

Supplementary material to

Influence of the Ringer's solution on wear of vacuum mixed poly(methyl methacrylate) bone cement in reciprocating sliding contact with AISI 316L stainless steel

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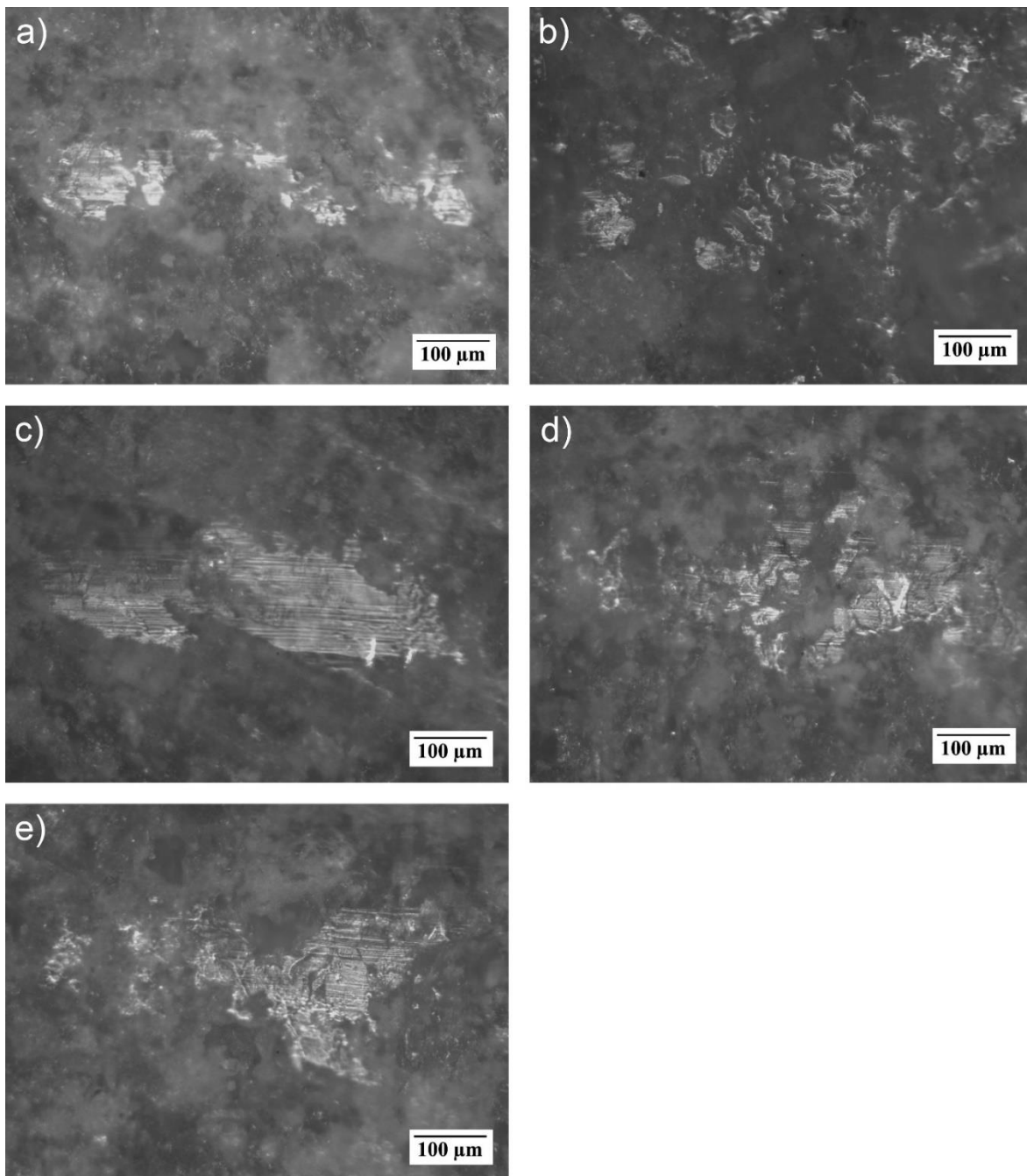


Figure S-1. Wear tracks on PMMA bone cement sliding against AISI 316L stainless steel ($v=4$ mm/s; dry sliding), at different loads: a) 100 mN; b) 250 mN; c) 500 mN; d) 750 mN and e) 1000 mN



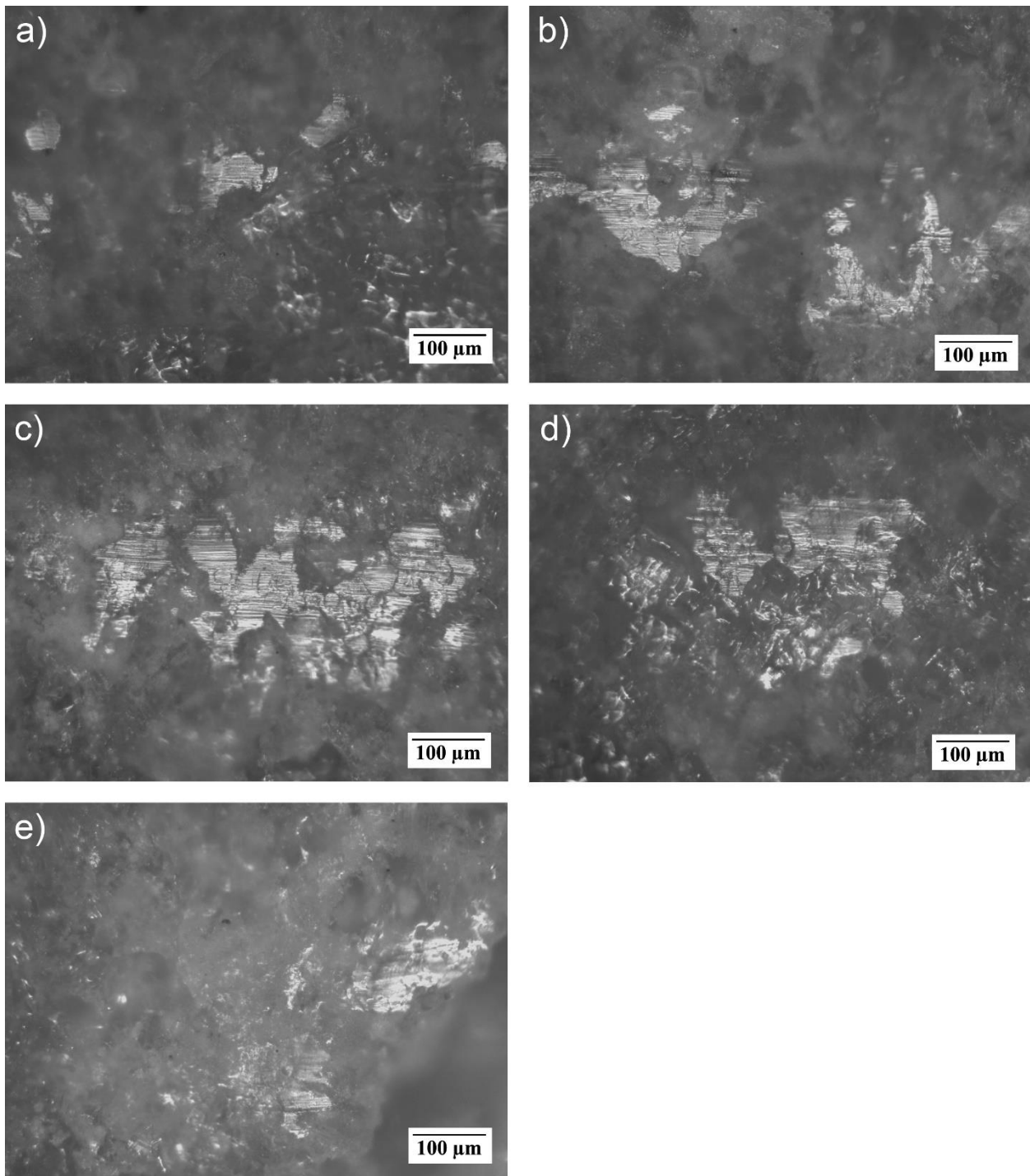


Figure S-2. Wear tracks on PMMA bone cement sliding against AISI 316L stainless steel ($v=8$ mm/s; dry sliding), at different loads: a) 100 mN; b) 250 mN; c) 500 mN; d) 750 mN and e) 1000 mN

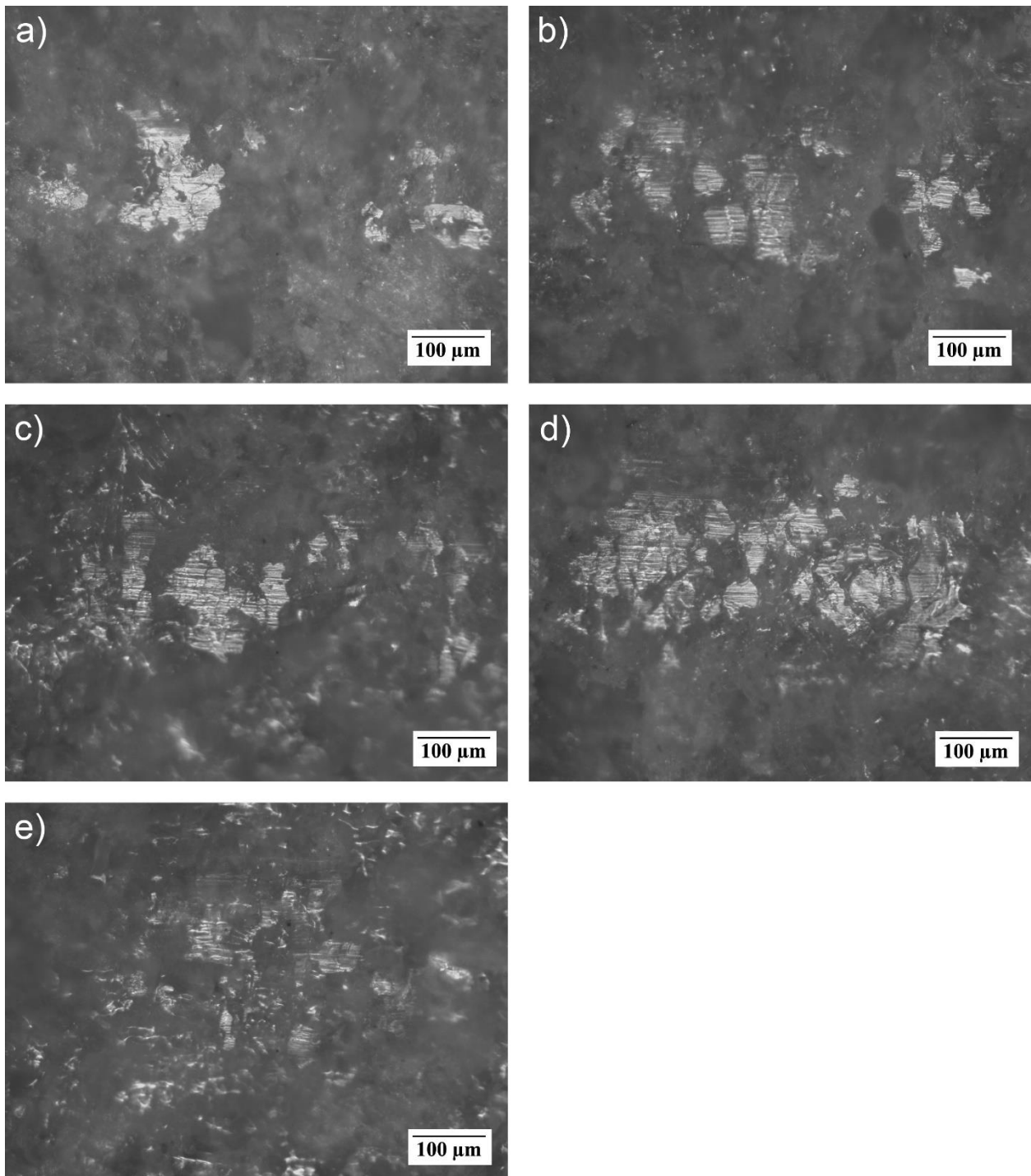


Figure S-3. Wear tracks on PMMA bone cement sliding against AISI 316L stainless steel ($v=12$ mm/s; dry sliding), at different loads: a) 100 mN; b) 250 mN; c) 500 mN; d) 750 mN and e) 1000 mN

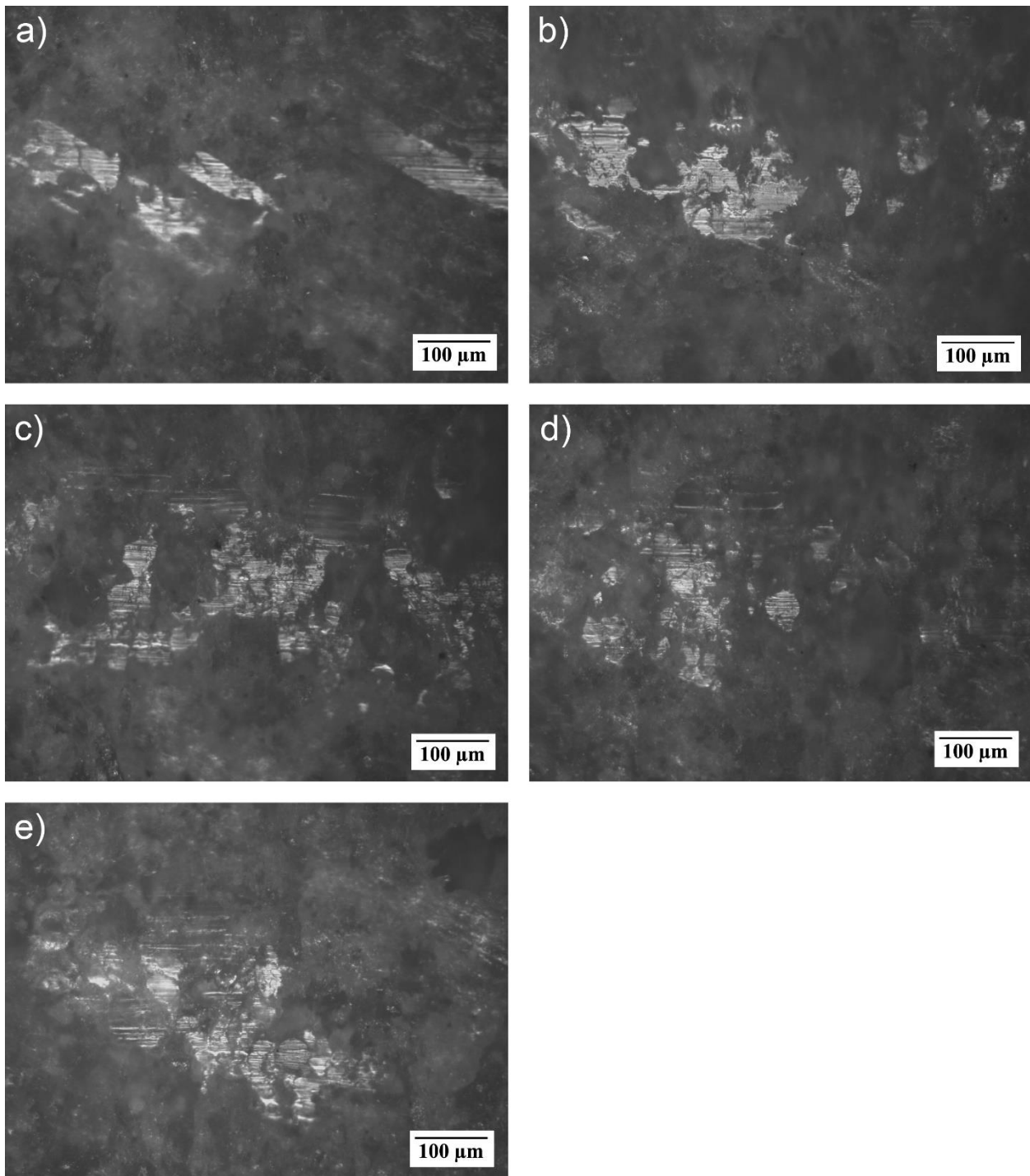


Figure S-4. Wear tracks on PMMA bone cement sliding against AISI 316L stainless steel ($v=4$ mm/s; sliding in Ringer's solution), at different loads: a) 100 mN; b) 250 mN; c) 500 mN; d) 750 mN and e) 1000 mN

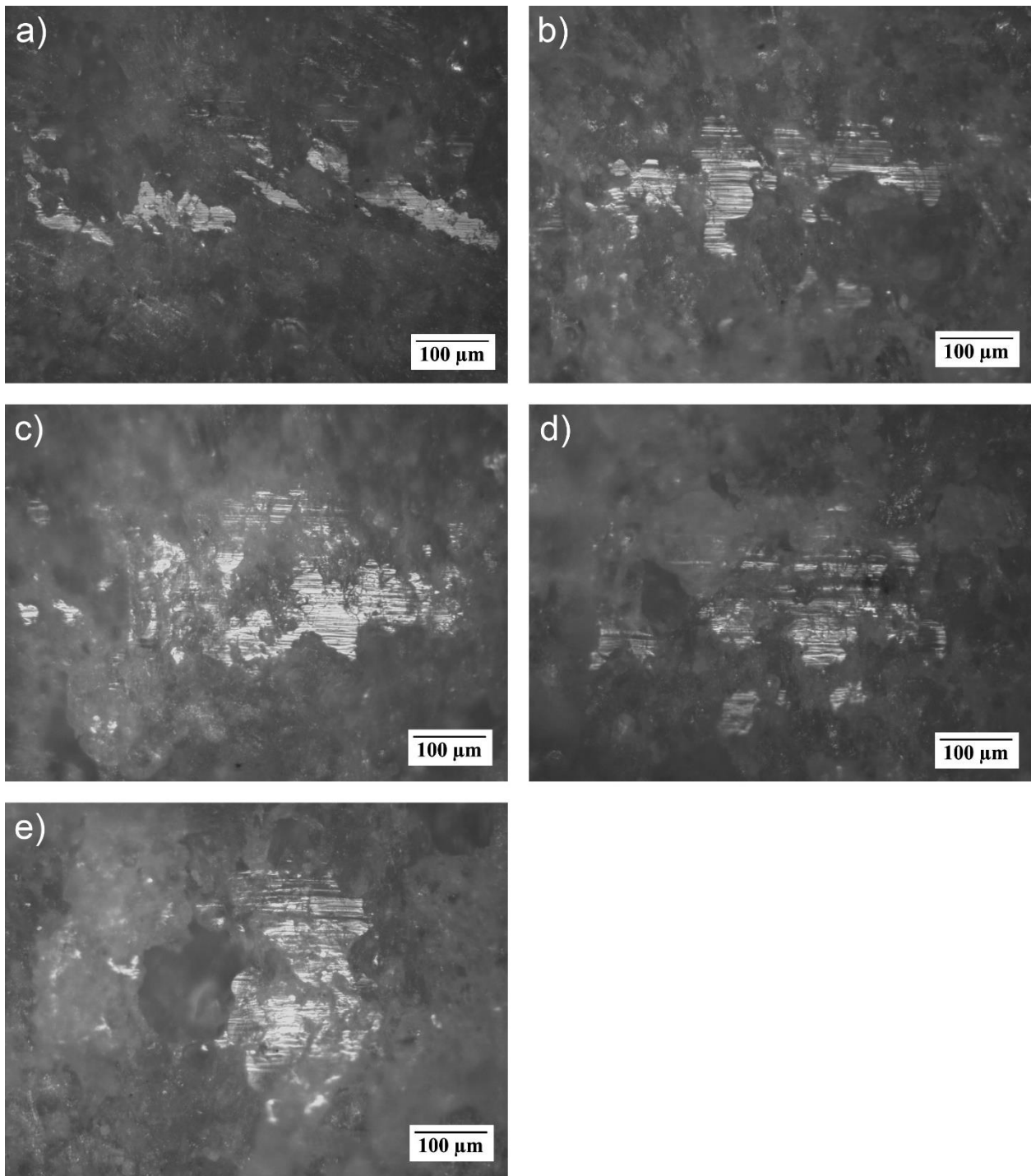


Figure S-5. Wear tracks on PMMA bone cement sliding against AISI 316L stainless steel ($v=8$ mm/s; sliding in Ringer's solution), at different loads: a) 100 mN; b) 250 mN; c) 500 mN; d) 750 mN and e) 1000 mN

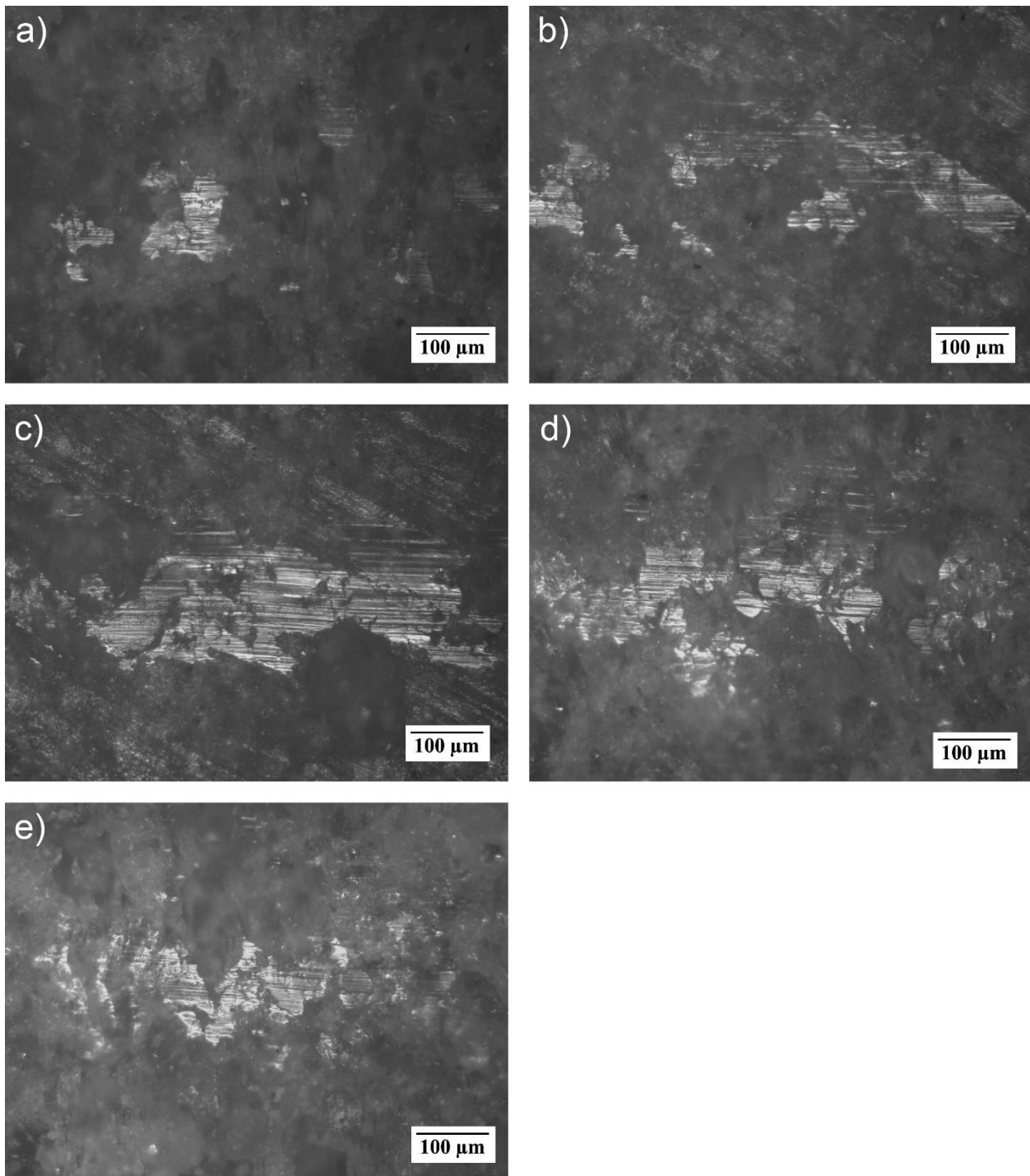


Figure S-6. Wear tracks on PMMA bone cement sliding against AISI 316L stainless steel ($v=12$ mm/s; sliding in Ringer's solution), at different loads: a) 100 mN; b) 250 mN; c) 500 mN; d) 750 mN and e) 1000 mN

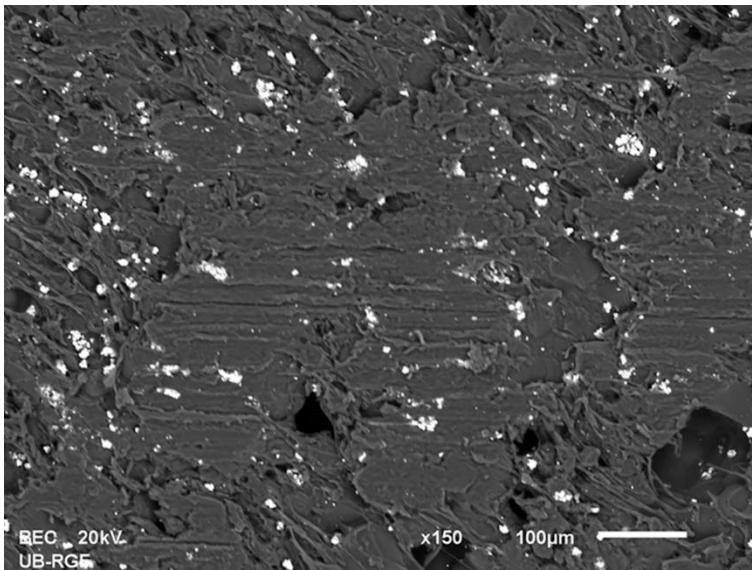


Figure S-7. SEM image of the sample surface (dry sliding, 8 mm/s, 500 mN): BSE image showing difference in chemical composition throughout the wear track

Table S 1. EDS microanalysis of the wear track (dry sliding; 12 mm/s; 500 mN): spectra denoted in Fig. 2a

	Content, wt.%				
	C	O	Fe	Zr	Pd
Spectrum 1	57.66	16.63		25.71	
Spectrum 2	80.33	19.49			0.17
Spectrum 3	81.12	18.70	0.18		
Spectrum 4	80.78	16.60		2.61	
Spectrum 5	81.31	18.69			
Spectrum 6	84.91	15.09			
Spectrum 7	84.24	15.25		0.51	

Table S 2. DS microanalysis of the wear track (sliding in Ringer's solution; 12 mm/s; 750 mN): spectra denoted in Fig. 4a

	Content, wt.%					
	C	O	Cl	Zr	Pd	Hf
Spectrum 1	82.62	17.38				
Spectrum 2	81.92	18.08				
Spectrum 3	50.13	7.09		42.77		
Spectrum 4	100.00					
Spectrum 5	66.14	33.86				
Spectrum 6	80.98	19.02				
Spectrum 7	53.21	20.47		25.76		0.57
Spectrum 8	75.26	23.44	0.29		1.01	
Spectrum 9	76.66	21.83	1.51			