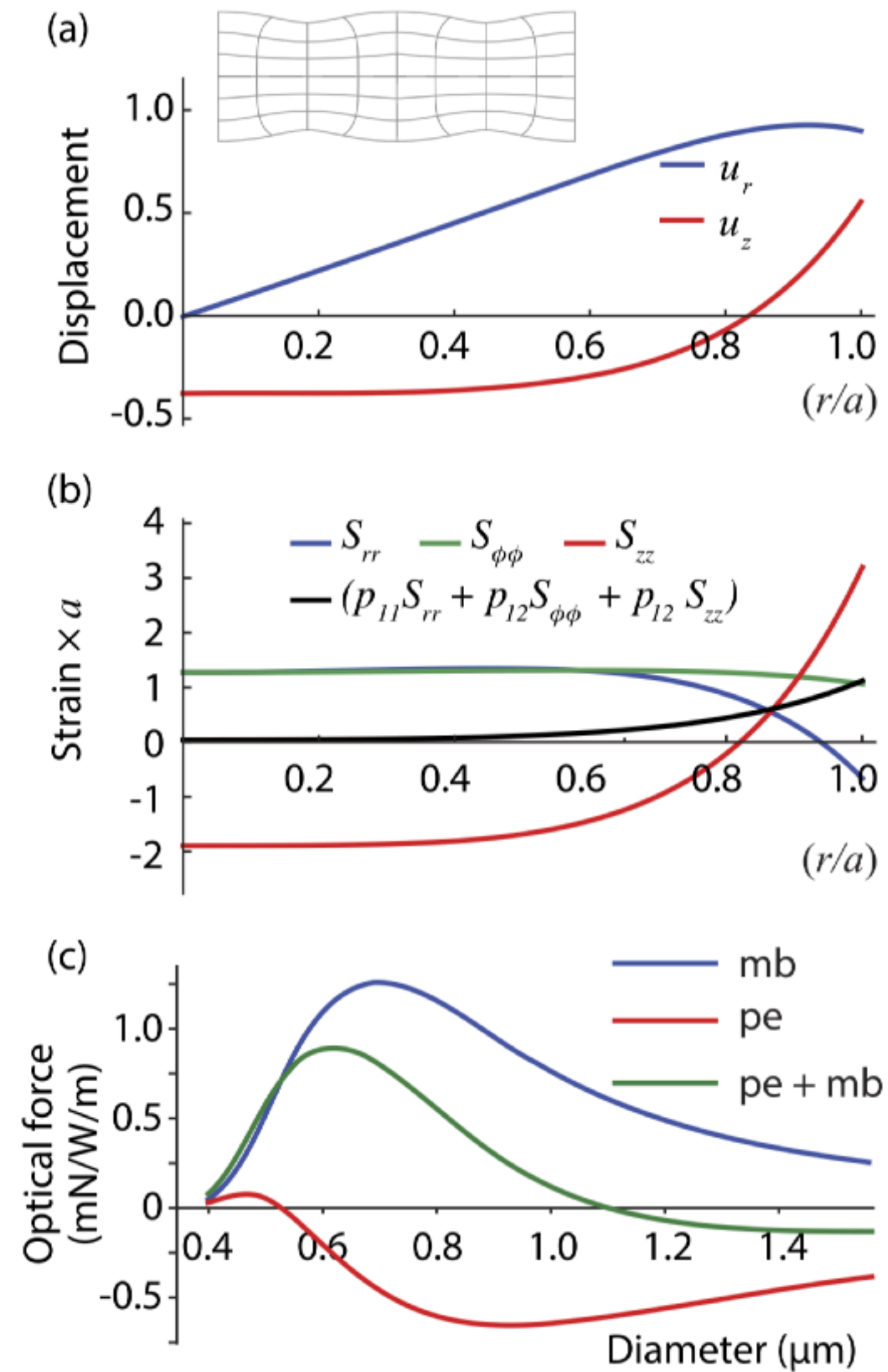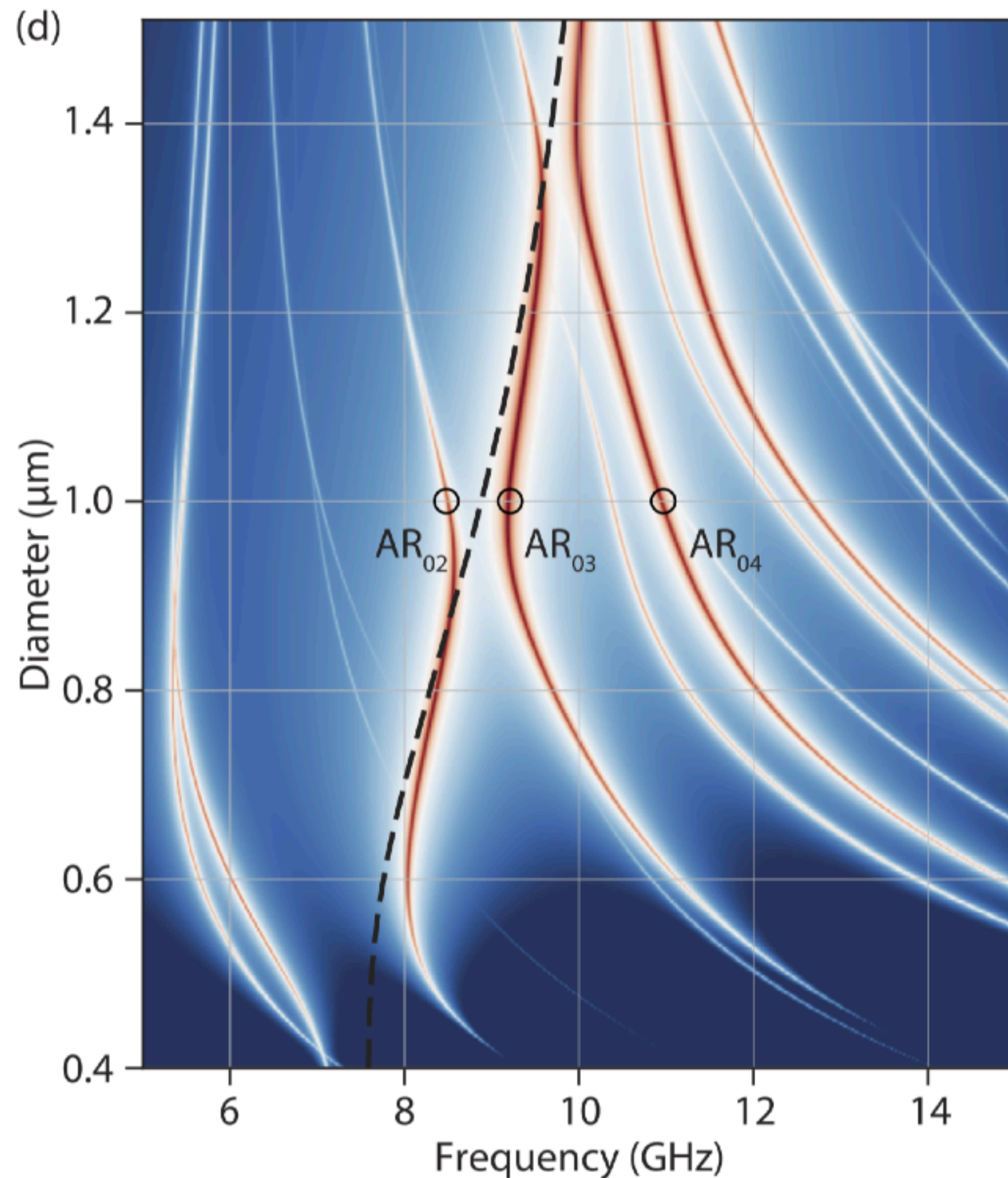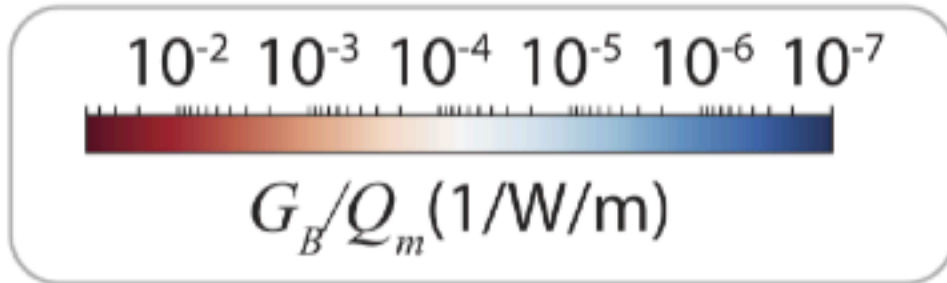# Silica nanowire revisited

$$f_{mb}^{(wg)} = \frac{\mathbf{u}^* \cdot \hat{n} \left(\delta\varepsilon_{mb}\mathbf{E}_{p,\parallel}^* \cdot \mathbf{E}_{s,\parallel} - \delta\varepsilon_{mb}^{-1}\mathbf{D}_{p,\perp}^* \cdot \mathbf{D}_{s,\perp} \right)}{\max(|\mathbf{u}|)N_p^{(wg)}N_s^{(wg)}}$$
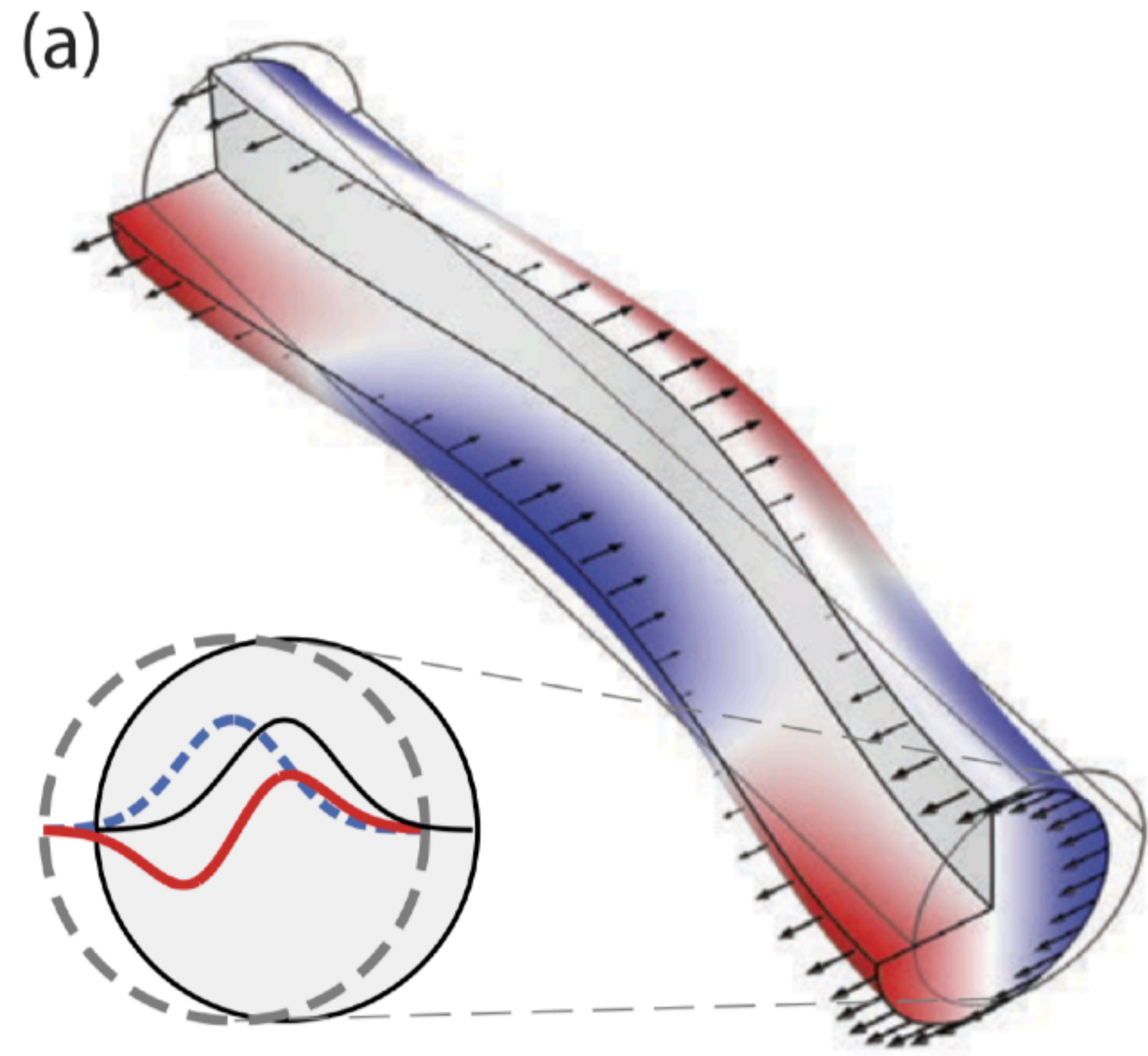
$$f_{pe}^{(wg)} = \frac{\mathbf{E}_p^* \cdot \delta\boldsymbol{\varepsilon}_{pe}^* \cdot \mathbf{E}_s}{\max(|\mathbf{u}|)N_p^{(wg)}N_s^{(wg)}}$$

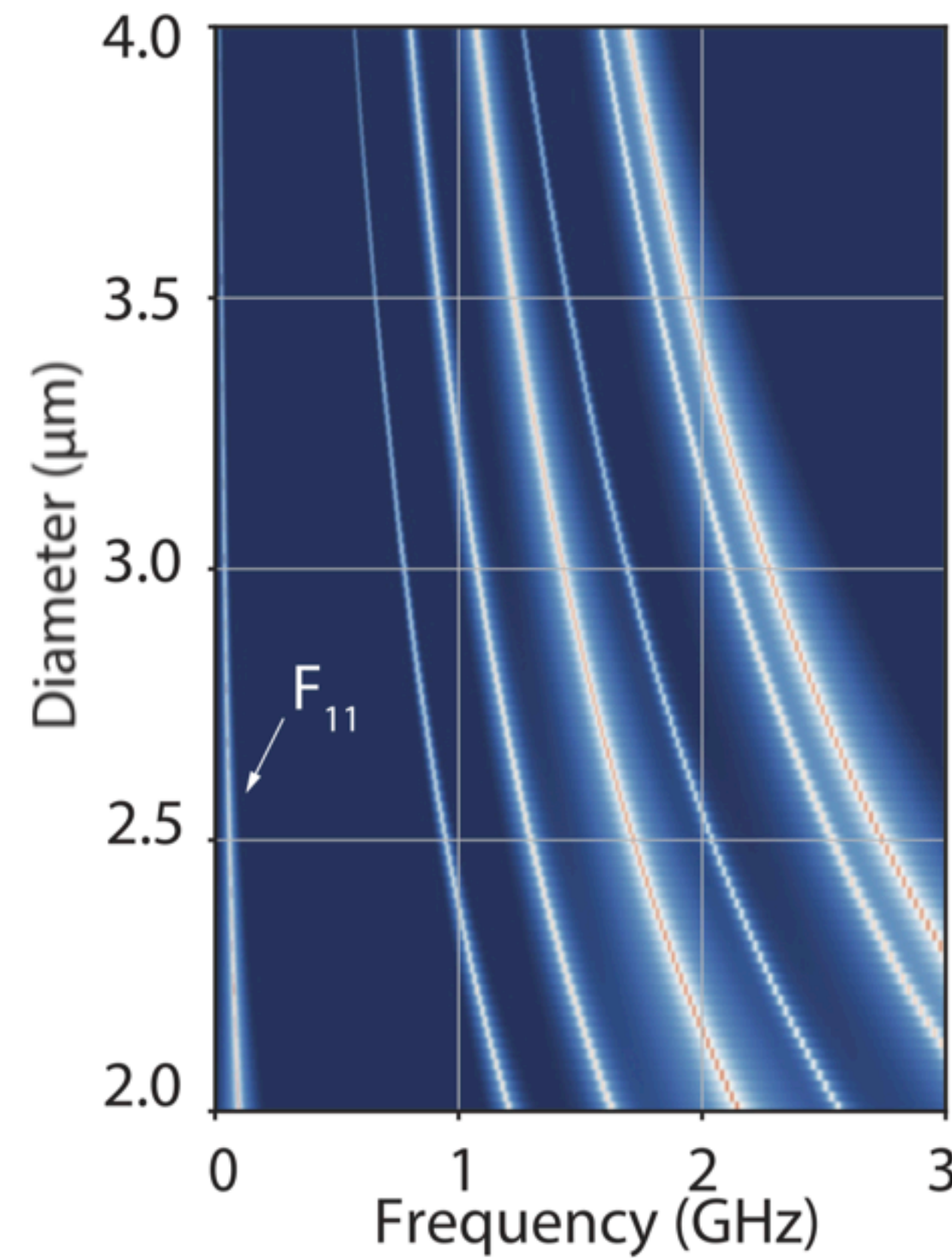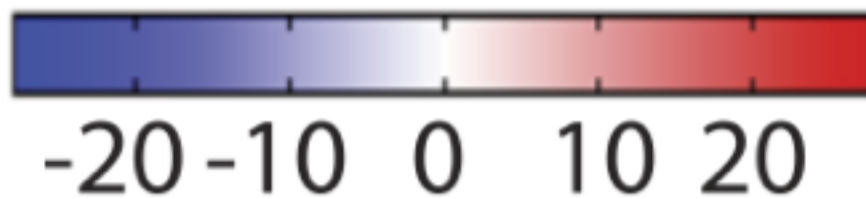$$\delta\varepsilon_{pe} = -\varepsilon_0 n^4 \mathbf{p} : \mathbf{S}$$

Silica nanowire revisited

(a)

Strain per unit displacemt [1/μm]
-20 -10 0 10 20

F_{11}

G_B/Q_m (1/W/m)
10^{-2} 10^{-3} 10^{-4} 10^{-5} 10^{-6} 10^{-7}

(b) F_{11}

mb
pe
pe+mb