In table 3 represented data about adsorption energies in sphalerite cluster with molecules of some inorganic acids, water and hydrogen peroxide.

Table 3 – Adsorption energies in sphalerite cluster systems - reagent molecules

Adsorption system	ΔE_{adc}, kJ/mol
HF	-142.13
HCl	-156.24
HBr	-157.23
H_2O	-135.12
H_2O_2	-127.26
HNO_2	-21.14
$HClO_2$	-367.19

Table 3 shows that the adsorption systems of sphalerite clusters with simple molecules have negative adsorption energies that are negative in sign and average in absolute value. By changing the absolute values of the adsorption energy in the case of molecules of mineral acids, water, and hydrogen peroxide, a series can be made:

$$HClO_2 > HBr \approx HCl > HF > H_2O > H_2O_2 > HNO_2.$$

The minima energy of adsorption has HNO_2 which equal -21.14 kJ/mol and maxima energy has $HClO_2$ about -367.19 kJ/mol. The calculated adsorption energy allows a preliminary conclusion about the strength of the interaction of clusters and allows you to choose substances for flotation

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