

## Answer on Question #55118 - Chemistry - Inorganic Chemistry

### Question:

Why are the ionic azides more stable than the covalent azides and hydrazoic acid?

### Answer:

The difference in stability between ionic and covalent azides is in the structure of the azide anion. There are several resonance structures for azide anion:



The dipole moment of these structures is zero because of their symmetry (the second structure is dominant)

For the covalent azides the structure is dipole, because it loses symmetry to form a covalent bond:

