Two Neutron Separation Energies in Neutron Rich Nuclei Near Drip Line

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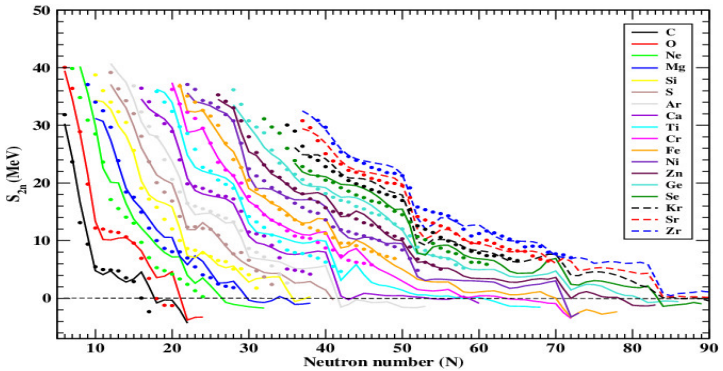
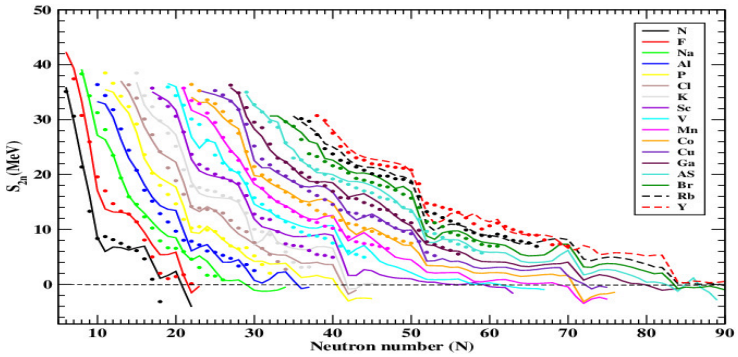
- ❑ We performed a self-consistent axially deformed RMF study for Isotopes from C to Zr with NL3 parameters set.
- ❑ Two neutron separation energies are calculated for both even-even and odd-odd isotopes of neutron rich nuclei from C to Zr. and presented in figure 1 and in figure 2, respectively
- ❑ Neutron skin thickness are also calculated for the chosen isotopic chain of neutron rich nuclei and the evaluation of neutron skin thickness with neutron number is shown in figure 3.
- ❑Moreover, the variation of neutron skin thickness with asymmetry energy parameter δ is also studied and shown in figure 4.





- •We observe that the S2n decreases on increasing the neutron number for both cases means on the addition of neutrons , nuclei stability decreases.
- •We also noticed that the decrease in S2n with increasing neutron number is more prominent in odd-odd nuclei in comparison to even-even nuclei which suggests that even-even nuclei are most stable
- •We also noticed sharp decrease in S2n at N=20, 40, 50, 70 and 82 which corresponds to the neutron magic numbers in these neutron-rich nuclei