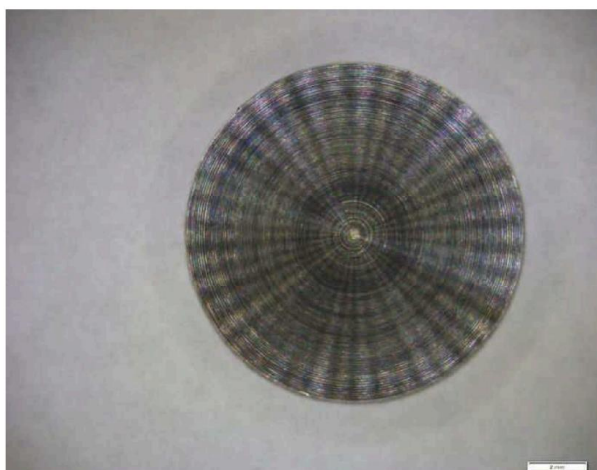


Melléklet

1. Sztereo mikroszkópos felvételek

Az alábbiakban láthatóak a sztereo mikroszkóppal készített felvételek a maratási előtti és utáni állapotokról. A képek jelölése a minta sorszáma és a nagyításra utal, pl. az S12_1 a 12-es minta 0,7×-es nagyítású képe, az S12_2 pedig ugyanezen korong 2×-es nagyítású képe.

1.1. Maratás előtti felvételek



S01_1



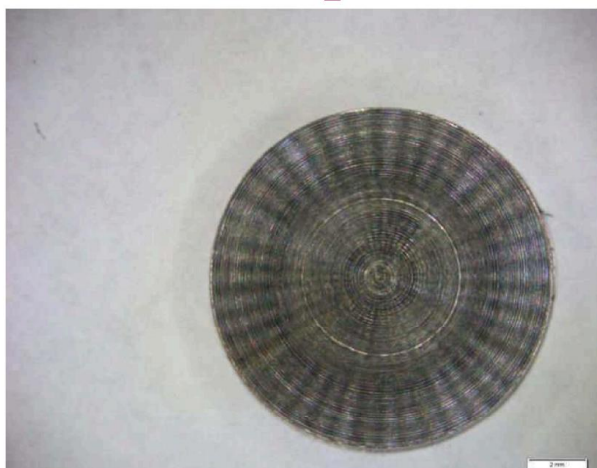
S01_2



S02_1



S02_2



S03_1



S03_2



S04_1



S04_2



S05_1



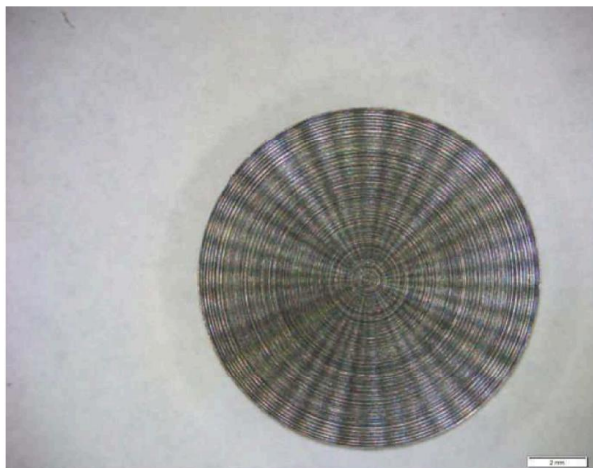
S05_2



S06_1



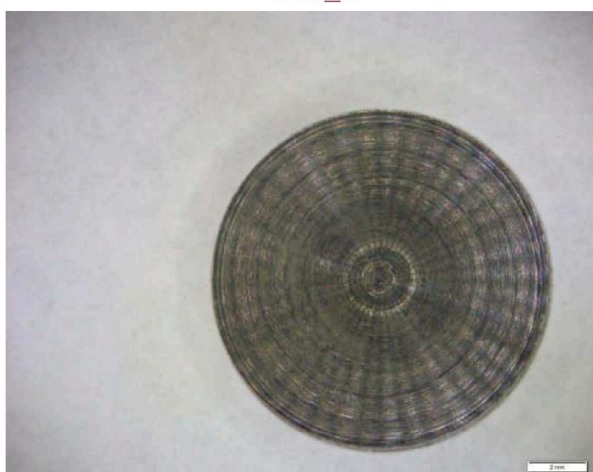
S06_2



S07_1



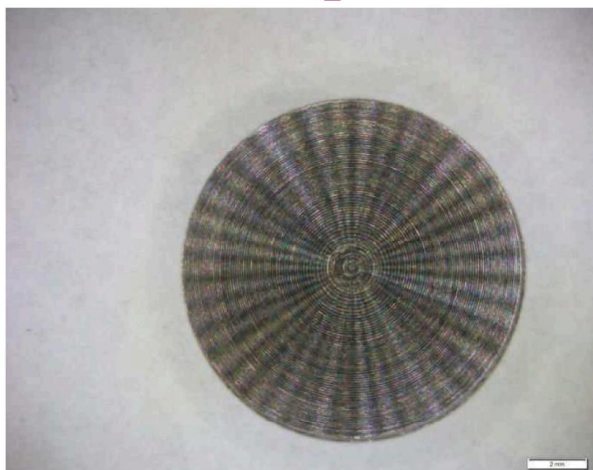
S07_2



S08_1



S08_2



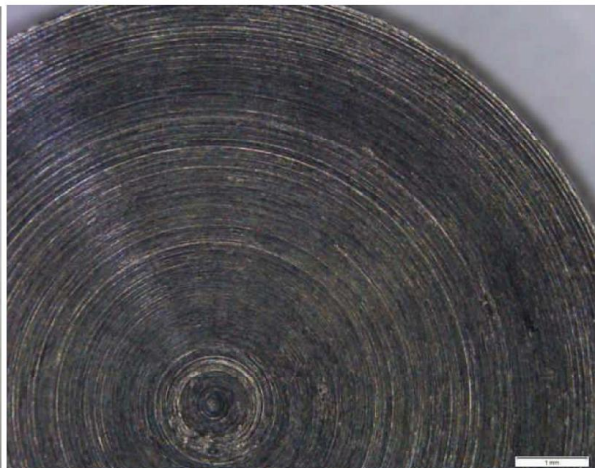
S09_1



S09_2



S10_1



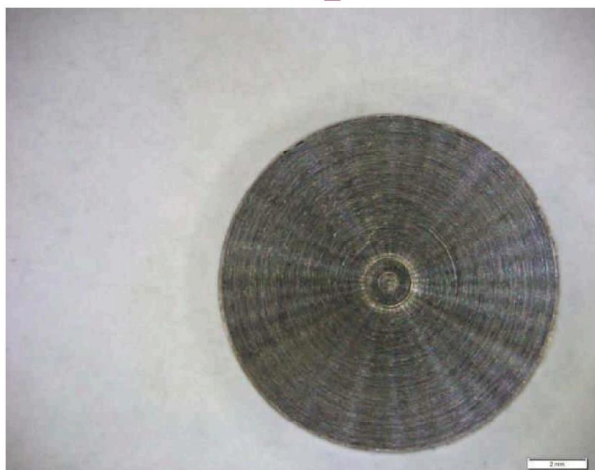
S10_2



S11_1



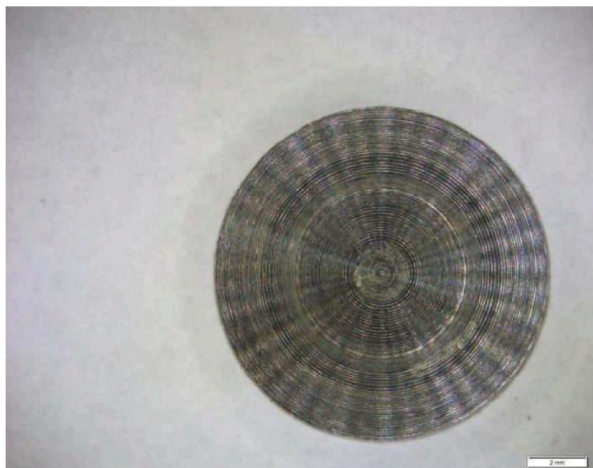
S11_2



S12_1



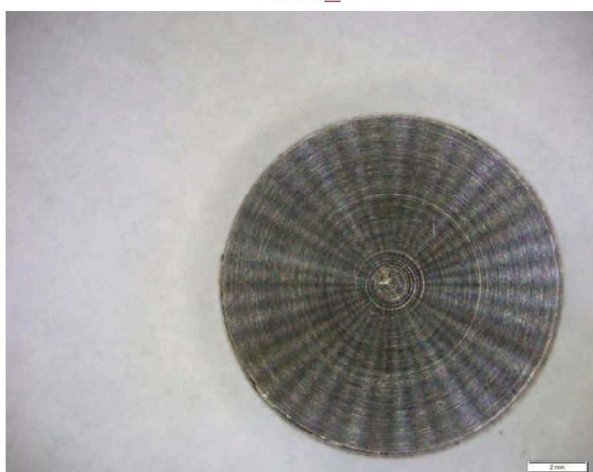
S12_2



S13_1



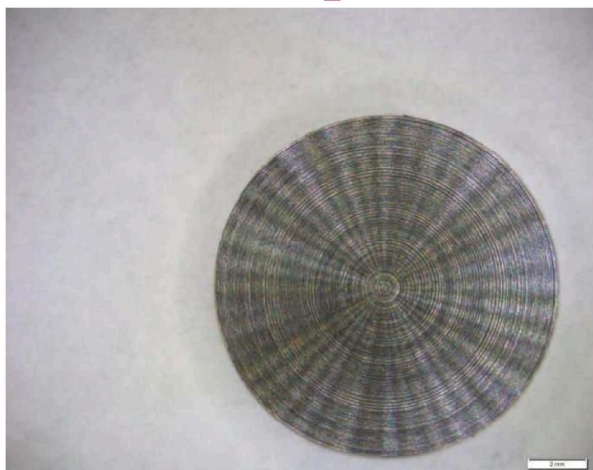
S13_2



S14_1



S14_2



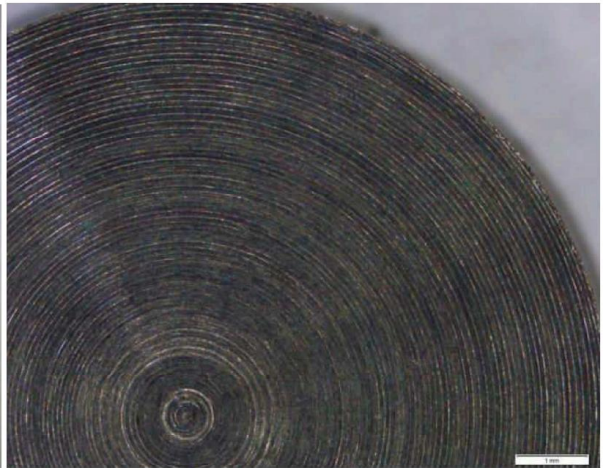
S15_1



S15_2



S16_1



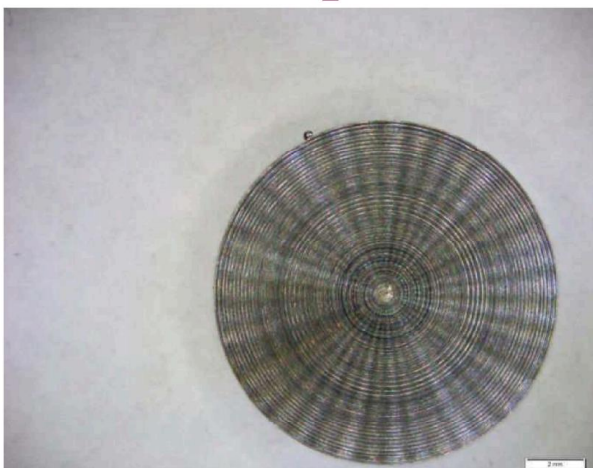
S16_2



S17_1



S17_2



S18_1



S18_2



S19_1



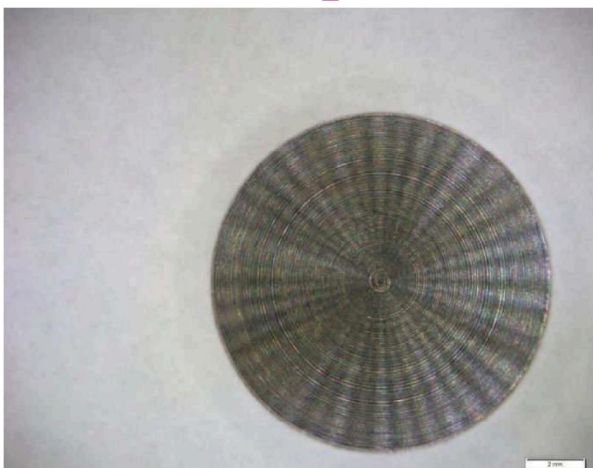
S19_2



S20_1



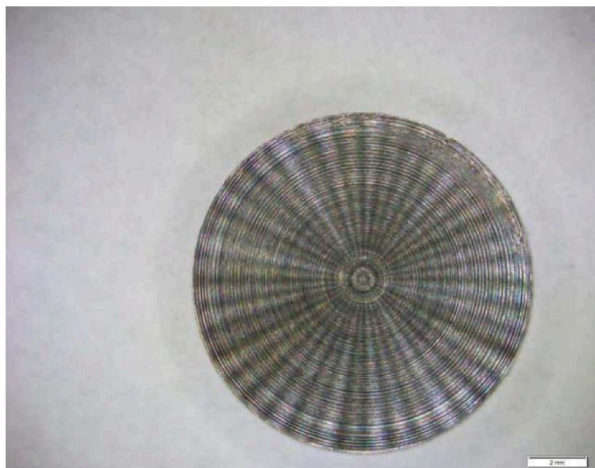
S20_2



S21_1



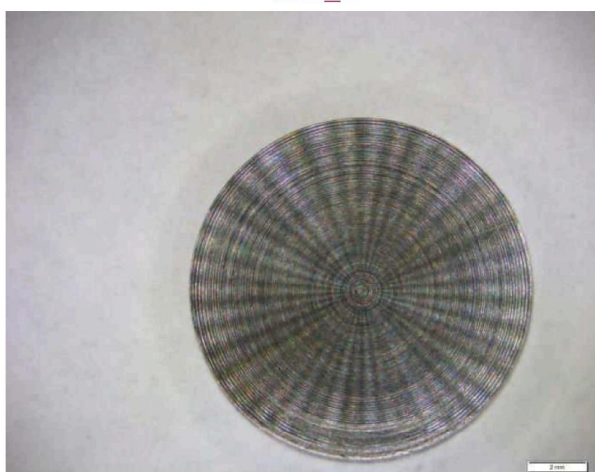
S21_2



S22_1



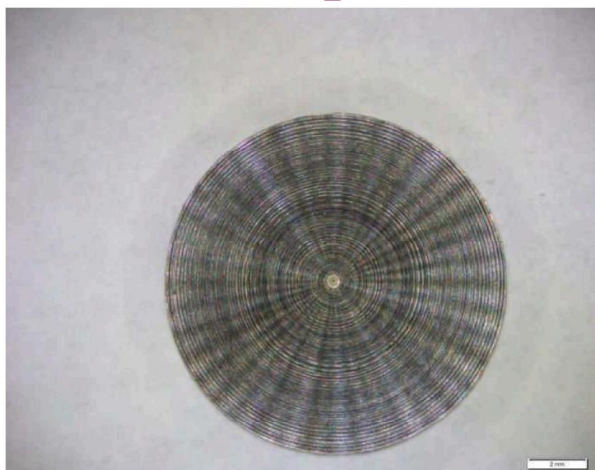
S22_2



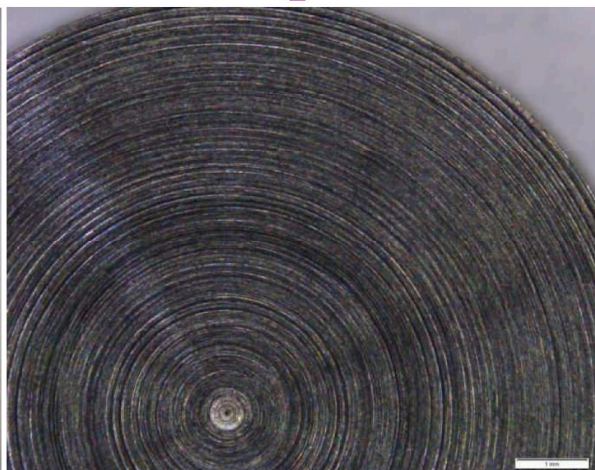
S23_1



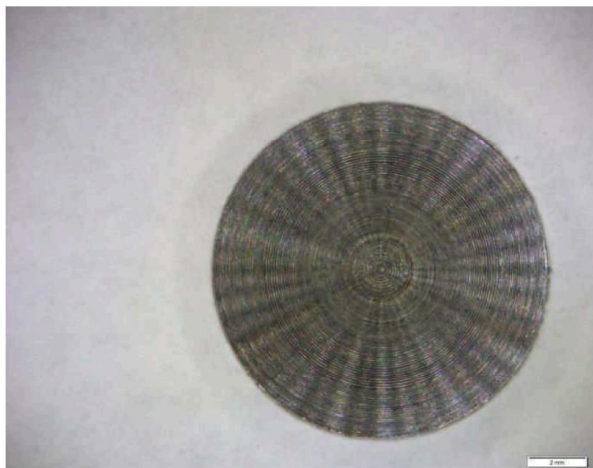
S23_2



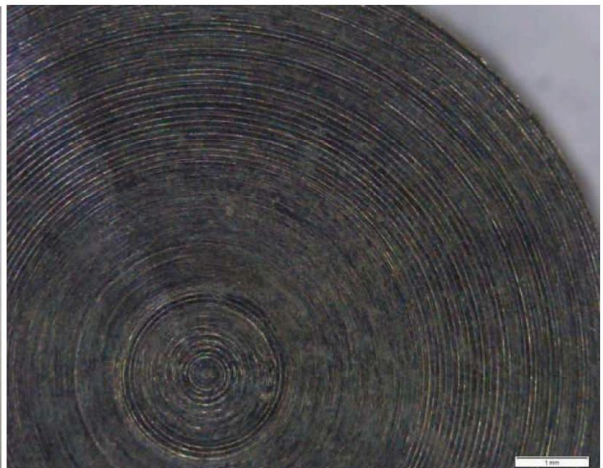
S24_1



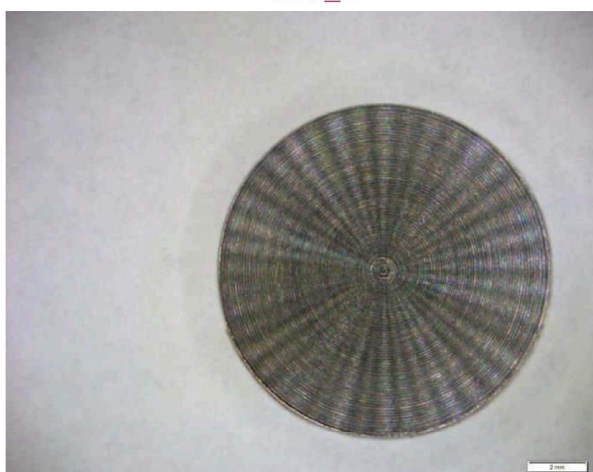
S24_2



S25_1



S25_2



S26_1



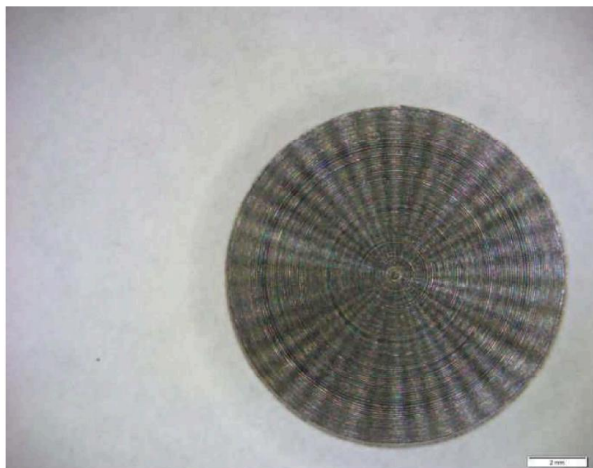
S26_2



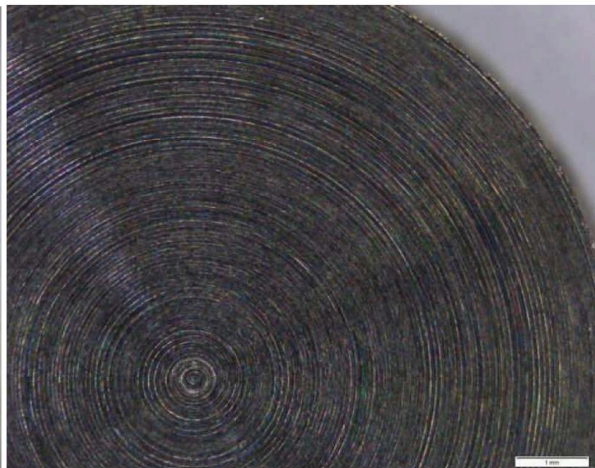
S27_1



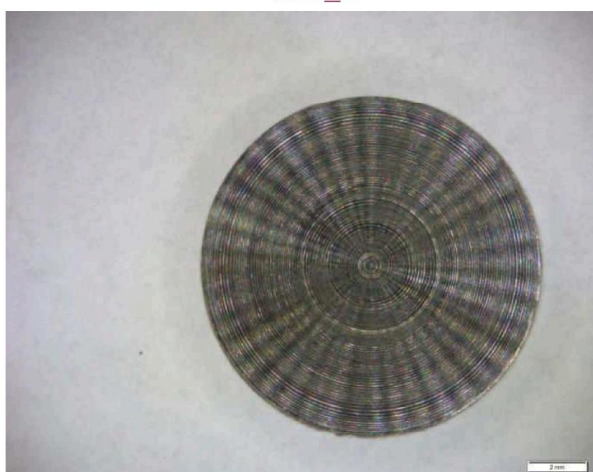
S27_2



S28_1



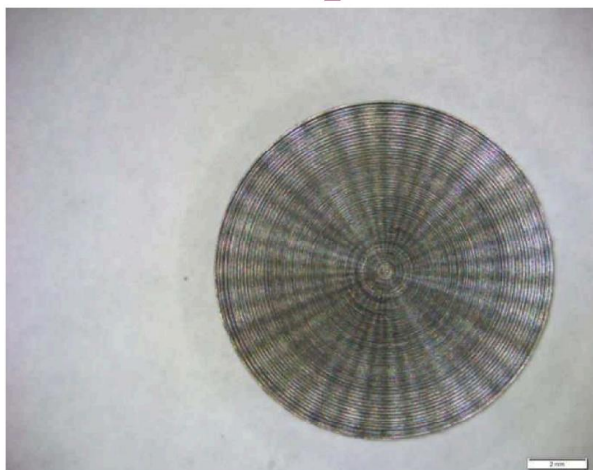
S28_2



S29_1



S29_2



S30_1



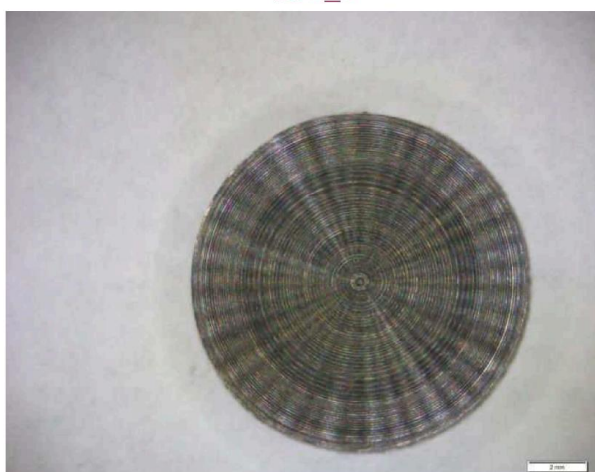
S30_2



S31_1



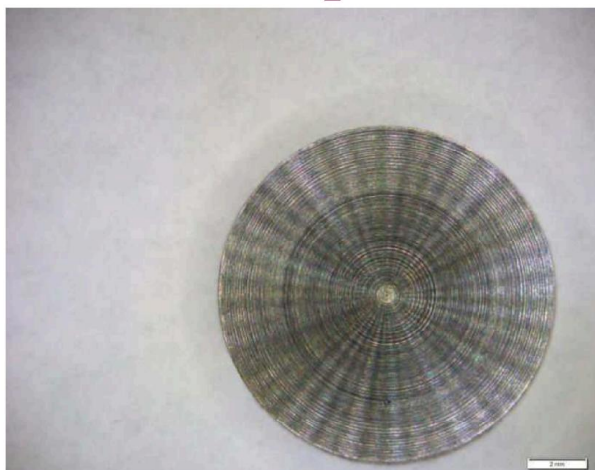
S31_2



S32_1



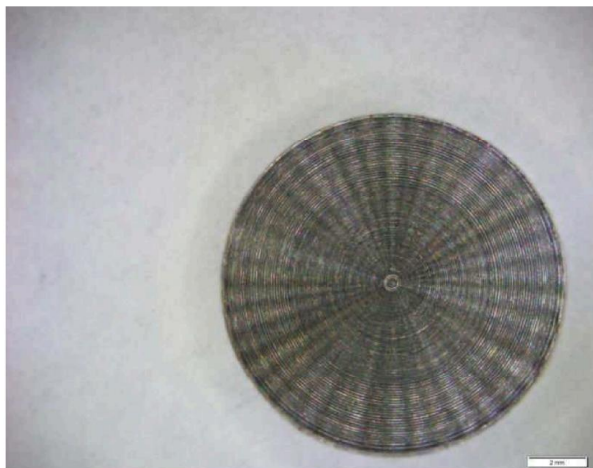
S32_2



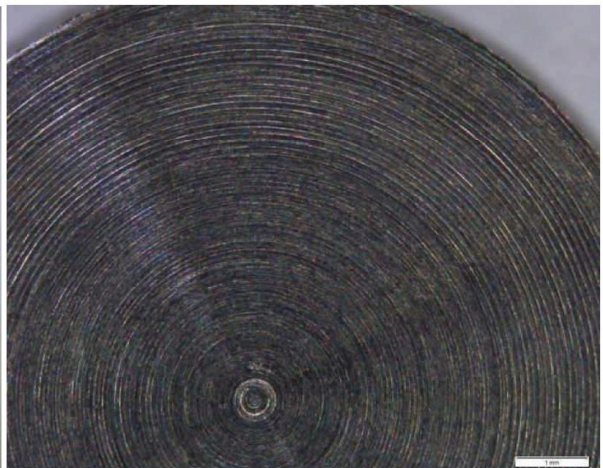
S33_1



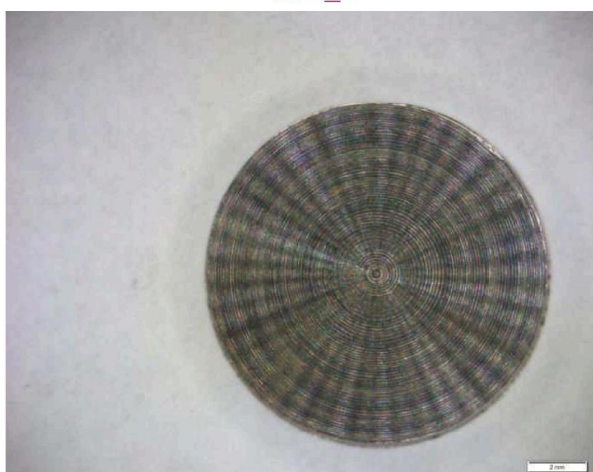
S33_2



S34_1



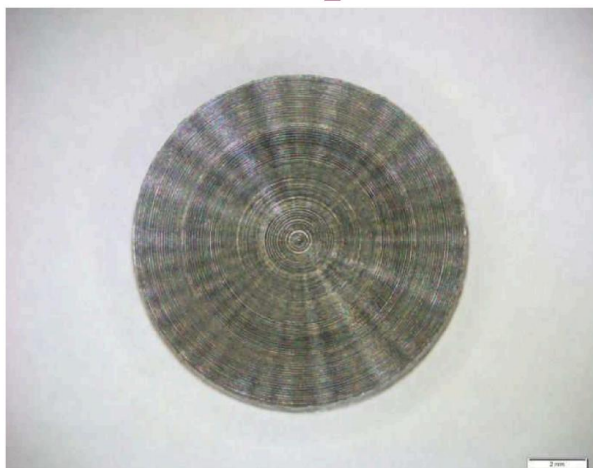
S34_2



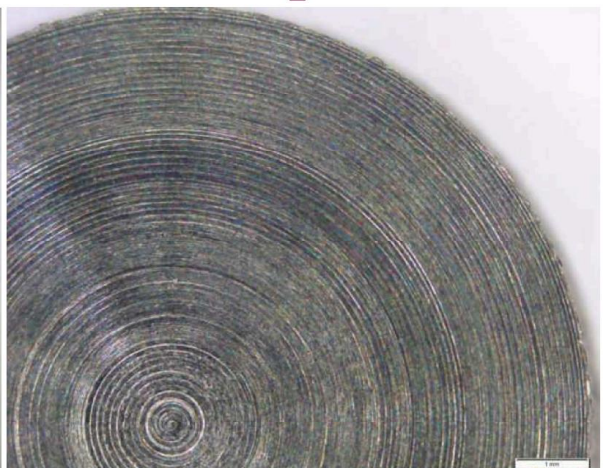
S35_1



S35_2

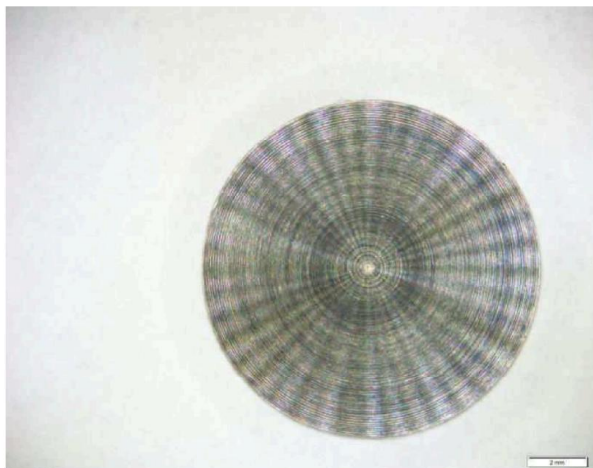


S36_1

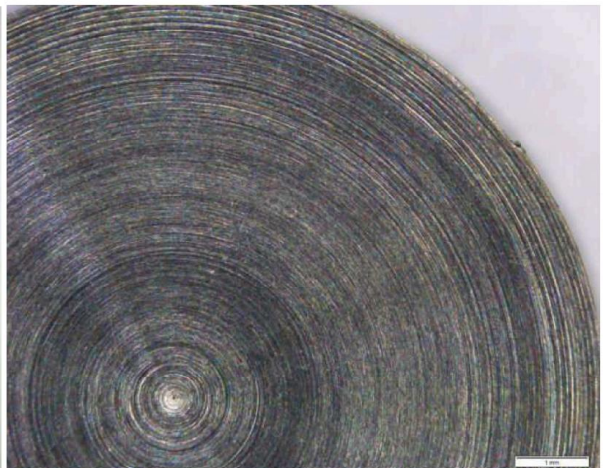


S36_2

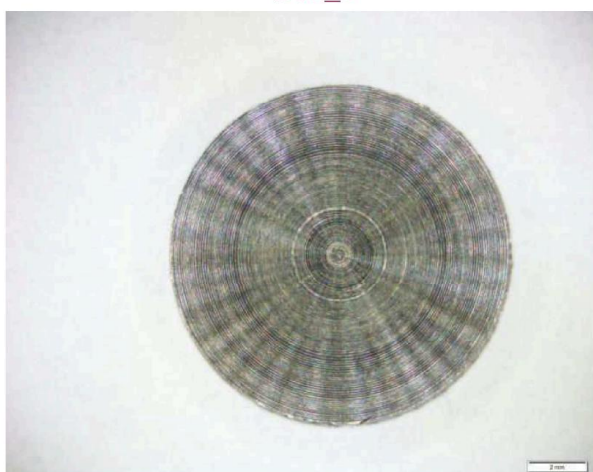
1.2. Maratás utáni felvételek



S01_1



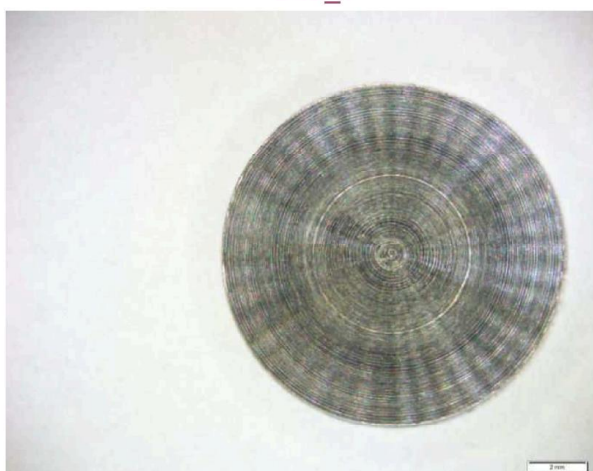
S01_2



S02_1



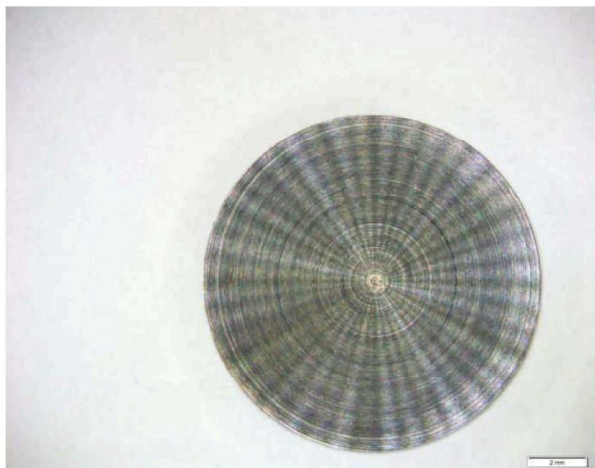
S02_2



S03_1



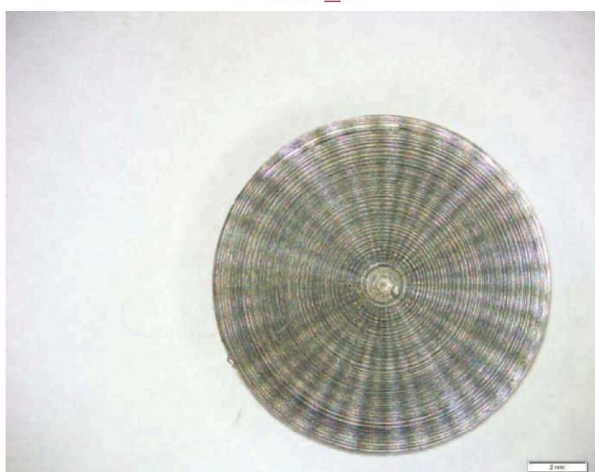
S03_2



S04_1



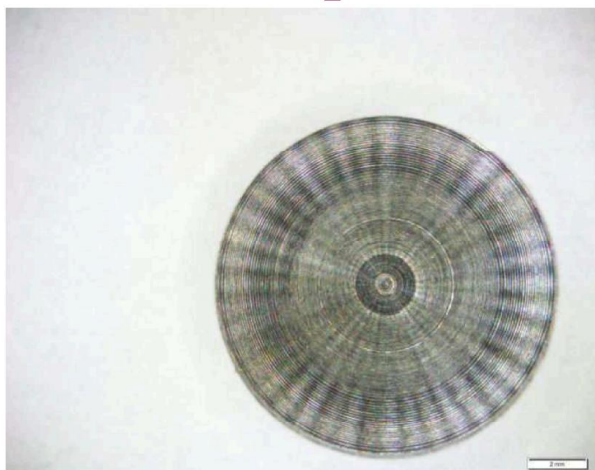
S04_2



S05_1



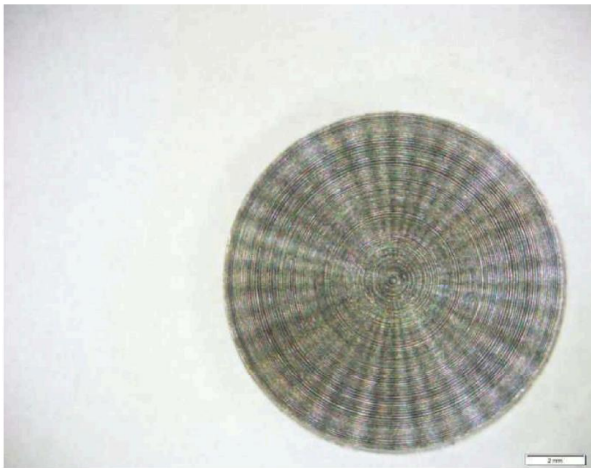
S05_2



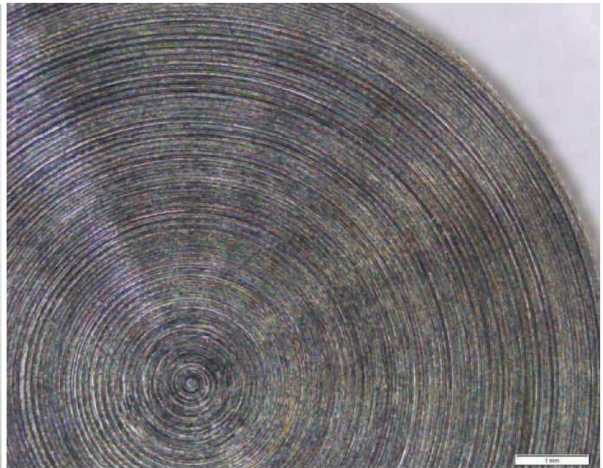
S06_1



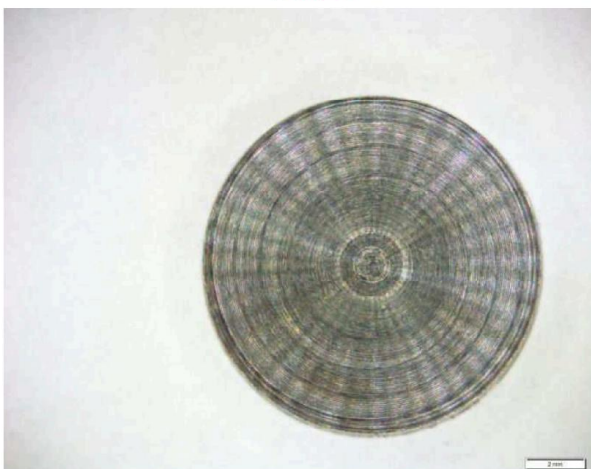
S06_2



S07_1



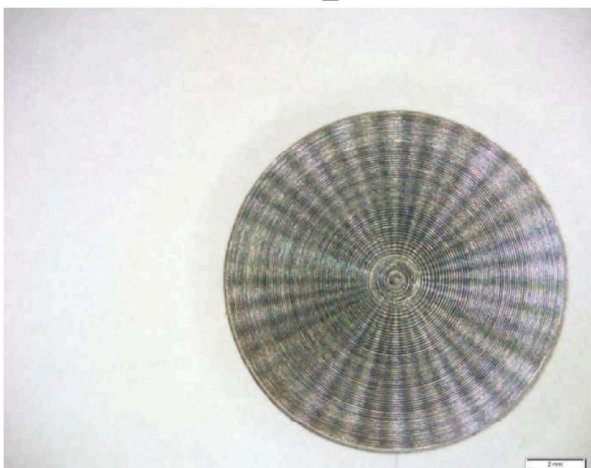
S07_2



S08_1



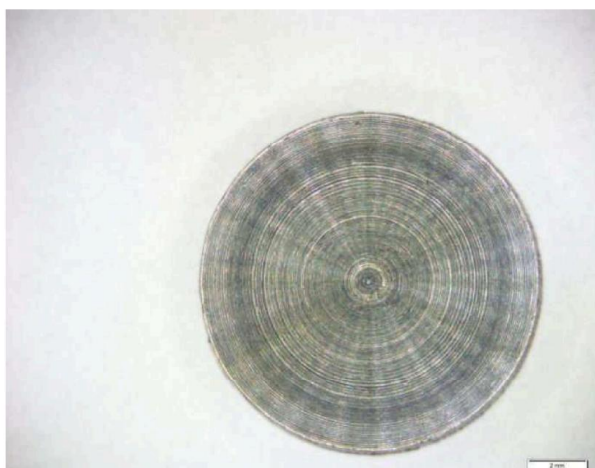
S08_2



S09_1



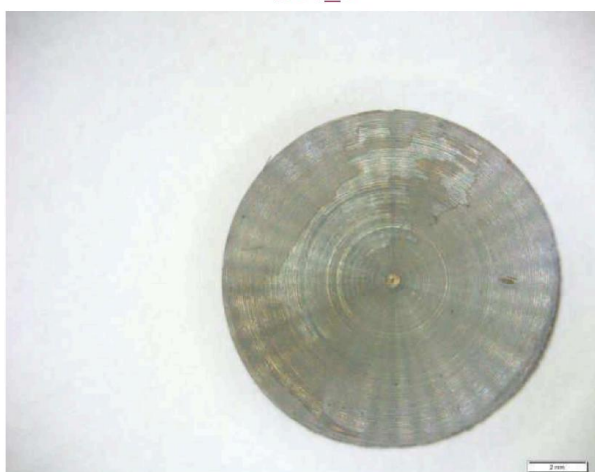
S09_2



S10_1



S10_2



S11_1



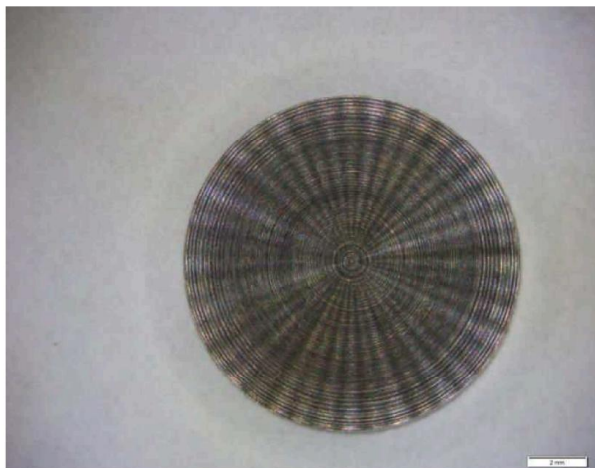
S11_2



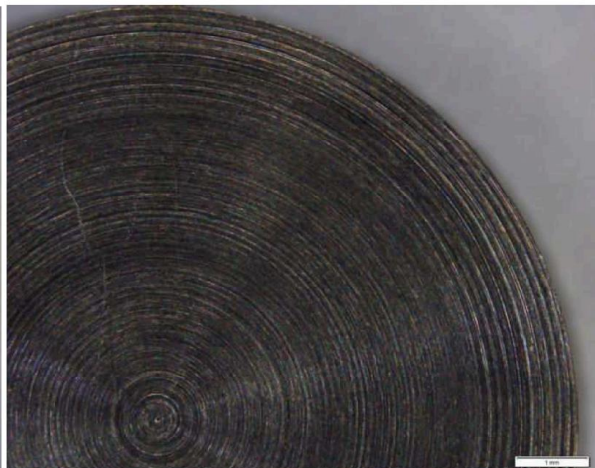
S12_1



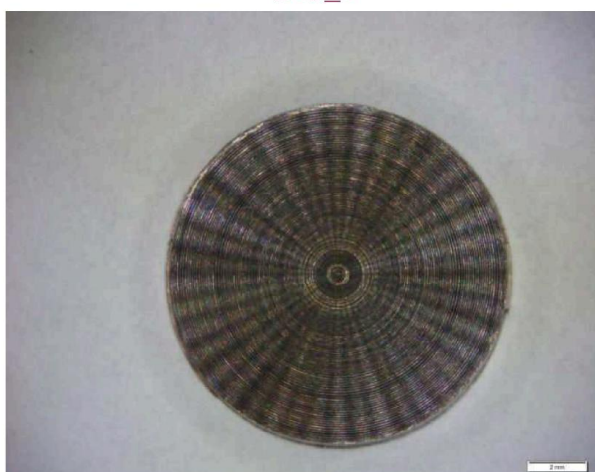
S12_2



S13_1



S13_2



S14_1



S14_2



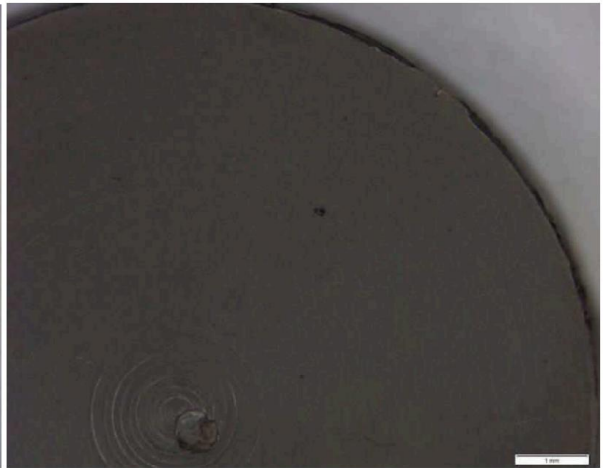
S15_1



S15_2



S16_1



S16_2



S17_1



S17_2



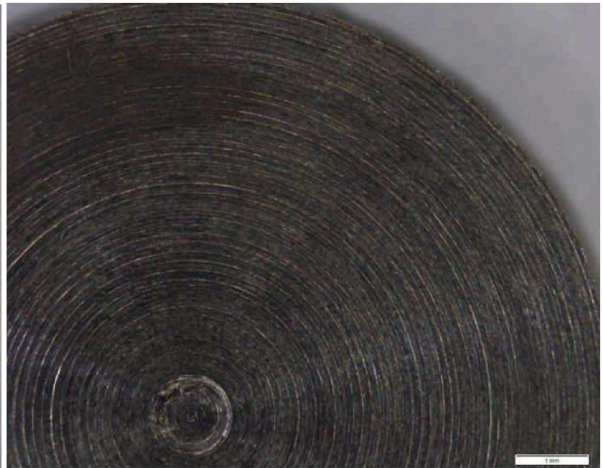
S18_1



S18_2



S19_1



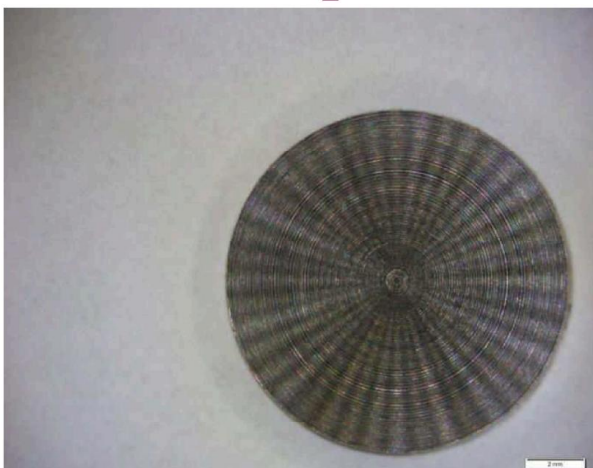
S19_2



S20_1



S20_2



S21_1



S21_2



S22_1



S22_2



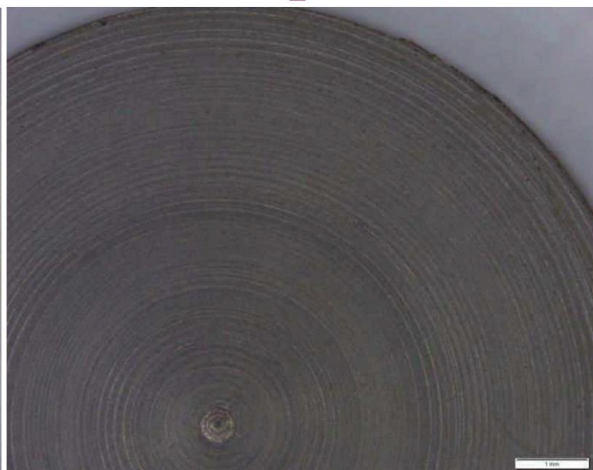
S23_1



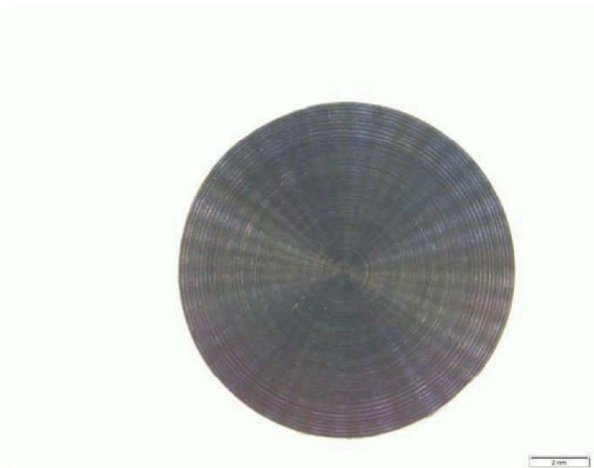
S23_2



S24_1



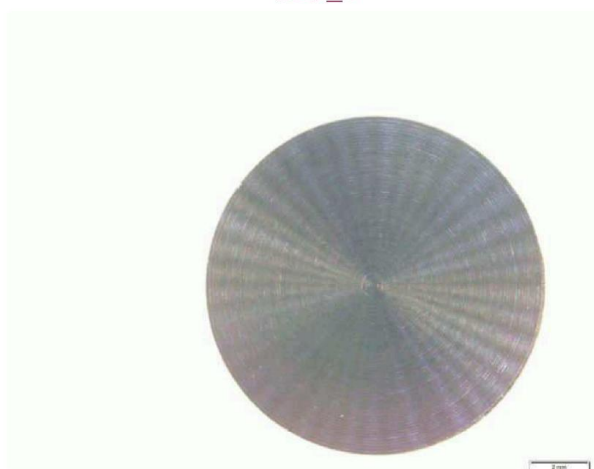
S24_2



S25_1



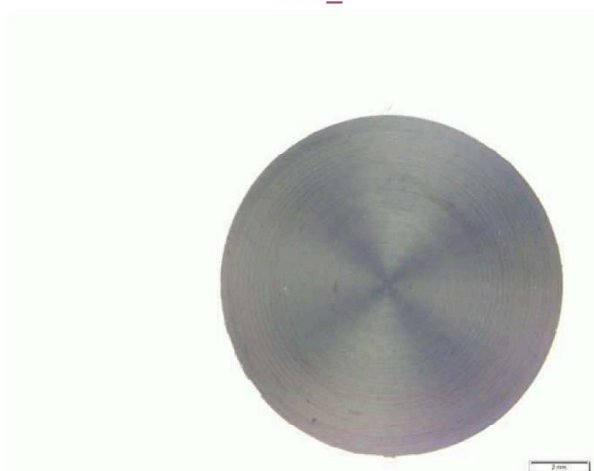
S25_2



S26_1



S26_2



S27_1



S27_2



S28_1



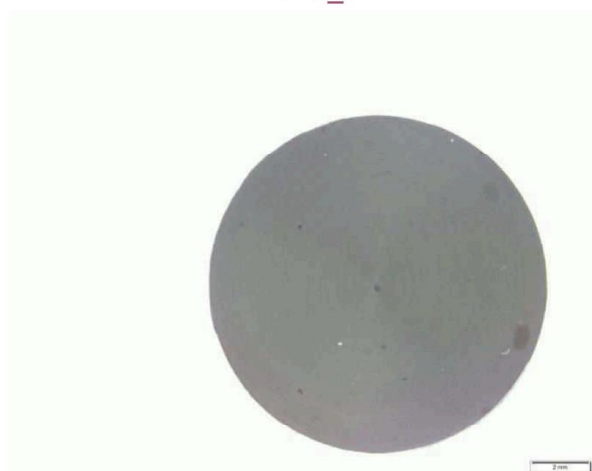
S28_2



S29_1



S29_2



S30_1



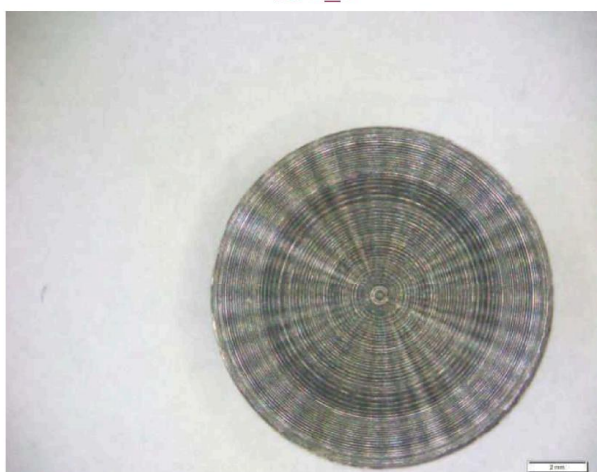
S30_2



S31_1



S31_2



S32_1



S32_2



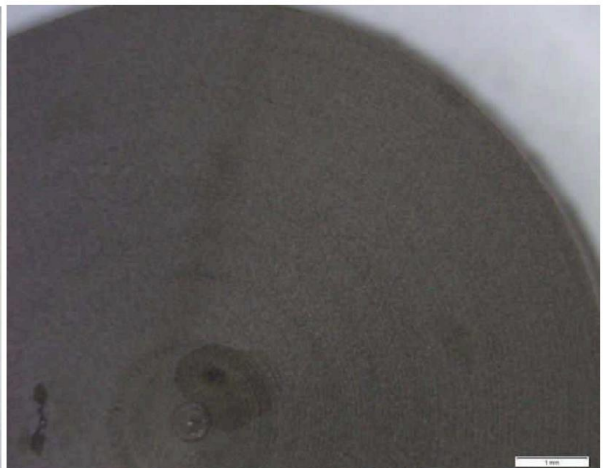
S33_1



S33_2



S34_1



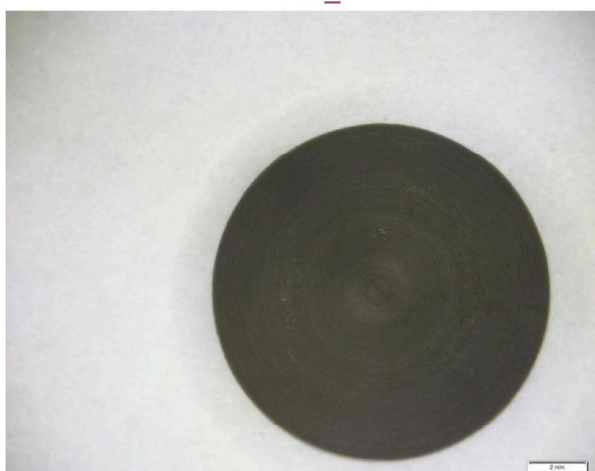
S34_2



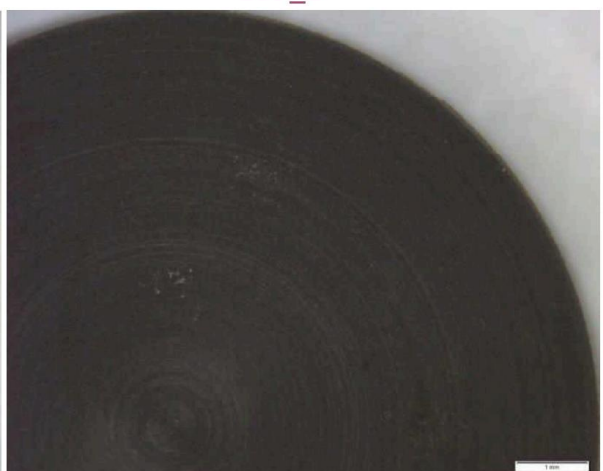
S35_1



S35_2



S36_1



S36_2

2. Tömeg- és felületi érdesség mérési eredmények

Az 1. táblázat tartalmazza a tömeg- és felületi érdesség mérési eredményeket mindegyik korongra. Mindegyik mérést háromszor végeztem el, a táblázat tartalmazza mindhárom mérés eredményét és az eredmények átlagát. A tömeg esetében az oszlopok elején jelöltem mely adatok vonatkoznak a felületkezelés előtte és utána.

20 °C - 10 sec						20 °C - 600 sec					
S 1	m (g)	#1	#2	#3	Átlag	S 2	m (g)	#1	#2	#3	Átlag
	Előtt	1,0522	1,0524	1,0523	1,0523		Előtt	1,0182	1,0183	1,0180	1,0182
	Után	1,0523	1,0525	1,0523	1,0524		Után	1,0181	1,0182	1,0183	1,0182
	Δm				-		Δm				0,0000
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,69	0,71	0,68	0,69		Után	0,6900	0,7700	0,7500	0,74
20 °C - 1800 sec						20 °C - 3600 sec					
S 3	m (g)	#1	#2	#3	Átlag	S 4	m (g)	#1	#2	#3	Átlag
	Előtt	1,0411	1,0410	1,0412	1,0411		Előtt	1,0499	1,0499	1,0498	1,0499
	Után	1,0414	1,0413	1,0410	1,0412		Után	1,0496	1,0496	1,0495	1,0496
	Δm				-		Δm				0,0003
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,7100	0,6000	0,5300	0,61		Után	0,4200	0,4800	0,4700	0,46
20 °C - 5400 sec						20 °C - 7200 sec					
S 5	m (g)	#1	#2	#3	Átlag	S 6	m (g)	#1	#2	#3	Átlag
	Előtt	1,0135	1,0137	1,0137	1,0136		Előtt	1,0197	1,0197	1,0196	1,0197
	Után	1,0136	1,0136	1,0134	1,0135		Után	1,0199	1,0195	1,0197	1,0197
	Δm				0,0001		Δm				0,0000
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,4500	0,3800	0,4200	0,42		Után	0,4700	0,5600	0,4600	0,50
40 °C - 10 sec						40 °C - 600 sec					
S 7	m (g)	#1	#2	#3	Átlag	S 8	m (g)	#1	#2	#3	Átlag
	Előtt	1,0300	1,0302	1,0302	1,0301		Előtt	1,0420	1,0423	1,0422	1,0422
	Után	1,0302	1,0302	1,0302	1,0302		Után	1,0421	1,0421	1,0421	1,0421
	Δm				-		Δm				0,0001
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,5600	0,7000	0,5900	0,62		Után	0,4100	0,4500	0,5200	0,46
40 °C - 1800 sec						40 °C - 3600 sec					
S 9	m (g)	#1	#2	#3	Átlag	S 10	m (g)	#1	#2	#3	Átlag
	Előtt	1,0362	1,0363	1,0359	1,0361		Előtt	1,0480	1,0482	1,0480	1,0481
	Után	1,0360	1,0360	1,0360	1,0360		Után	1,0480	1,0481	1,0480	1,0480
	Δm				0,0001		Δm				0,0000
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,7900	0,7000	0,6400	0,7100		Után	0,6500	0,5600	0,4600	0,56
40 °C - 5400 sec						40 °C - 7200 sec					
S 11	m (g)	#1	#2	#3	Átlag	S 12	m (g)	#1	#2	#3	Átlag
	Előtt	1,0010	1,0011	1,0010	1,0010		Előtt	1,0079	1,0078	1,0078	1,0078
	Után	1,0000	1,0000	0,9999	1,0000		Után	1,0069	1,0068	1,0068	1,0068
	Δm				0,0011		Δm				0,0010
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,5900	0,6200	0,5300	0,58		Után	0,6000	0,5800	0,6900	0,62

Melléklet 1.a táblázat: Tömeg- és érdesség mérési eredmények S1-12

60 °C - 10 sec						60 °C - 600 sec					
S 13	m (g)	#1	#2	#3	Átlag	S 14	m (g)	#1	#2	#3	Átlag
	Előtt	1,0183	1,0182	1,0187	1,0184		Előtt	1,0592	1,0593	1,0593	1,0593
	Után	1,0183	1,0182	1,0183	1,0183		Után	1,0591	1,0593	1,0592	1,0592
	Δm				0,0001		Δm				0,0001
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,7500	0,7100	0,6500	0,70		Után	0,6500	0,6600	0,6700	0,6600
60 °C - 1800 sec						60 °C - 3600 sec					
S 15	m (g)	#1	#2	#3	Átlag	S 16	m (g)	#1	#2	#3	Átlag
	Előtt	1,0268	1,0268	1,0269	1,0268		Előtt	1,0599	1,0600	1,0600	1,0600
	Után	1,0263	1,0263	1,0263	1,0263		Után	1,0431	1,0430	1,0432	1,0431
	Δm				0,0005		Δm				0,0169
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,6700	0,6700	0,6800	0,6733		Után	0,5300	0,5900	0,4700	0,53
60 °C - 5400 sec						60 °C - 7200 sec					
S 17	m (g)	#1	#2	#3	Átlag	S 18	m (g)	#1	#2	#3	Átlag
	Előtt	1,0508	1,0509	1,0508	1,0508		Előtt	1,0345	1,0347	1,0346	1,0346
	Után	1,0475	1,0476	1,0477	1,0476		Után	1,0297	1,0297	1,0296	1,0297
	Δm				0,0032		Δm				0,0049
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,4200	0,6000	0,6100	0,54		Után	1,1000	0,9600	0,7600	0,9400
20 °C - 10 sec						20 °C - 600 sec					
S 19	m (g)	#1	#2	#3	Átlag	S 20	m (g)	#1	#2	#3	Átlag
	Előtt	1,0297	1,0298	1,0298	1,0298		Előtt	1,0607	1,0611	1,0611	1,0610
	Után	1,0299	1,0298	1,0297	1,0298		Után	1,0609	1,0611	1,0611	1,0610
	Δm				0,0000		Δm				-
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,6400	0,5600	0,6700	0,6233		Után	1,3100	1,2500	1,0100	1,1900
20 °C - 1800 sec						20 °C - 3600 sec					
S 21	m (g)	#1	#2	#3	Átlag	S 22	m (g)	#1	#2	#3	Átlag
	Előtt	1,0422	1,0421	1,0421	1,0421		Előtt	1,0346	1,0343	1,0344	1,0344
	Után	1,0419	1,0418	1,0418	1,0418		Után	1,0342	1,0346	1,0345	1,0344
	Δm				0,0003		Δm				0,0000
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,6500	0,5400	0,6800	0,6233		Után	0,7700	0,6200	0,6700	0,6867
20 °C - 5400 sec						20 °C - 7200 sec					
S 23	m (g)	#1	#2	#3	Átlag	S 24	m (g)	#1	#2	#3	Átlag
	Előtt	1,0347	1,0346	1,0348	1,0347		Előtt	1,0561	1,0563	1,0562	1,0562
	Után	1,0345	1,0344	1,0343	1,0344		Után	1,0545	1,0547	1,0546	1,0546
	Δm				0,0003		Δm				0,0016
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,4900	0,5200	0,5200	0,5100		Után	0,6300	0,6800	0,6100	0,6400
40 °C - 10 sec						40 °C - 600 sec					
S 25	m (g)	#1	#2	#3	Átlag	S 26	m (g)	#1	#2	#3	Átlag
	Előtt	1,0235	1,0234	1,0234	1,0234		Előtt	1,0539	1,0540	1,0540	1,0540
	Után	1,0231	1,0232	1,0231	1,0231		Után	1,0536	1,0537	1,0538	1,0537
	Δm				0,0003		Δm				0,0003
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,6800	0,7000	0,5800	0,6533		Után	0,6800	0,6900	0,5600	0,6433

Melléklet 1.b táblázat: Tömeg- és érdesség mérési eredmények S13-26

40 °C - 1800 sec						40 °C - 3600 sec					
S 27	m (g)	#1	#2	#3	Átlag	S 28	m (g)	#1	#2	#3	Átlag
	Előtt	1,0601	1,0600	1,0599	1,0600		Előtt	1,0266	1,0265	1,0266	1,0266
	Után	1,0588	1,0589	1,0588	1,0588		Után	1,0245	1,0244	1,0243	1,0244
	Δm				0,0012		Δm				0,0022
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,9200	0,8800	0,8600	0,8867		Után	0,5200	0,5100	0,5800	0,5367
40 °C - 5400 sec						40 °C - 7200 sec					
S 29	m (g)	#1	#2	#3	Átlag	S 30	m (g)	#1	#2	#3	Átlag
	Előtt	1,0157	1,0156	1,0157	1,0157		Előtt	1,0344	1,0343	1,0345	1,0344
	Után	1,0126	1,0125	1,0124	1,0125		Után	1,0296	1,0297	1,0296	1,0296
	Δm				0,0032		Δm				0,0048
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,5700	0,5500	0,5200	0,5467		Után	0,6700	0,6600	0,6400	0,6567
60 °C - 10 sec						60 °C - 600 sec					
S 31	m (g)	#1	#2	#3	Átlag	S 32	m (g)	#1	#2	#3	Átlag
	Előtt	1,0252	1,0254	1,0255	1,0254		Előtt	1,0214	1,0213	1,0213	1,0213
	Után	1,0251	1,0251	1,0250	1,0251		Után	1,0208	1,0207	1,0209	1,0208
	Δm				0,0003		Δm				0,0005
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,6600	0,7500	0,7900	0,7333		Után	0,7600	0,7100	0,7100	0,7267
60 °C - 1800 sec						60 °C - 3600 sec					
S 33	m (g)	#1	#2	#3	Átlag	S 34	m (g)	#1	#2	#3	Átlag
	Előtt	1,0232	1,0233	1,0235	1,0233		Előtt	1,0343	1,0344	1,0344	1,0344
	Után	1,0214	1,0214	1,0213	1,0214		Után	1,0285	1,0284	1,0285	1,0285
	Δm				0,0020		Δm				0,0059
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	0,5900	0,6000	0,6800	0,6233		Után	0,6700	0,6800	0,6900	0,6800
60 °C - 5400 sec						60 °C - 7200 sec					
S 35	m (g)	#1	#2	#3	Átlag	S 36	m (g)	#1	#2	#3	Átlag
	Előtt	1,0214	1,0216	1,0216	1,0215		Előtt	1,0129	1,0130	1,0131	1,0130
	Után	1,0154	1,0153	1,0152	1,0153		Után	1,0003	1,0002	1,0003	1,0003
	Δm				0,0062		Δm				0,0127
	Ra (μm)	#1	#2	#3	Átlag		Ra (μm)	#1	#2	#3	Átlag
	Után	1,6000	1,7600	1,7900	1,7167		Után	0,6500	0,6200	0,6100	0,6267

Melléklet 1.c táblázat: Tömeg- és érdesség mérési eredmények S27-36

3. Átmérő- és vastagságmérési eredmények

Az előző táblázathoz hasonlóan, ebben a 2. táblázatban is a lemért korongokhoz tartozó mérési adatok, illetve azok átlagai találhatóak. A 3. táblázat a számított térfogati és sűrűségértékeket mutatja.

S 1	Átmérő [mm]				S 19	Átmérő [mm]					
		#1	#2	#3		Átlag		#1	#2	#3	Átlag
	Előtt	12,06	12,03	12,07		12,05	Előtt	12,09	12,09	12,09	12,09
	Után	12,06	12,03	12,07		12,05	Után	12,06	12,08	12,09	12,08
	Vastgság [mm]					Vastgság [mm]					
			#2	#3		Átlag		#1	#2	#3	Átlag
	Előtt	2,12	2,1	2,15		2,12	Előtt	2,01	2,03	1,99	2,01
	Után	2,12	2,1	2,15	2,12	Után	1,99	2	2	1,997	
S 3	Átmérő [mm]				S 21	Átmérő [mm]					
		#1	#2	#3		Átlag		#1	#2	#3	Átlag
	Előtt	12,18	12,22	12,19		12,20	Előtt	12,23	12,21	12,2	12,21
	Után	12,15	12,18	12,18		12,17	Után	12,14	12,15	12,14	12,14
	Vastgság [mm]					Vastgság [mm]					
		#1	#2	#3		Átlag		#1	#2	#3	Átlag
	Előtt	1,99	2,04	2,03		2,02	Előtt	2,08	2,09	2,11	2,093
	Után	1,95	2,01	1,96	1,97	Után	2,05	2,04	2,03	2,04	
S 6	Átmérő [mm]				S 24	Átmérő [mm]					
		#1	#2	#3		Átlag		#1	#2	#3	Átlag
	Előtt	12,06	12,09	12,08		12,08	Előtt	12,14	12,15	12,14	12,14
	Után	12,03	12,04	12,04		12,04	Után	12,07	12,09	12,1	12,09
	Vastgság [mm]					Vastgság [mm]					
		#1	#2	#3		Átlag		#1	#2	#3	Átlag
	Előtt	2,01	2,02	2,01		2,01	Előtt	2,07	2,1	2,07	2,08
	Után	1,96	2,03	1,99	1,99	Után	2	2,06	2,02	2,027	
S 7	Átmérő [mm]				S 25	Átmérő [mm]					
		#1	#2	#3		Átlag		#1	#2	#3	Átlag
	Előtt	12,09	12,1	12,09		12,09	Előtt	11,89	11,87	11,92	11,89
	Után	12,1	12,1	12,08		12,09	Után	11,92	11,88	11,88	11,89
	Vastgság [mm]					Vastgság [mm]					
		#1	#2	#3		Átlag		#1	#2	#3	Átlag
	Előtt	2	2,01	1,98		2,00	Előtt	2,03	2,04	2,05	2,04
	Után	2,01	1,98	2	2,00	Után	2,02	2,02	2,05	2,03	
S 9	Átmérő [mm]				S 27	Átmérő [mm]					
		#1	#2	#3		Átlag		#1	#2	#3	Átlag
	Előtt	12,09	12,07	12,11		12,09	Előtt	12,09	12,1	12,09	12,09
	Után	12,08	12,07	12,06		12,07	Után	12,08	12,07	12,1	12,08
	Vastgság [mm]					Vastgság [mm]					
		#1	#2	#3		Átlag		#1	#2	#3	Átlag
	Előtt	2,03	2,03	2,05		2,04	Előtt	2,09	2,06	2,07	2,073
	Után	2,03	1,97	2,01	2,00	Után	2,07	2,03	2,04	2,047	
S 12	Átmérő [mm]				S 30	Átmérő [mm]					
		#1	#2	#3		Átlag		#1	#2	#3	Átlag
	Előtt	12,05	12,05	12,05		12,05	Előtt	12,01	12,03	12	12,01
	Után	12,03	12,03	12,02		12,03	Után	12,01	11,98	11,98	11,99
	Vastgság [mm]					Vastgság [mm]					
		#1	#2	#3		Átlag		#1	#2	#3	Átlag
	Előtt	2	2	1,98		1,99	Előtt	2,06	2,02	2,05	2,043
	Után	1,93	1,93	1,94	1,93	Után	1,98	2,04	1,99	2,003	

S 13	Átmérő [mm]					S 31	Átmérő [mm]				
		#1	#2	#3	Átlag			#1	#2	#3	Átlag
	Előtt	11,93	11,92	11,93	11,93		Előtt	12	12,01	12,02	12,01
	Után	11,92	11,93	11,92	11,92		Után	12	12,02	12,01	12,01
	Vastgság [mm]						Vastgság [mm]				
		#1	#2	#3	Átlag			#1	#2	#3	Átlag
	Előtt	2,04	2,04	2,03	2,04		Előtt	2	1,99	2,04	2,01
	Után	2,03	2,01	2,02	2,02	Után	1,98	2,05	1,98	2,003	
S 15	Átmérő [mm]					S 33	Átmérő [mm]				
		#1	#2	#3	Átlag			#1	#2	#3	Átlag
	Előtt	12,11	12,13	12,11	12,12		Előtt	11,94	11,9	11,94	11,93
	Után	12,09	12,09	12,12	12,1		Után	11,92	11,93	11,91	11,92
	Vastgság [mm]						Vastgság [mm]				
		#1	#2	#3	Átlag			#1	#2	#3	Átlag
	Előtt	2	2,01	2	2,00		Előtt	2,04	2,01	1,99	2,013
	Után	1,98	1,95	1,96	1,96	Után	2,01	2	2	2,003	
S 18	Átmérő [mm]					S 36	Átmérő [mm]				
		#1	#2	#3	Átlag			#1	#2	#3	Átlag
	Előtt	12,17	12,17	12,18	12,17		Előtt	12	12,01	12,02	12,01
	Után	12,13	12,15	12,13	12,14		Után	11,99	11,99	11,99	11,99
	Vastgság [mm]						Vastgság [mm]				
		#1	#2	#3	Átlag			#1	#2	#3	Átlag
	Előtt	2	2,02	2	2,01		Előtt	2,03	2	2,02	2,017
	Után	1,97	1,96	1,97	1,97	Után	1,97	1,93	1,96	1,953	

Melléklet 2. táblázat: Átmérő- és vastagságmérési eredmények

Minta	Állapot	Térfogat [mm ³]	Sűrűség [g/mm ³]	Minta	Állapot	Térfogat [mm ³]	Sűrűség [g/mm ³]
S1	Előtt	242,28	0,0043433	S19	Előtt	230,75	0,0044627
	Után	242,28	0,0043435		Után	228,71	0,0045026
S3	Előtt	236,01	0,0044113	S21	Előtt	245,24	0,0042494
	Után	229,55	0,004536		Után	236,26	0,0044096
S6	Előtt	230,62	0,0044214	S24	Előtt	240,90	0,0043845
	Után	226,82	0,0044956		Után	232,53	0,0045353
S7	Előtt	229,34	0,0044917	S25	Előtt	226,64	0,0045158
	Után	229,34	0,0044919		Után	225,52	0,0045367
S9	Előtt	233,81	0,0044315	S27	Előtt	238,15	0,004451
	Után	229,22	0,0045196		Után	234,70	0,0045115
S12	Előtt	227,32	0,0044335	S29	Előtt	231,61	0,0044661
	Után	219,63	0,0045843		Után	226,19	0,004552
S13	Előtt	227,53	0,0044758	S30	Előtt	227,70	0,0045031
	Után	225,55	0,0045147		Után	226,95	0,0045167
S15	Előtt	231,00	0,0044452	S33	Előtt	224,93	0,0045496
	Után	225,76	0,0044452		Után	223,56	0,0045686
S18	Előtt	233,55	0,0044298	S36	Előtt	228,46	0,004434
	Után	227,52	0,0045256		Után	220,55	0,0045354

Melléklet 3. táblázat: Térfogat- és sűrűségszámolás eredményei

5. T-(Student-) eloszlás kritikus értékei különböző valószínűségi szintek mellett

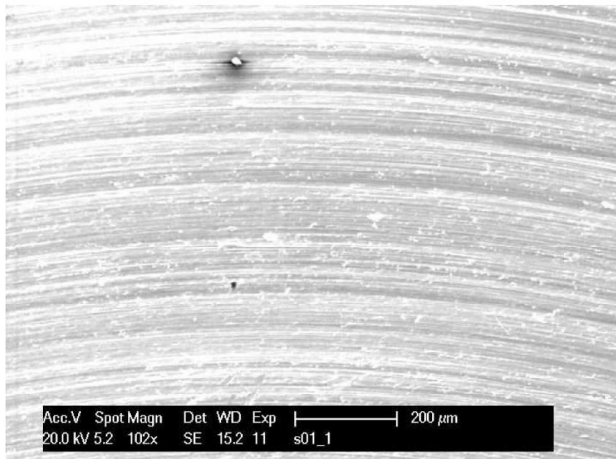
IV. táblázat. A t -(Student-) próba kritikus értékei 80%-os (90%-os) , 90%-os (95%-os), 95%-os (97.5%-os), 98%-os (99%-os), 99%-os (99.5%-os) , 99.9%-os (99.95%-os) kétoldali (egyoldali) szintre

szabadsági fok, f	Statistikai biztonság					
	80%	90%	95%	98%	99%	99.9%
1	3.0777	6.3138	12.7062	31.8206	63.6567	636.6192
2	1.8856	2.9200	4.3027	6.9646	9.9248	31.5991
3	1.6377	2.3534	3.1824	4.5407	5.8409	12.9240
4	1.5332	2.1318	2.7764	3.7469	4.6041	8.6103
5	1.4759	2.0150	2.5706	3.3649	4.0321	6.8688
6	1.4398	1.9432	2.4469	3.1427	3.7074	5.9588
7	1.4149	1.8946	2.3646	2.9980	3.4995	5.4079
8	1.3968	1.8595	2.3060	2.8965	3.3554	5.0413
9	1.3830	1.8331	2.2622	2.8214	3.2498	4.7809
10	1.3722	1.8125	2.2281	2.7638	3.1693	4.5869
11	1.3634	1.7959	2.2010	2.7181	3.1058	4.4370
12	1.3562	1.7823	2.1788	2.6810	3.0545	4.3178
13	1.3502	1.7709	2.1604	2.6503	3.0123	4.2208
14	1.3450	1.7613	2.1448	2.6245	2.9768	4.1405
15	1.3406	1.7531	2.1314	2.6025	2.9467	4.0728
16	1.3368	1.7459	2.1199	2.5835	2.9208	4.0150
17	1.3334	1.7396	2.1098	2.5669	2.8982	3.9651
18	1.3304	1.7341	2.1009	2.5524	2.8784	3.9216
19	1.3277	1.7291	2.0930	2.5395	2.8609	3.8834
20	1.3253	1.7247	2.0860	2.5280	2.8453	3.8495
21	1.3232	1.7207	2.0796	2.5176	2.8314	3.8193
22	1.3212	1.7171	2.0739	2.5083	2.8188	3.7921
23	1.3195	1.7139	2.0687	2.4999	2.8073	3.7676
24	1.3178	1.7109	2.0639	2.4922	2.7969	3.7454
25	1.3163	1.7081	2.0595	2.4851	2.7874	3.7251
26	1.3150	1.7056	2.0555	2.4786	2.7787	3.7066
27	1.3137	1.7033	2.0518	2.4727	2.7707	3.6896
28	1.3125	1.7011	2.0484	2.4671	2.7633	3.6739
29	1.3114	1.6991	2.0452	2.4620	2.7564	3.6594
30	1.3104	1.6973	2.0423	2.4573	2.7500	3.6460
40	1.3031	1.6839	2.0211	2.4233	2.7045	3.5510
50	1.2987	1.6759	2.0086	2.4033	2.6778	3.4960
60	1.2958	1.6706	2.0003	2.3901	2.6603	3.4602
80	1.2922	1.6641	1.9901	2.3739	2.6387	3.4163
100	1.2901	1.6602	1.9840	2.3642	2.6259	3.3905
200	1.2858	1.6525	1.9719	2.3451	2.6006	3.3398
500	1.2832	1.6479	1.9647	2.3338	2.5857	3.3101
∞	1.2816	1.6449	1.9600	2.3263	2.5758	3.2905

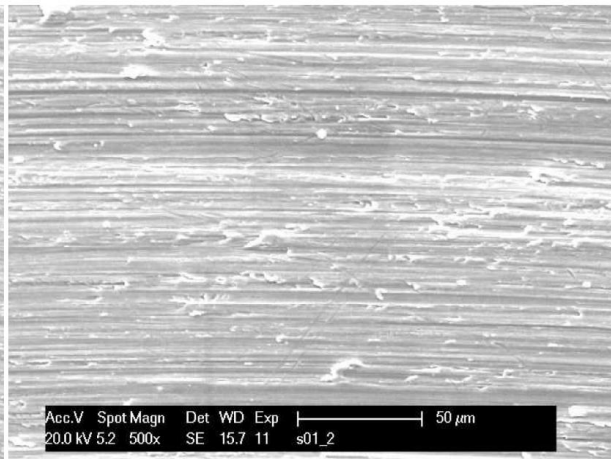
Melléklet 3. táblázat: T-(Student-) eloszlás kritikus értékei különböző valószínűségi szintek mellett {4}

6. SEM felvételek

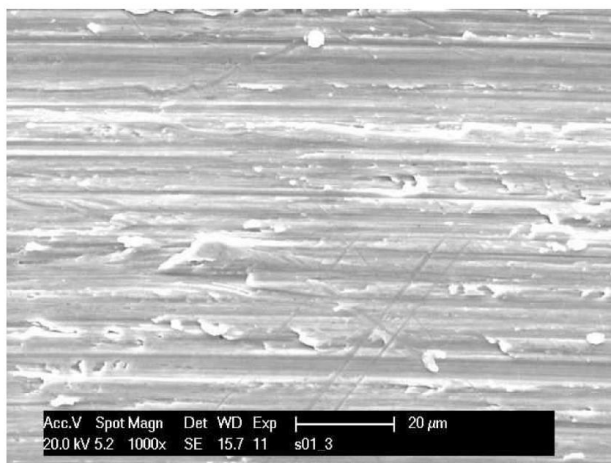
A korongokról maratás után három különböző nagyításban készítettem felvételeket. A képek jelölése a minta neve és a nagyításra utaló kód: 100×=1, 500×=2, 1000×=3. A 37-es minta maratlan, az esztergált felület látható rajta.



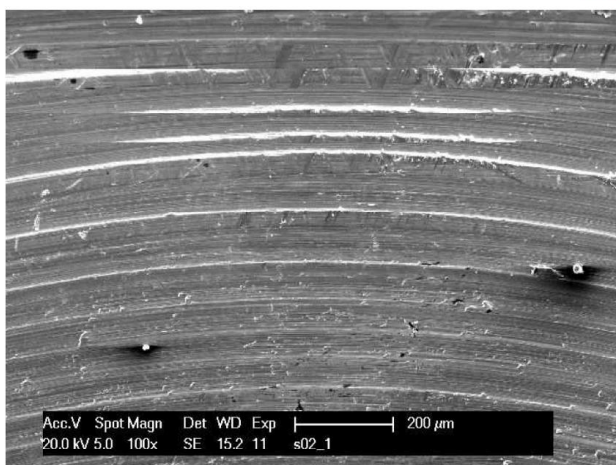
S1_1



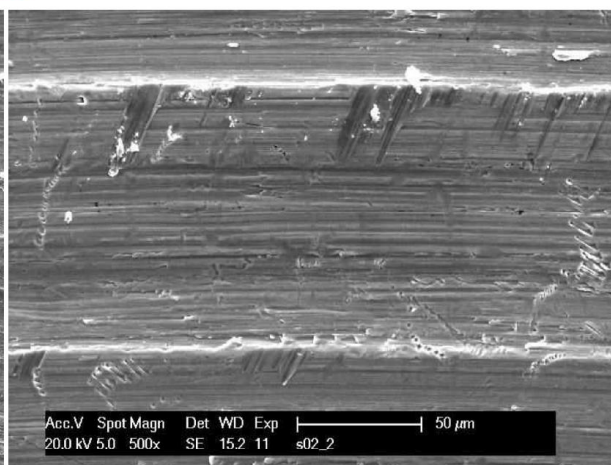
S1_2



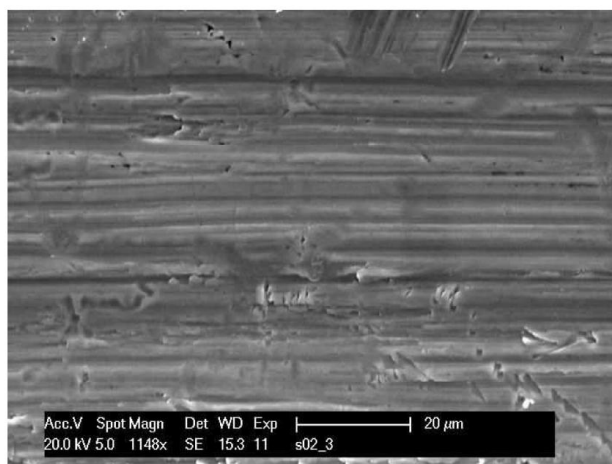
S1_3



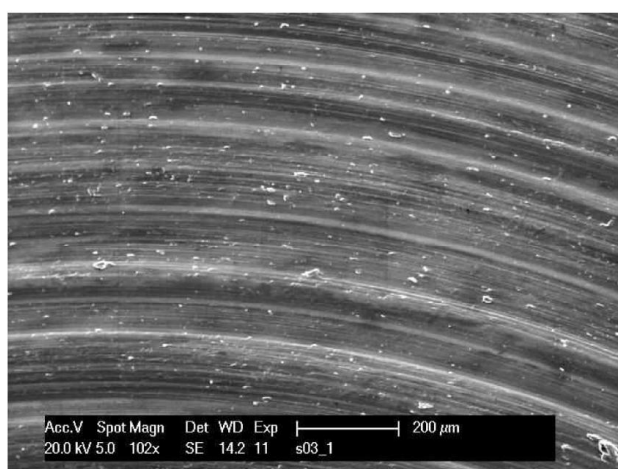
S2_1



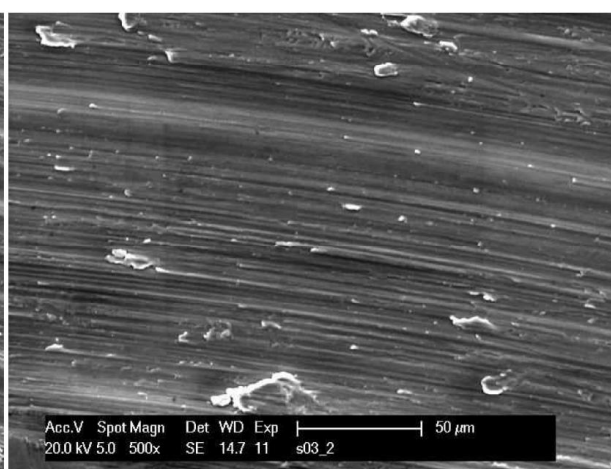
S2_2



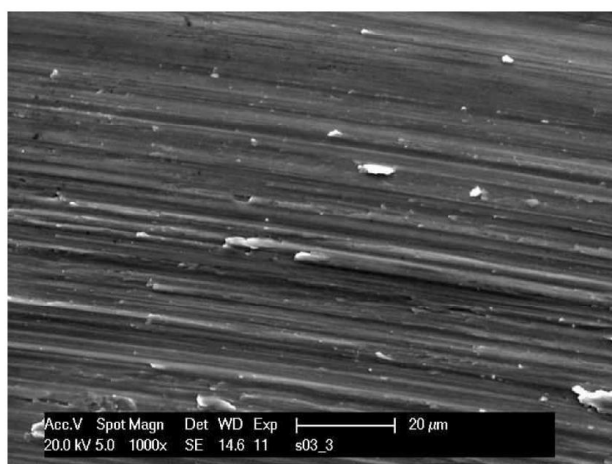
S2_3



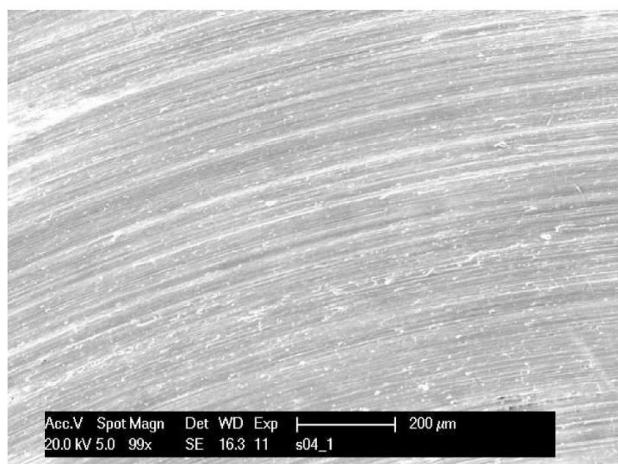
S3_1



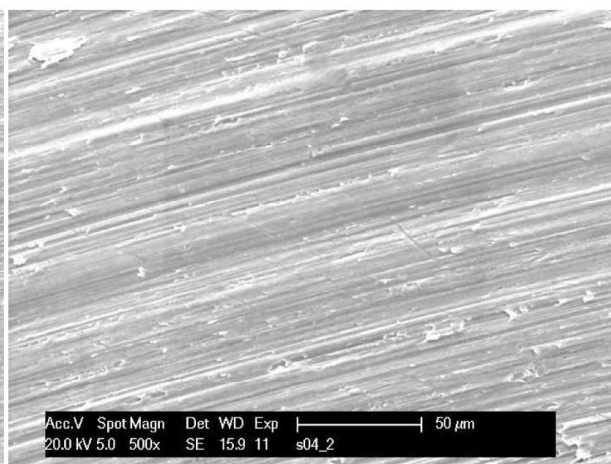
S3_2



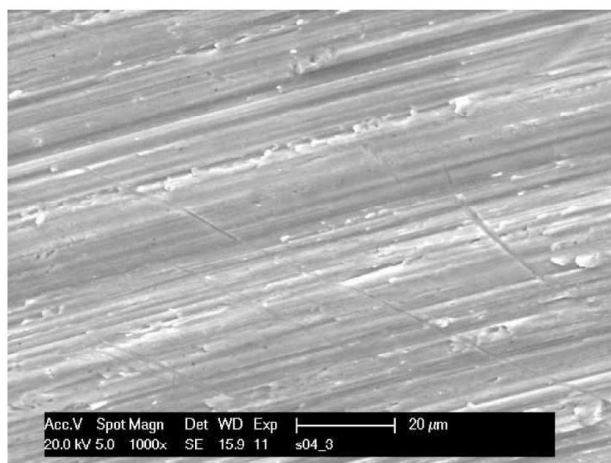
S3_3



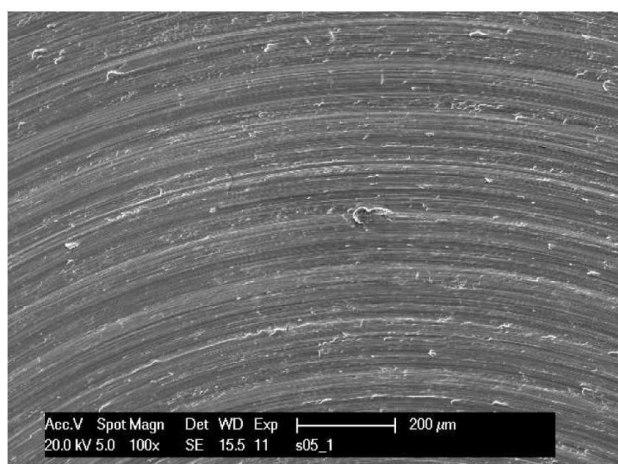
S4_1



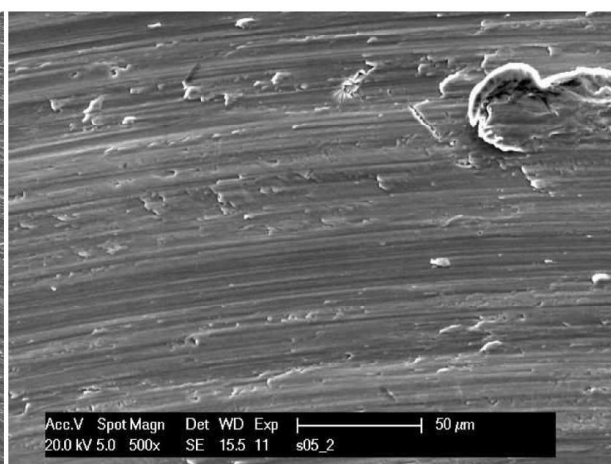
S4_2



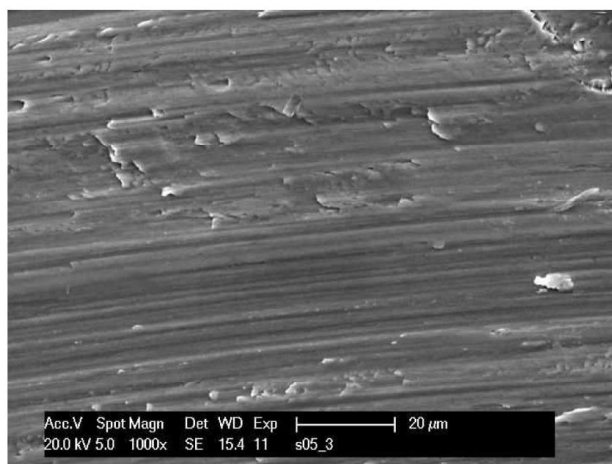
S4_3



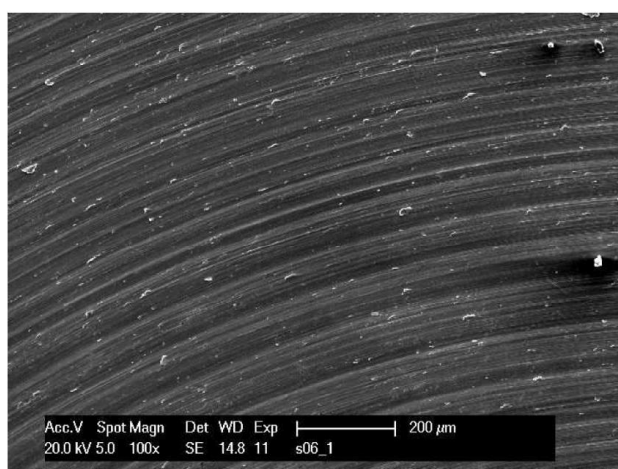
S5_1



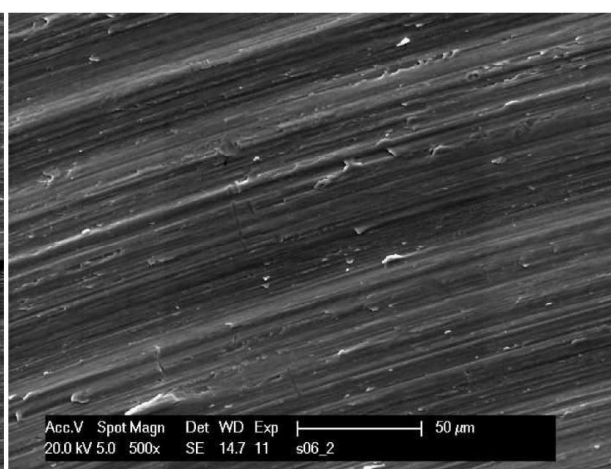
S5_2



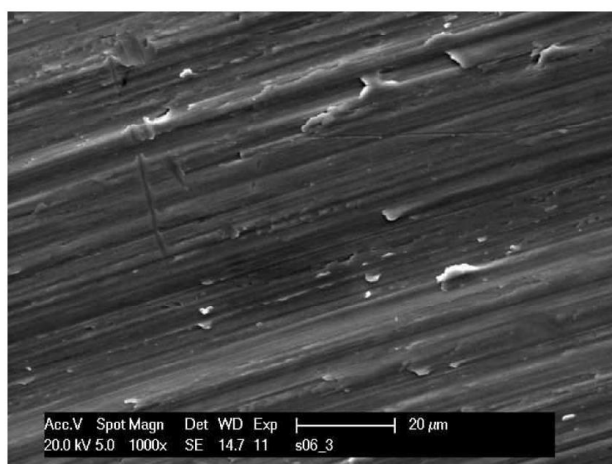
S5_3



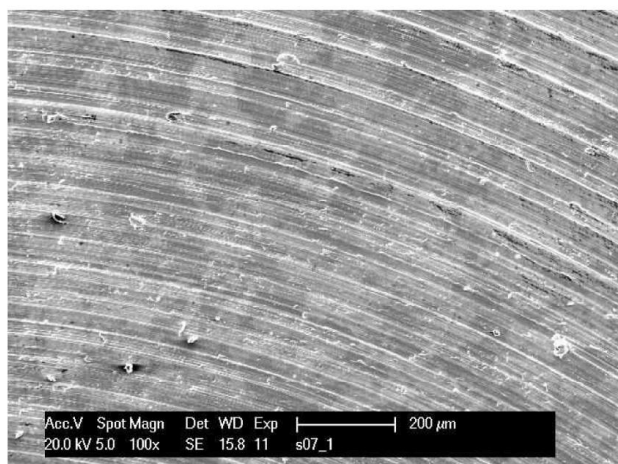
S6_1



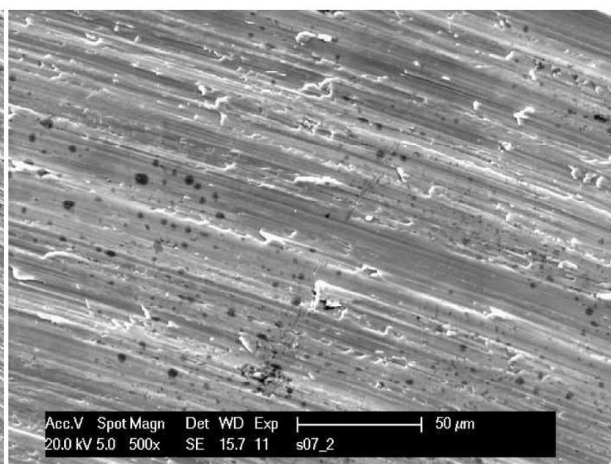
S6_2



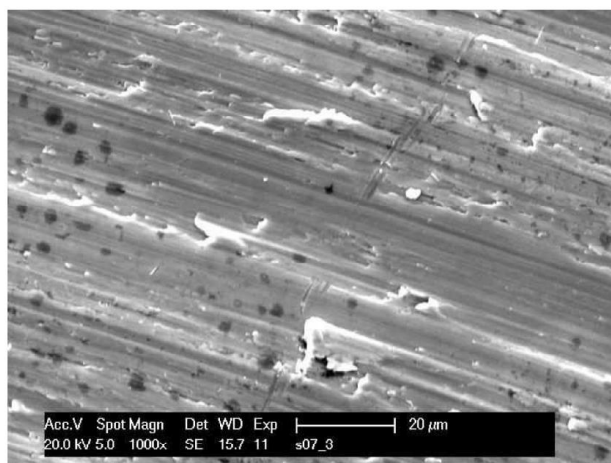
S6_3



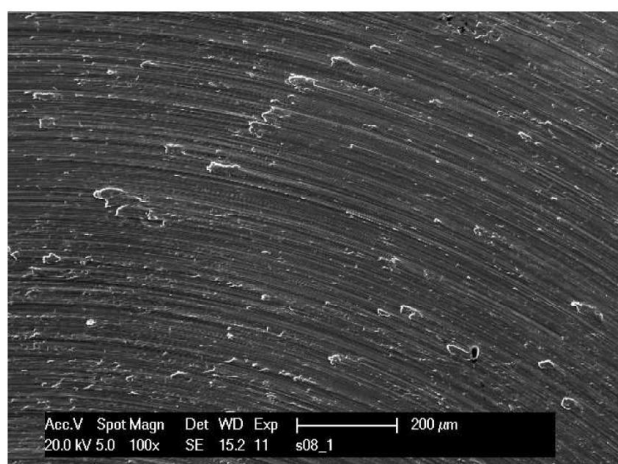
S7_1



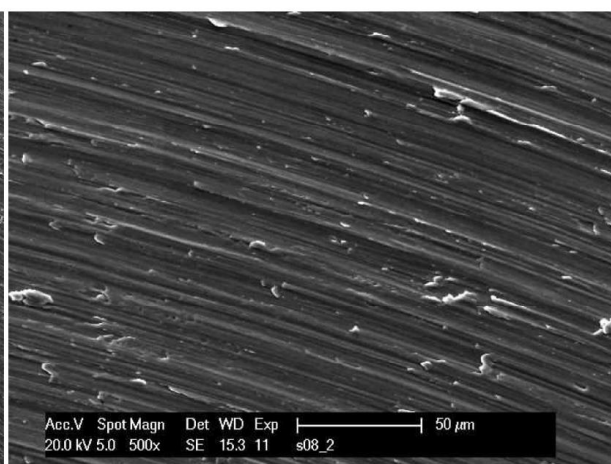
S7_2



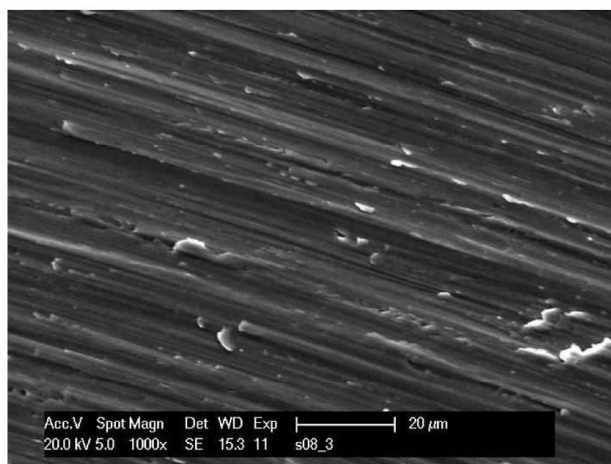
S7_3



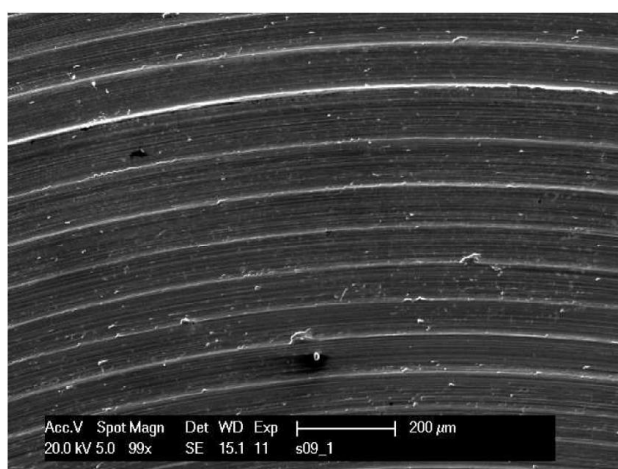
S8_1



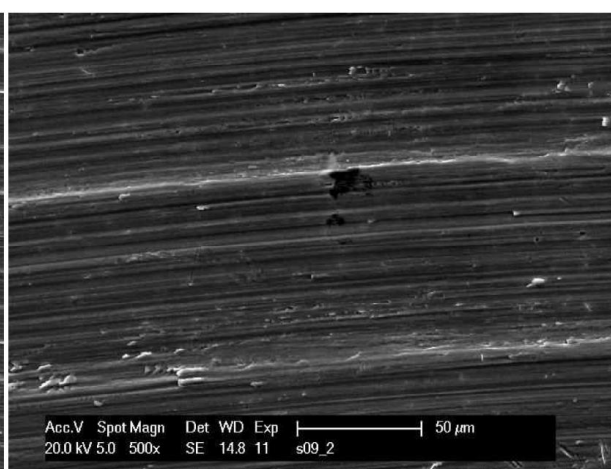
S8_2



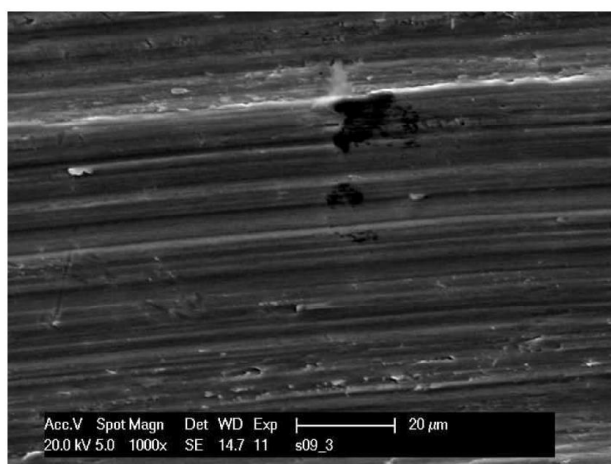
S8_3



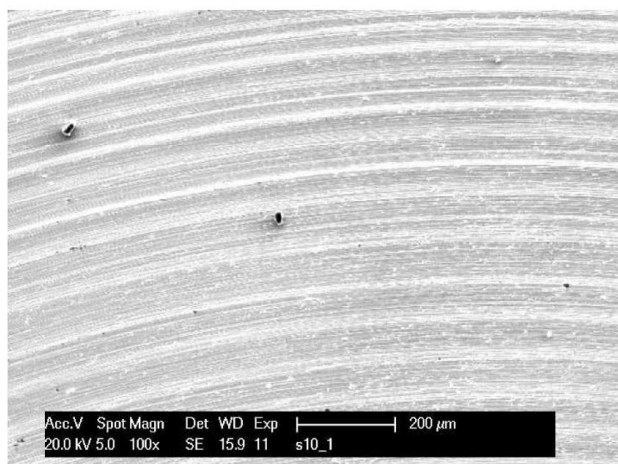
S9_1



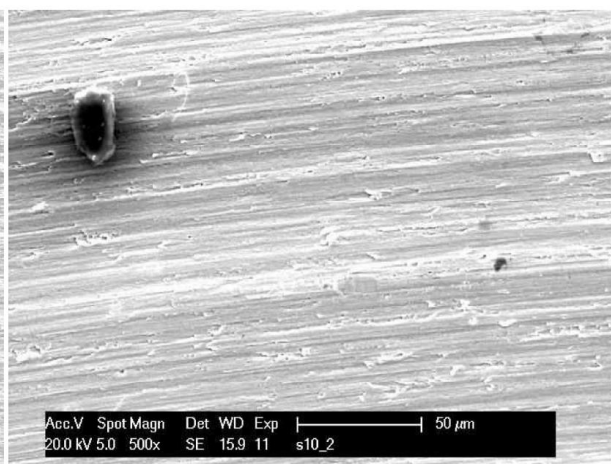
S9_2



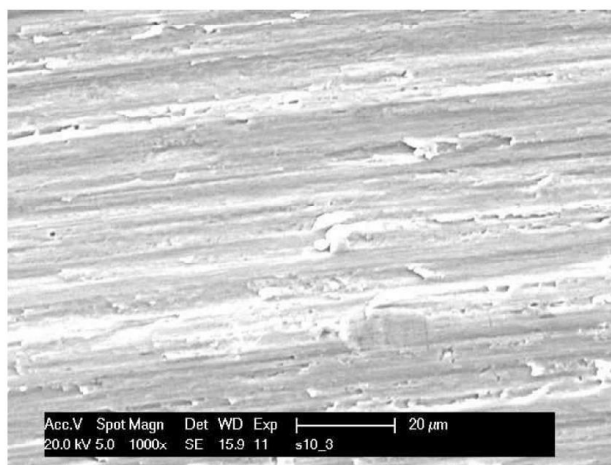
S9_3



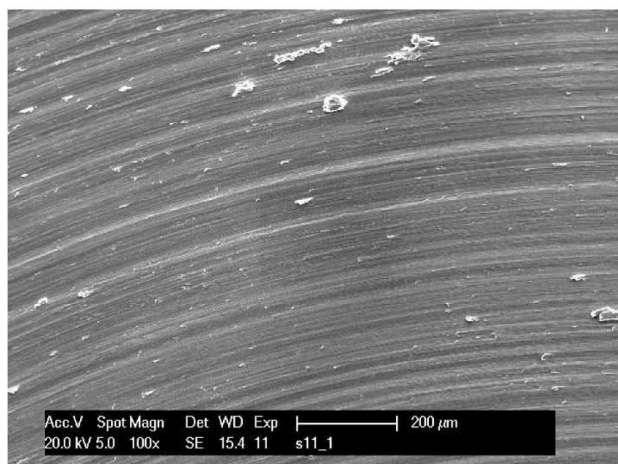
S10_1



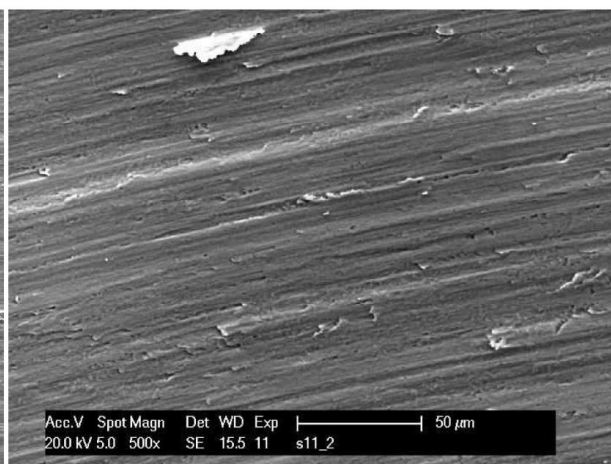
S10_2



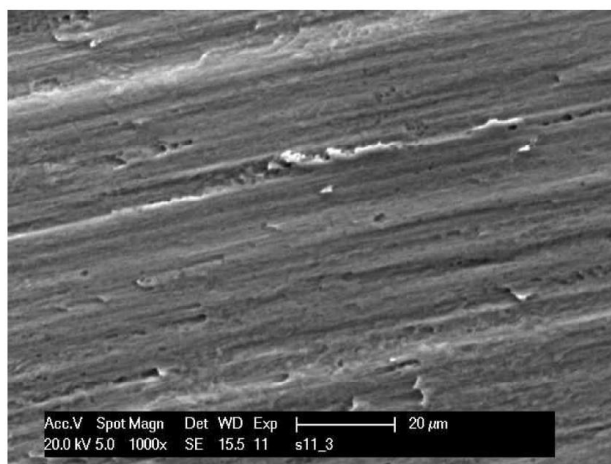
S10_3



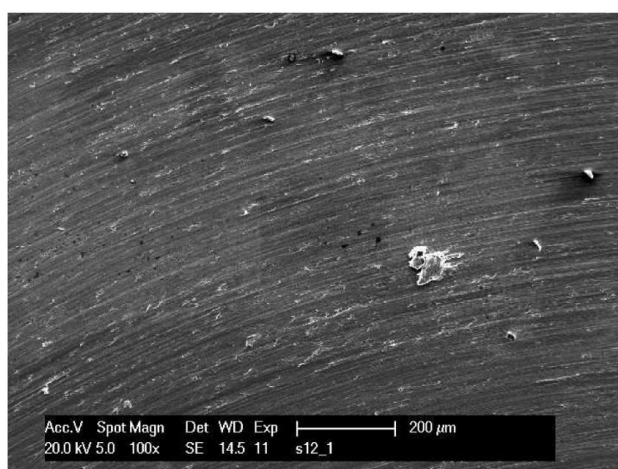
S11_1



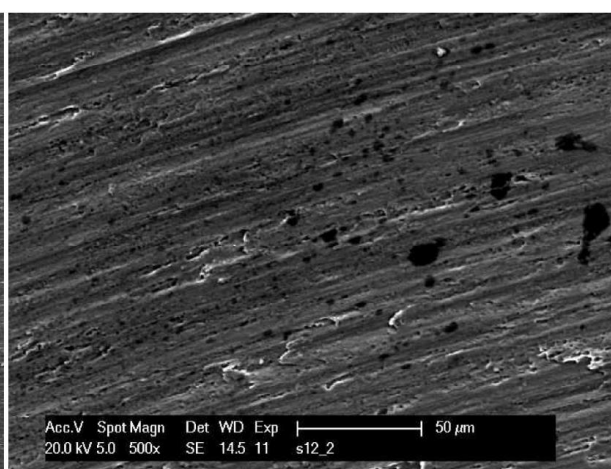
S11_2



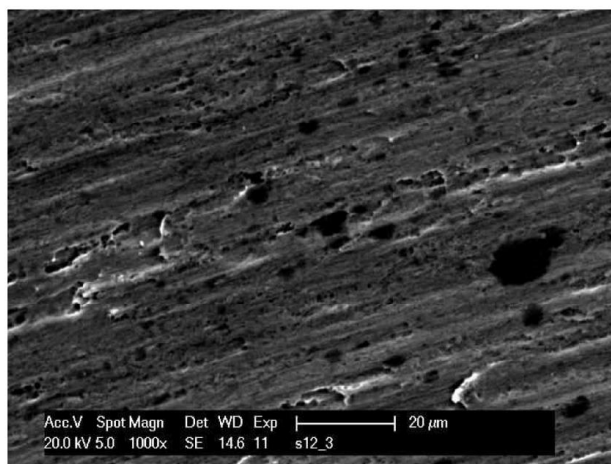
S11_3



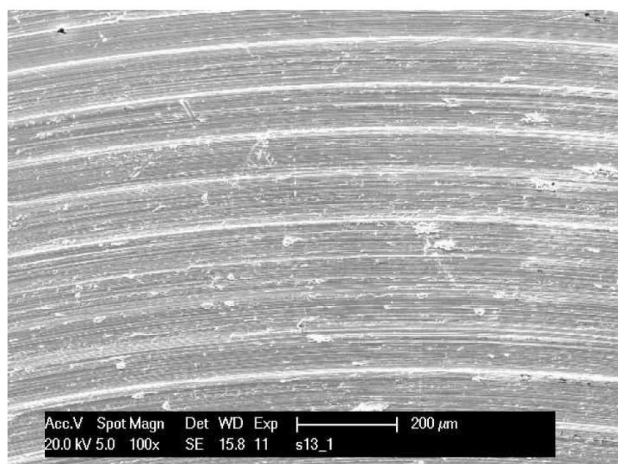
S12_1



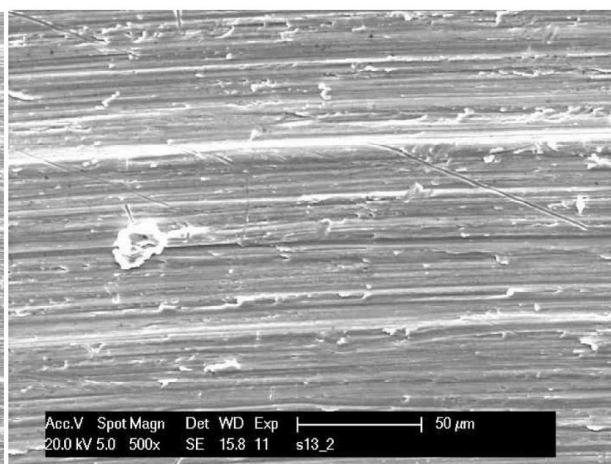
S12_2



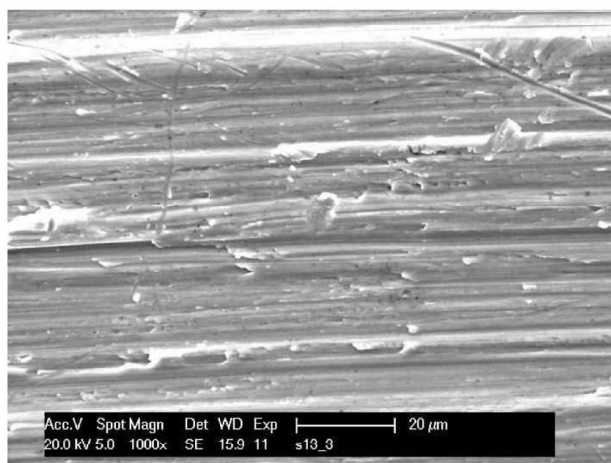
S12_3



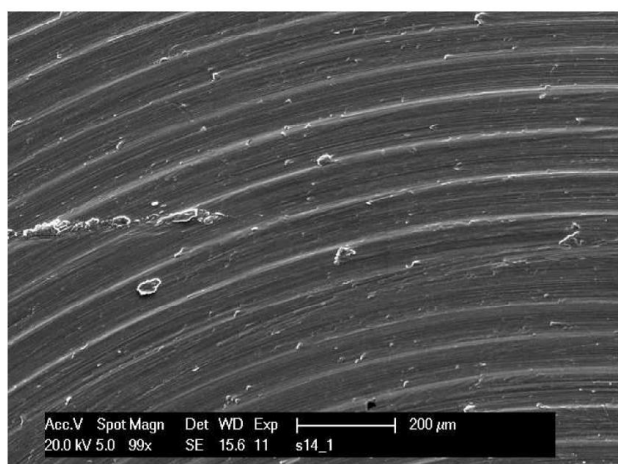
S13_1



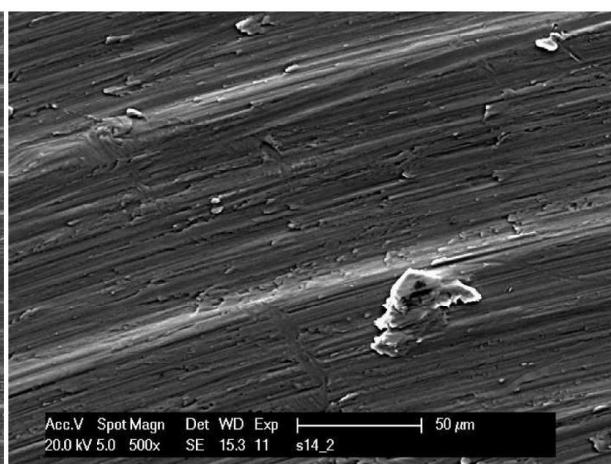
S13_2



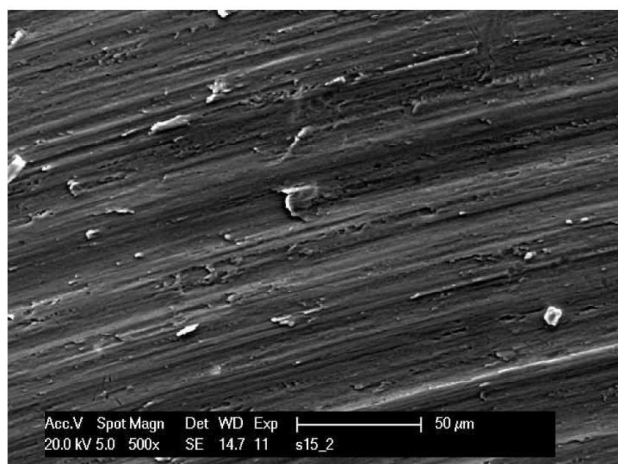
S13_3



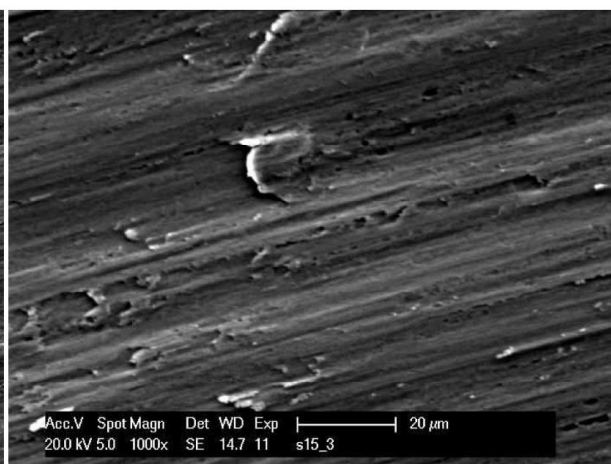
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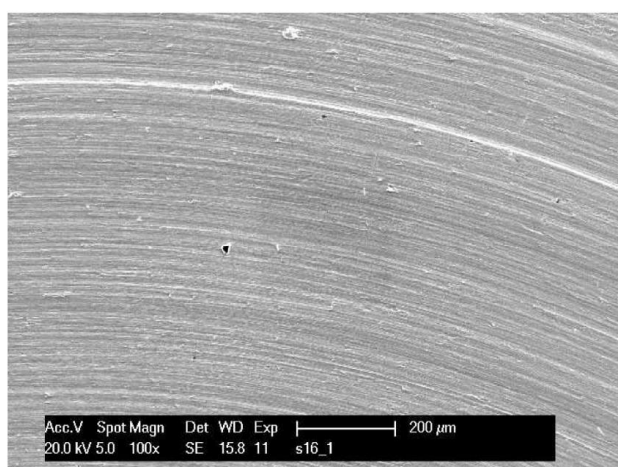
S14_2



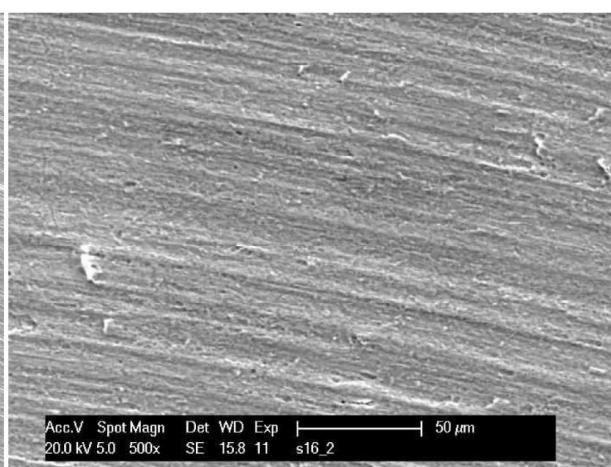
S15_2



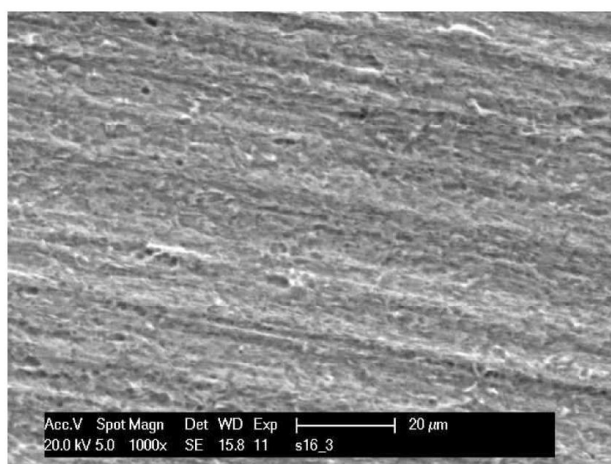
S15_3



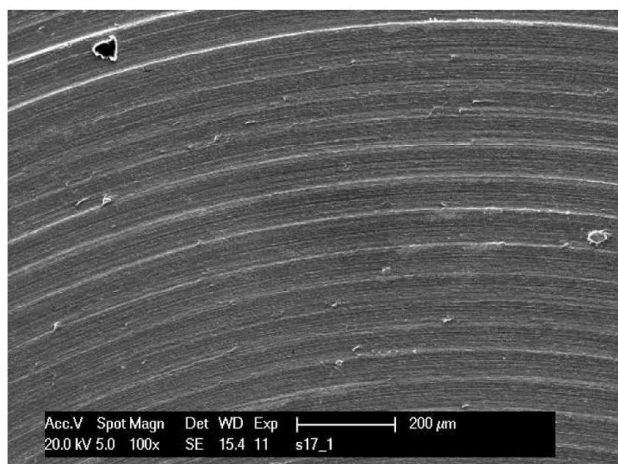
S16_1



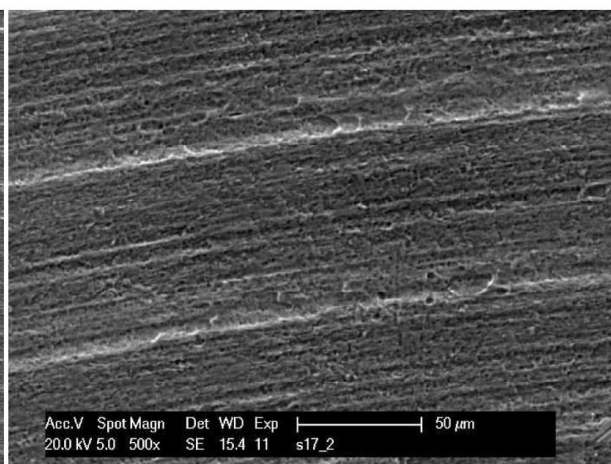
S16_2



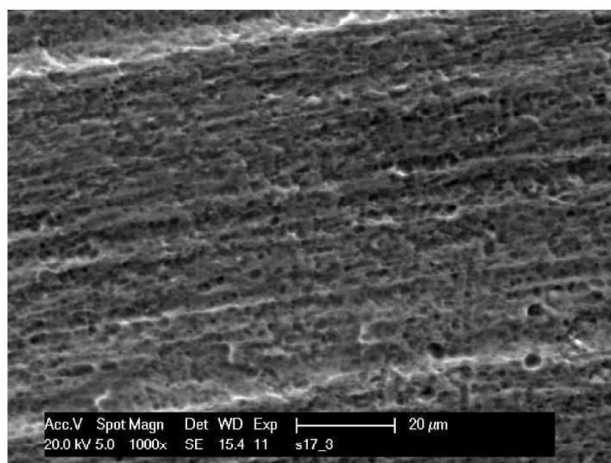
S16_3



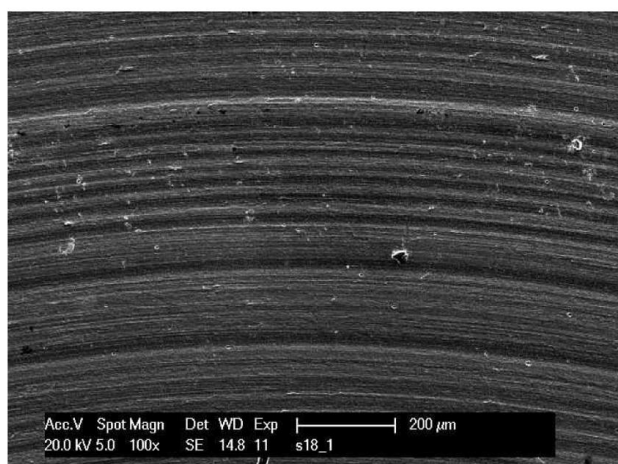
S17_1



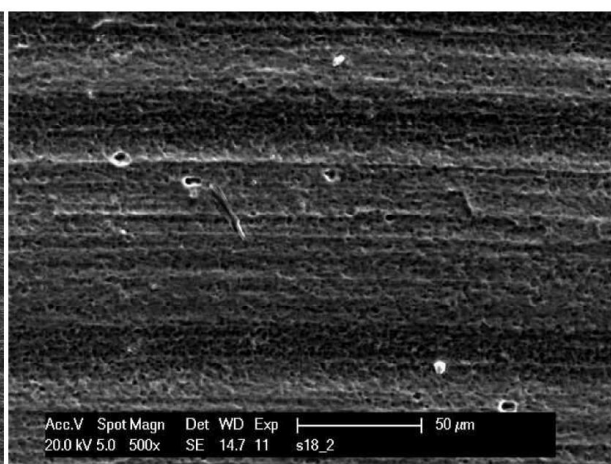
S17_2



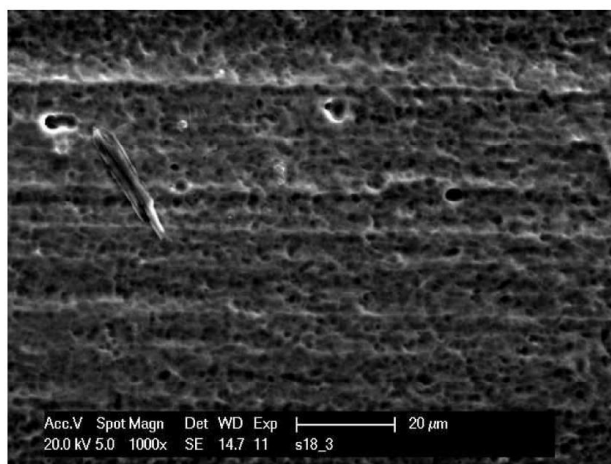
S17_3



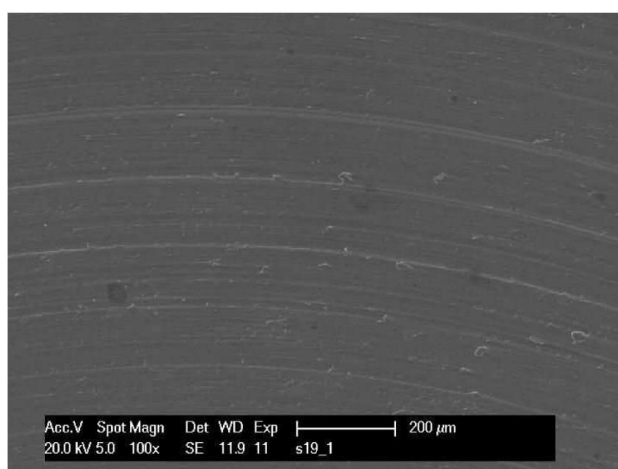
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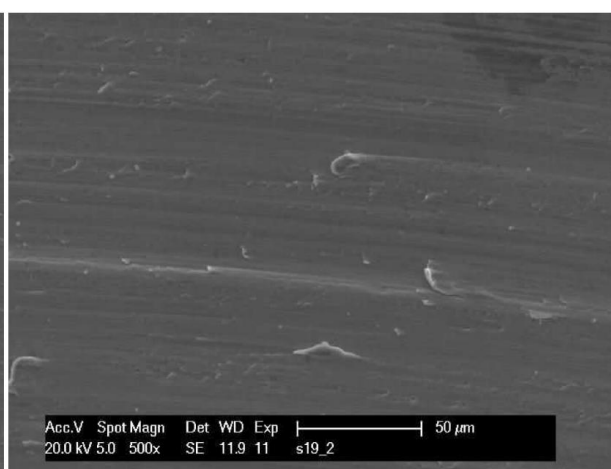
S18_2



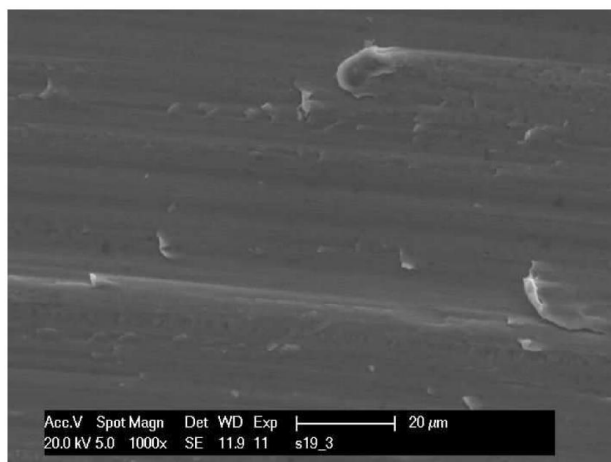
S18_3



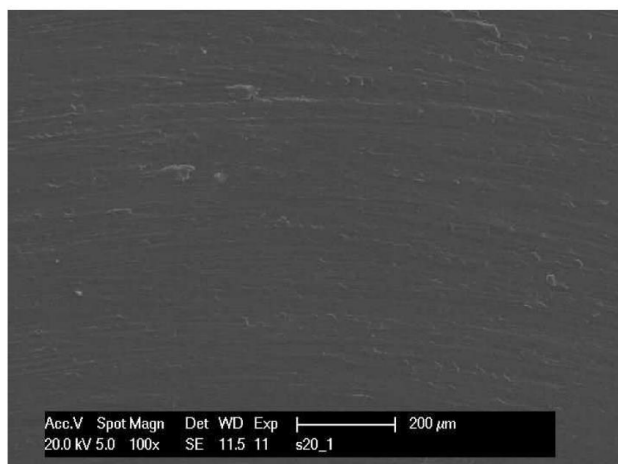
S19_1



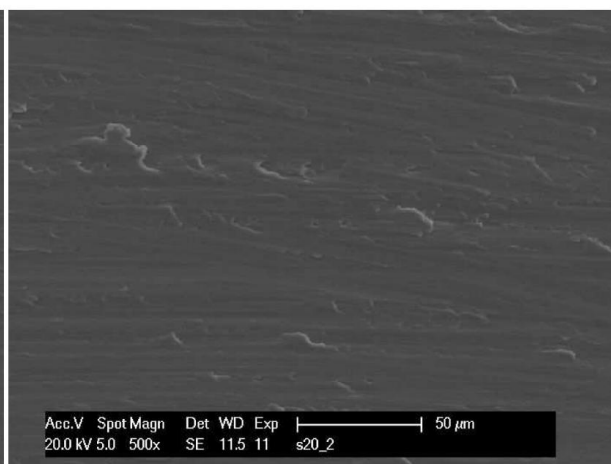
S19_2



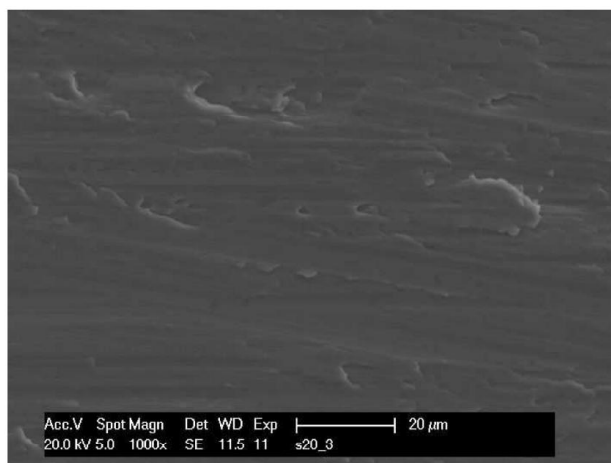
S19_3



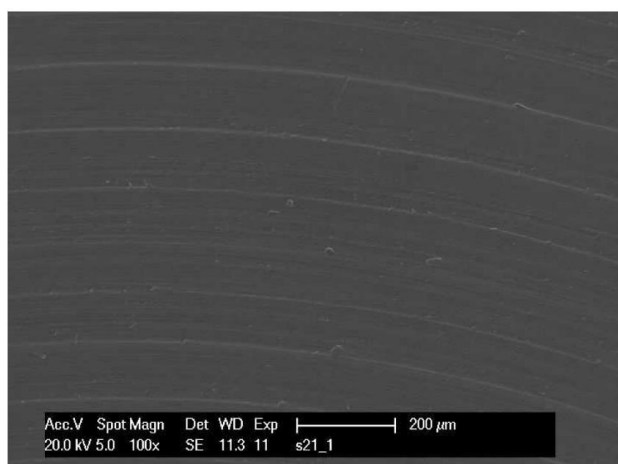
S20_1



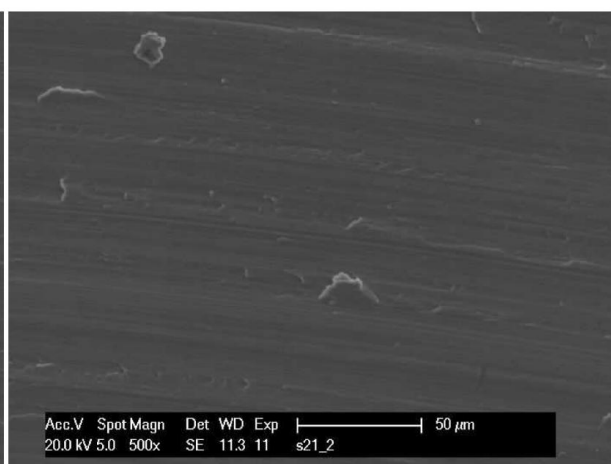
S20_2



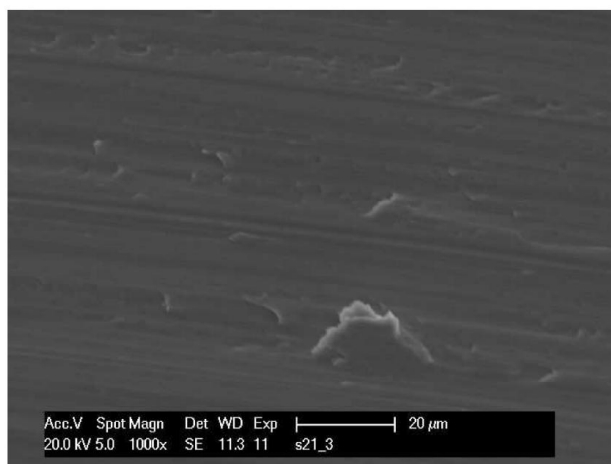
S20_3



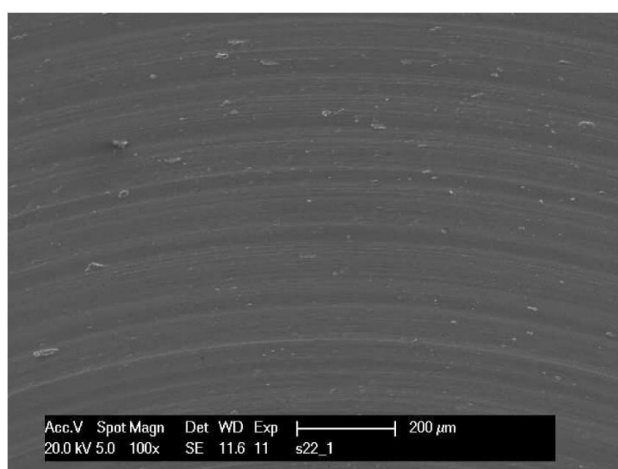
S21_1



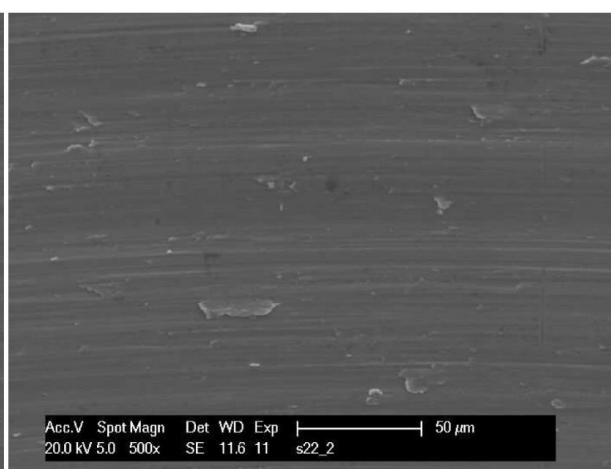
S21_2



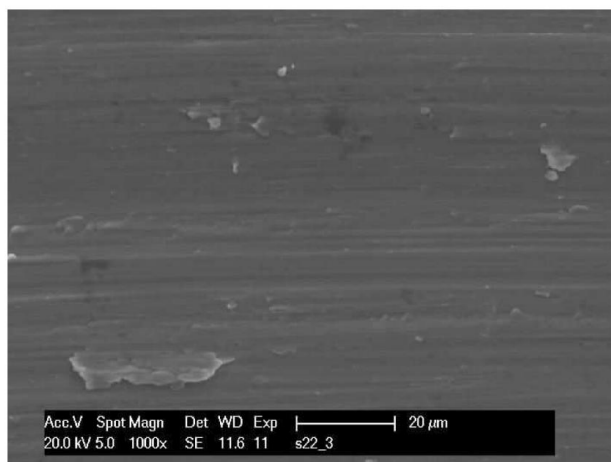
S21_3



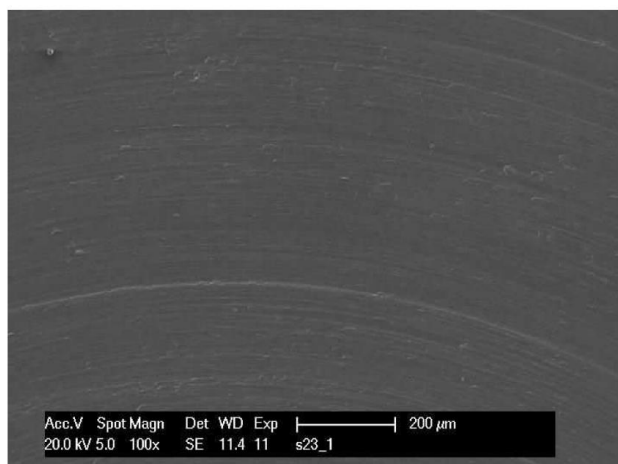
S22_1



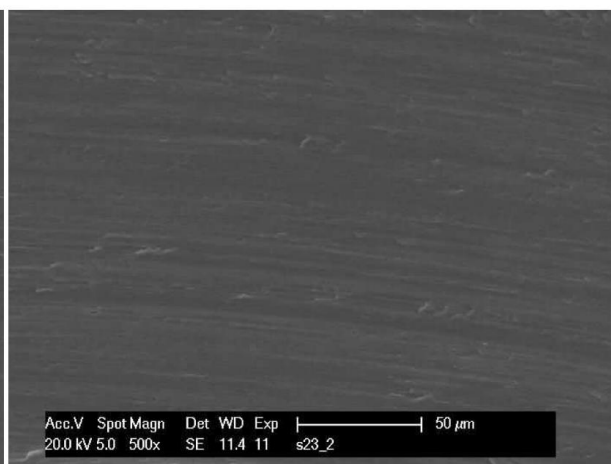
S22_2



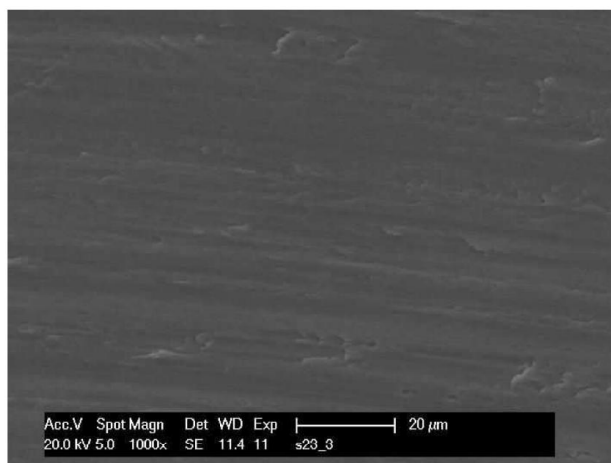
S22_3



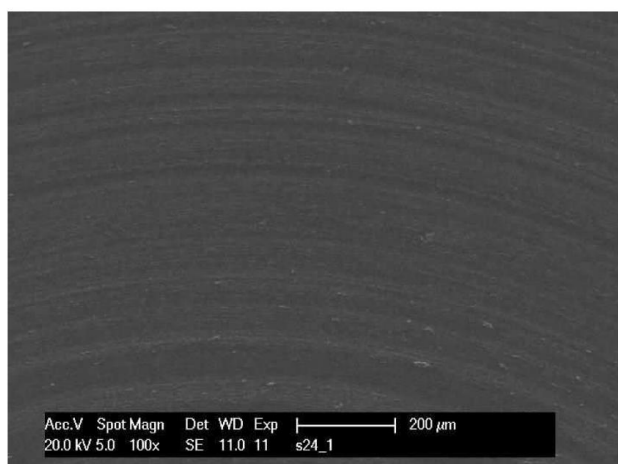
S23_1



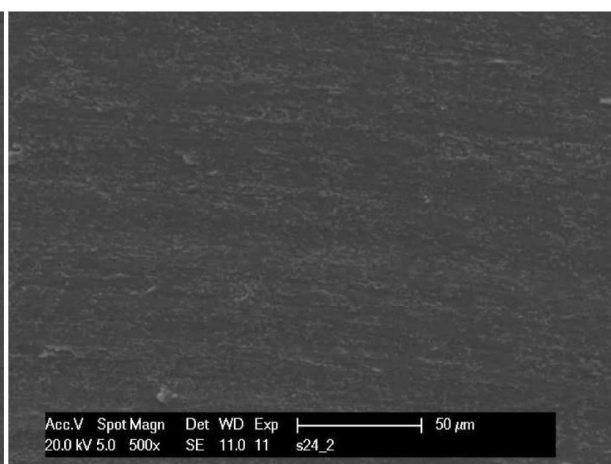
S23_2



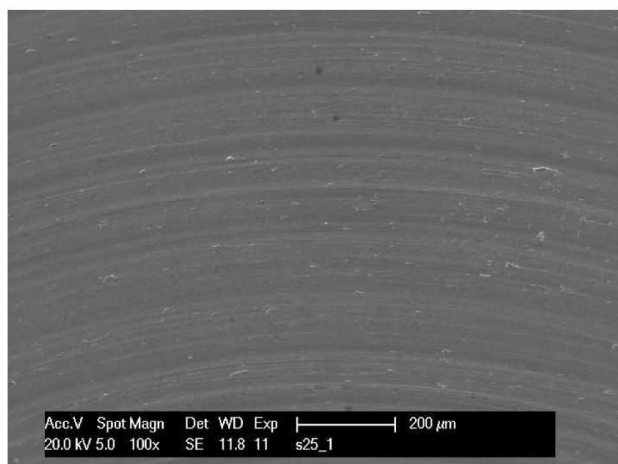
S23_3



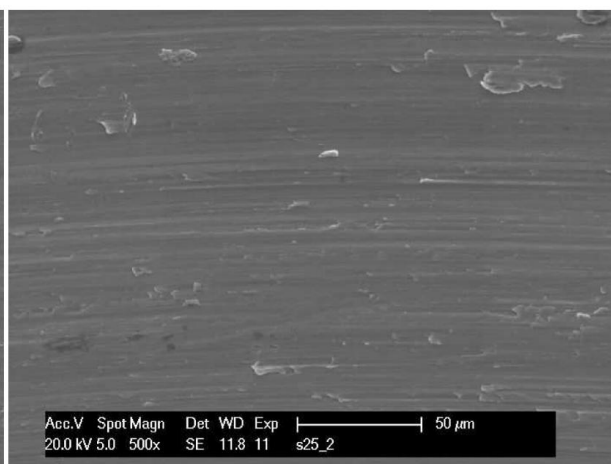
S24_1



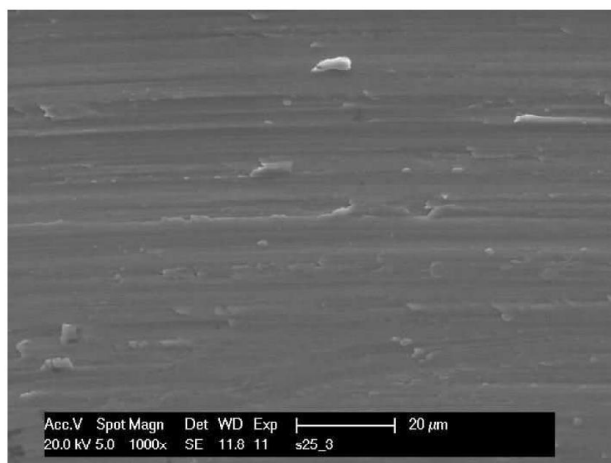
S24_2



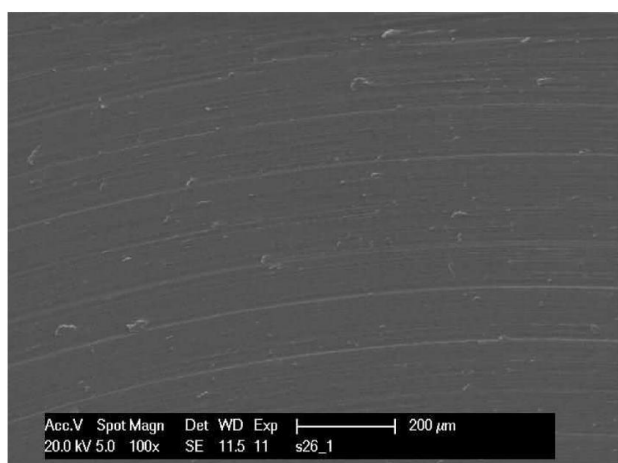
S25_1



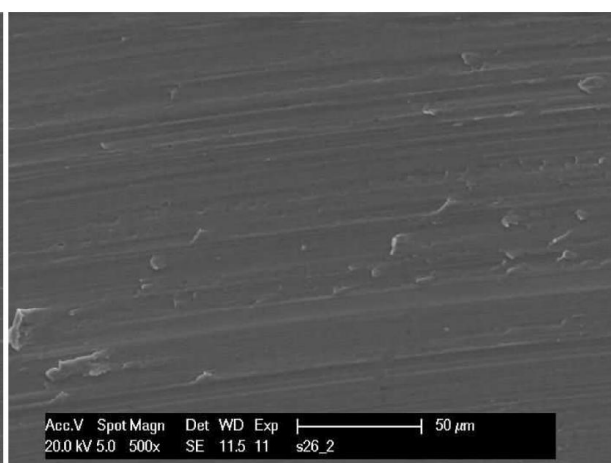
S25_2



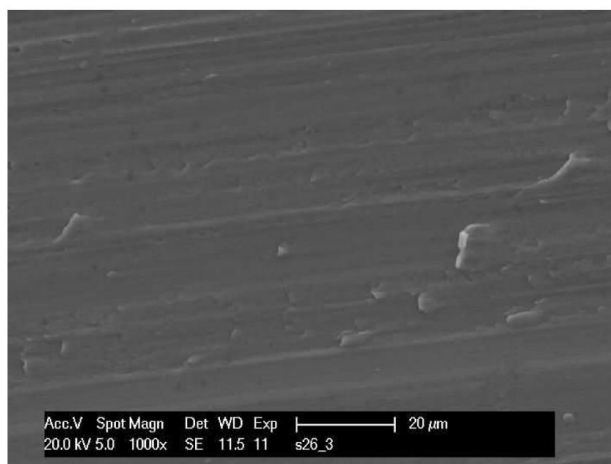
S25_3



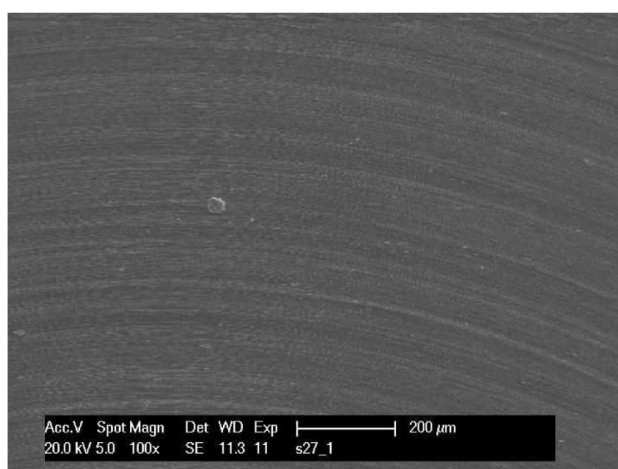
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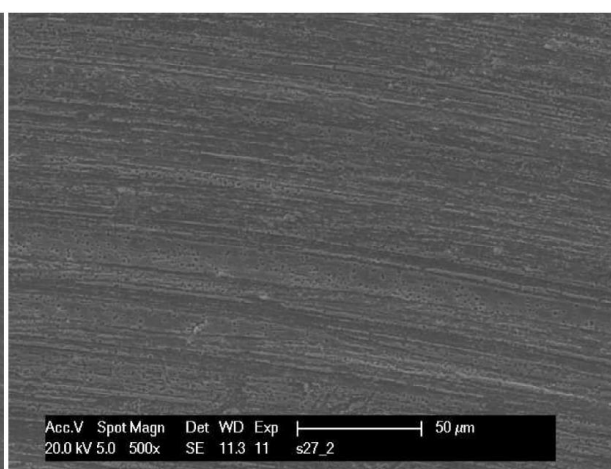
S26_2



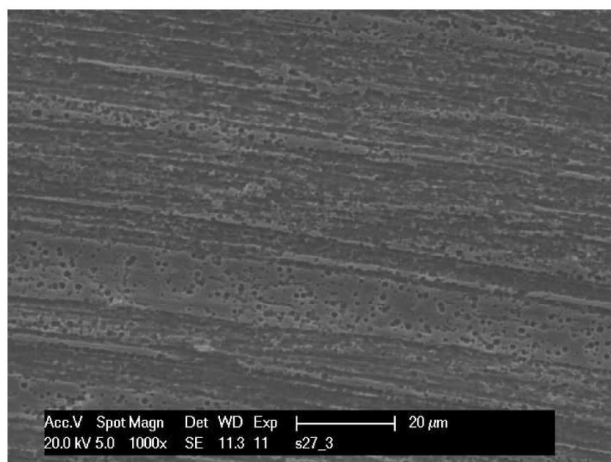
S26_3



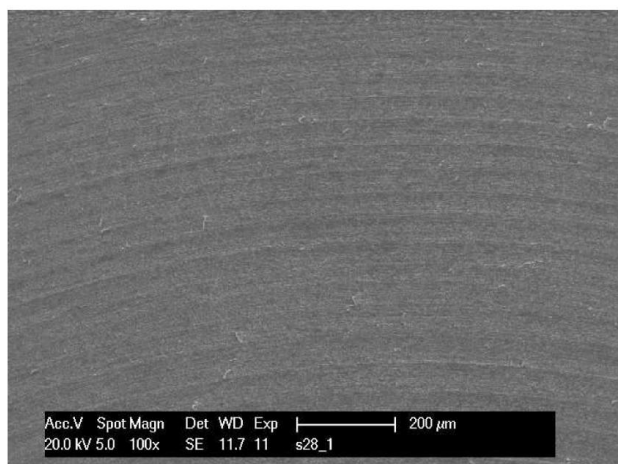
S27_1



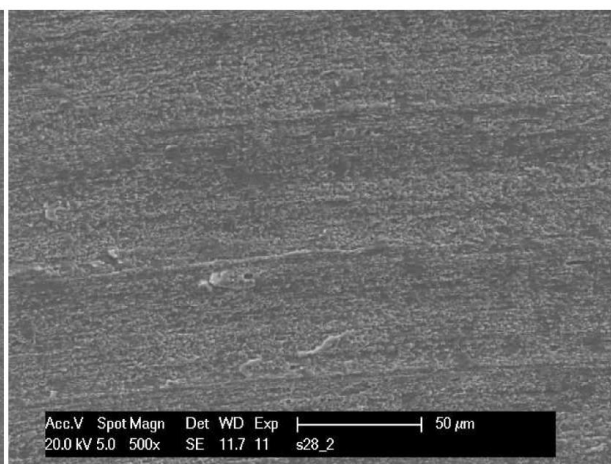
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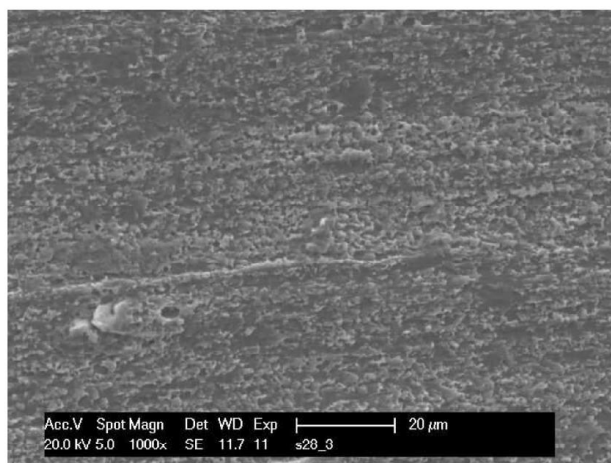
S27_3



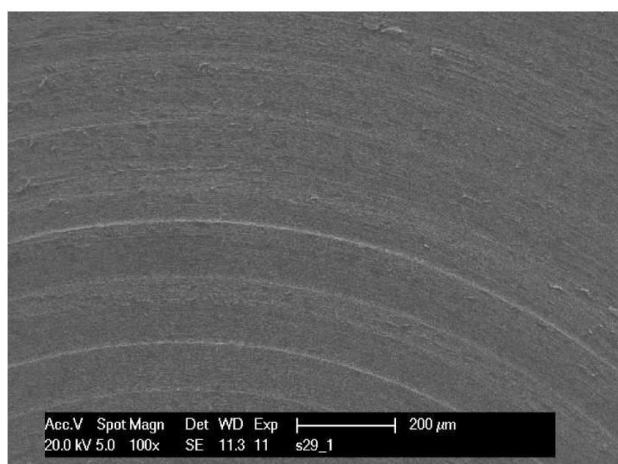
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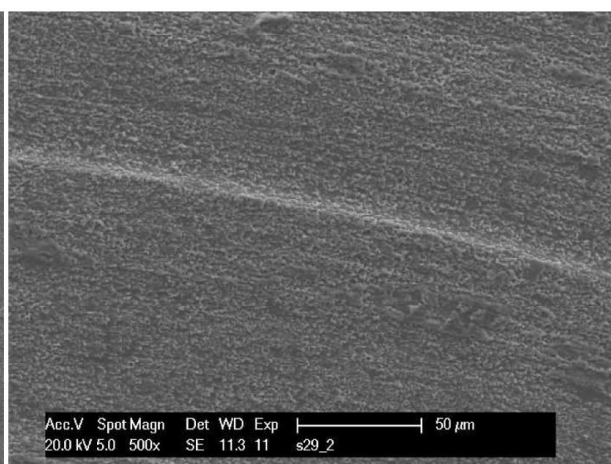
S28_2



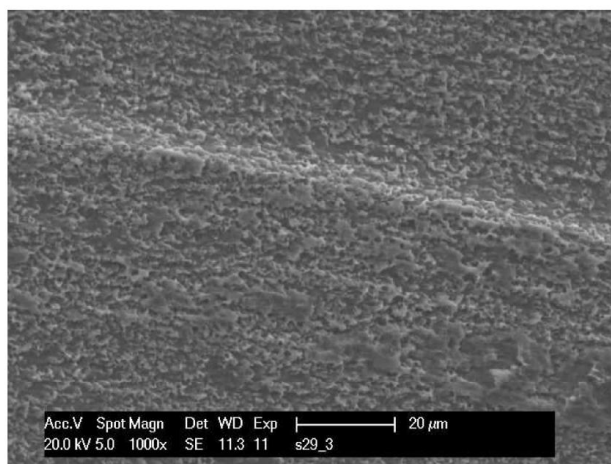
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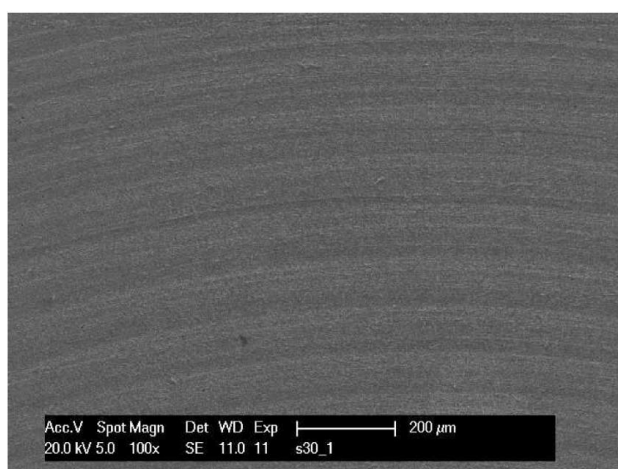
S29_1



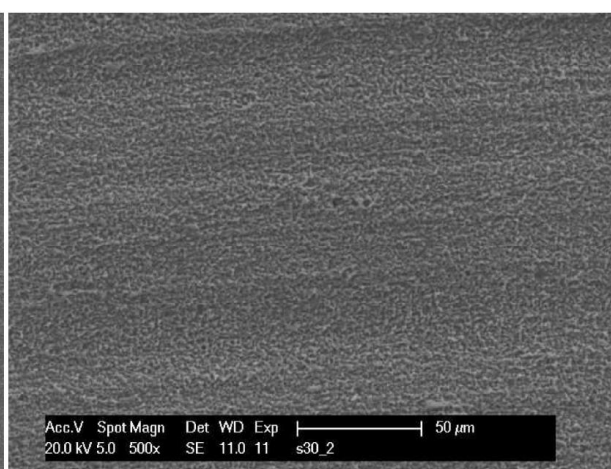
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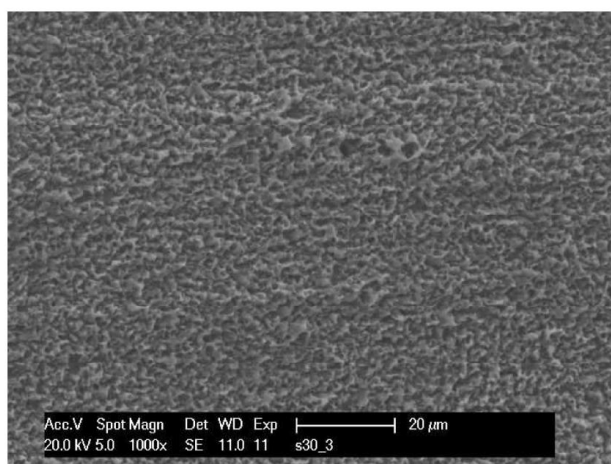
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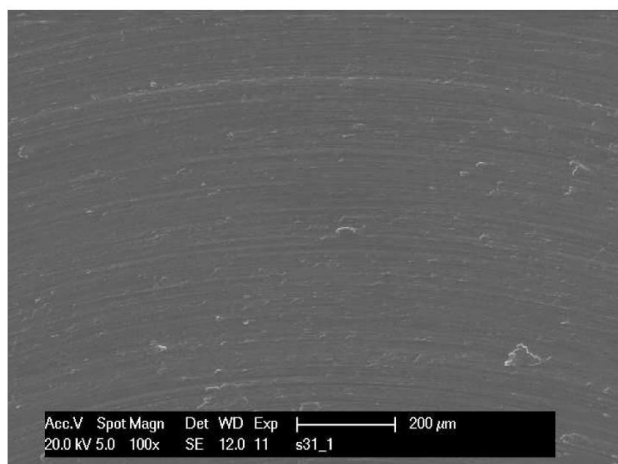
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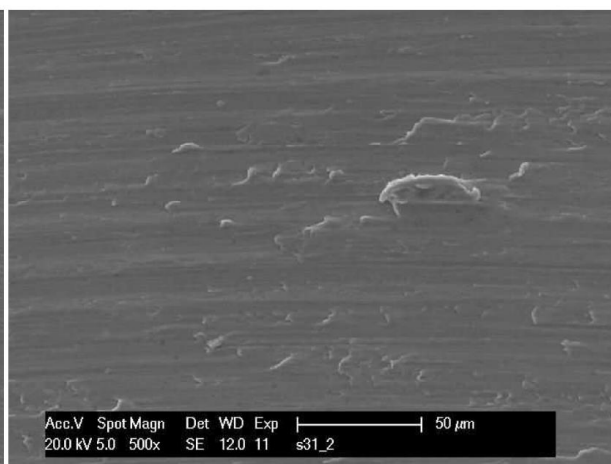
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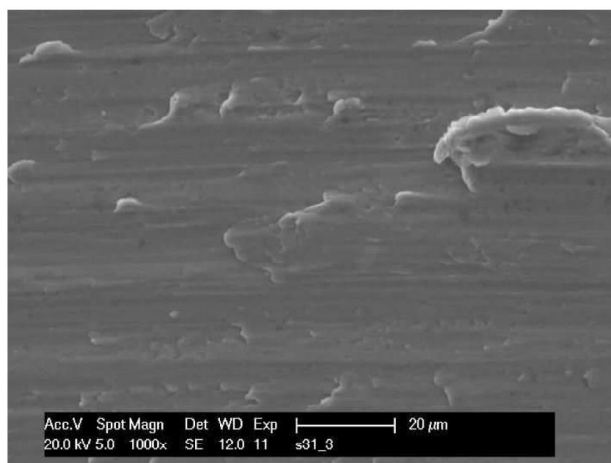
S30_3



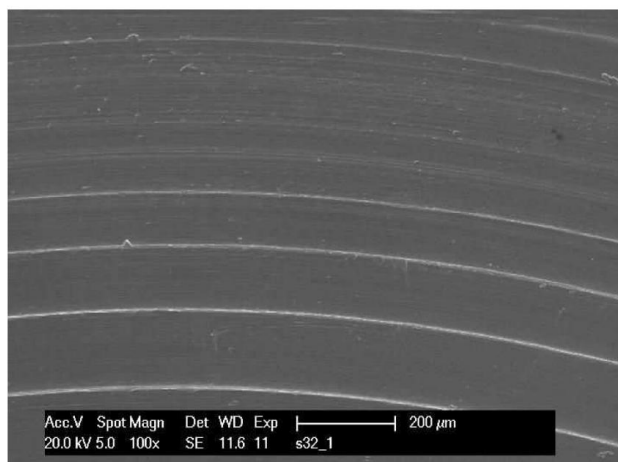
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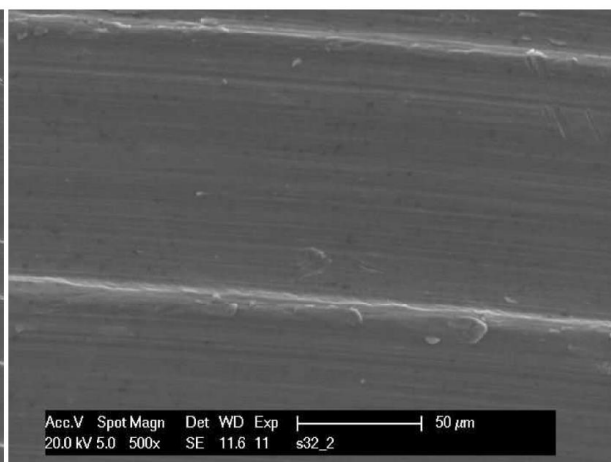
S31_2



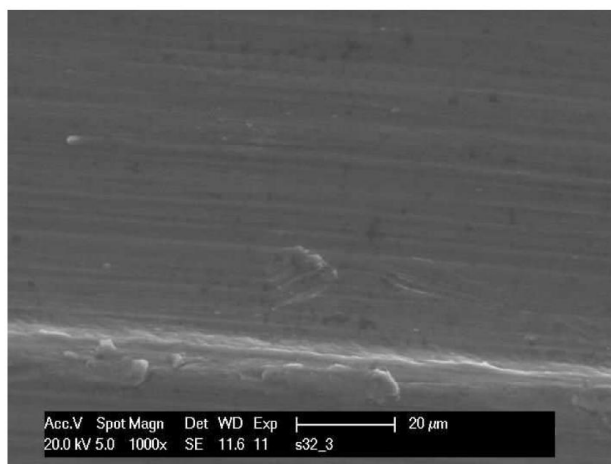
S31_3



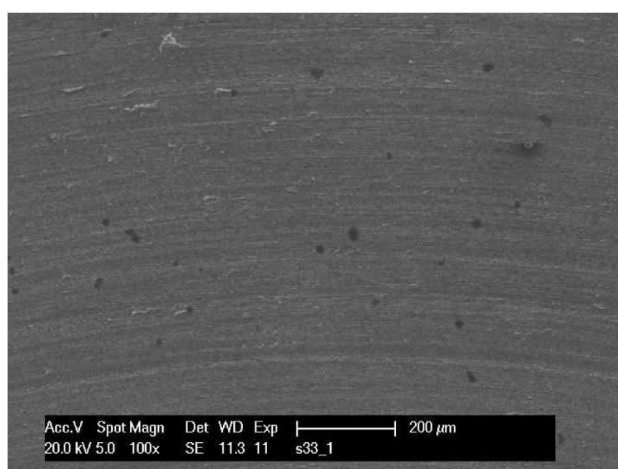
S32_1



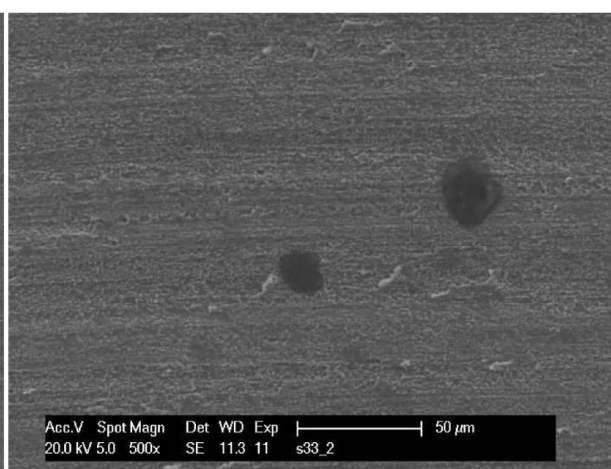
S32_2



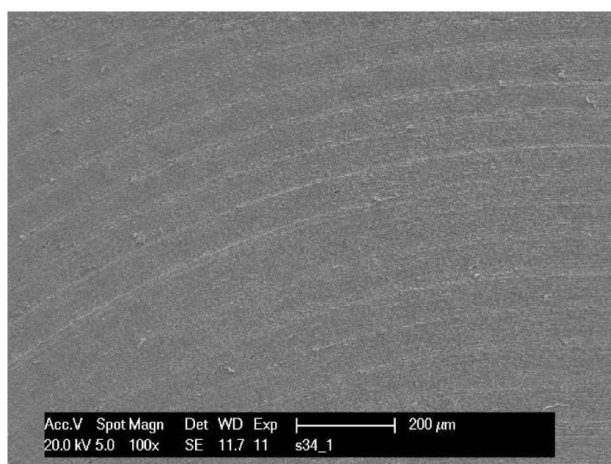
S32_3



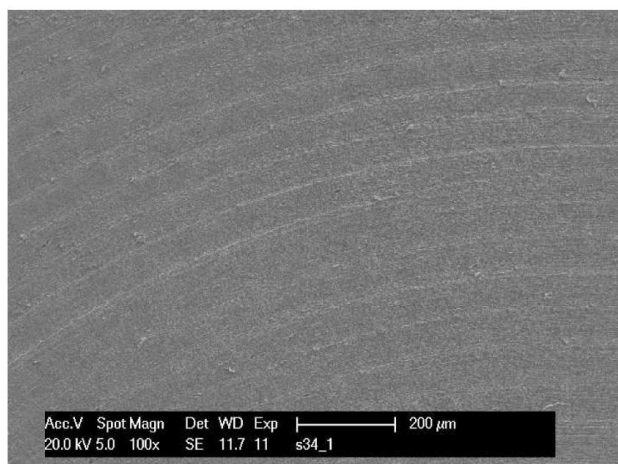
S33_1



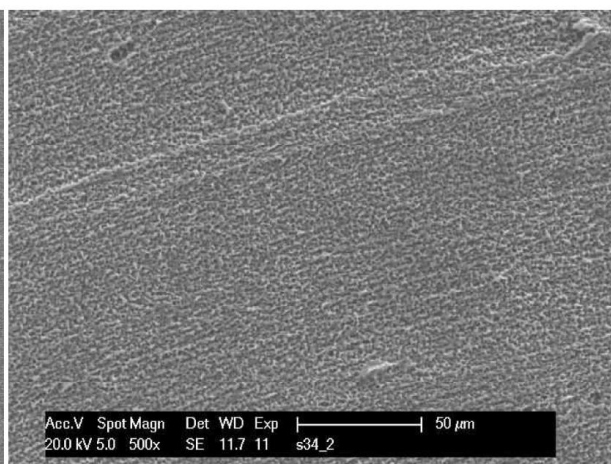
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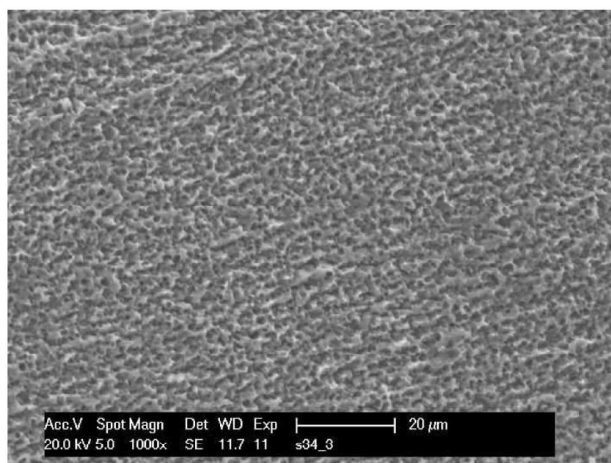
S33_3



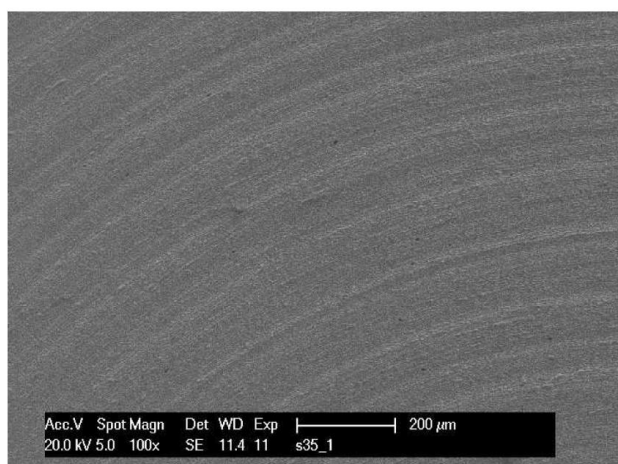
S34_1



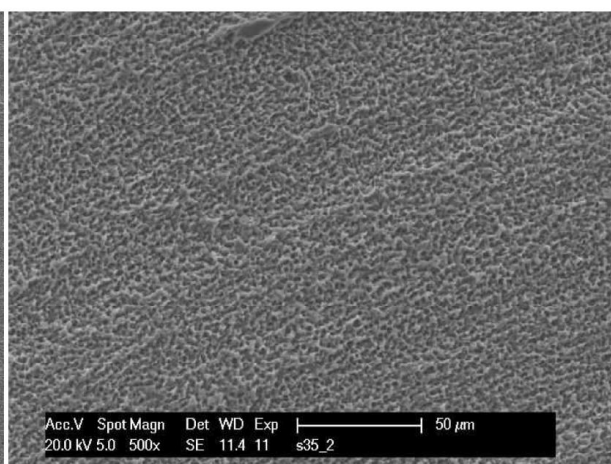
S34_2



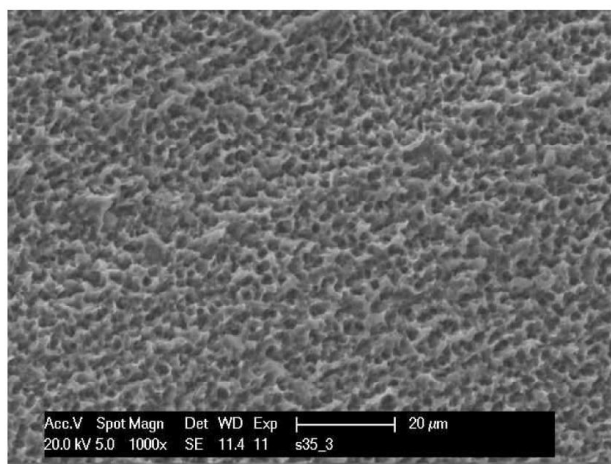
S34_3



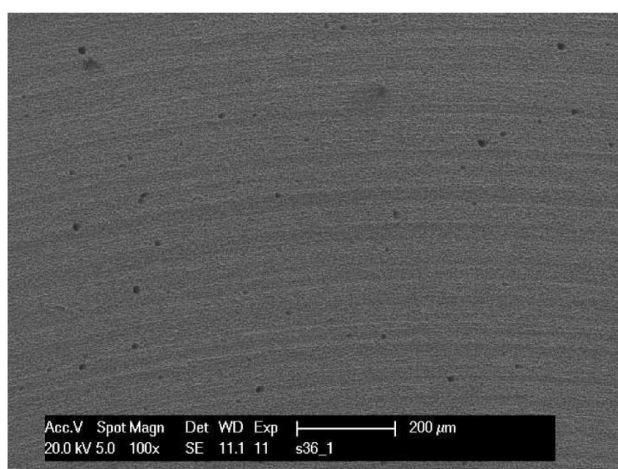
S35_1



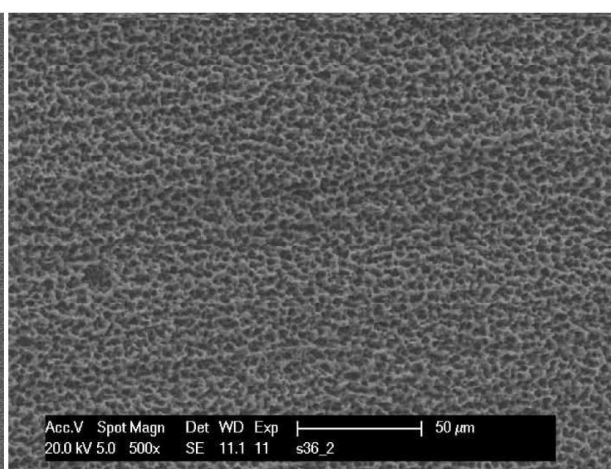
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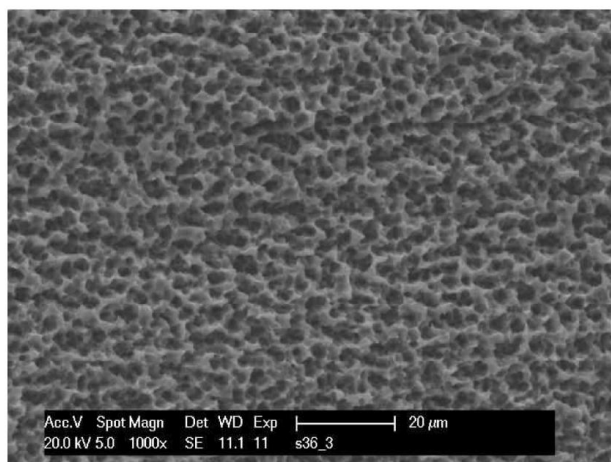
S35_3



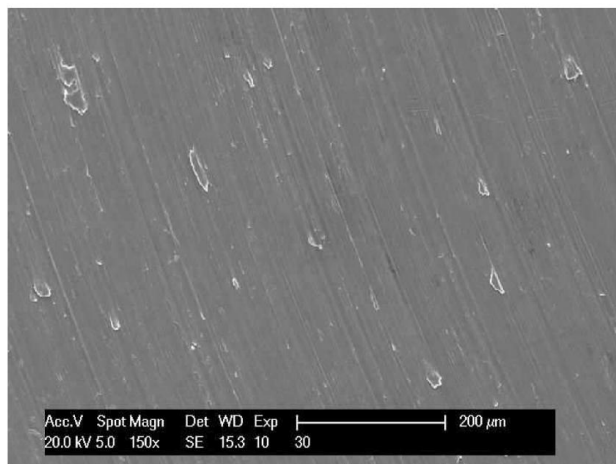
S36_1



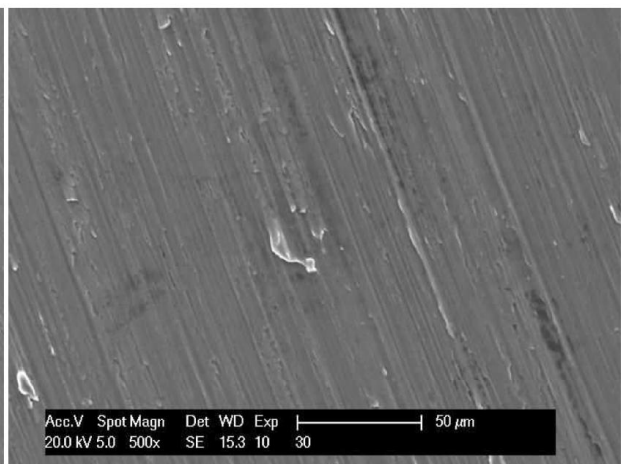
S36_2



S36_3



S37_1



S37_2