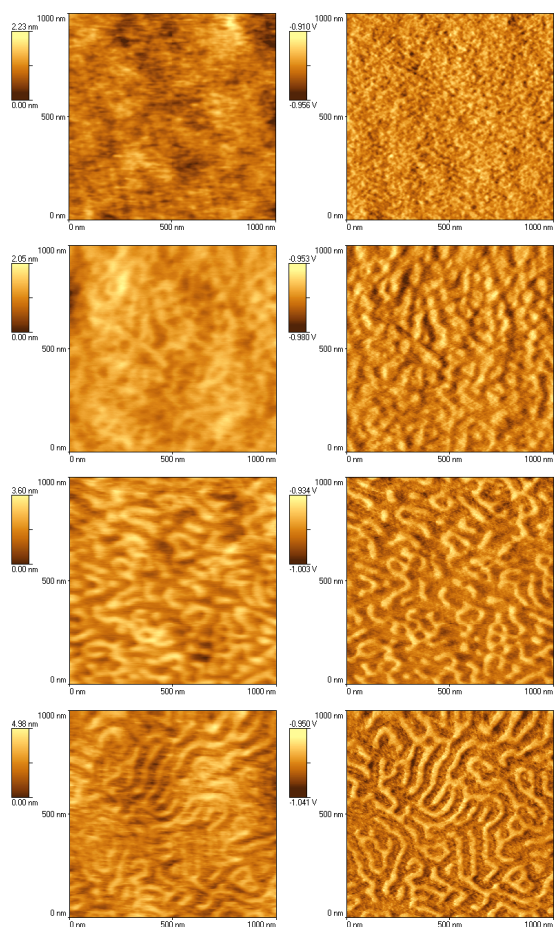
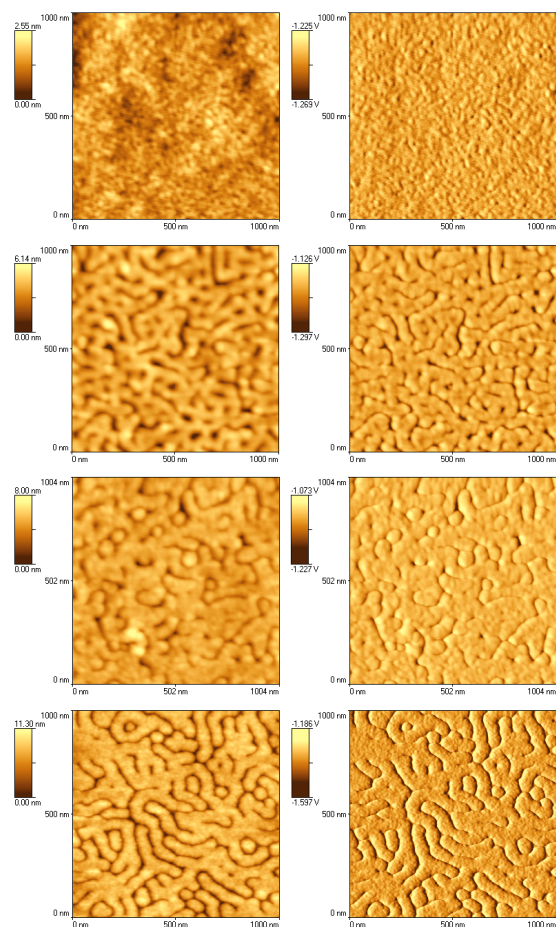


Supporting Information

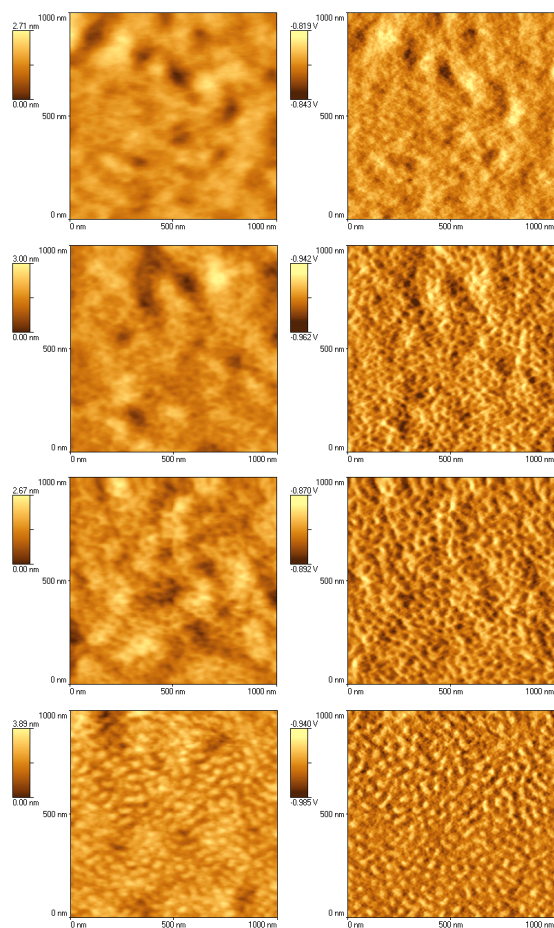
Atomic Force Microscopy Images



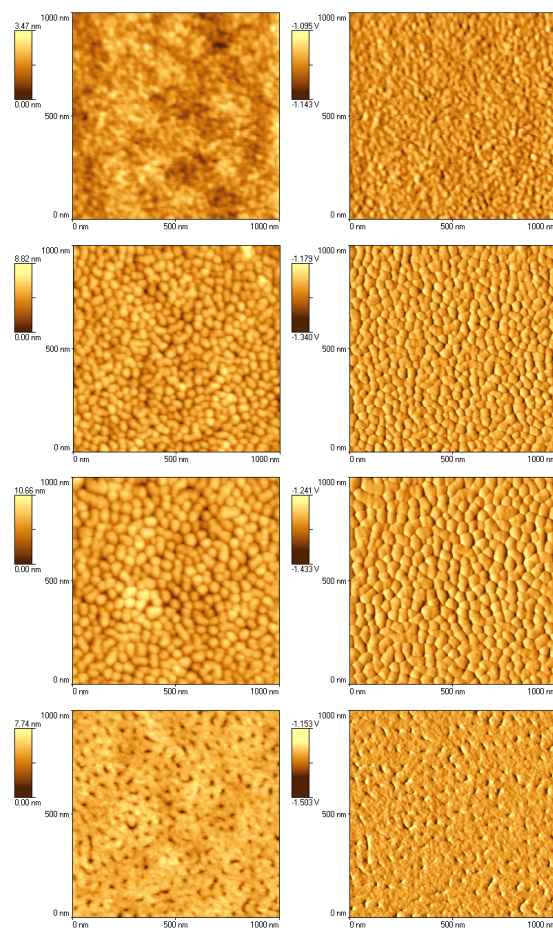
AFM topographic (left) and phase (right) images of the native AC films (*from top to bottom*): AC-0.10, AC-0.19, AC-0.24, and AC-0.45.



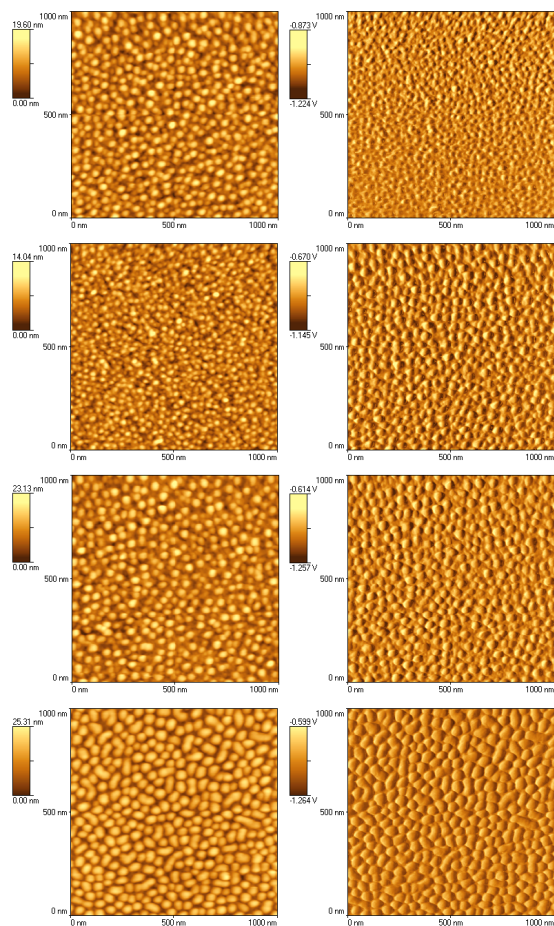
AFM topographic (left) and phase (right) images of the RuO₄ treated AC films (*from top to bottom*): AC-0.10, AC-0.19, AC-0.24, and AC-0.45.



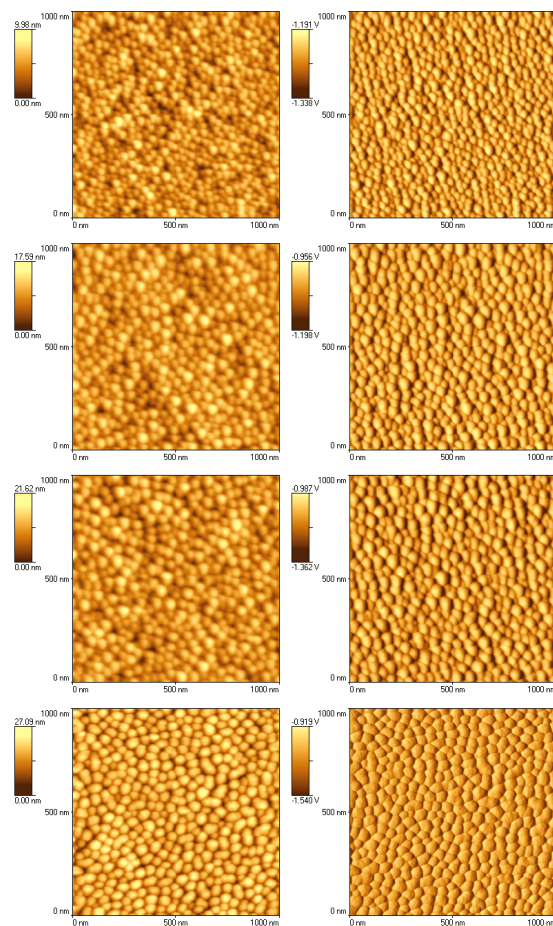
AFM topographic (left) and phase (right) images of the native TA films (*from top to bottom*): TA-0.10, TA-0.19, TA-0.24, and TA-0.45



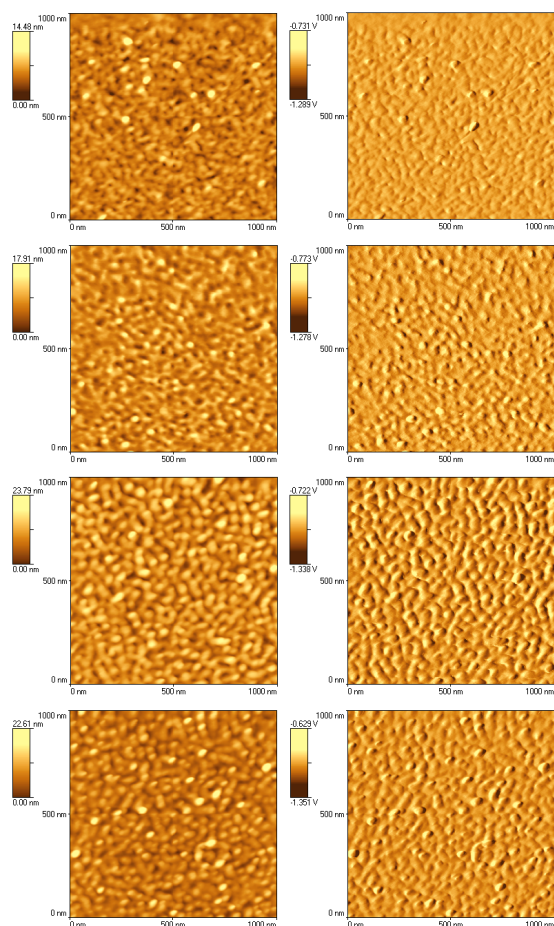
AFM topographic (left) and phase (right) images of the RuO₄ treated TA films (*from top to bottom*): TA-0.10, TA-0.19, TA-0.24, and TA-0.45



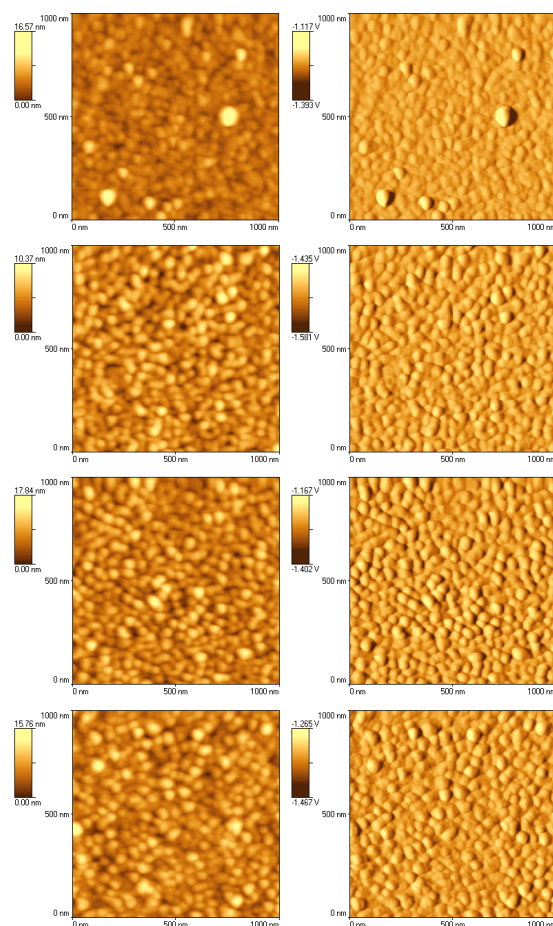
AFM topographic (left) and phase (right) images of the native SEA films (from top to bottom): SEA-0.10, SEA-0.19, SEA-0.24, and SEA-0.45



AFM topographic (left) and phase (right) images of the RuO₄ treated SEA films (from top to bottom): SEA-0.10, SEA-0.19, SEA-0.24, and SEA-0.45

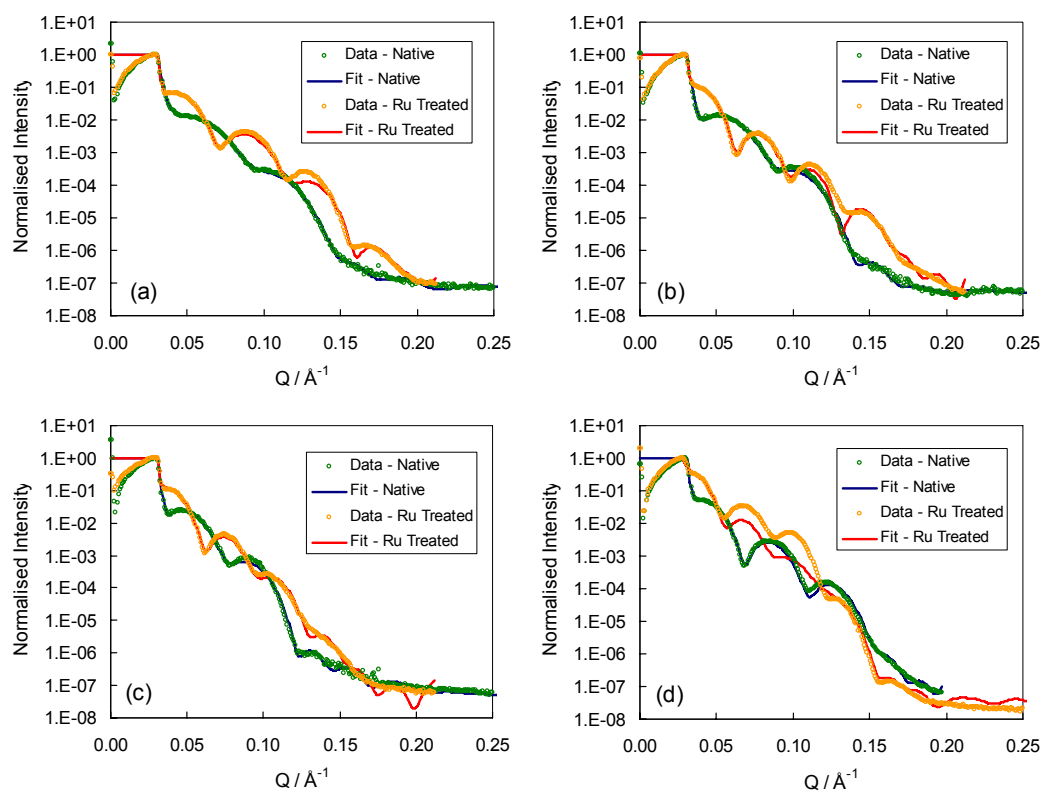


AFM topographic (left) and phase (right) images of the native SEC films (from top to bottom): SEC-0.10, SEC-0.19, SEC-0.24, and SEC-0.45



AFM topographic (left) and phase (right) images of the RuO₄ treated SEC films (from top to bottom): SEC-0.10, SEC-0.19, SEC-0.24, and SEC-0.45

X-ray Reflectometry Profiles



XR profiles of the native and RuO₄ treated TA films: (a) TA-0.10, (b) TA-0.19, (c) TA-0.20, and (d) TA-0.45

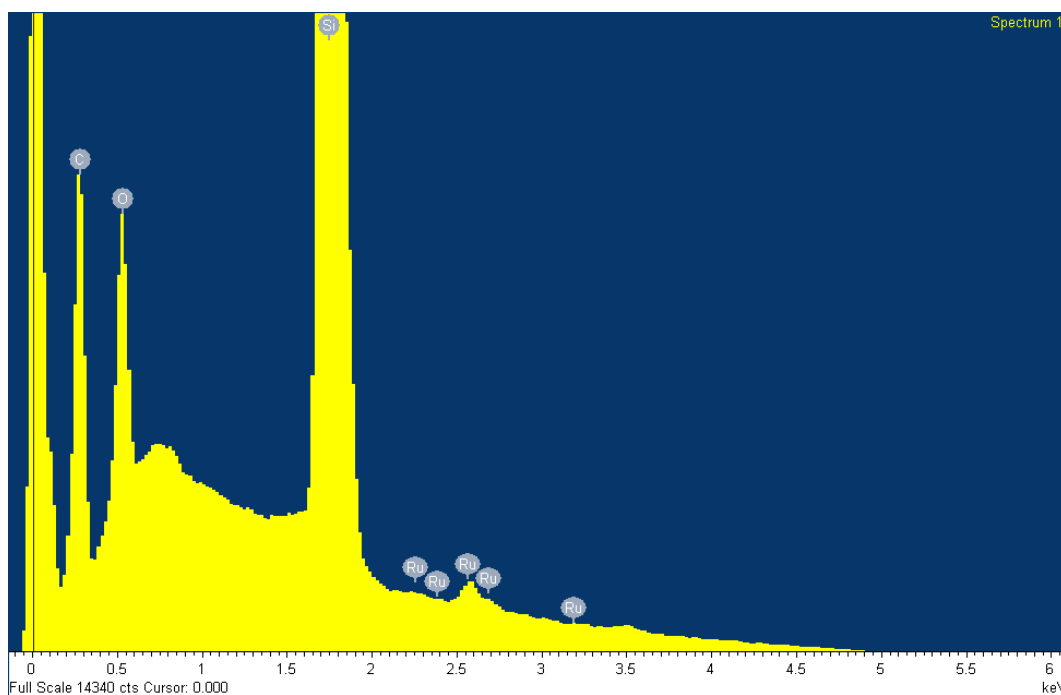
Ellipsometry Results

Film	MSE	Thickness	A	B	Non-Uni
<i>Native Films</i>					
AC-0.10	13.06	64.94 ± 0.36	1.492 ± 0.006	0.0022 ± 0.0008	–
AC-0.19	7.634	65.82 ± 0.09	1.501 ± 0.002	0.0039 ± 0.0005	–
AC-0.24	6.576	73.99 ± 0.07	1.512 ± 0.002	0.0035 ± 0.0003	–
AC-0.45	9.587	68.39 ± 0.15	1.599 ± 0.005	-0.0054 ± 0.0011	–
TA-0.10	7.272	7.32 ± 0.02	1.52	0.001	–
TA-0.19	7.300	9.42 ± 0.02	1.52	0.001	–
TA-0.24	5.766	11.20 ± 0.01	1.52	0.001	–
TA-0.45	13.02	14.48 ± 0.04	1.52	0.001	–
SEA-0.10	4.692	8.72 ± 0.03	1.52	0.001	–
SEA-0.19	4.405	11.42 ± 0.03	1.52	0.001	–
SEA-0.24	7.108	11.46 ± 0.04	1.52	0.001	–
SEA-0.45	5.053	14.29 ± 0.04	1.52	0.001	–
SEC-0.10	6.040	12.99 ± 0.04	1.52	0.001	–
SEC-0.19	4.900	13.04 ± 0.03	1.52	0.001	–
SEC-0.24	6.753	13.59 ± 0.04	1.52	0.001	–
SEC-0.45	5.831	14.57 ± 0.03	1.52	0.001	–
<i>RuO₄ Treated Films</i>					
AC-0.10	14.42	60.06 ± 0.35	1.450 ± 0.016	0.0332 ± 0.0037	15.22 ± 2.12
		8.85 ± 0.34	1.952 ± 0.348	-0.0903 ± 0.0882	
AC-0.19	12.11	58.32 ± 0.27	1.449 ± 0.013	0.0427 ± 0.0403	19.94 ± 0.96
		13.60 ± 0.30	1.832 ± 0.161	-0.0754 ± 0.0461	
AC-0.24	18.31	48.78 ± 0.38	1.377 ± 0.028	0.0705 ± 0.0087	10.65 ± 0.83
		29.70 ± 0.39	1.792 ± 0.070	-0.0396 ± 0.0154	
AC-0.45	1.509	62.05 ± 0.38	1.493 ± 0.021	0.0486 ± 0.0060	25.89 ± 1.37
		12.50 ± 0.40	2.222 ± 0.329	-0.1810 ± 0.0928	
TA-0.10	13.34	13.12 ± 0.14	1.652 ± 0.028	-0.0083 ± 0.0036	–
TA-0.19	12.08	13.36 ± 0.09	1.772 ± 0.028	-0.0175 ± 0.0046	–
TA-0.24	11.59	15.28 ± 0.10	1.689 ± 0.021	-0.0085 ± 0.0034	–
TA-0.45	15.55	19.11 ± 0.12	1.719 ± 0.022	-0.0113 ± 0.0039	–

MSE is the mean square error, Thickness refers to the thickness of the Cauchy layer used in the model, which had first and second coefficients of A and B. Non-Uni refers to the thickness non-uniformity of the sample (0% equates to a perfectly smooth surface).

For the AC films treated with RuO₄ the data could only be fitted using two Cauchy layers. The first layer is closer to the substrate and the second layer closer to the air/film surface.

EDX Spectrum



Sample EDX spectrum (RuO_4 treated TA-0.45) showing the carbon, oxygen, silicon and ruthenium peaks.