

\* Rank 0 tensor. \* Rank 1 tensor.

$$[0 \quad T_y \quad 0]$$

$$T_y = T_{py}^{(1)}$$

\* Rank 2 tensor (s).

$$\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & T_{yz} \\ 0 & T_{yz} & 0 \end{bmatrix}$$

$$T_{yz} = T_{dyz}^{(1)}$$

\* Rank 2 tensor (a).

$$\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & T_{yz} \\ 0 & -T_{yz} & 0 \end{bmatrix}$$

$$T_{yz} = M_{px}^{(1)}$$

\* Rank 3 tensor (s).

$$\begin{bmatrix} 0 & T_{xxy} & 0 \\ 0 & T_{yyy} & 0 \\ 0 & T_{zzy} & 0 \\ 0 & 0 & T_{yzz} \\ 0 & 0 & 0 \\ T_{xyx} & 0 & 0 \end{bmatrix}$$

$$T_{xxy} = 2M_{dxz}^{(1)} - T_{fay}^{(1)} - T_{fby}^{(1)} + T_{py}^{(1)}$$

$$T_{yyy} = 2T_{fay}^{(1)} + T_{py}^{(1)} + 2T_{py}^{(2)}$$

$$T_{zzy} = -2M_{dxz}^{(1)} - T_{fay}^{(1)} + T_{fby}^{(1)} + T_{py}^{(1)}$$

$$T_{yzz} = M_{dxz}^{(1)} - T_{fay}^{(1)} + T_{fby}^{(1)} + T_{py}^{(2)}$$

$$T_{xyx} = -M_{dxz}^{(1)} - T_{fay}^{(1)} - T_{fby}^{(1)} + T_{py}^{(2)}$$

\* Rank 3 tensor (a).

$$\begin{bmatrix} 0 & 0 & T_{yzz} \\ 0 & 0 & 0 \\ T_{xyx} & 0 & 0 \end{bmatrix}$$

$$T_{yzz} = M_{dxz}^{(2)} - T_{py}^{(3)}$$

$$T_{xyx} = M_{dxz}^{(2)} + T_{py}^{(3)}$$

\* Rank 4 tensor (sss).

$$\begin{bmatrix} 0 & 0 & 0 & T_{xxyz} & 0 & 0 \\ 0 & 0 & 0 & T_{yyyz} & 0 & 0 \\ 0 & 0 & 0 & T_{zzyz} & 0 & 0 \\ T_{xxyz} & T_{yyyz} & T_{zzyz} & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & T_{zxxxy} \\ 0 & 0 & 0 & 0 & T_{zxxxy} & 0 \end{bmatrix}$$

$$\begin{aligned}
T_{xxyz} &= T_{dyz}^{(1)} + 2T_{gbx}^{(1)} \\
T_{yyyyz} &= T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zzyz} &= T_{dyz}^{(1)} + 2T_{dyz}^{(2)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zxxxy} &= T_{dyz}^{(2)} + 2T_{gbx}^{(1)}
\end{aligned}$$

\* Rank 4 tensor (ssa).

$$\begin{bmatrix}
0 & 0 & 0 & T_{xxyz} & 0 & 0 \\
0 & 0 & 0 & T_{yyyyz} & 0 & 0 \\
0 & 0 & 0 & T_{zzyz} & 0 & 0 \\
-T_{xxyz} & -T_{yyyyz} & -T_{zzyz} & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & T_{zxxxy} \\
0 & 0 & 0 & 0 & -T_{zxxxy} & 0
\end{bmatrix}$$

$$\begin{aligned}
T_{xxyz} &= -4M_{fbx}^{(1)} + T_{dyz}^{(3)} \\
T_{yyyyz} &= -2M_{fax}^{(1)} + 2M_{fbx}^{(1)} + 2M_{px}^{(1)} + T_{dyz}^{(3)} \\
T_{zzyz} &= 2M_{fax}^{(1)} + 2M_{fbx}^{(1)} - 2M_{px}^{(1)} + T_{dyz}^{(3)} \\
T_{zxxxy} &= -4M_{fax}^{(1)} - M_{px}^{(1)}
\end{aligned}$$

\* Rank 4 tensor (aas).

$$\begin{bmatrix}
0 & 0 & 0 \\
0 & 0 & T_{zxxxy} \\
0 & T_{zxxxy} & 0
\end{bmatrix}$$

$$T_{zxxxy} = 2T_{dyz}^{(4)}$$

\* Rank 4 tensor (aaa).

$$\begin{bmatrix}
0 & 0 & 0 \\
0 & 0 & T_{zxxxy} \\
0 & -T_{zxxxy} & 0
\end{bmatrix}$$

$$T_{zxxxy} = -M_{px}^{(2)}$$

\* Rank 4 tensor (sa).

$$\begin{bmatrix}
T_{xxyz} & 0 & 0 \\
T_{yyyyz} & 0 & 0 \\
T_{zzyz} & 0 & 0 \\
0 & 0 & 0 \\
0 & 0 & T_{zxxxy} \\
0 & T_{xyzx} & 0
\end{bmatrix}$$

$$\begin{aligned}
T_{xxyz} &= 2M_{fax}^{(2)} + M_{px}^{(3)} + 2M_{px}^{(4)} \\
T_{yyyyz} &= -M_{fax}^{(2)} + M_{fbx}^{(2)} + M_{px}^{(3)} - 2T_{dyz}^{(5)} \\
T_{zzyz} &= -M_{fax}^{(2)} - M_{fbx}^{(2)} + M_{px}^{(3)} + 2T_{dyz}^{(5)} \\
T_{zxxxy} &= -M_{fax}^{(2)} - M_{fbx}^{(2)} + M_{px}^{(4)} - T_{dyz}^{(5)} \\
T_{xyzx} &= -M_{fax}^{(2)} + M_{fbx}^{(2)} + M_{px}^{(4)} + T_{dyz}^{(5)}
\end{aligned}$$

\* Rank 4 tensor (as).

$$\begin{bmatrix}
T_{yzxx} & T_{yzyy} & T_{yzzz} & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & T_{zxxxy} \\
0 & 0 & 0 & 0 & T_{xyzx} & 0
\end{bmatrix}$$

$$\begin{aligned}
T_{yzxx} &= 2M_{fax}^{(3)} + M_{px}^{(5)} + 2M_{px}^{(6)} \\
T_{yzyy} &= -M_{fax}^{(3)} + M_{fbx}^{(3)} + M_{px}^{(5)} - 2T_{dyz}^{(6)} \\
T_{yzzz} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} + M_{px}^{(5)} + 2T_{dyz}^{(6)} \\
T_{zxxxy} &= -M_{fax}^{(3)} + M_{fbx}^{(3)} + M_{px}^{(6)} + T_{dyz}^{(6)} \\
T_{xyyzx} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} + M_{px}^{(6)} - T_{dyz}^{(6)}
\end{aligned}$$

\* Rank 4 tensor (s).

$$\begin{bmatrix}
0 & 0 & 0 & T_{xxyz} & 0 & 0 & T_{xxzy} & 0 & 0 \\
0 & 0 & 0 & T_{yyyz} & 0 & 0 & T_{yyzy} & 0 & 0 \\
0 & 0 & 0 & T_{zzyz} & 0 & 0 & T_{zzzy} & 0 & 0 \\
T_{yzxx} & T_{yzyy} & T_{yzzz} & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & T_{zxxxy} & 0 & 0 & T_{zxyyx} \\
0 & 0 & 0 & 0 & T_{xyyzx} & 0 & 0 & T_{xyyxz} & 0
\end{bmatrix}$$

$$\begin{aligned}
T_{xxyz} &= 2M_{fax}^{(2)} - 4M_{fbx}^{(1)} + M_{px}^{(3)} + 2M_{px}^{(4)} + T_{dyz}^{(1)} + T_{dyz}^{(3)} + 2T_{gbx}^{(1)} \\
T_{xxzy} &= -2M_{fax}^{(2)} - 4M_{fbx}^{(1)} - M_{px}^{(3)} - 2M_{px}^{(4)} + T_{dyz}^{(1)} + T_{dyz}^{(3)} + 2T_{gbx}^{(1)} \\
T_{yyyz} &= -2M_{fax}^{(1)} - M_{fbx}^{(2)} + 2M_{fbx}^{(1)} + M_{fbx}^{(2)} + 2M_{px}^{(1)} + M_{px}^{(3)} + T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} - 2T_{dyz}^{(5)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yyzy} &= -2M_{fax}^{(1)} + M_{fbx}^{(2)} + 2M_{fbx}^{(1)} - M_{fbx}^{(2)} + 2M_{px}^{(1)} - M_{px}^{(3)} + T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} + 2T_{dyz}^{(5)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zzyz} &= 2M_{fax}^{(1)} - M_{fbx}^{(2)} + 2M_{fbx}^{(1)} - M_{fbx}^{(2)} - 2M_{px}^{(1)} + M_{px}^{(3)} + T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} + 2T_{dyz}^{(5)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zzzy} &= 2M_{fax}^{(1)} + M_{fbx}^{(2)} + 2M_{fbx}^{(1)} + M_{fbx}^{(2)} - 2M_{px}^{(1)} - M_{px}^{(3)} + T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} - 2T_{dyz}^{(5)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yzxx} &= 4M_{fbx}^{(1)} + T_{dyz}^{(1)} - T_{dyz}^{(3)} + 2T_{gbx}^{(1)} \\
T_{yzyy} &= 2M_{fax}^{(1)} - 2M_{fbx}^{(1)} - 2M_{px}^{(1)} + T_{dyz}^{(1)} + 2T_{dyz}^{(2)} - T_{dyz}^{(3)} + T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{yzzz} &= -2M_{fax}^{(1)} - 2M_{fbx}^{(1)} + 2M_{px}^{(1)} + T_{dyz}^{(1)} + 2T_{dyz}^{(2)} - T_{dyz}^{(3)} - T_{gax}^{(1)} - T_{gbx}^{(1)} \\
T_{zxxxy} &= -4M_{fax}^{(1)} - M_{fbx}^{(2)} - M_{fbx}^{(2)} - M_{px}^{(1)} + M_{px}^{(4)} + T_{dyz}^{(2)} - T_{dyz}^{(5)} + 2T_{gbx}^{(1)} \\
T_{zxyyx} &= -4M_{fax}^{(1)} + M_{fbx}^{(2)} + M_{fbx}^{(2)} - M_{px}^{(1)} - M_{px}^{(4)} + T_{dyz}^{(2)} + T_{dyz}^{(5)} + 2T_{gbx}^{(1)} \\
T_{xyyzx} &= 4M_{fax}^{(1)} - M_{fbx}^{(2)} + M_{fbx}^{(2)} + M_{px}^{(1)} + M_{px}^{(4)} + T_{dyz}^{(2)} + T_{dyz}^{(5)} + 2T_{gbx}^{(1)} \\
T_{xyyxz} &= 4M_{fax}^{(1)} + M_{fbx}^{(2)} - M_{fbx}^{(2)} + M_{px}^{(1)} - M_{px}^{(4)} + T_{dyz}^{(2)} - T_{dyz}^{(5)} + 2T_{gbx}^{(1)}
\end{aligned}$$

\* Rank 4 tensor (a).

$$\begin{bmatrix}
T_{yzxx} & T_{yzyy} & T_{yzzz} & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & T_{zxxxy} & 0 & 0 & T_{zxyyx} \\
0 & 0 & 0 & 0 & T_{xyyzx} & 0 & 0 & T_{xyyxz} & 0
\end{bmatrix}$$

$$\begin{aligned}
T_{yzxx} &= 2M_{fax}^{(3)} + M_{px}^{(5)} + 2M_{px}^{(6)} \\
T_{yzyy} &= -M_{fax}^{(3)} + M_{fbx}^{(3)} + M_{px}^{(5)} - 2T_{dyz}^{(6)} \\
T_{yzzz} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} + M_{px}^{(5)} + 2T_{dyz}^{(6)} \\
T_{zxxxy} &= -M_{fax}^{(3)} + M_{fbx}^{(3)} - M_{px}^{(2)} + M_{px}^{(6)} + 2T_{dyz}^{(4)} + T_{dyz}^{(6)} \\
T_{zxyyx} &= -M_{fax}^{(3)} + M_{fbx}^{(3)} + M_{px}^{(2)} + M_{px}^{(6)} - 2T_{dyz}^{(4)} + T_{dyz}^{(6)} \\
T_{xyyzx} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} + M_{px}^{(2)} + M_{px}^{(6)} + 2T_{dyz}^{(4)} - T_{dyz}^{(6)} \\
T_{xyyxz} &= -M_{fax}^{(3)} - M_{fbx}^{(3)} - M_{px}^{(2)} + M_{px}^{(6)} - 2T_{dyz}^{(4)} - T_{dyz}^{(6)}
\end{aligned}$$

\* Rank 4 tensor (t).

$$\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & T_{yyyyz} \\ 0 & T_{zzzy} & 0 \\ 0 & T_{yyzy} & 0 \\ 0 & 0 & 0 \\ 0 & 0 & T_{xxyz} \\ 0 & 0 & T_{yzzz} \\ 0 & T_{zxy} & 0 \\ 0 & 0 & 0 \\ -\frac{T_{yyyyz}}{2} + \frac{T_{yyzy}}{2} + T_{zxy} & 0 & 0 \end{bmatrix}$$

$$T_{yyyyz} = T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} - 2T_{dyz}^{(5)} + T_{gax}^{(1)} - T_{gbx}^{(1)}$$

$$T_{zzzy} = T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} - 2T_{dyz}^{(5)} - T_{gax}^{(1)} - T_{gbx}^{(1)}$$

$$T_{yyzy} = T_{dyz}^{(1)} + 2T_{dyz}^{(2)} + T_{dyz}^{(3)} + 2T_{dyz}^{(5)} + T_{gax}^{(1)} - T_{gbx}^{(1)}$$

$$T_{xxyz} = T_{dyz}^{(1)} + T_{dyz}^{(3)} + 2T_{gbx}^{(1)}$$

$$T_{yzzz} = T_{dyz}^{(1)} + 2T_{dyz}^{(2)} - T_{dyz}^{(3)} - T_{gax}^{(1)} - T_{gbx}^{(1)}$$

$$T_{zxy} = T_{dyz}^{(2)} - T_{dyz}^{(5)} + 2T_{gbx}^{(1)}$$