

Success 24/7 Chemistry Notes: Nuclear Reactions

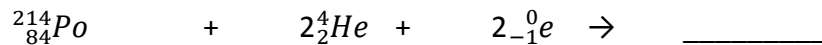
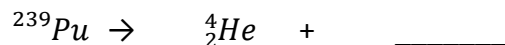
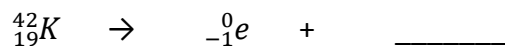
Stability of isotopes:

- All nuclides with atomic numbers greater than 83 are unstable and will go through alpha decay.
- Nuclides with atomic numbers from 1 to 20 are stable when the neutron/proton ratio = 1.
- Nuclides with atomic numbers above 20 are stable when the neutron/proton ratio is greater than 1.
- Nuclides with even numbers of protons and neutrons are more stable than those with odd numbers.

Elements with atomic numbers higher than 92 are called transuranium elements.

- Not found in nature
- Produced in laboratories
- Highly unstable

Nuclear Reaction Examples:



Nuclear Reaction Word Problems:

1. The alpha decay of radon-198
2. The beta decay of uranium-237
3. Positron emission from silicon-26
4. Sodium-22 undergoes electron capture

Easy summary:

Captured
Bombarded



Decayed
Emitted