

Elektronová mikroskopie v materiálovém výzkumu

Kristina Hakenová

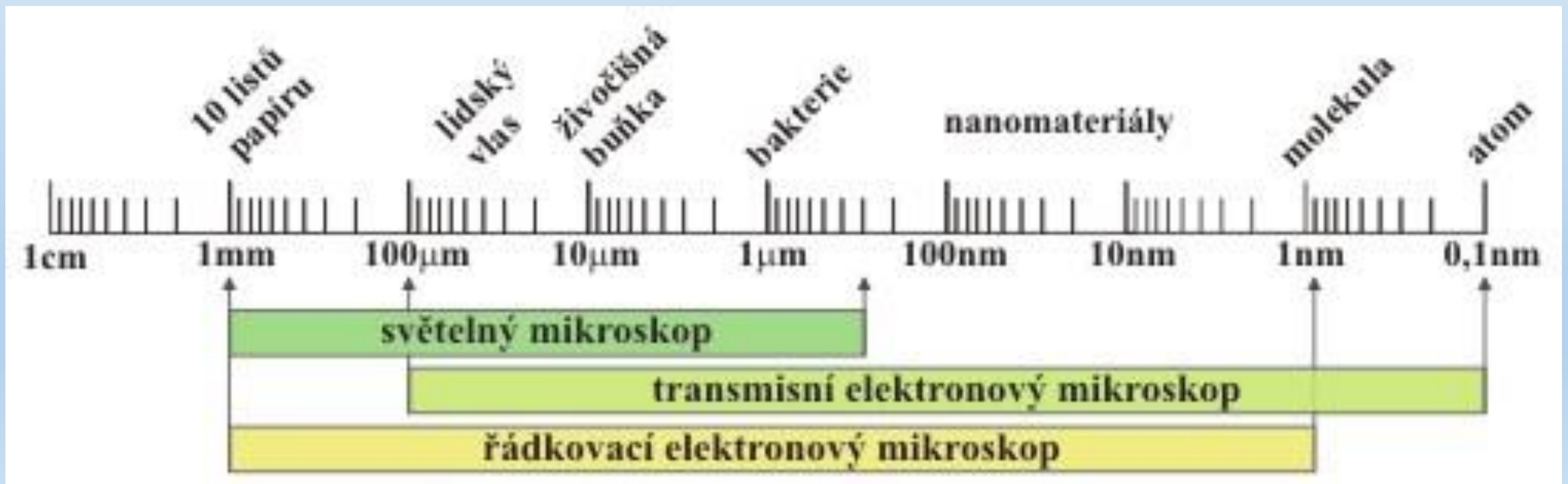
Karel Vlachovský

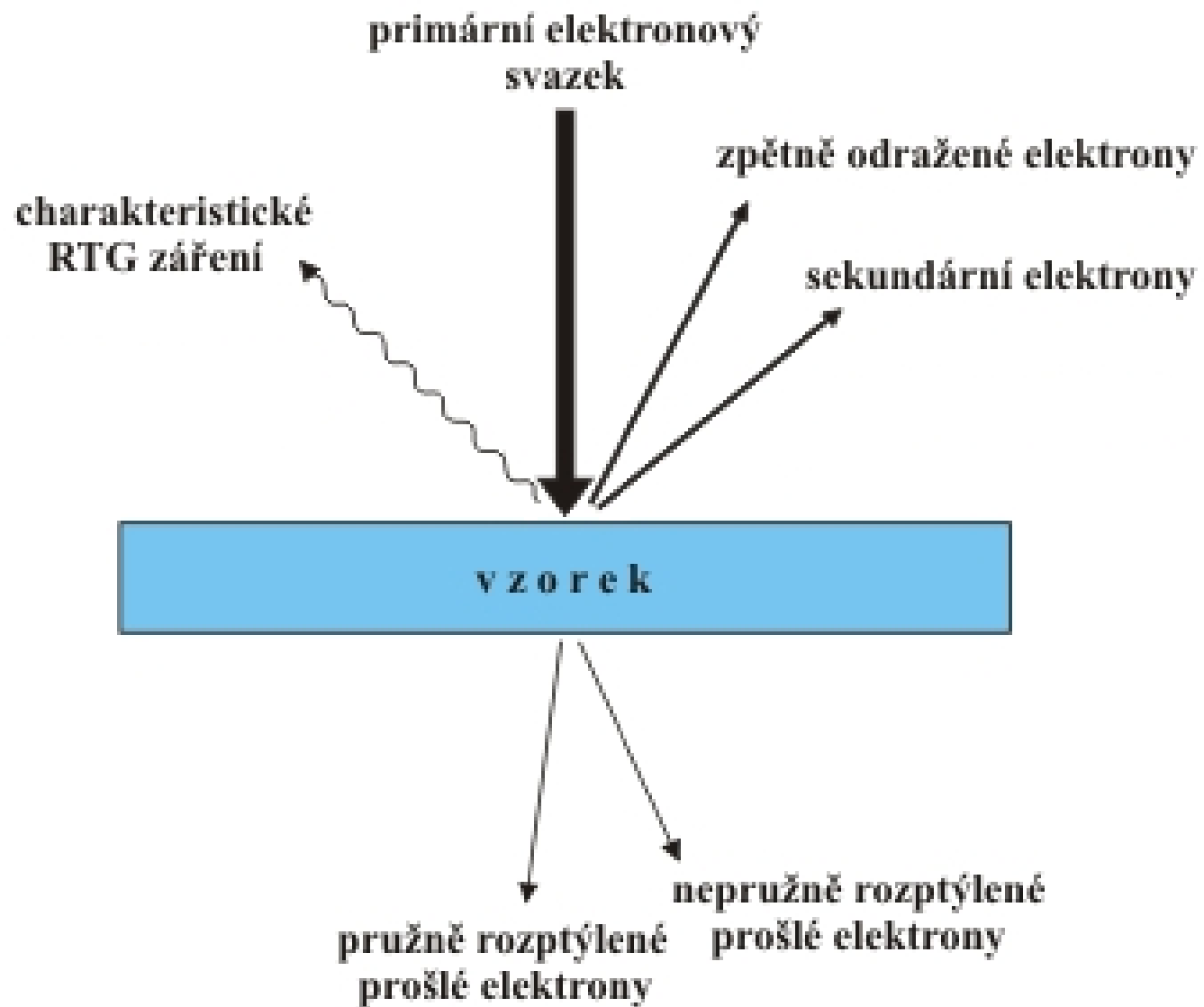
Osnova

- Úvod
- Příprava
- Mince
- Antický hřeb
- Závěr

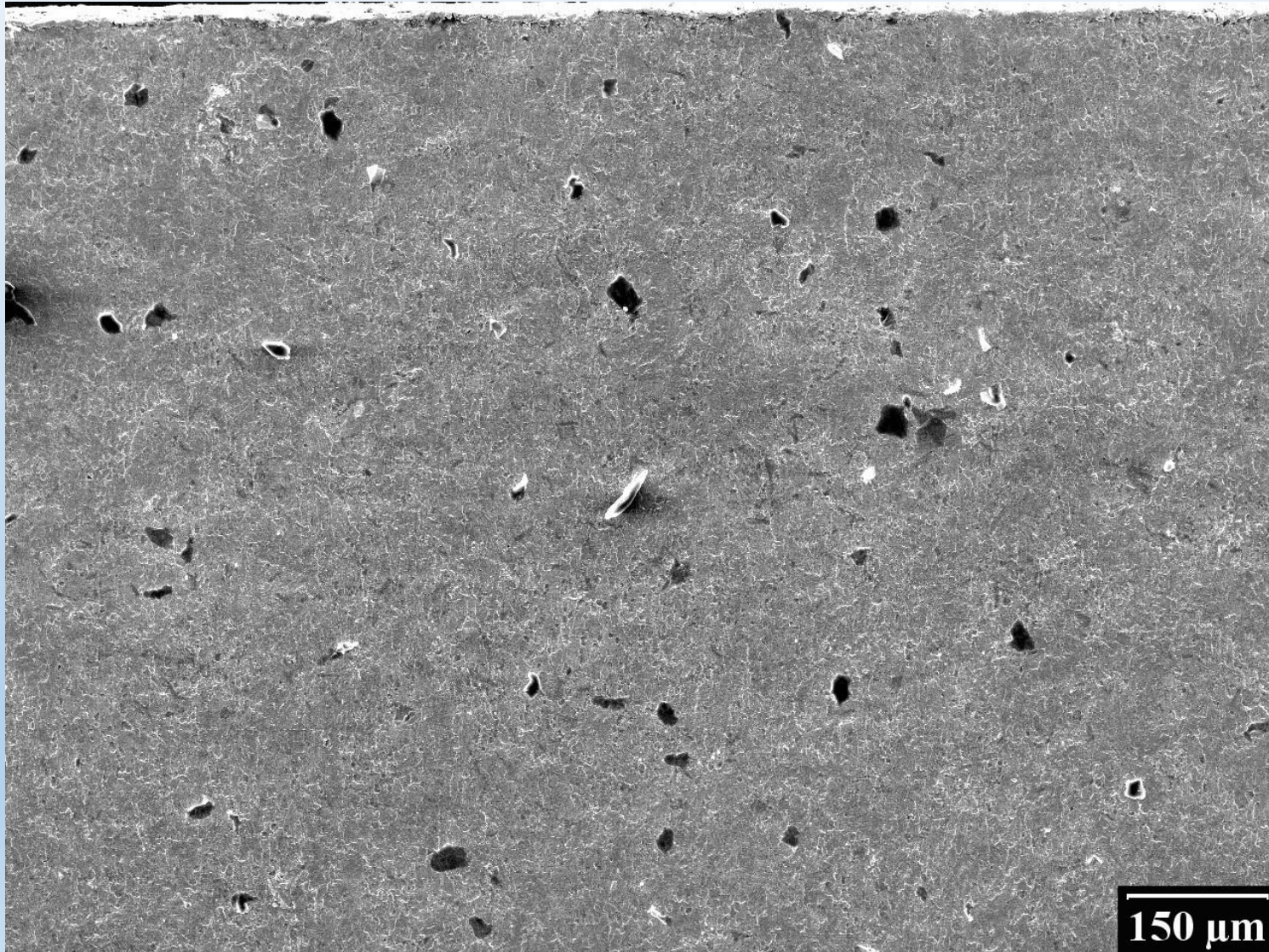
Úvod

- Fotony -> elektrony
- Transmisní elektronové mikroskopy (TEM)
- Rastrovací elektronové mikroskopy (SEM)

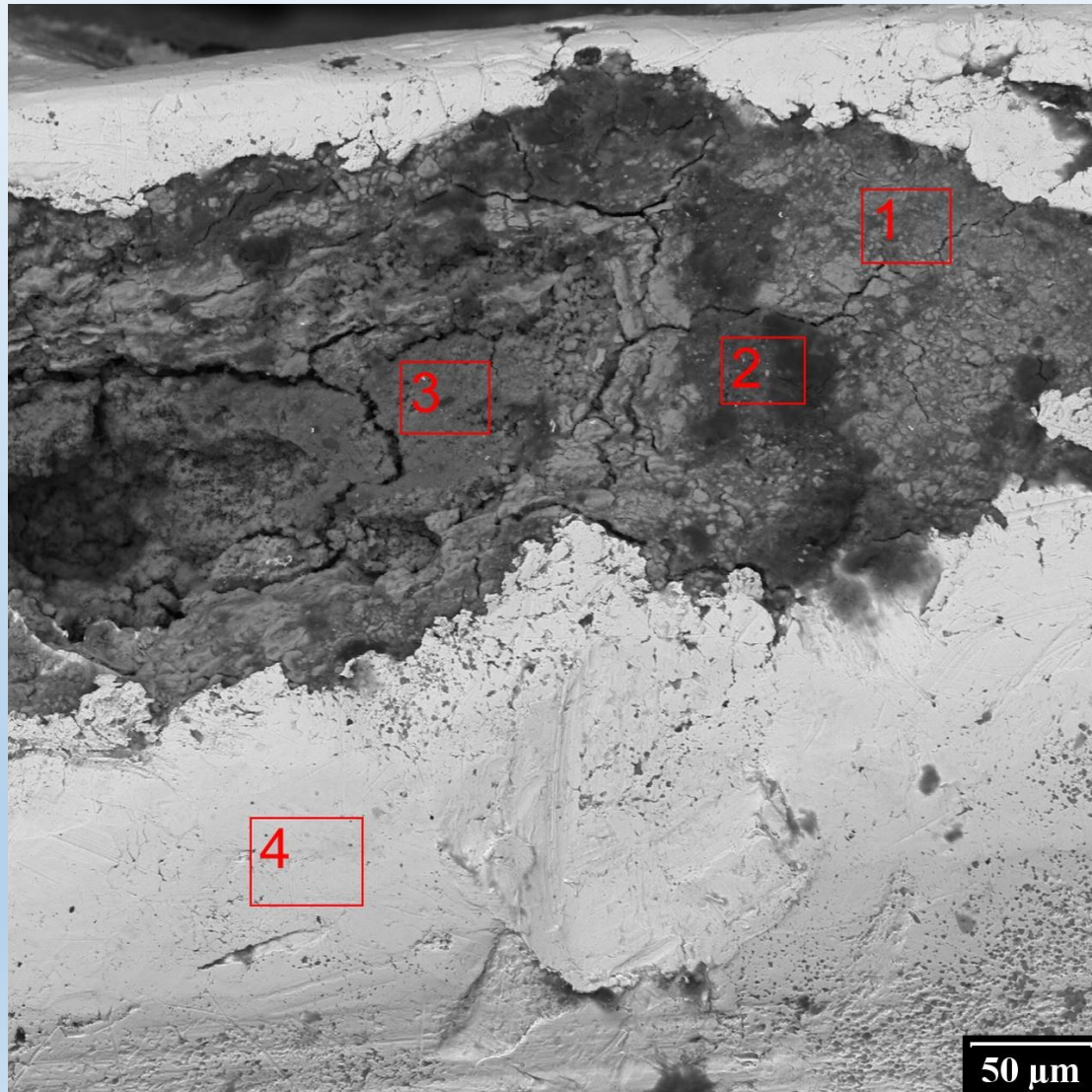




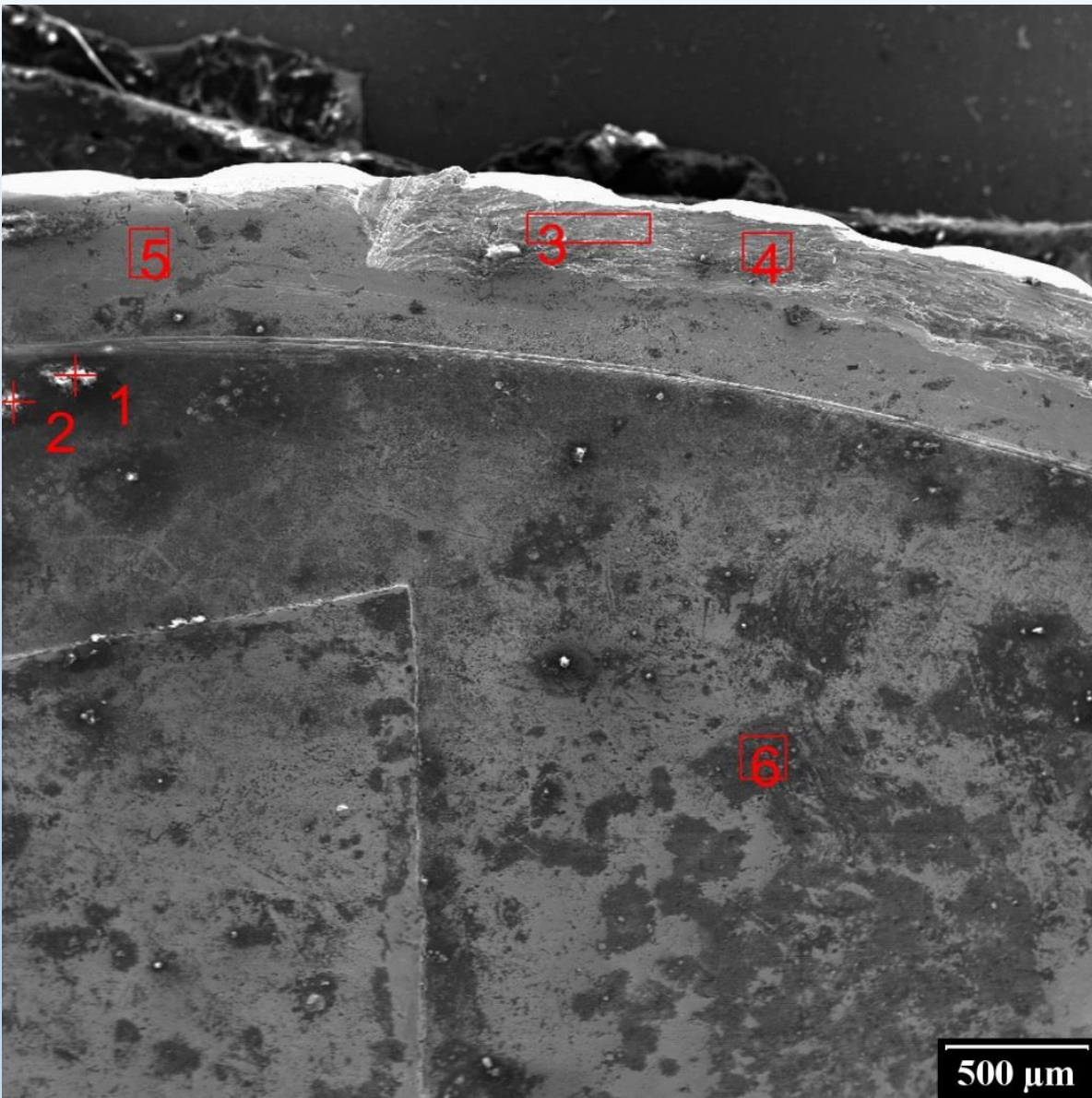
Co se stane, když se neuklidí?



Mince



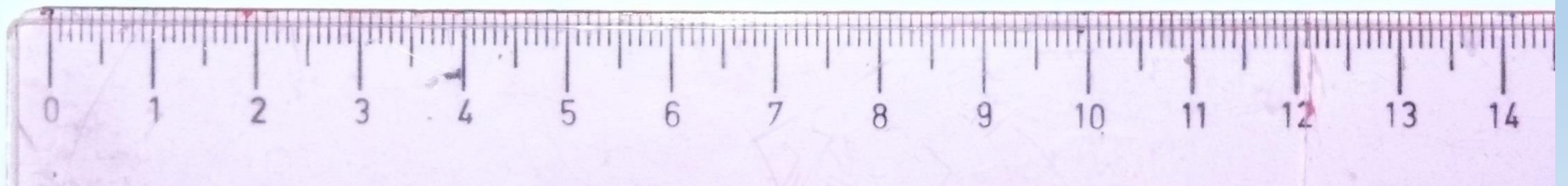
Prvek	C	O	S	Fe	Ni
Area 1	46,859	13,121	4,022	15,237	19,017
Area 2	67,612	9,540	2,812	7,306	7,816
Area 3	57,489	14,349	13,585	9,068	4,652
Area 4				0,721	99,063



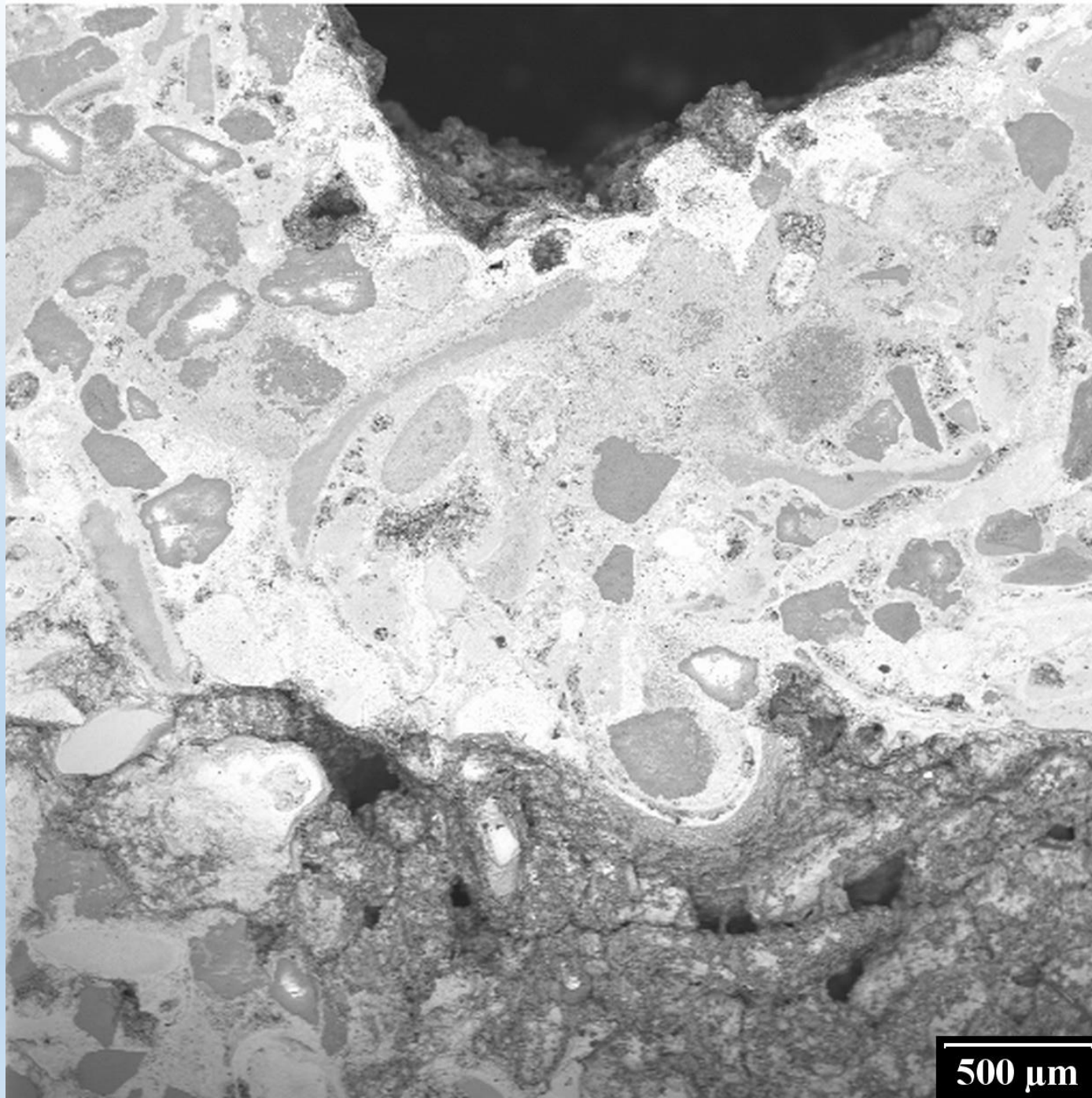
Prvek	C	O	S	Fe	Ni
Area 1	27,588	3,347	0,709	2,383	50,560
Area 2	45,986	8,406	0,236	12,538	30,614
Area 3	8,312	1,127	0,461	1,176	88,258
Area 4	13,595	3,178	1,744	2,075	79,128
Area 5				0,900	98,864
Area 6	37,973	4,227		0,550	55,969

Antický hřeb



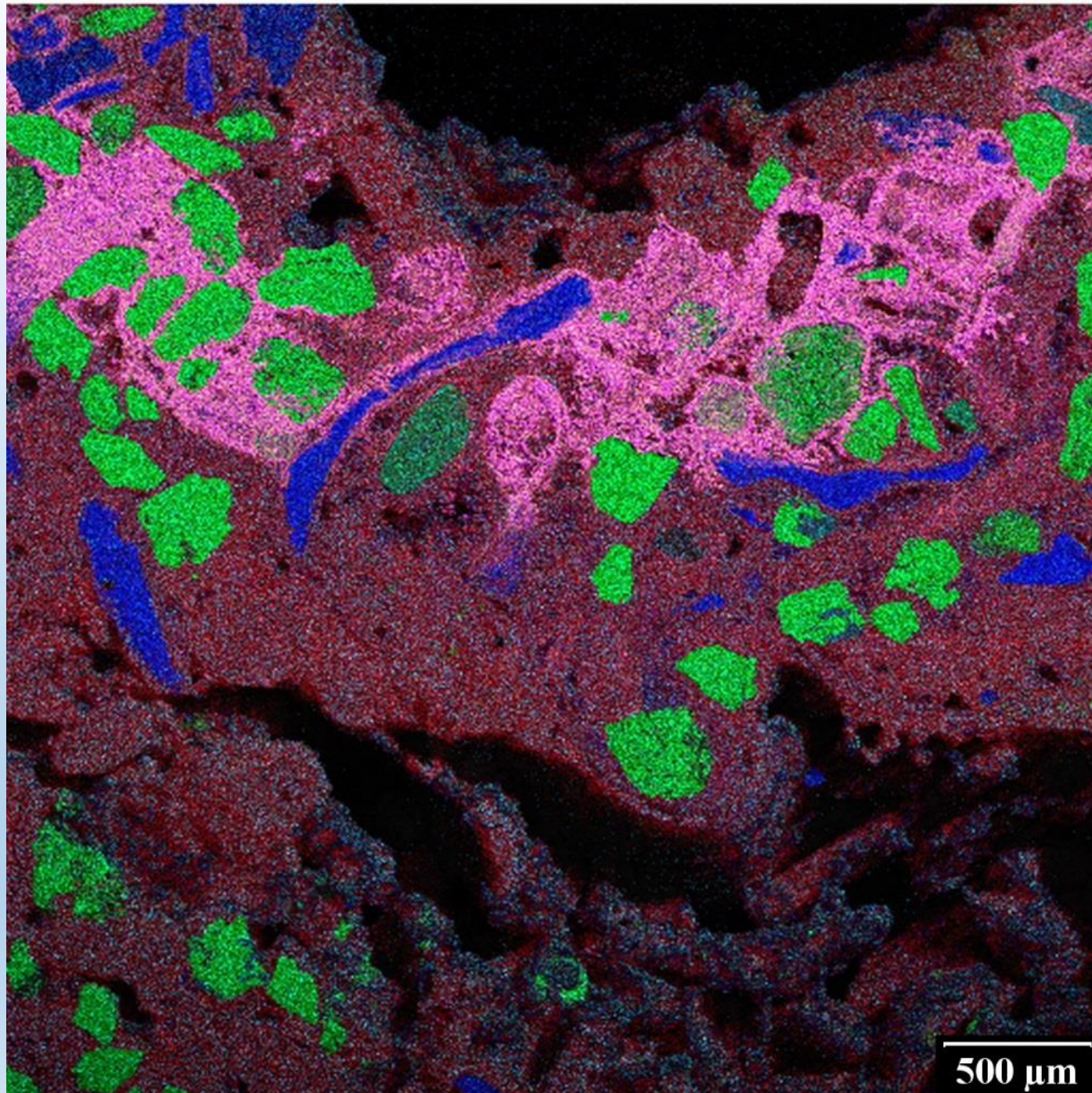


SEM



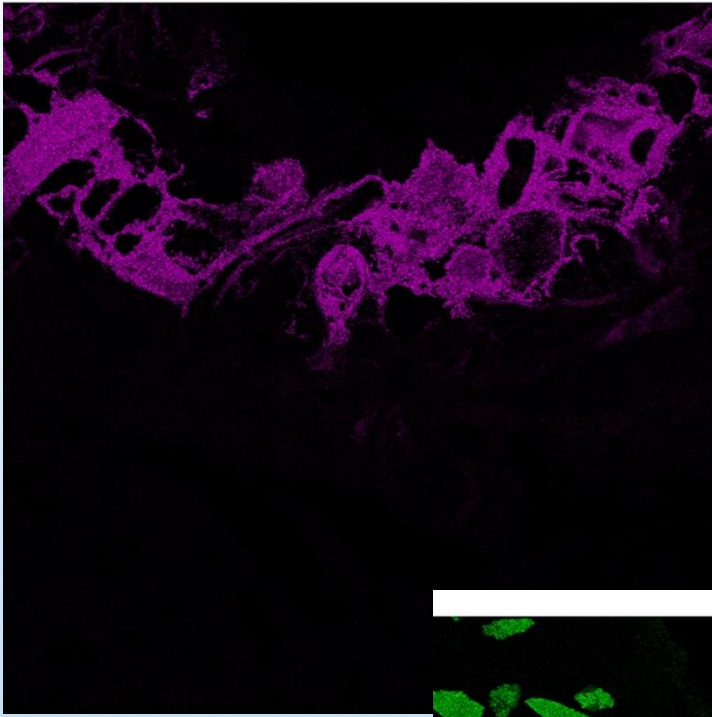
500 μm

SEM

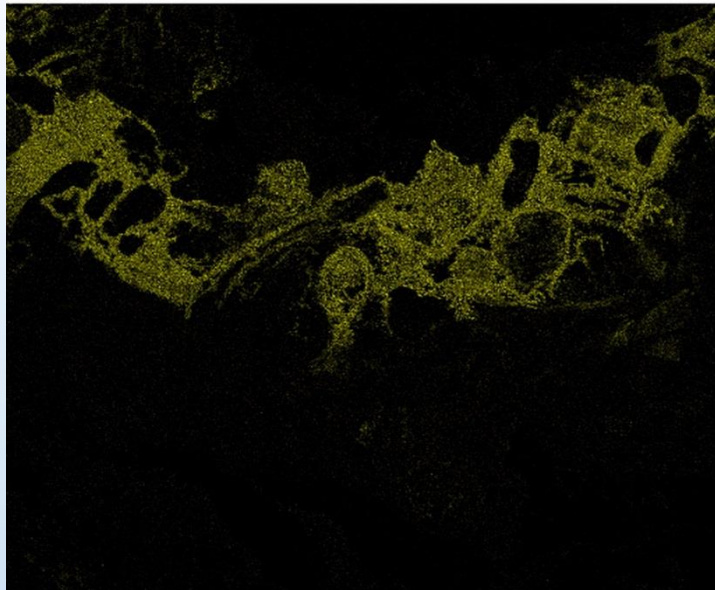


500 μm

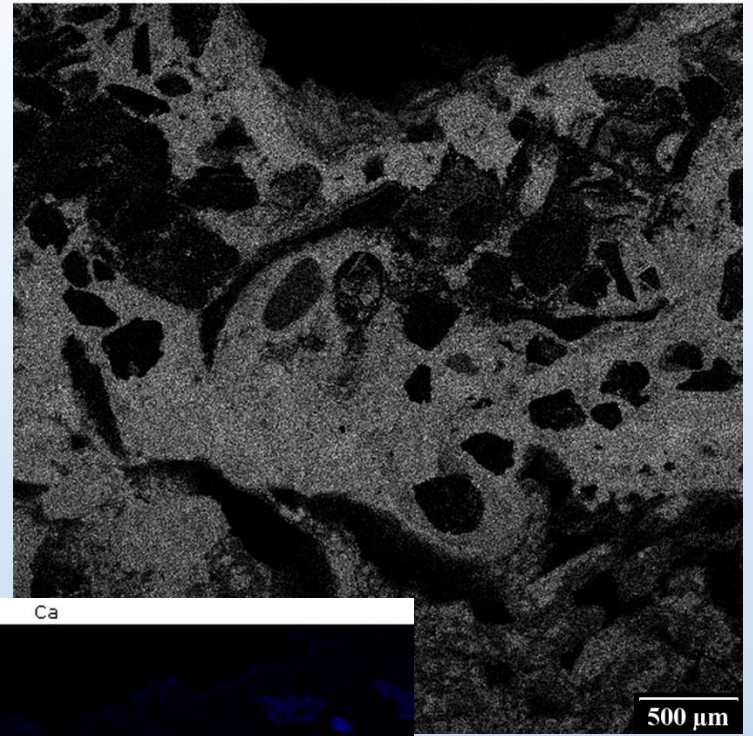
Cl



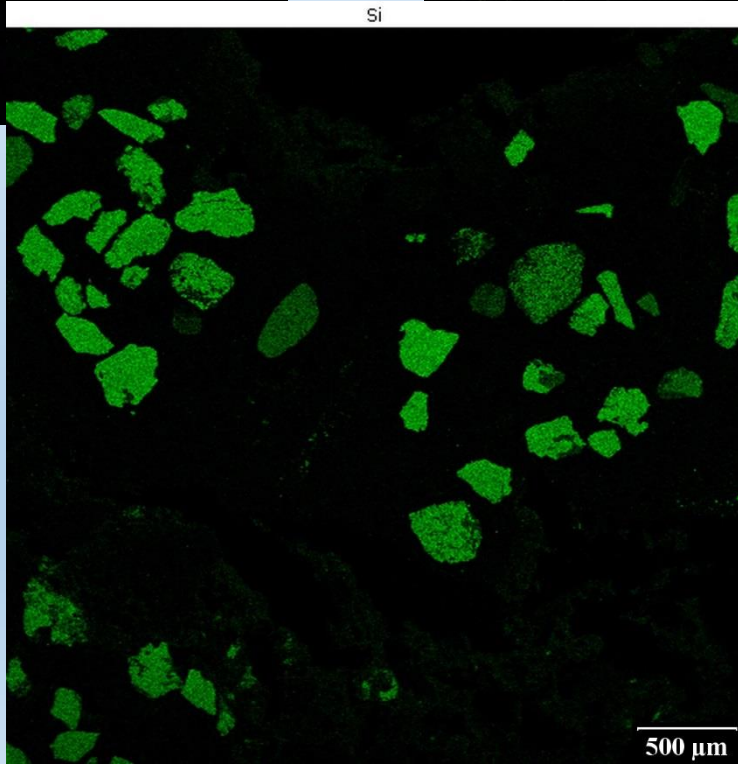
Na



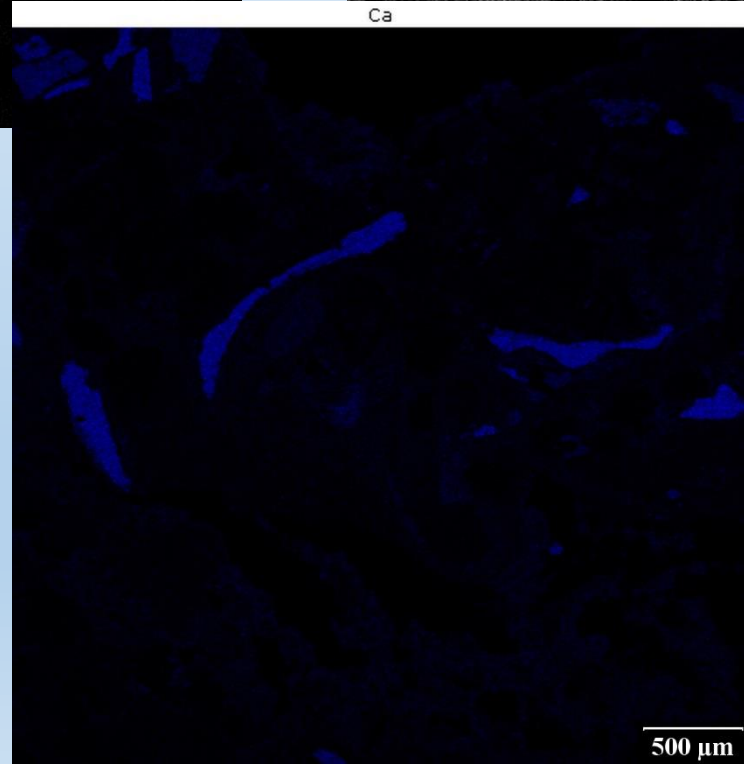
Fe

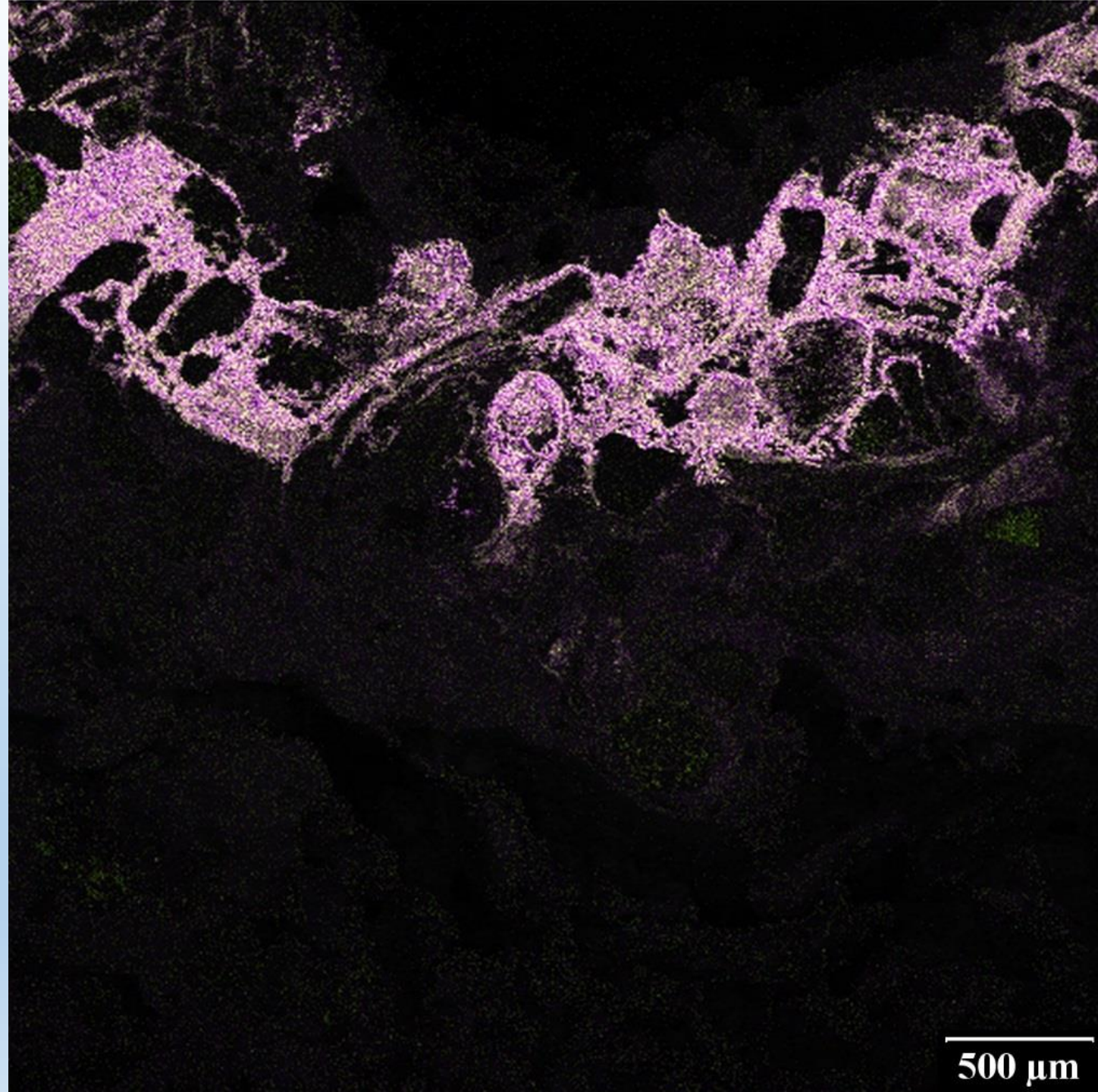


Si

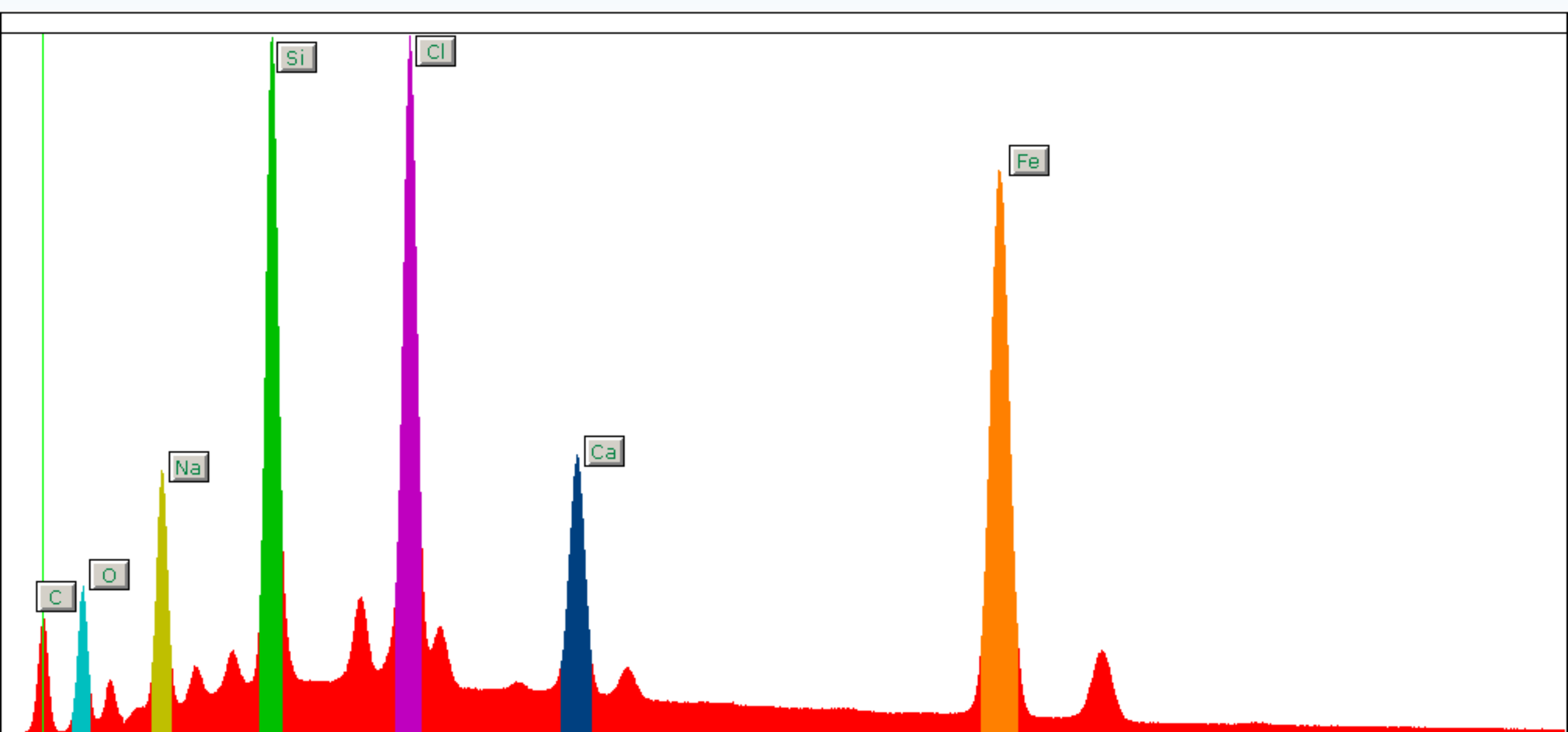


Ca



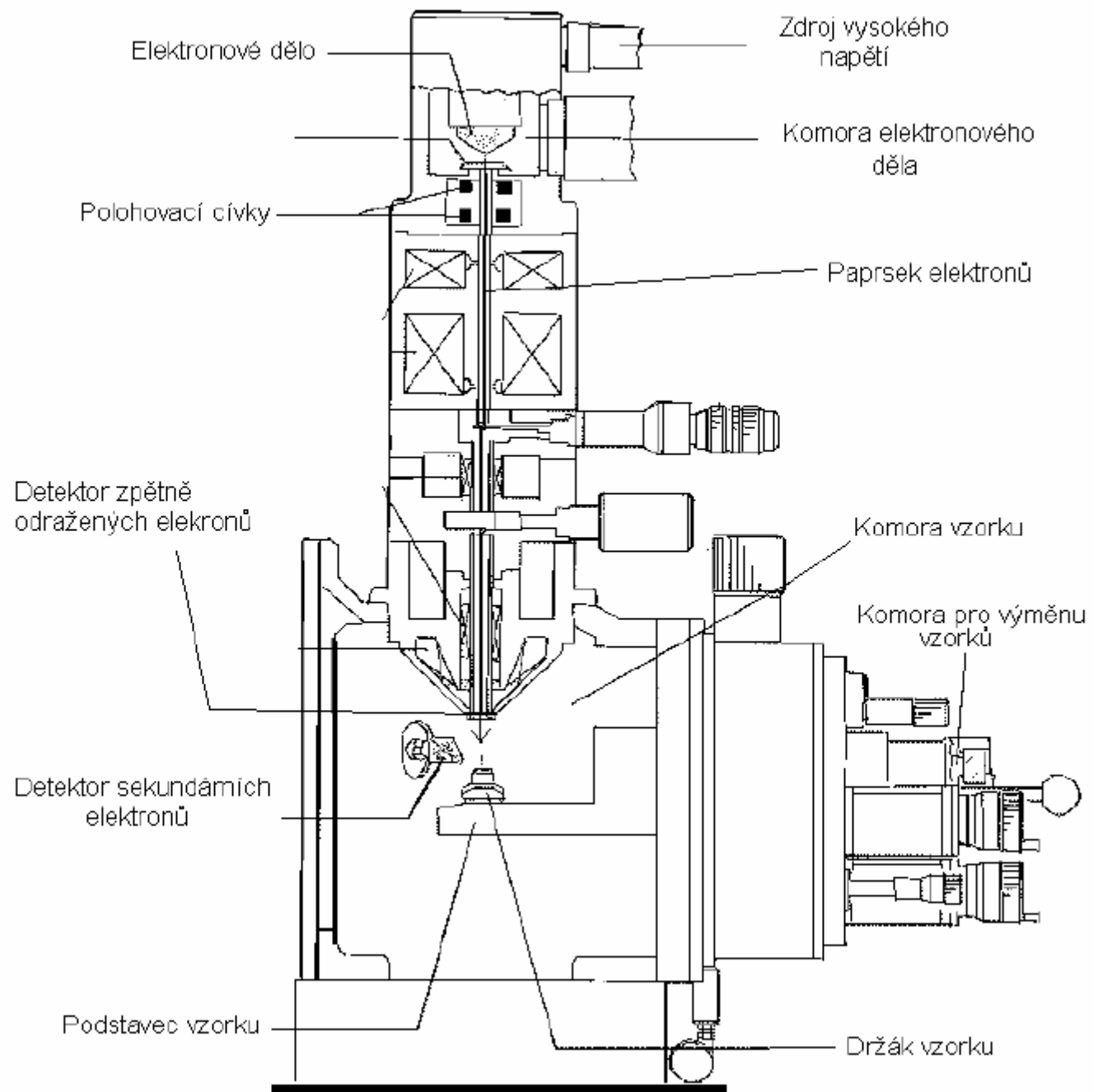


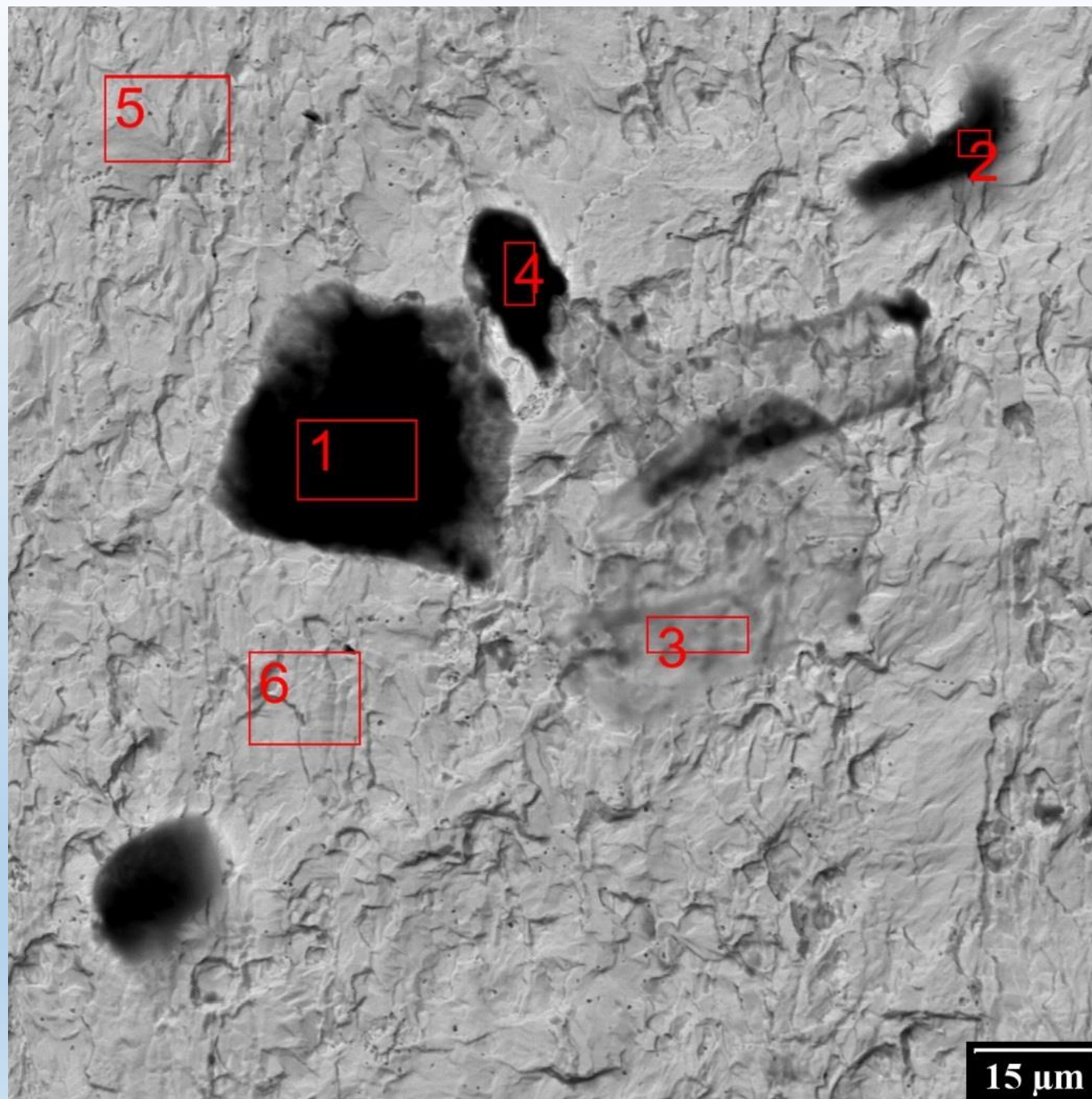
500 μm



Cursor=0,275 keV 13877 cnt ID = Sb m1n C ka1 Zr m3n Y m2n Pd ma1 Pd mz2 Pd mz1 Pd mb K ln Sn me
Vert=83659 Window 0,005 - 40,955= 7 158 321 cnt

Děkujeme za pozornost





Zdroje

- Elektronovým mikroskopem do nitra materiálů aneb jak vypadá jejich struktura. *Fyzikální ústav akademie věd ČR* . [online]. 16.6.2015 [cit. 2015-06-16]. Dostupné z:
<http://www.fzu.cz/popularizace/elektronovym-mikroskopem-do-nitra-materialu-aneb-jak-vypada-jejich-struktura>