

## Answer on Question#38527-Chemistry-Inorganic Chemistry

### Question

Which d orbital is involved in  $sp^3d^3$  hybridization?

### Answer

Three d orbitals of the same energy, namely  $d_{xy}$ ,  $d_{xz}$  and  $d_{yz}$  are involved in  $sp^3d^3$  hybridization, because it is energy-optimal combination. It has been determined on basis of Schrödinger equation by quantum mechanical calculations.