Supporting Information

Chromatographic separation and mass spectrometric analysis of *N*-acetyl-L-cysteine-protected palladium nanoparticles

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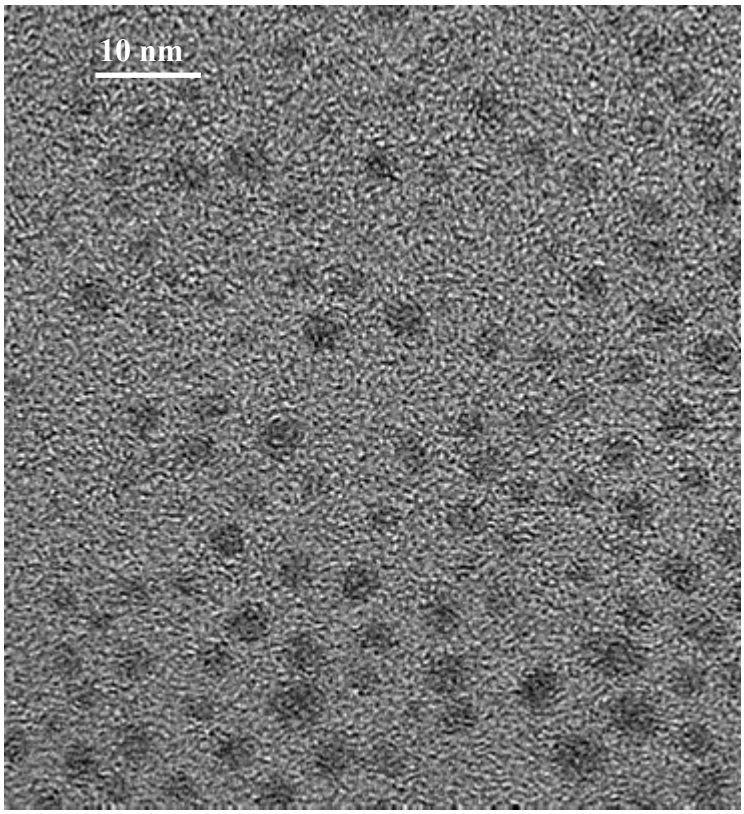


Fig. S1. TEM image of the as-synthesised NAC-PdNPs.

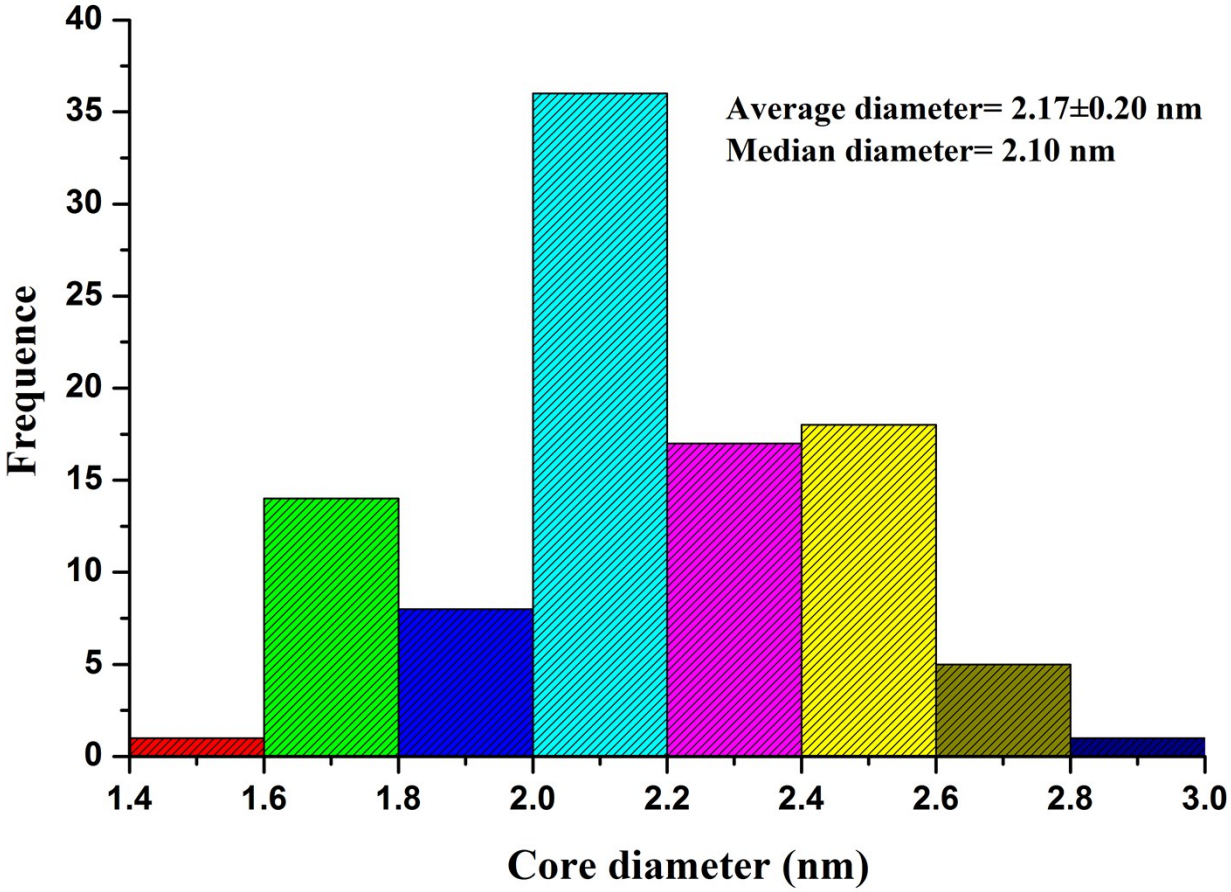
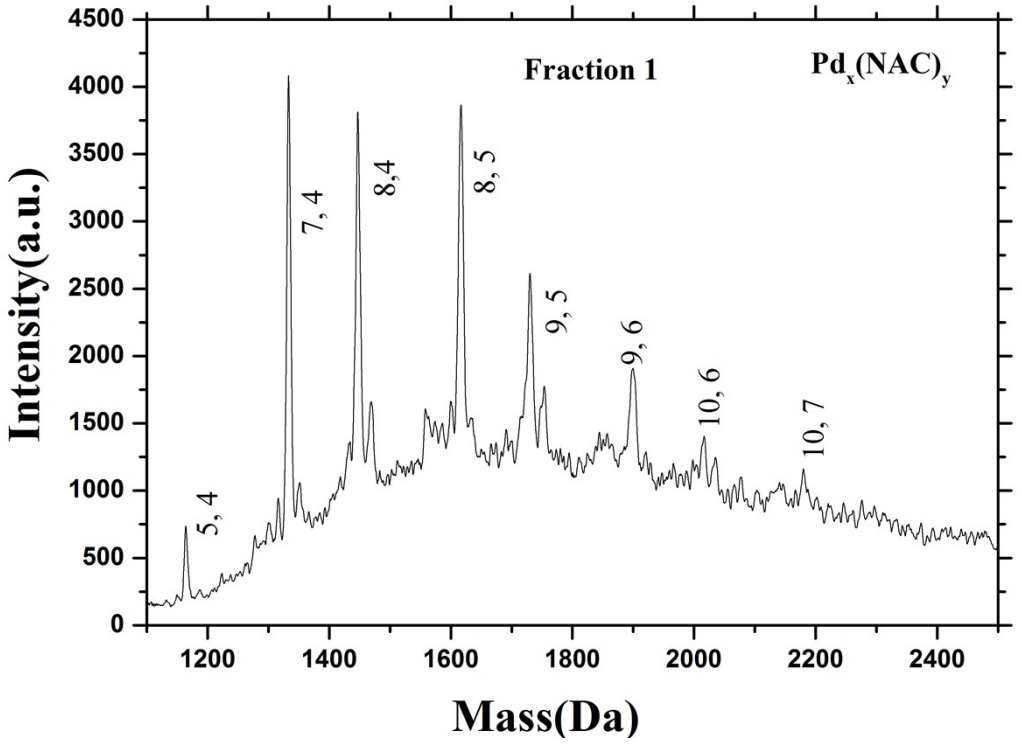
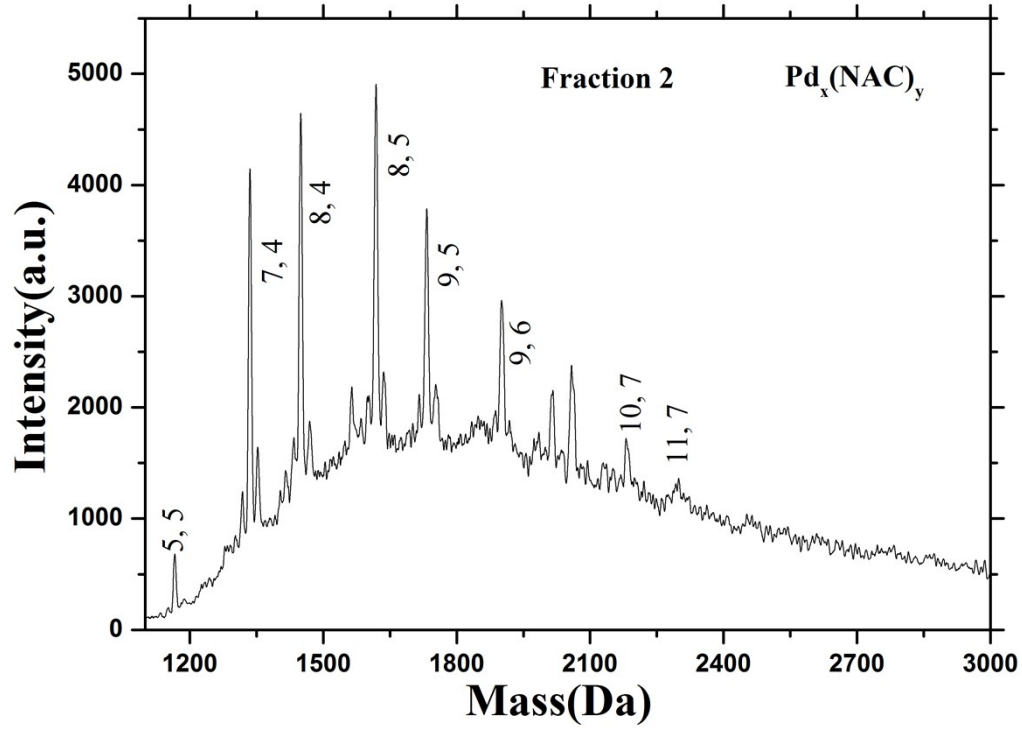


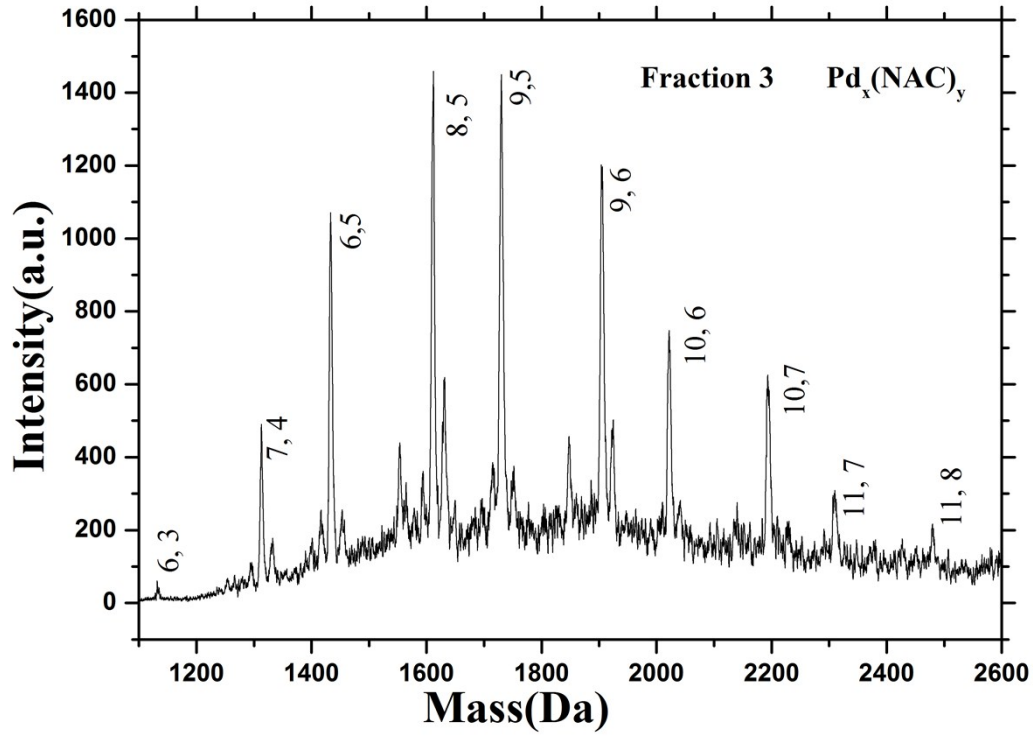
Fig. S2. The particle size histogram of the as-synthesised NAC-PdNPs.

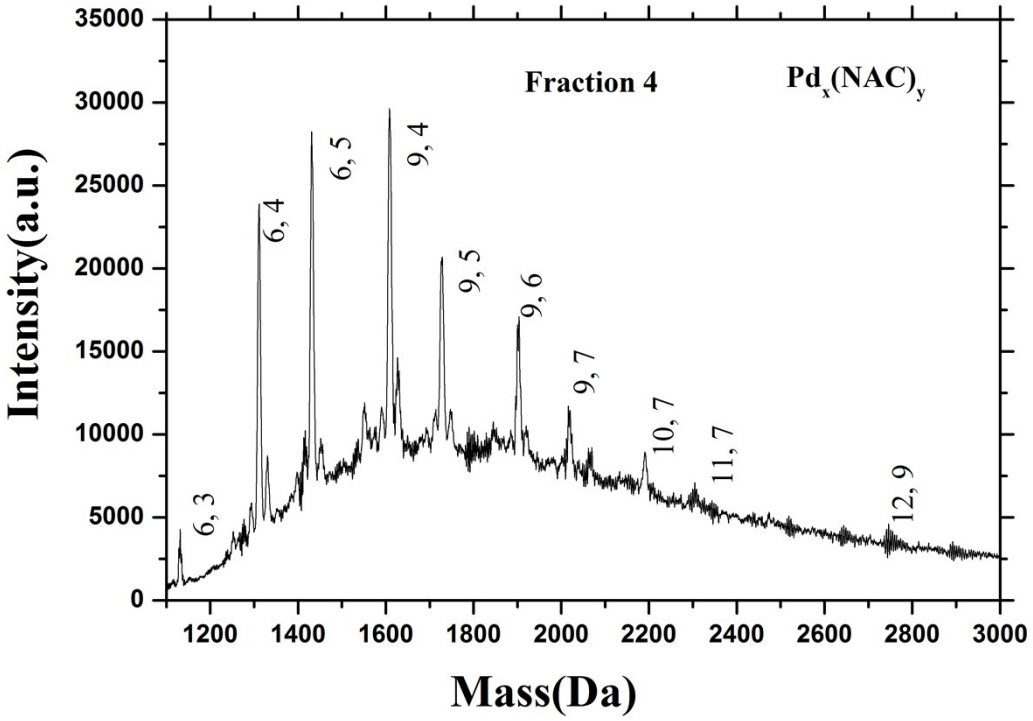
Table S1. $Pd_x(NAC)_y$ MALDI-TOF mass peaks

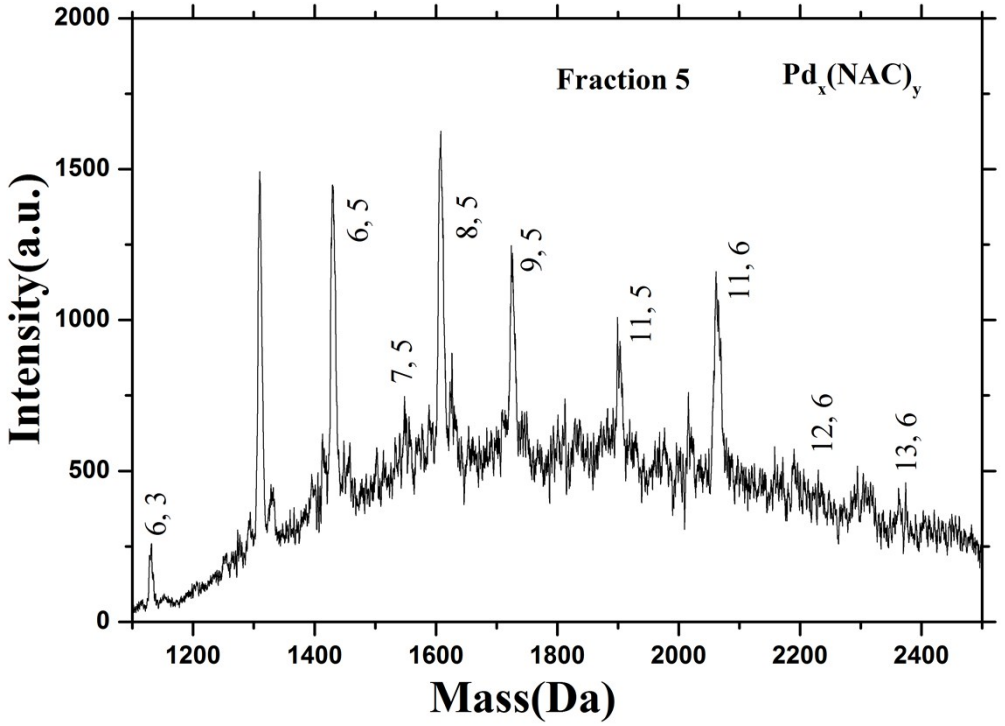
Formula	*m*/*z* (Da)	Formula	*m*/*z* (Da)
$Pd_5(NAC)_4$	1164	$Pd_{11}(NAC)_6$	2149
$Pd_5(NAC)_5$	1327	$Pd_{11}(NAC)_7$	2312
$Pd_6(NAC)_3$	1128	$Pd_{11}(NAC)_8$	2475
$Pd_6(NAC)_5$	1454	$Pd_{11}(NAC)_9$	2638
$Pd_7(NAC)_4$	1397	$Pd_{12}(NAC)_8$	2581
$Pd_7(NAC)_5$	1560	$Pd_{12}(NAC)_9$	2744
$Pd_8(NAC)_3$	1341	$Pd_{13}(NAC)_5$	2199
$Pd_8(NAC)_4$	1504	$Pd_{13}(NAC)_6$	2362
$Pd_8(NAC)_5$	1667	$Pd_{13}(NAC)_7$	2525
$Pd_8(NAC)_6$	1830	$Pd_{13}(NAC)_8$	2688
$Pd_8(NAC)_8$	2156	$Pd_{13}(NAC)_9$	2851
$Pd_9(NAC)_3$	1447	$Pd_{14}(NAC)_5$	2305
$Pd_9(NAC)_4$	1610	$Pd_{14}(NAC)_9$	2957
$Pd_9(NAC)_5$	1773	$Pd1_{15}(NAC)_8$	2901
$Pd_9(NAC)_6$	1936	$Pd_{15}(NAC)_9$	3064
$Pd_9(NAC)_7$	2099	$Pd_{17}(NAC)_9$	3276
$Pd_9(NAC)_8$	2262	$Pd_{17}(NAC)_{10}$	3439
$Pd_9(NAC)_9$	2425	$Pd_{17}(NAC)_{11}$	3602
$Pd_{10}(NAC)_6$	2042	$Pd_{19}(NAC)_8$	3326
$Pd_{10}(NAC)_7$	2205	$Pd_{19}(NAC)_9$	3489
$Pd_{11}(NAC)_5$	1986	$Pd_{20}(NAC)_{11}$	3922

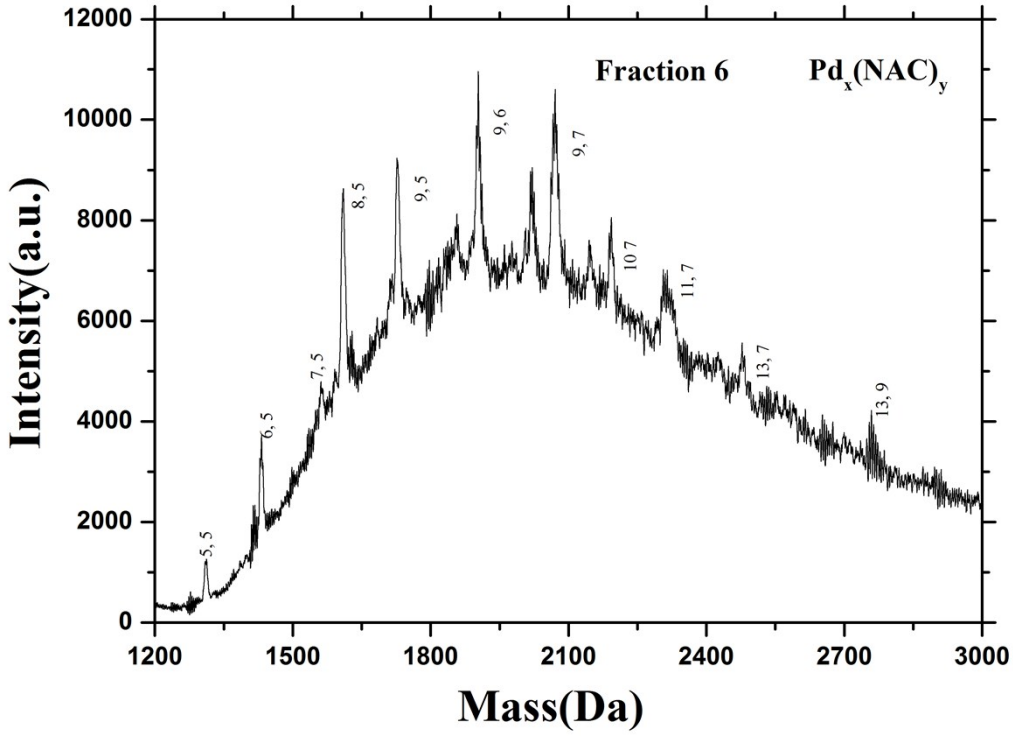

Fraction 1
$Pd_x(NAC)_y$
Intensity(a.u.)
Mass(Da)
5, 4
7, 4
8,4
8, 5
9, 5
9, 6
10, 6
10, 7

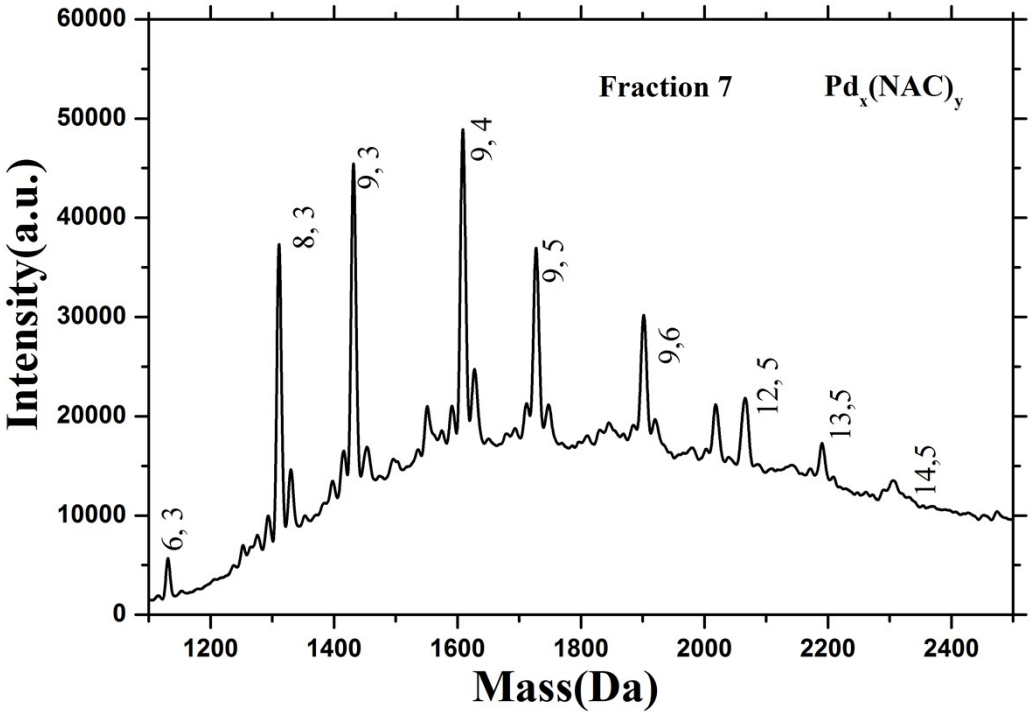

Fraction 2
$Pd_x(NAC)_y$
Intensity(a.u.)
Mass(Da)
5, 5
7, 4
8, 4
8, 5
9, 5
9, 6
10, 7
11, 7

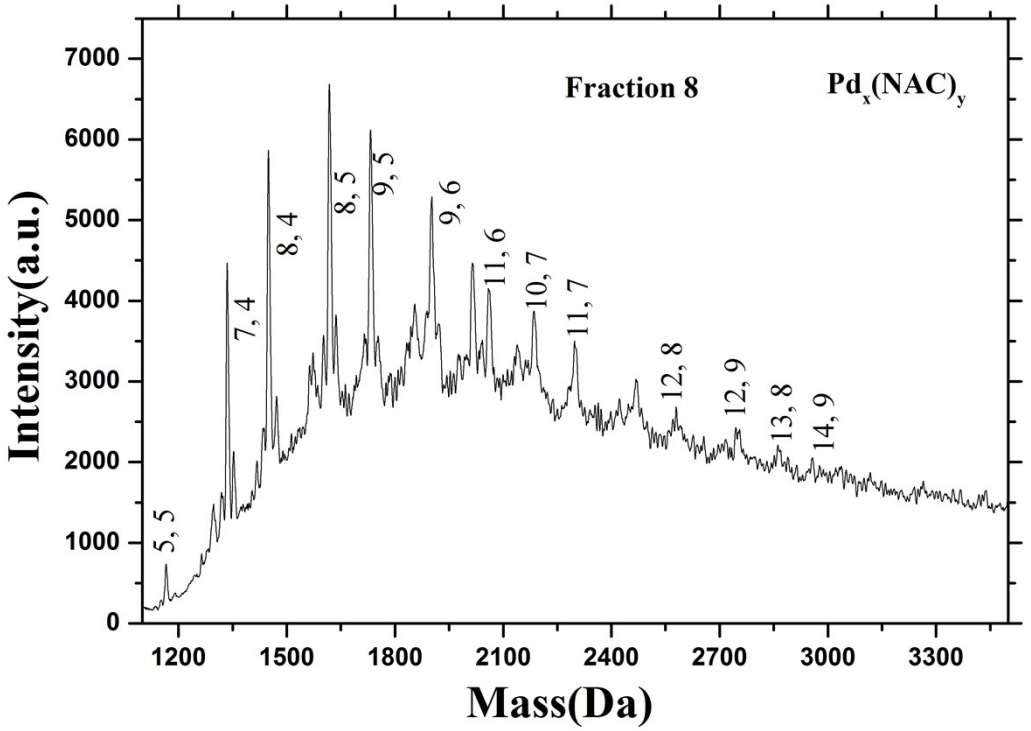

Fraction 3
$Pd_x(NAC)_y$
Intensity(a.u.)
Mass(Da)
6, 3
7, 4
6,5
8, 5
9,5
9, 6
10, 6
10,7
11, 7
11, 8

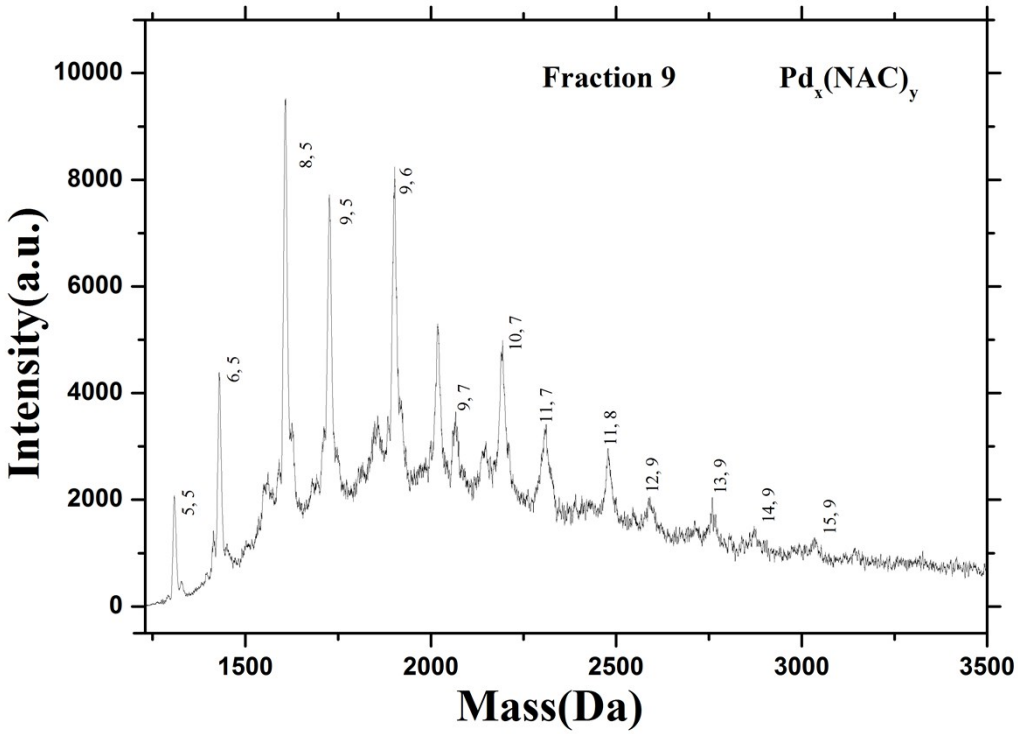

Fraction 4
$Pd_x(NAC)_y$
Intensity(a.u.)
Mass(Da)
6, 3
6, 4
6, 5
9, 4
9, 5
9, 6
9, 7
10, 7
11, 7
12, 9

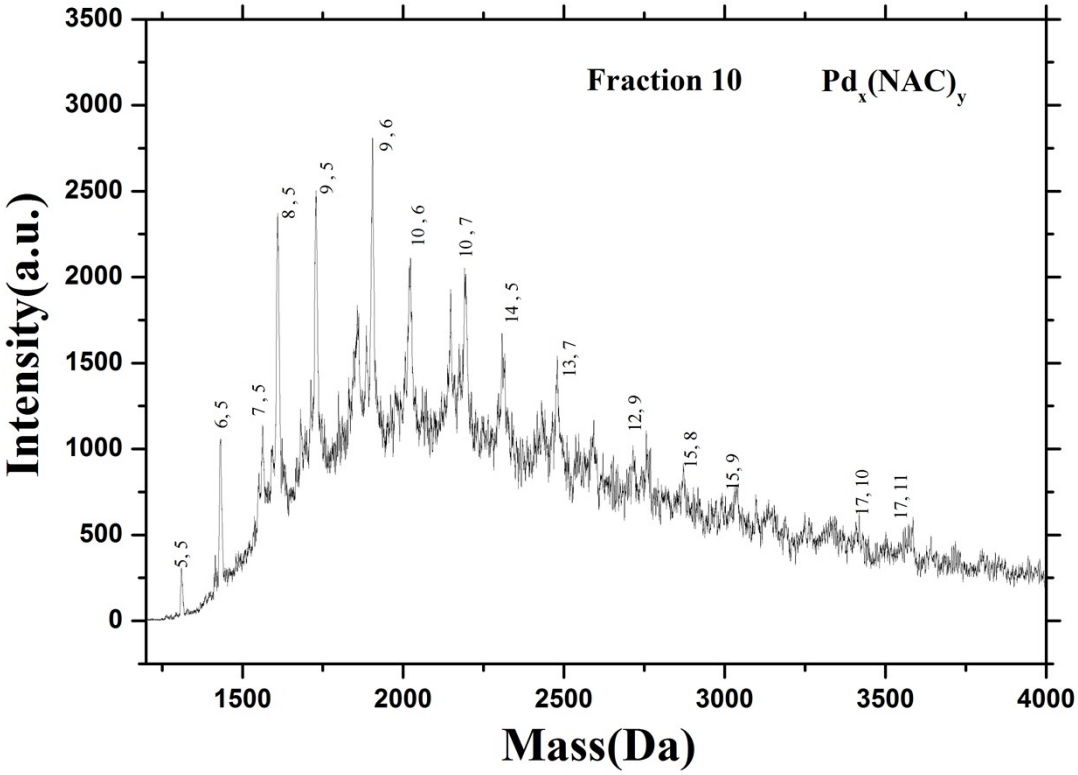

Fraction 5
$Pd_x(NAC)_y$
Intensity(a.u.)
Mass(Da)
6, 3
6, 5
7, 5
8, 5
9, 5
11, 5
11, 6
12, 6
13, 6


Fraction 6
$Pd_x(NAC)_y$
Intensity(a.u.)
Mass(Da)
5, 5
6, 5
7, 5
8, 5
9, 5
9, 6
9, 7
10 7
11, 7
13, 7
13, 9


Fraction 7
$Pd_x(NAC)_y$
Intensity(a.u.)
Mass(Da)
6, 3
8, 3
9, 3
9, 4
9, 5
9,6
12, 5
13,5
14,5


Fraction 8
$Pd_x(NAC)_y$
Intensity(a.u.)
Mass(Da)
5, 5
7, 4
8, 4
8, 5
9, 5
9, 6
11, 6
10, 7
11, 7
12, 8
12, 9
13, 8
14, 9


Fraction 9
$Pd_x(NAC)_y$
Intensity(a.u.)
Mass(Da)
0
2000
4000
6000
8000
10000
1500
2000
2500
3000
3500
5, 5
6, 5
8, 5
9, 5
9, 6
9, 7
10, 7
11, 7
11, 8
12, 9
13, 9
14, 9
15, 9


Fraction 10
$Pd_x(NAC)_y$
Intensity(a.u.)
Mass(Da)
0
500
1000
1500
2000
2500
3000
3500
1500
2000
2500
3000
3500
4000
5, 5
6, 5
7, 5
8, 5
9, 5
9, 6
10, 6
10, 7
14, 5
13, 7
12, 9
15, 8
15, 9
17, 10
17, 11

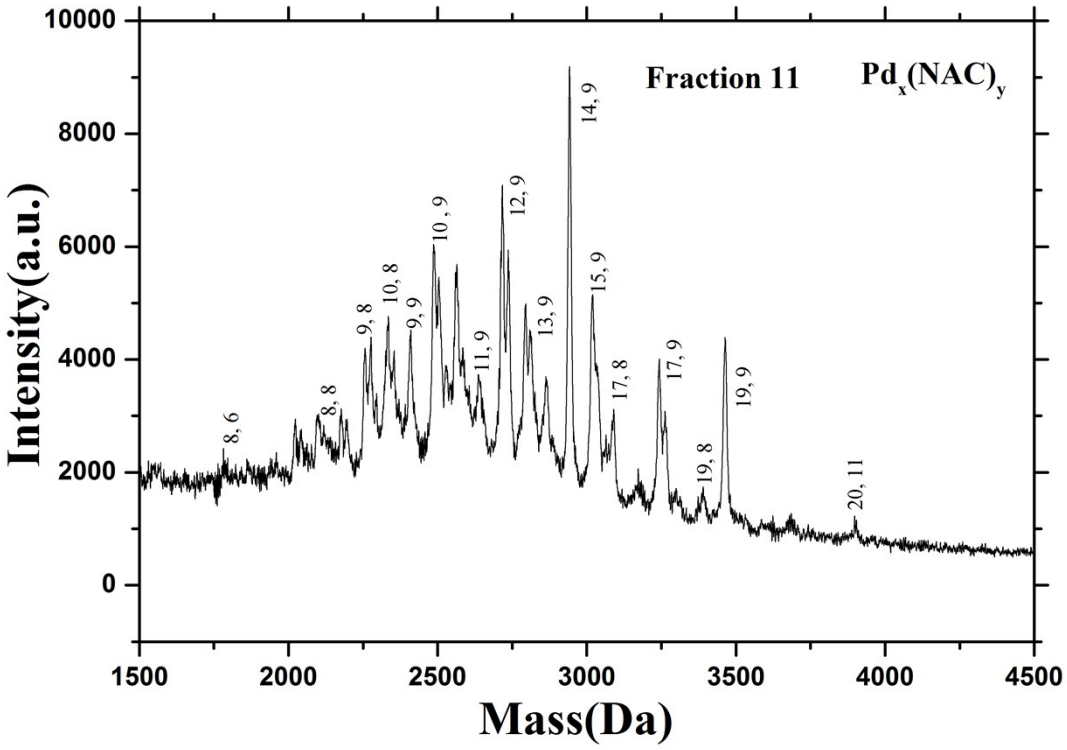


Fig. S3. MALDI mass spectra of Fraction 1–11. The mass peaks are assigned to $Pd_x(NAC)_y$. *x* and *y* denote the numbers of Pd atom and intact NAC ligand, respectively. The numbers next to the peaks are assigned to the corresponding *x* and *y* values.