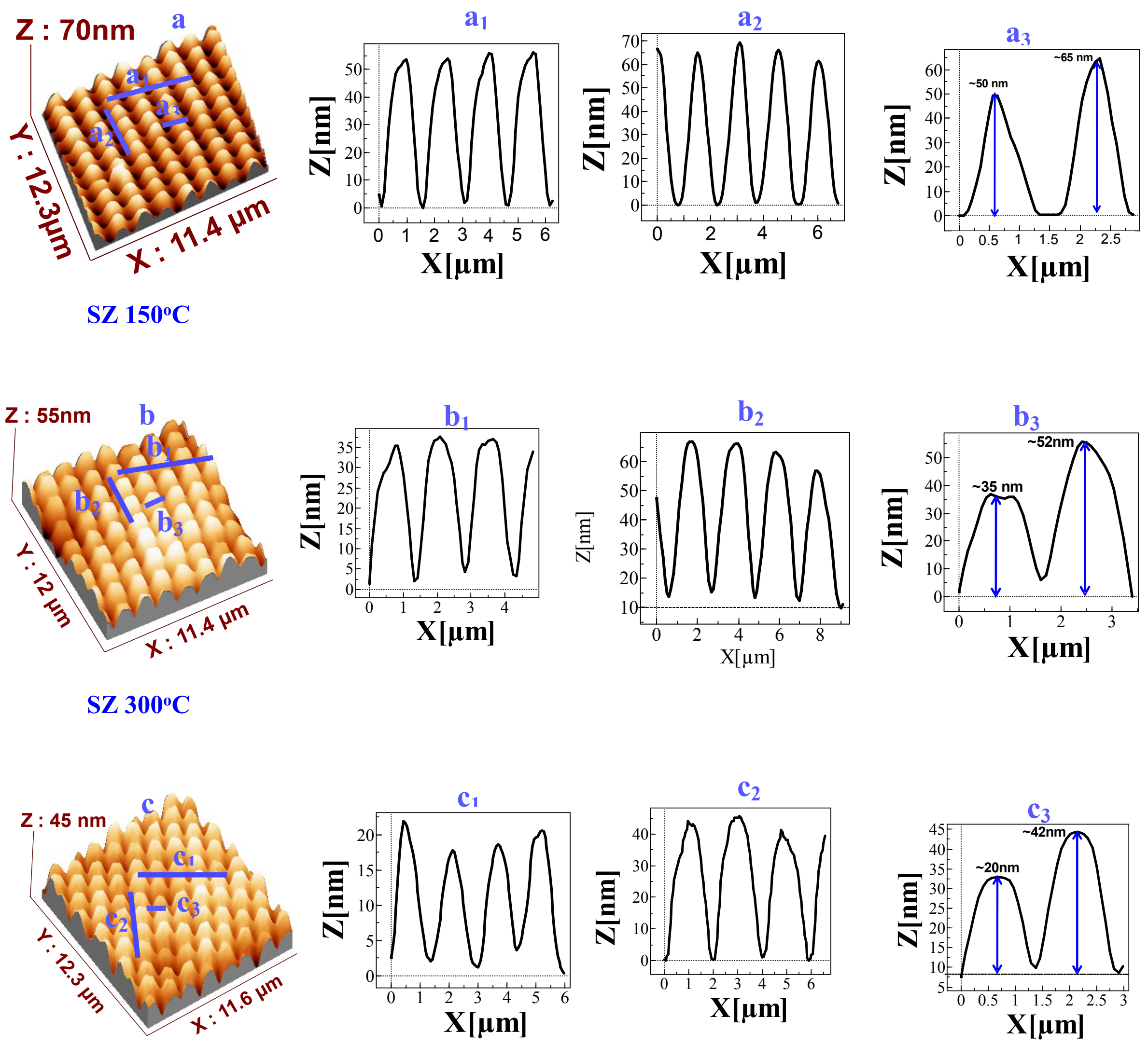


Figure S2: *AFM images of the film at different applied pressure after the 2nd imprinting showing the change of fidelity of the 2D pattern. The applied pressure (Pa) for each case is embedded at the bottom.*



SZ 150°C

SZ 300°C

SZ 500°C

Figure S3: *(a, b, c) AFM images and their corresponding HP (a1, b1, c1) for 1st imprint, (a2, b2, c2) for 2nd imprint and (a3, b3, c3) for the both direction of the films. The HP of the films changes depending upon the curing temperature (as described in each case).*

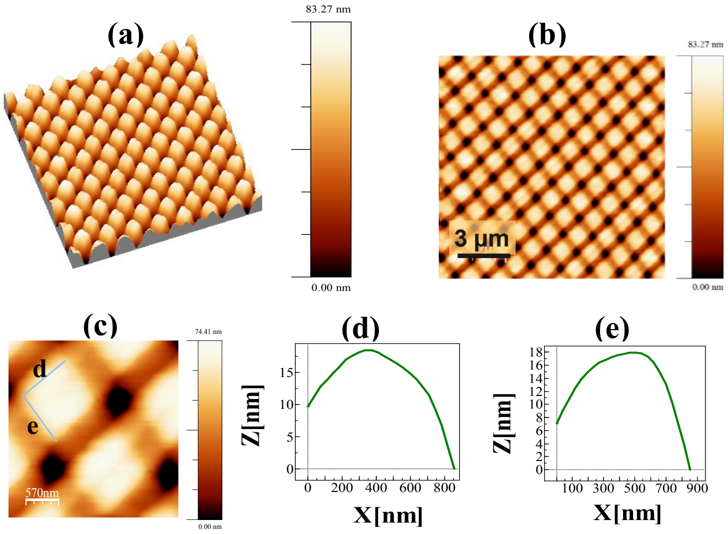


Figure S4: *(a, b, c) AFM images for the well ordered 2D pattern at an optimum applied pressure (~1.198Pa) and (d) and (e) correspond to the HP of the films which shows nearly same value of HP a square pillar-like pattern.*

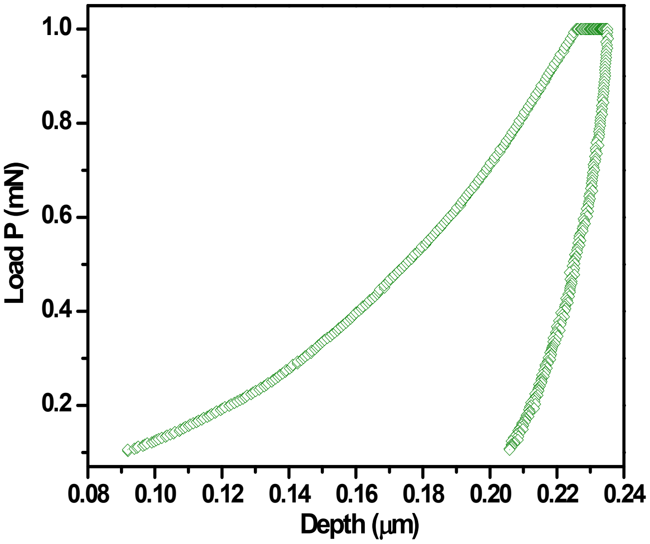


Figure S5: *Nanoindentation plot (load vs. depth) of the gel film (the measurement has been done after 45 min of film deposition)*

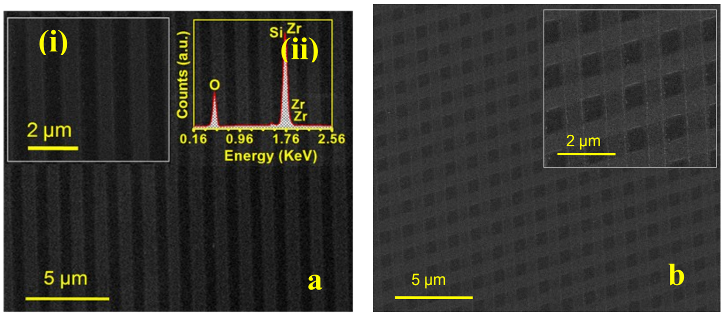


Figure S6: *FESEM images of (a) 1D and (b) 2D patterned films cured at $500^{o}C$. The images at relatively higher magnification are shown in the insets and the presence of different elements in 1D film is evidenced from the FESEM-EDS curve (inset ii) of the film.*

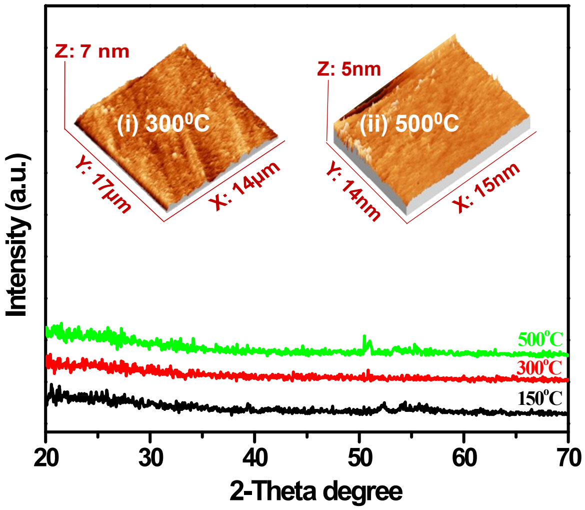


Figure S7: *XRD reflections of the films cured at different temperatures (insets i and ii are the AFM images of the film cured at 300^{o} and $500^{o}C$, respectively).*