

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

$$\begin{bmatrix} M_x & 0 & 0 \end{bmatrix}$$

$$M_x = M_{px}^{(1)}$$

\* Rank 2 tensor (s).

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

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

\* Rank 2 tensor (a).

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

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

\* Rank 3 tensor (s).

$$\begin{bmatrix} M_{xxx} & 0 & 0 \\ M_{yyy} & 0 & 0 \\ M_{zzx} & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & M_{zzz} \\ 0 & M_{xyy} & 0 \end{bmatrix}$$

$$M_{xxx} = 2M_{fax}^{(1)} + M_{px}^{(1)} + 2M_{px}^{(2)}$$

$$M_{yyy} = -M_{fax}^{(1)} + M_{fbx}^{(1)} + M_{px}^{(1)} - 2T_{dyz}^{(1)}$$

$$M_{zzx} = -M_{fax}^{(1)} - M_{fbx}^{(1)} + M_{px}^{(1)} + 2T_{dyz}^{(1)}$$

$$M_{zzz} = -M_{fax}^{(1)} - M_{fbx}^{(1)} + M_{px}^{(2)} - T_{dyz}^{(1)}$$

$$M_{xyy} = -M_{fax}^{(1)} + M_{fbx}^{(1)} + M_{px}^{(2)} + T_{dyz}^{(1)}$$

\* Rank 3 tensor (a).

$$\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & M_{zzz} \\ 0 & M_{xyy} & 0 \end{bmatrix}$$

$$M_{zzz} = M_{px}^{(3)} + T_{dyz}^{(2)}$$

$$M_{xyy} = -M_{px}^{(3)} + T_{dyz}^{(2)}$$

\* Rank 4 tensor (sss).

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

$$\begin{aligned}
M_{xyz} &= M_{dyz}^{(1)} + 2M_{gbx}^{(1)} \\
M_{yyy} &= M_{dyz}^{(1)} + 2M_{dyz}^{(2)} + M_{gax}^{(1)} - M_{gbx}^{(1)} \\
M_{zzz} &= M_{dyz}^{(1)} + 2M_{dyz}^{(2)} - M_{gax}^{(1)} - M_{gbx}^{(1)} \\
M_{zxy} &= M_{dyz}^{(2)} + 2M_{gbx}^{(1)}
\end{aligned}$$

\* Rank 4 tensor (ssa).

$$\begin{bmatrix}
0 & 0 & 0 & M_{xyz} & 0 & 0 \\
0 & 0 & 0 & M_{yyy} & 0 & 0 \\
0 & 0 & 0 & M_{zzz} & 0 & 0 \\
-M_{xyz} & -M_{yyy} & -M_{zzz} & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & M_{zxy} \\
0 & 0 & 0 & 0 & -M_{zxy} & 0
\end{bmatrix}$$

$$\begin{aligned}
M_{xyz} &= M_{dyz}^{(3)} - 4T_{fbx}^{(1)} \\
M_{yyy} &= M_{dyz}^{(3)} - 2T_{fax}^{(1)} + 2T_{fbx}^{(1)} + 2T_{px}^{(1)} \\
M_{zzz} &= M_{dyz}^{(3)} + 2T_{fax}^{(1)} + 2T_{fbx}^{(1)} - 2T_{px}^{(1)} \\
M_{zxy} &= -4T_{fax}^{(1)} - T_{px}^{(1)}
\end{aligned}$$

\* Rank 4 tensor (aas).

$$\begin{bmatrix}
0 & 0 & 0 \\
0 & 0 & M_{zxy} \\
0 & M_{zxy} & 0
\end{bmatrix}$$

$$M_{zxy} = 2M_{dyz}^{(4)}$$

\* Rank 4 tensor (aaa).

$$\begin{bmatrix}
0 & 0 & 0 \\
0 & 0 & M_{zxy} \\
0 & -M_{zxy} & 0
\end{bmatrix}$$

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

\* Rank 4 tensor (sa).

$$\begin{bmatrix}
M_{xyz} & 0 & 0 \\
M_{yyy} & 0 & 0 \\
M_{zzz} & 0 & 0 \\
0 & 0 & 0 \\
0 & 0 & M_{zxy} \\
0 & M_{xyz} & 0
\end{bmatrix}$$

$$\begin{aligned}
M_{xyz} &= 2T_{fax}^{(2)} + T_{px}^{(3)} + 2T_{px}^{(4)} \\
M_{yyy} &= -2M_{dyz}^{(5)} - T_{fax}^{(2)} + T_{fbx}^{(2)} + T_{px}^{(3)} \\
M_{zzz} &= 2M_{dyz}^{(5)} - T_{fax}^{(2)} - T_{fbx}^{(2)} + T_{px}^{(3)} \\
M_{zxy} &= -M_{dyz}^{(5)} - T_{fax}^{(2)} - T_{fbx}^{(2)} + T_{px}^{(4)} \\
M_{yxz} &= M_{dyz}^{(5)} - T_{fax}^{(2)} + T_{fbx}^{(2)} + T_{px}^{(4)}
\end{aligned}$$

\* Rank 4 tensor (as).

$$\begin{bmatrix}
M_{yzx} & M_{zyy} & M_{yzz} & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & M_{zxy} \\
0 & 0 & 0 & 0 & M_{yxz} & 0
\end{bmatrix}$$

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

\* Rank 4 tensor (s).

$$\begin{bmatrix}
0 & 0 & 0 & M_{xxyz} & 0 & 0 & M_{xxzy} & 0 & 0 \\
0 & 0 & 0 & M_{yyyz} & 0 & 0 & M_{yyzy} & 0 & 0 \\
0 & 0 & 0 & M_{zzyz} & 0 & 0 & M_{zzzy} & 0 & 0 \\
M_{yzxx} & M_{zyyy} & M_{yzzz} & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & M_{zxxxy} & 0 & 0 & M_{zxxyx} \\
0 & 0 & 0 & 0 & M_{xyzx} & 0 & 0 & M_{xyxz} & 0
\end{bmatrix}$$

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

\* Rank 4 tensor (a).

$$\begin{bmatrix}
M_{yzxx} & M_{zyyy} & M_{yzzz} & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & M_{zxxxy} & 0 & 0 & M_{zxxyx} \\
0 & 0 & 0 & 0 & M_{xyzx} & 0 & 0 & M_{xyxz} & 0
\end{bmatrix}$$

$$\begin{aligned}
M_{yzxx} &= 2T_{fax}^{(3)} + T_{px}^{(5)} + 2T_{px}^{(6)} \\
M_{yzyy} &= -2M_{dyz}^{(6)} - T_{fax}^{(3)} + T_{fbx}^{(3)} + T_{px}^{(5)} \\
M_{yzzz} &= 2M_{dyz}^{(6)} - T_{fax}^{(3)} - T_{fbx}^{(3)} + T_{px}^{(5)} \\
M_{zxyy} &= 2M_{dyz}^{(4)} + M_{dyz}^{(6)} - T_{fax}^{(3)} + T_{fbx}^{(3)} - T_{px}^{(2)} + T_{px}^{(6)} \\
M_{zxyx} &= -2M_{dyz}^{(4)} + M_{dyz}^{(6)} - T_{fax}^{(3)} + T_{fbx}^{(3)} + T_{px}^{(2)} + T_{px}^{(6)} \\
M_{xyzx} &= 2M_{dyz}^{(4)} - M_{dyz}^{(6)} - T_{fax}^{(3)} - T_{fbx}^{(3)} + T_{px}^{(2)} + T_{px}^{(6)} \\
M_{xyxz} &= -2M_{dyz}^{(4)} - M_{dyz}^{(6)} - T_{fax}^{(3)} - T_{fbx}^{(3)} - T_{px}^{(2)} + T_{px}^{(6)}
\end{aligned}$$

\* Rank 4 tensor (t).

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

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

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

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

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

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

$$M_{zxxxy} = M_{dyz}^{(2)} - M_{dyz}^{(5)} + 2M_{gbx}^{(1)}$$