Fig 25: SLS Viscoelastic Stress Relaxation — 4 Biofilm Conditions
Step eigenstrain $\varepsilon_0 = 0.01$, $E\infty$(DI) power-law, τ(DI) Eq. (X)

(a) Stress relaxation: $\sigma(t) = [E\infty + E_1 \cdot \exp(-t/\tau)] \cdot \varepsilon_0$

- Commensal Static (τ=56.5s)
- Commensal HOBIC (τ=53.1s)
- Dysbiotic HOBIC (τ=19.2s)
- Dysbiotic Static (τ=3.2s)

— elastic E_0 (dashed)
-- long-term $E\infty$ (dotted)

(b) Normalized relaxation (fraction of instantaneous stress)

- Commensal Static
- Commensal HOBIC
- Dysbiotic HOBIC
- Dysbiotic Static