

## Answer on Question #55832 - Chemistry - Inorganic Chemistry

### Question:

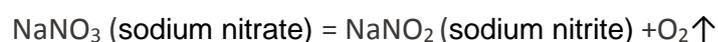
Can I use Zn to reduce Sodium Nitrate to Sodium Nitrite?

### Answer:

#### Absolutely not:

**Zn + NaNO<sub>3</sub> ≠ - this reaction does not occur**

Moreover, you needn't this at all, you just need a decomposition reaction:



You also can use zinc for getting sodium zincate



On the other hand, you can do some other chemical transformations.

For example:

- 1)  $\text{Zn} + 2\text{N}_2\text{O}_4 = \text{Zn}(\text{NO}_3)_2 = 2\text{NO} \uparrow$
- 2)  $2\text{Zn}(\text{NO}_3)_2 = 2\text{ZnO} + 4\text{NO}_2 \uparrow + \text{O}_2 \uparrow$
- 3)  $\text{NO} + \text{NO}_2 + 2\text{NaOH} = 2\text{NaNO}_2 + \text{H}_2\text{O}$ .

Alternatively:

- 1)  $\text{Cu}(\text{NO}_3)_2 + 2\text{Zn} = \text{Cu} + 2\text{ZnNO}_3$
- 2)  $2\text{Zn}(\text{NO}_3)_2 = 2\text{ZnO} + 4\text{NO}_2 \uparrow + \text{O}_2 \uparrow$
- 3)  $\text{NO} + \text{NO}_2 + 2\text{NaOH} = 2\text{NaNO}_2 + \text{H}_2\text{O}$ .