Supplementary Materials

$$\boldsymbol{A}_{11}=\begin{bmatrix} 0 & \frac{1}{M_1} & 0 & 0 & \frac{-1}{M_1} & 0 \\ 0 & \frac{-1}{T_{t1}} & \frac{1}{T_{t1}} & 0 & 0 & 0 \\ 0 & 0 & \frac{-1}{T_{r1}} & \frac{1}{T_{r1}}-\frac{K_{r1}}{T_{g1}} & 0 & 0 \\ 0 & 0 & 0 & \frac{-1}{T_{g1}} & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & -q_1 \end{bmatrix},\quad \boldsymbol{A}_{22}=\begin{bmatrix} 0 & \frac{1}{M_2} & 0 & 0 & \frac{1}{M_2} & 0 \\ 0 & \frac{1}{T_{t2}} & 0 & 0 & 0 & 0 \\ 0 & 0 & \frac{-1}{T_{r2}} & \frac{1}{T_{r2}}-\frac{K_{r2}}{T_{g2}} & 0 & 0 \\ 0 & 0 & 0 & \frac{-1}{T_{g2}} & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & -q_2 \end{bmatrix}$$

$$\boldsymbol{A}_{\tau 1}=\begin{bmatrix} \frac{-D_1}{M_1} & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ \frac{-m_1K_{r1}}{R_1T_{g1}} & 0 & 0 & 0 & 0 & 0 \\ \frac{-m_1}{R_1T_{g1}} & 0 & 0 & 0 & 0 & 0 \\ 2\pi T_{12} & 0 & 0 & 0 & 0 & 0 \\ \frac{n_1-m_1q_1}{R_1} & 0 & 0 & 0 & 0 & 0 \end{bmatrix},\quad \boldsymbol{A}_{\tau 2}=\begin{bmatrix} \frac{-D_2}{M_2} & 0 & 0 & 0 & 0 & 0 \\ \frac{-1}{T_{t2}} & 0 & 0 & 0 & 0 & 0 \\ \frac{-m_2K_{r2}}{R_2T_{g2}} & 0 & 0 & 0 & 0 & 0 \\ \frac{-m_2}{R_2T_{g2}} & 0 & 0 & 0 & 0 & 0 \\ 2\pi T_{12} & 0 & 0 & 0 & 0 & 0 \\ \frac{n_2-m_2q_2}{R_2} & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$\boldsymbol{A}_{12}=\begin{bmatrix} 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ -2\pi T_{12} & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix},\quad \boldsymbol{A}_{21}=\begin{bmatrix} 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 2\pi T_{12} & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$\boldsymbol{B}_{11}=\begin{bmatrix} 0 & 0 & \frac{K_{r1}}{T_{g1}} & \frac{1}{T_{g1}} & 0 & n_1-m_1q_1 \end{bmatrix}^T,\quad \boldsymbol{B}_{22}=\begin{bmatrix} 0 & 0 & \frac{K_{r2}}{T_{g2}} & \frac{1}{T_{g2}} & 0 & n_2-m_2q_2 \end{bmatrix}^T$$

$$\boldsymbol{B}_{12}=\boldsymbol{B}_{21}=\boldsymbol{0}_{6\times 1},\quad \boldsymbol{F}_{12}=\boldsymbol{F}_{21}=\boldsymbol{0}_{6\times 1}$$

$$\boldsymbol{F}_{11}=\begin{bmatrix} \frac{-1}{M_1} & 0 & 0 & 0 & 0 & 0 \end{bmatrix}^T,\quad \boldsymbol{F}_{22}=\begin{bmatrix} \frac{-1}{M_2} & 0 & 0 & 0 & 0 & 0 \end{bmatrix}^T$$

$$\boldsymbol{C}_{11}=\begin{bmatrix} 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \end{bmatrix},\quad \boldsymbol{C}_{22}=\begin{bmatrix} 0 & 0 & 0 & 0 & -1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \end{bmatrix}$$

$$\boldsymbol{C}_{\tau 1}=\begin{bmatrix} B_1 & 0 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}, \qquad \boldsymbol{C}_{\tau 2}=\begin{bmatrix} B_2 & 0 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$