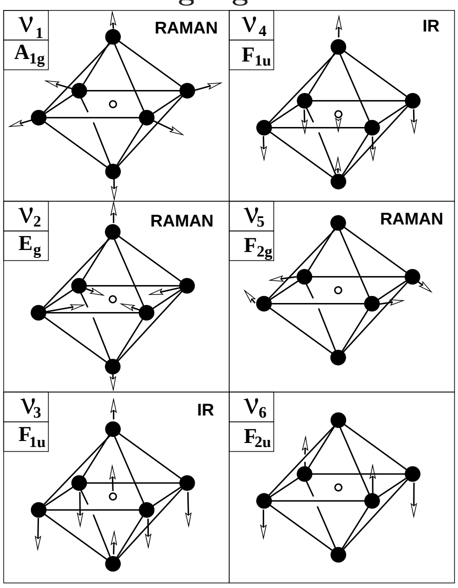
2.10. Anwendungen, Beispiel 2: Oktaeder

Charaktertafel der Punktgruppe O_h

O_h	E	$8C_3$	$6C_2$	$6C_4$	$3C_2$	i	$6S_4$	$8S_6$	$3\sigma_h$	$6\sigma_d$		
A_{1g}	+1	+1	+1	+1	+1	+1	+1	+1	+1	+1		$x^2+y^2+z^2$
A_{2g}	+1	+1	-1	-1	+1	+1	-1	+1	+1	-1		
E_g	+2	-1	0	0	+2	+2	0	-1	+2	0		$(2z^2\text{-}x^2\text{-}y^2,\ x^2-y^2)$
T_{1g}	+3	0	-1	+1	-1	+3	+1	0	-1	-1	(R_x, R_y, R_z)	
T_{2g}	+3	0	+1	-1	-1	+3	-1	0	-1	+1		(xy, yz, xy)
A_{1u}	+1	+1	+1	+1	+1	-1	-1	-1	-1	-1		
A_{2u}	+1	+1	-1	-1	+1	-1	+1	-1	-1	+1		
E_u	+2	-1	0	0	+2	-2	0	+1	-2	0		
T_{1u}	+3	0	-1	+1	-1	-3	-1	0	+1	+1	(x,y,z)	
T_{2u}	+3	0	+1	-1	-1	-3	+1	0	+1	-1		

Atomverschiebungen: Normalschwingungen



MOs: Komplexe mit σ-Donor-Liganden