

$\mathcal{H}_{D_{4h}}$	$ 2, 2\rangle$	$ 2, 1\rangle$	$ 2, 0\rangle$	$ 2, -1\rangle$	$ 2, -2\rangle$
$\langle 2, 2 $	$Dq - Dt + 2Ds$	0	0	0	$5Dq$
$\langle 2, 1 $	0	$-4Dq + 4Dt - Ds$	0	0	0
$\langle 2, 0 $	0	0	$6Dq - 6Dt - 2Ds$	0	0
$\langle 2, 1 $	0	0	0	$-4Dq + 4Dt - Ds$	0
$\langle 2, -2 $	$5Dq$	0	0	0	$Dq - Dt + 2Ds$

Table 1.2: Matrix elements of the crystal-field Hamiltonian  $\langle l', m' | \mathcal{H}_{D_{4h}} | l, m \rangle$  for an arrangement of ligands consistent with the  $D_{4h}$  point group in 3D, namely with point charges disposed on an elongated/compressed octahedron.