

## Supplementary File

**Table S1:** XRD-analysis data of the ZrO<sub>2</sub> and Pt/ZrO<sub>2</sub> nanocatalysts

No.	ZrO <sub>2</sub>		0.5 wt% Pt/ZrO <sub>2</sub>		1 wt% Pt/ZrO <sub>2</sub>	
	2θ °	Intensity	2θ °	Intensity	2θ °	Intensity
1	20.632420	24.40	20.594530	25.33	20.440750	9.14
2	24.371590	17.44	24.295030	16.96	24.520900	14.81
3	28.276290	100	28.234250	100	28.264510	100
4	34.299830	28.13	34.227920	24.80	34.421460	21.12
5	38.642940	16.56	38.599360	8.65	38.654860	7.80
6	41.281790	13.22	41.289720	8.46	41.534310	7.85
7	45.856970	12.45	45.594860	14.24	45.533080	8.38
8	49.326140	27.16	49.305130	22.63	49.285860	22.43
9	54.237780	16.93	54.168660	19.97	54.163740	16.73
10	55.505320	27.26	55.507510	19.57	55.426540	19.00
11	58.190300	11.20	58.161950	9.56	58.043670	7.33
12	61.499650	12.36	61.389670	12.30	61.447950	6.48
13	62.907620	17.09	62.823380	12.83	62.870870	11.94
14	65.703330	14.47	65.766820	9.46	65.662670	9.02
15	71.339770	8.78	71.240100	6.34	71.271010	5.29
	<b>SUM</b>	<b>347.45</b>	<b>SUM</b>	<b>311.1</b>	<b>SUM</b>	<b>267.32</b>
	<b>(DOC)%</b>	<b>100%</b>		<b>89.5%</b>		<b>79.9%</b>

**Table S2:** XRD-analysis data of the SZrO<sub>2</sub> and Pt/SZrO<sub>2</sub> nanocatalysts

No.	SZrO <sub>2</sub>		0.5 wt% Pt/SZrO <sub>2</sub>		1 wt% Pt/SZrO <sub>2</sub>	
	2θ °	Intensity	2θ °	Intensity	2θ °	Intensity
1	24.049160	18.28	24.085230	17.52	24.156820	15.10
2	28.177570	100	28.251610	100.00	28.265540	100.00
3	34.148120	24.79	34.245500	24.99	34.202390	25.07
4	41.235990	8.36	41.364850	7.20	41.343630	7.22
5	44.699050	7.77	44.921810	8.32	44.906120	7.25
6	50.104440	29.88	50.231340	28.17	50.273270	26.66
7	50.593820	15.42	50.547020	14.71	50.692590	13.40
8	51.163780	9.9	51.350230	7.59	51.304950	6.93

<b>9</b>	54.059890	13.74	54.149630	12.10	54.144640	12.91
<b>10</b>	55.479570	18.43	55.463620	17.86	55.462510	16.57
<b>11</b>	55.877770	9.95	55.947630	7.59	55.826600	10.99
<b>12</b>	58.087560	6.16	58.004750	5.72	58.132920	5.20
<b>13</b>	59.913040	15.54	59.928960	13.87	59.971200	14.11
<b>14</b>	64.208120	3.63	64.274880	3.54	64.315220	2.77
<b>15</b>	71.246970	7.65	71.265600	5.14	71.279510	5.43
	<b>SUM</b>	<b>289.5</b>	<b>SUM</b>	<b>274.32</b>	<b>SUM</b>	<b>269.61</b>
	<b>(DOC)%</b>	<b>100%</b>	<b>(DOC)%</b>	<b>94.75%</b>	<b>(DOC)%</b>	<b>93.13%</b>