

## Semi - Empirical Mass Formula

$$E_{\text{bind}} = a_1 A - a_2 A^{2/3} - a_3 \frac{Z^2}{A^{1/3}} - a_4 \frac{(A-2Z)^2}{A} + \frac{\delta}{A^{3/4}}$$

$$a_1 \sim 15.6 \text{ MeV}$$

$$a_2 \sim 16.8 \text{ MeV}$$

$$a_3 \sim 0.72 \text{ MeV}$$

$$a_4 \sim 23.8 \text{ MeV}$$

$$\delta = -34 \text{ MeV}$$

odd - odd nuclei

$$+34 \text{ MeV}$$

even even nuclei

$$0 \text{ MeV}$$

even odd, odd even nuclei