Supplementary Information

Differential Thermal Analysis Techniques as a tool for preliminary examination of catalyst for combustion

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Using the EDX method, the weight percentage of each element present in the catalysts was studied.
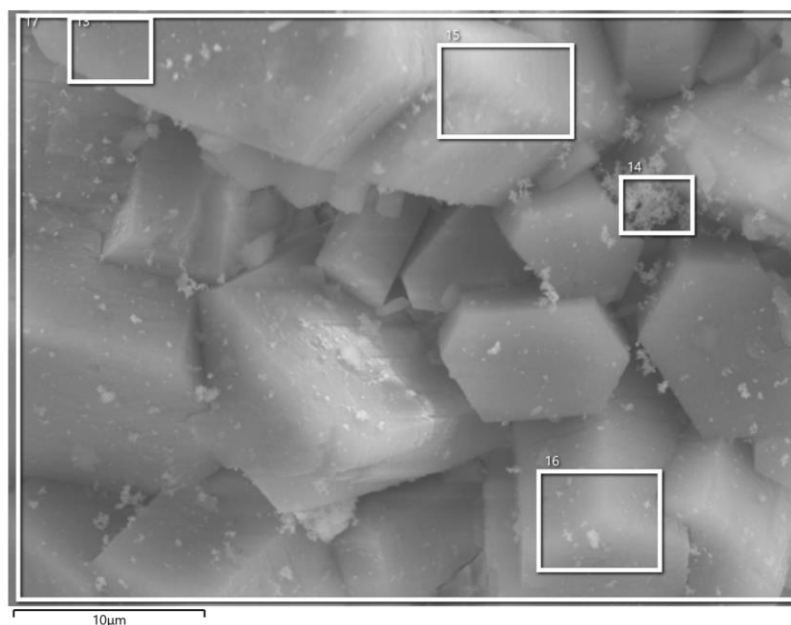
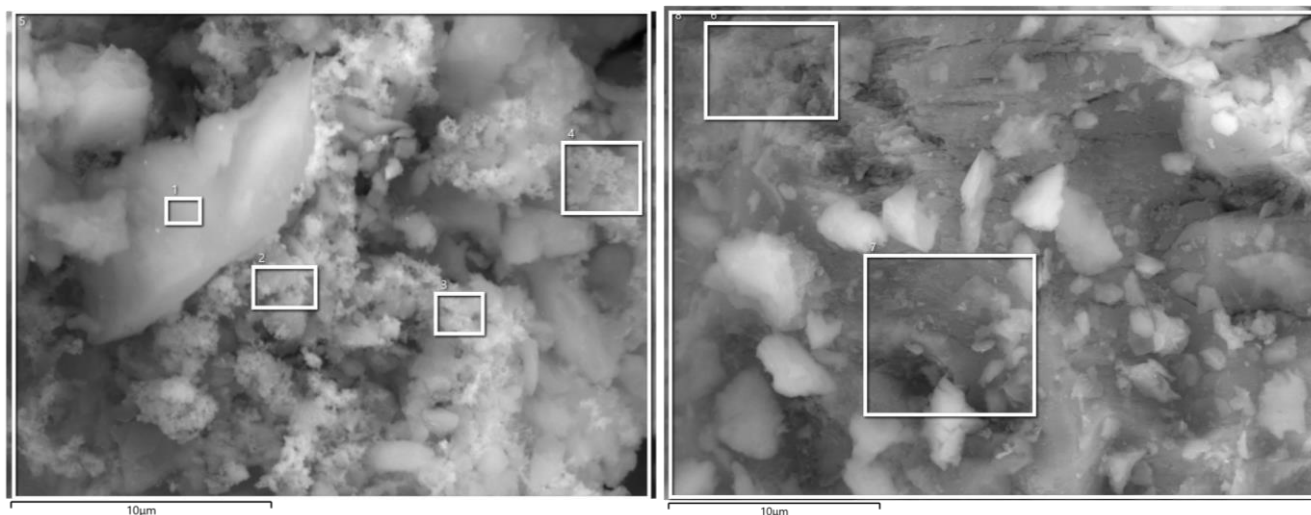**Figure 1**. SEM image of c-5PdAl$_2$O$_3$ catalyst with depicted position of the recorded EDX spectra.

Spectrum	O wt%	Al wt%	Pd wt%
13	53.8	44.9	2.3
14	44.1	28.2	27.1
15	53.7	42.0	4.3
16	59.2	38.0	2.3
17*	53.3	42.0	4.2
Mean	52.9	43.9	8.0
Max	59.7	28.8	27.0
Min	44.1	38.9	2.3
Std deviation	5.6	6.0	10.7

*overview spectrum

Table 1. EDX results for c-5PdAl$_2$O$_3$ catalyst.

Figure 2. SEM images of c-10PdAl$_2$O$_3$ catalyst with depicted position of the recorded EDX spectra.

Spectrum/ content	O wt%	Al wt%	Pd wt%
1	49.0	39.9	11.1
2	27.7	26.8	45.5
3	29.1	20.2	50.7
4	31.4	24.1	44.5
5*	37.1	28.7	34.2
6	27.1	52.9	20.1
7	33.4	51.9	14.7
8*	38.2	49.0	12.9
Mean	37.9	36.7	29.2
Max	49.0	52.9	50.7
Min	27.7	20.2	11.1
Std deviation	8.3	13.4	16.4

*overview spectrum

Table 2. EDX results for c-10PdAl$_2$O$_3$ catalyst