

Table 1: Binding energies ( $E_b$ ) and total energies ( $E_{tot}$ ), for clusters in the gas phase, total energies ( $E_{tot}$ ) and adsorption energies ( $E_{ads}$ ) for deposited clusters, total energies ( $E_{tot}$ ) and adsorption energies ( $E_{ads}$ ) for optimised supported clusters, and the difference in adsorption energies ( $\Delta E$ ) between deposited and optimised supported clusters

Cluster	Gas phase		Deposited		Optimised supported		$\Delta E$
	$E_b$	$E_{tot}$	$E_{Tot}$	$E_{ads}$	$E_{Tot}$	$E_{ads}$	
Au <sub>4</sub>	-1.73	-6.93	-8.82	-1.90	-8.83	-1.91	0.01
Au <sub>3</sub> Rh	-2.30	-9.21	-10.96	-1.74	-10.96	-1.74	0.00
Au <sub>2</sub> Rh <sub>2</sub>	-2.97	-11.90	-13.70	-1.80	-14.02	-2.12	0.33
AuRh <sub>3</sub>	-3.50	-14.00	-16.28	-2.28	-16.69	-2.69	0.41
Rh <sub>4</sub>	-4.24	-16.98	-19.13	-2.15	-19.14	-2.16	0.01
Au <sub>5</sub>	-1.88	-9.39	-10.92	-1.52	-10.92	-1.52	0.00
Au <sub>4</sub> Rh	-2.35	-11.77	-13.97	-2.09	-13.88	-2.11	0.01
Au <sub>3</sub> Rh <sub>2</sub>	-2.86	-14.34	-16.26	-1.92	-16.84	-2.50	0.58
Au <sub>2</sub> Rh <sub>3</sub>	-3.41	-17.03	-19.34	-2.31	-19.61	-2.58	0.27
AuRh <sub>4</sub>	-3.96	-19.78	-21.88	-2.09	-21.98	-2.19	0.10
Rh <sub>5</sub>	-4.54	-22.68	-26.07	-3.38	-26.07	-3.38	0.00
Au <sub>6</sub>	-2.11	-12.68	-14.27	-1.59	-14.27	-1.59	0.00
Au <sub>5</sub> Rh	-2.45	-14.71	-16.57	-1.74	-16.68	-1.97	0.11
Au <sub>4</sub> Rh <sub>2</sub>	-2.90	-17.38	-19.01	-1.80	-19.44	-2.06	0.43
Au <sub>3</sub> Rh <sub>3</sub>	-3.36	-20.19	-21.77	-2.28	-22.15	-1.96	0.38
Au <sub>2</sub> Rh <sub>4</sub>	-3.77	-22.66	-25.11	-2.15	-25.17	-2.51	0.06
AuRh <sub>5</sub>	-4.27	-25.61	-28.04	-2.42	-28.47	-2.86	0.43
Rh <sub>6</sub>	-4.70	-28.21	-31.61	-2.59	-31.61	-3.40	0.00