

Electronic Supplementary Information

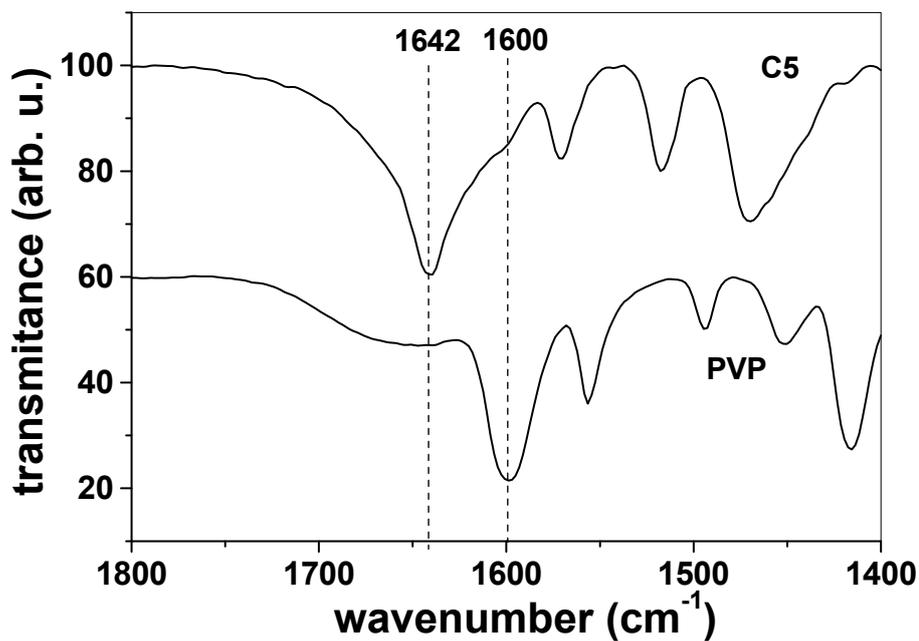


Figure S1. FTIR spectra obtained for PVP and QPVP-C5. The spectrum obtained for QPVP-C2 is similar to that determined for QPVP-C5.

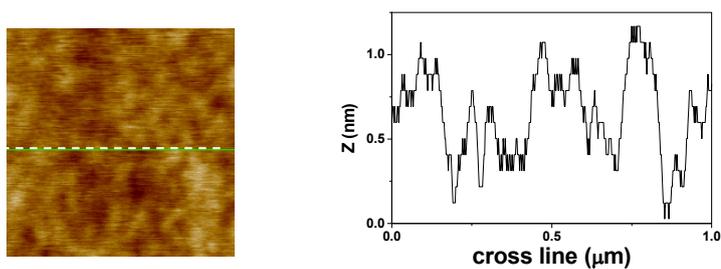


Figure S4. AFM topographic image (1 μm x 1 μm) obtained for bare PS with the corresponding cross-section, RMS = 0.25 nm.

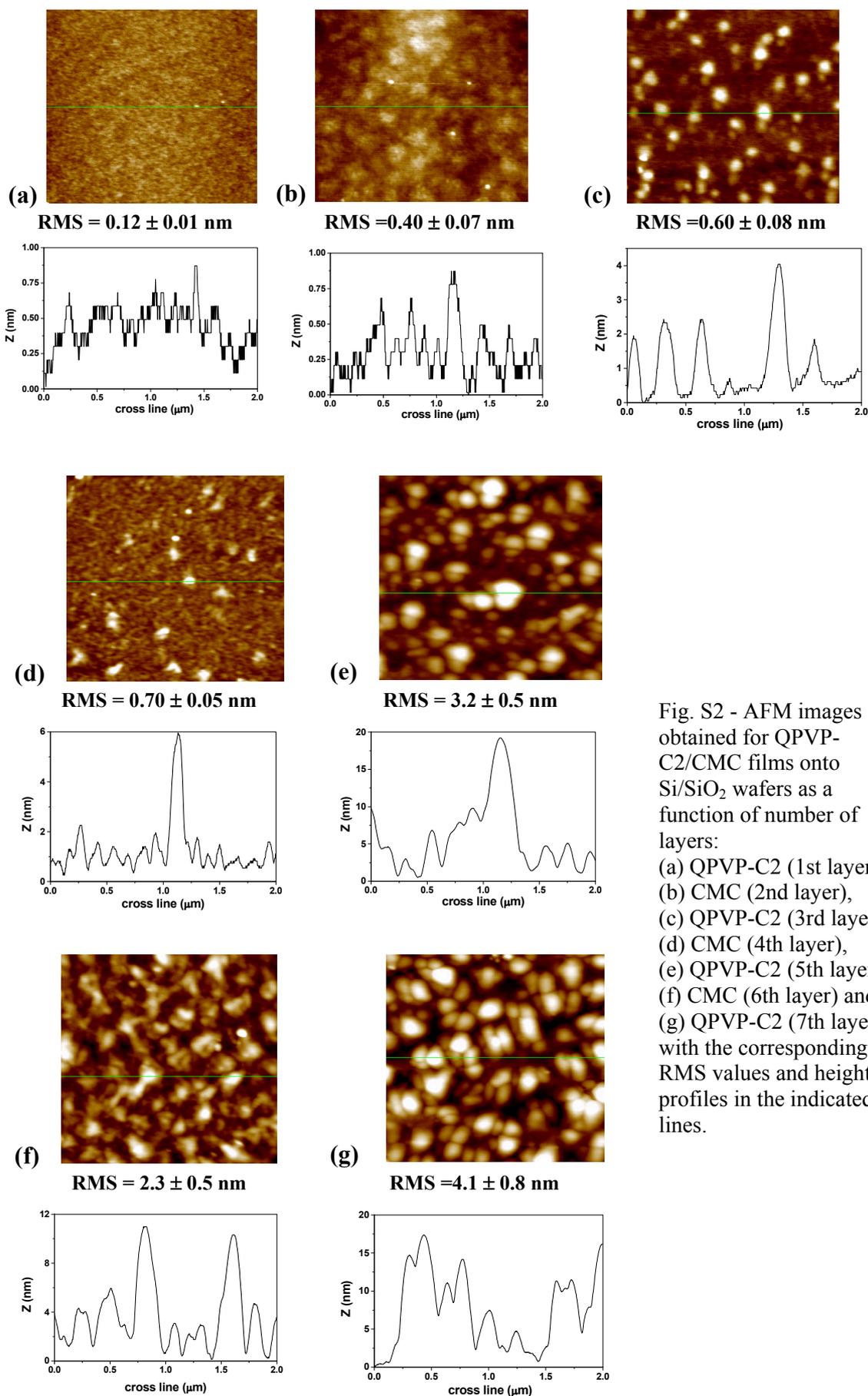


Fig. S2 - AFM images obtained for QPVP-C2/CMC films onto Si/SiO₂ wafers as a function of number of layers: (a) QPVP-C2 (1st layer), (b) CMC (2nd layer), (c) QPVP-C2 (3rd layer), (d) CMC (4th layer), (e) QPVP-C2 (5th layer), (f) CMC (6th layer) and (g) QPVP-C2 (7th layer), with the corresponding RMS values and height profiles in the indicated lines.

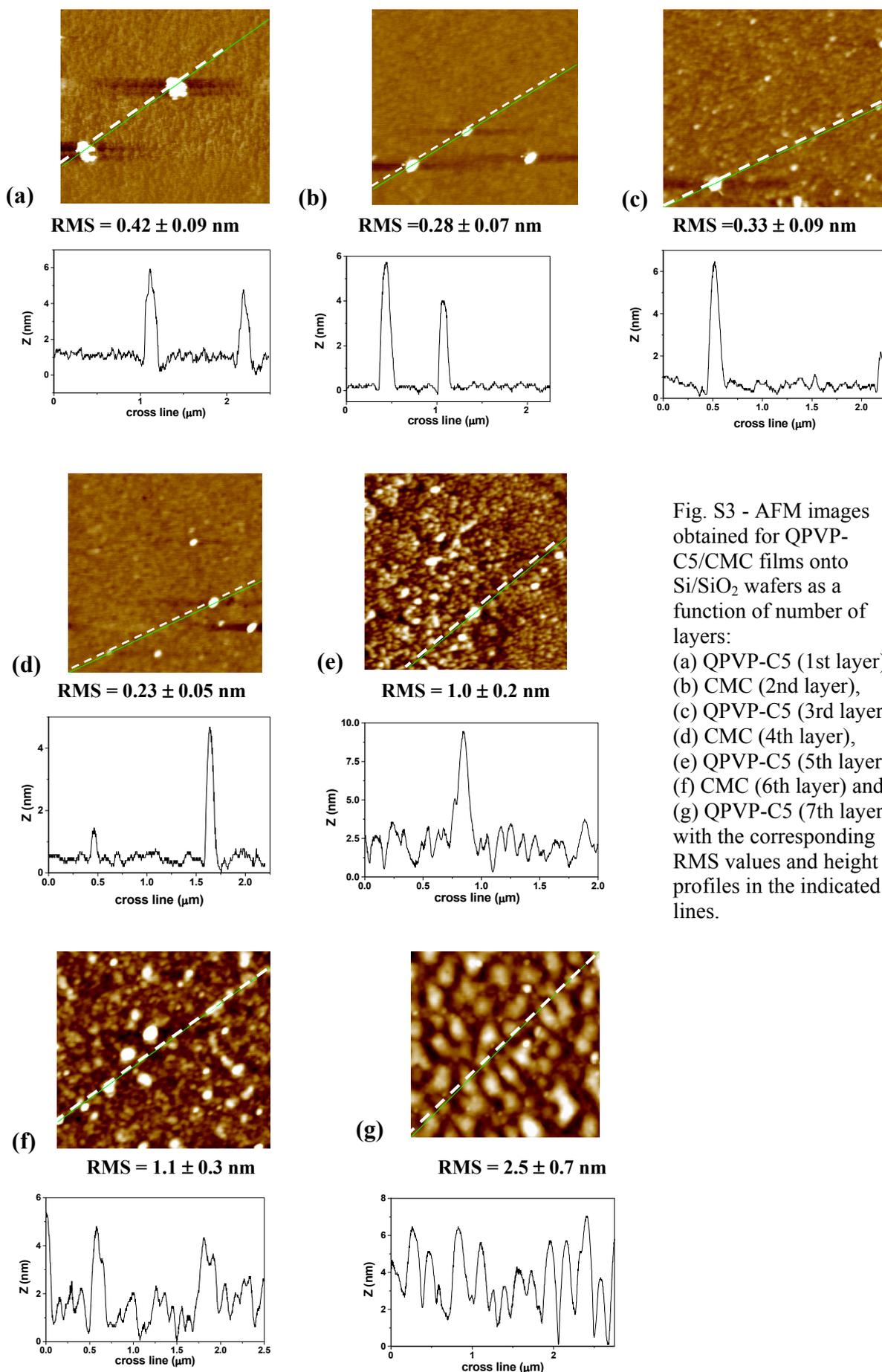


Fig. S3 - AFM images obtained for QPVP-C5/CMC films onto Si/SiO₂ wafers as a function of number of layers: (a) QPVP-C5 (1st layer), (b) CMC (2nd layer), (c) QPVP-C5 (3rd layer), (d) CMC (4th layer), (e) QPVP-C5 (5th layer), (f) CMC (6th layer) and (g) QPVP-C5 (7th layer), with the corresponding RMS values and height profiles in the indicated lines.

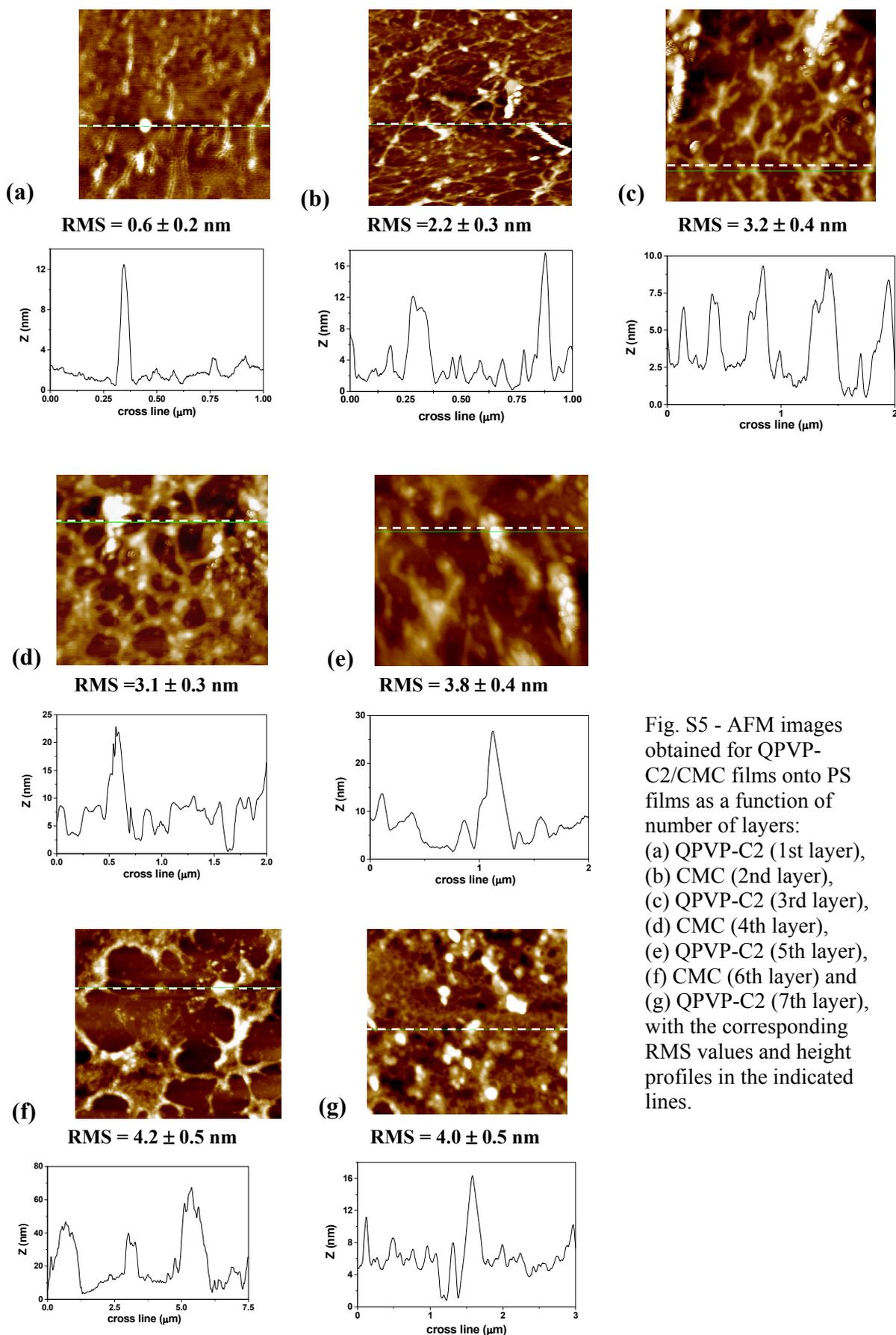


Fig. S5 - AFM images obtained for QPVP-C2/CMC films onto PS films as a function of number of layers: (a) QPVP-C2 (1st layer), (b) CMC (2nd layer), (c) QPVP-C2 (3rd layer), (d) CMC (4th layer), (e) QPVP-C2 (5th layer), (f) CMC (6th layer) and (g) QPVP-C2 (7th layer), with the corresponding RMS values and height profiles in the indicated lines.

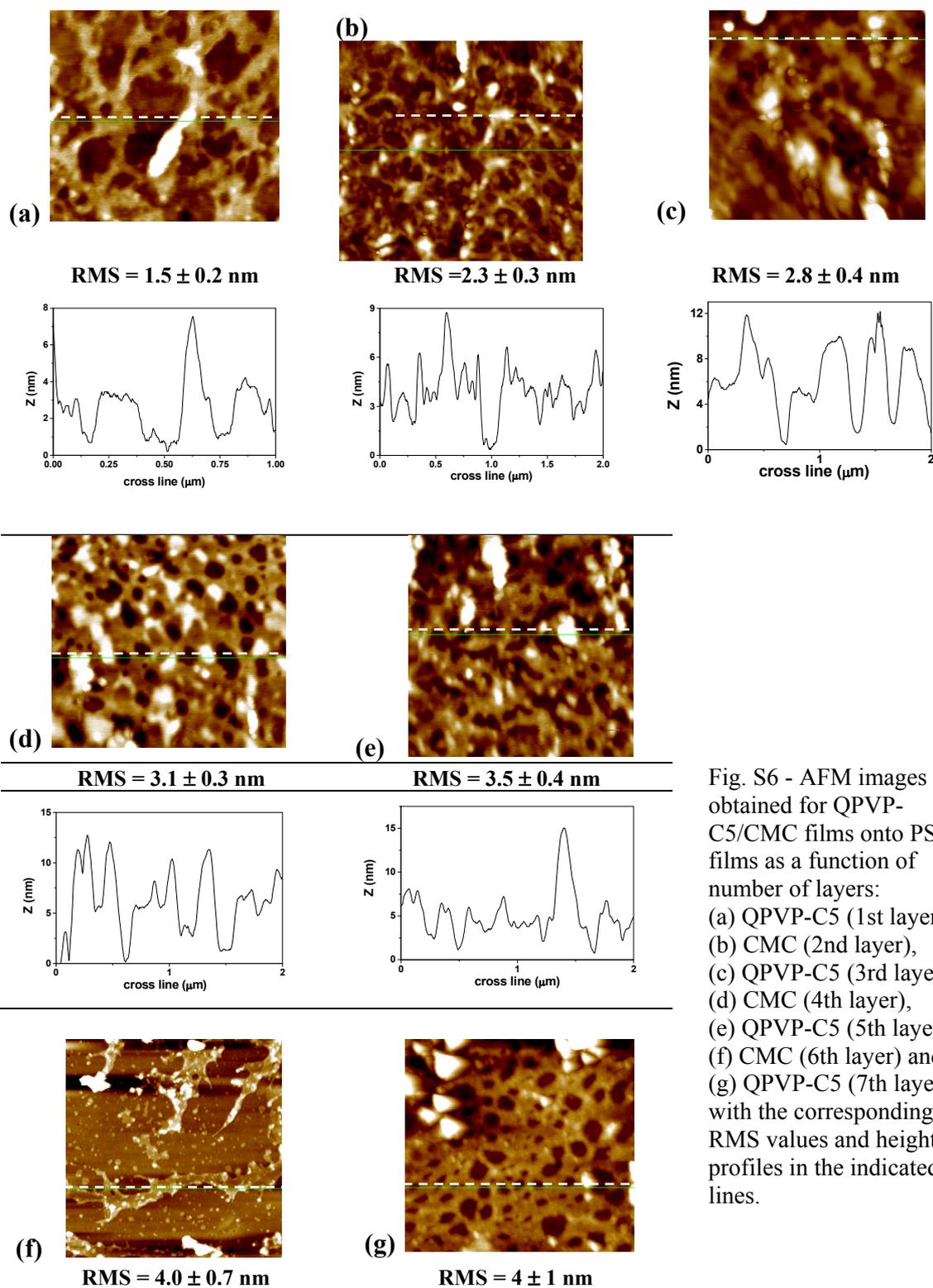


Fig. S6 - AFM images obtained for QPVP-C5/CMC films onto PS films as a function of number of layers: (a) QPVP-C5 (1st layer), (b) CMC (2nd layer), (c) QPVP-C5 (3rd layer), (d) CMC (4th layer), (e) QPVP-C5 (5th layer), (f) CMC (6th layer) and (g) QPVP-C5 (7th layer), with the corresponding RMS values and height profiles in the indicated lines.

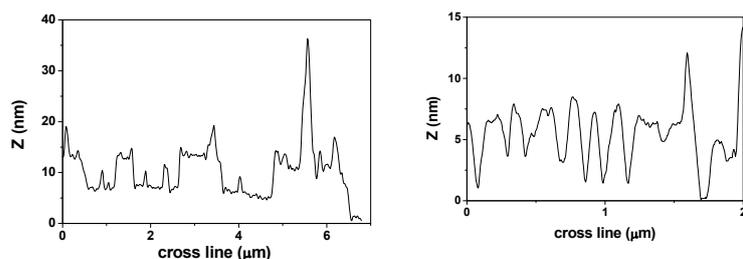


Table T1. Mean values of advancing (θ_a), receding (θ_r) and the hysteresis ($\Delta\theta$) contact angle measurements and the root mean square roughness values (RMS) from AFM images (at least two different of same composition) with scan areas of $2\ \mu\text{m} \times 2\ \mu\text{m}$. The contact angle data represent the average over ten measurements (two different spots on five samples of same composition) with the corresponding standard deviation. The surfaces analyses were performed after each deposition onto Si/SiO₂ wafers. (*) It was not possible to measure (θ_r) for bare Si/SiO₂.

	θ_a (°)	θ_r (°)	$\Delta\theta$ (°)	RMS (nm)
Si/SiO ₂	5	(*)	(*)	0.10 ± 0.01
QPVP-C2 (1st)	28 ± 3	25 ± 1	3	0.12 ± 0.01
CMC (2nd)	26 ± 2	23 ± 1	3	0.40 ± 0.07
QPVP-C2 (3rd)	31 ± 2	26 ± 2	5	0.60 ± 0.08
CMC (4th)	37 ± 5	31 ± 3	6	0.70 ± 0.05
QPVP-C2 (5th)	38 ± 5	28 ± 3	10	3.2 ± 0.5
CMC (6th)	45 ± 5	33 ± 4	12	2.3 ± 0.5
QPVP-C2 (7th)	43 ± 5	30 ± 3	13	4.1 ± 0.8
QPVP-C5 (1st)	46 ± 5	39 ± 5	7	0.42 ± 0.09
CMC (2nd)	48 ± 5	40 ± 4	8	0.28 ± 0.07
QPVP-C5 (3rd)	46 ± 5	41 ± 5	6	0.33 ± 0.09
CMC (4th)	52 ± 7	42 ± 4	10	0.23 ± 0.05
QPVP-C5 (5th)	57 ± 4	43 ± 5	14	1.0 ± 0.2
CMC (6th)	67 ± 5	50 ± 5	17	1.1 ± 0.3

QPVP-C5 (7th)	62 ± 5	44 ± 4	18	2.5 ± 0.7
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Table T2. Mean values of advancing (θ_a), receding (θ_r) and the hysteresis ($\Delta\theta$) contact angle measurements and the root mean square roughness values (RMS) from AFM images (at least two different of same composition) with scan areas ranging from 1 μm X 1 μm to 3 μm X 3 μm . The contact angle data represent the average over ten measurements (two different spots on five samples of same composition) with the corresponding standard deviation. The surfaces analyses were performed after each deposition onto PS films.

	θ_a (°)	θ_r (°)	$\Delta\theta$ (°)	RMS (nm)
PS	90	90	0	0.25 ± 0.05
QPVP-C2 (1st)	85 ± 5	81 ± 4	4	0.6 ± 0.2
CMC (2nd)	80 ± 5	75 ± 5	5	2.2 ± 0.3
QPVP-C2 (3rd)	77 ± 2	73 ± 3	4	3.2 ± 0.4
CMC (4th)	76 ± 3	68 ± 2	8	3.1 ± 0.3
QPVP-C2 (5th)	73 ± 5	62 ± 6	11	3.8 ± 0.4
CMC (6th)	66 ± 6	53 ± 6	13	4.2 ± 0.5
QPVP-C2 (7th)	69 ± 4	56 ± 5	13	4.0 ± 0.5
QPVP-C5 (1st)	81 ± 6	76 ± 5	5	1.5 ± 0.2
CMC (2nd)	76 ± 3	63 ± 4	10	2.3 ± 0.3
QPVP-C5 (3rd)	80 ± 4	69 ± 5	11	2.8 ± 0.3
CMC (4th)	71 ± 6	61 ± 4	10	3.1 ± 0.4
QPVP-C5 (5th)	75 ± 5	62 ± 6	13	3.5 ± 0.4
CMC (6th)	68 ± 3	53 ± 5	15	4.0 ± 0.7
QPVP-C5 (7th)	68 ± 6	51 ± 3	17	4 ± 1