

back donation (also known as the Chatt-Dewar-Duncanson model)

A description of the bonding of π -conjugated *ligands* to a transition metal which involves a synergic process with donation of electrons from the filled π -orbital or lone electron pair orbital of the ligand into an empty orbital of the metal (donor-acceptor bond), together with release (back donation) of electrons from an *nd* orbital of the metal (which is of π -symmetry with respect to the metal-ligand axis) into the empty π^* -antibonding orbital of the ligand.

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