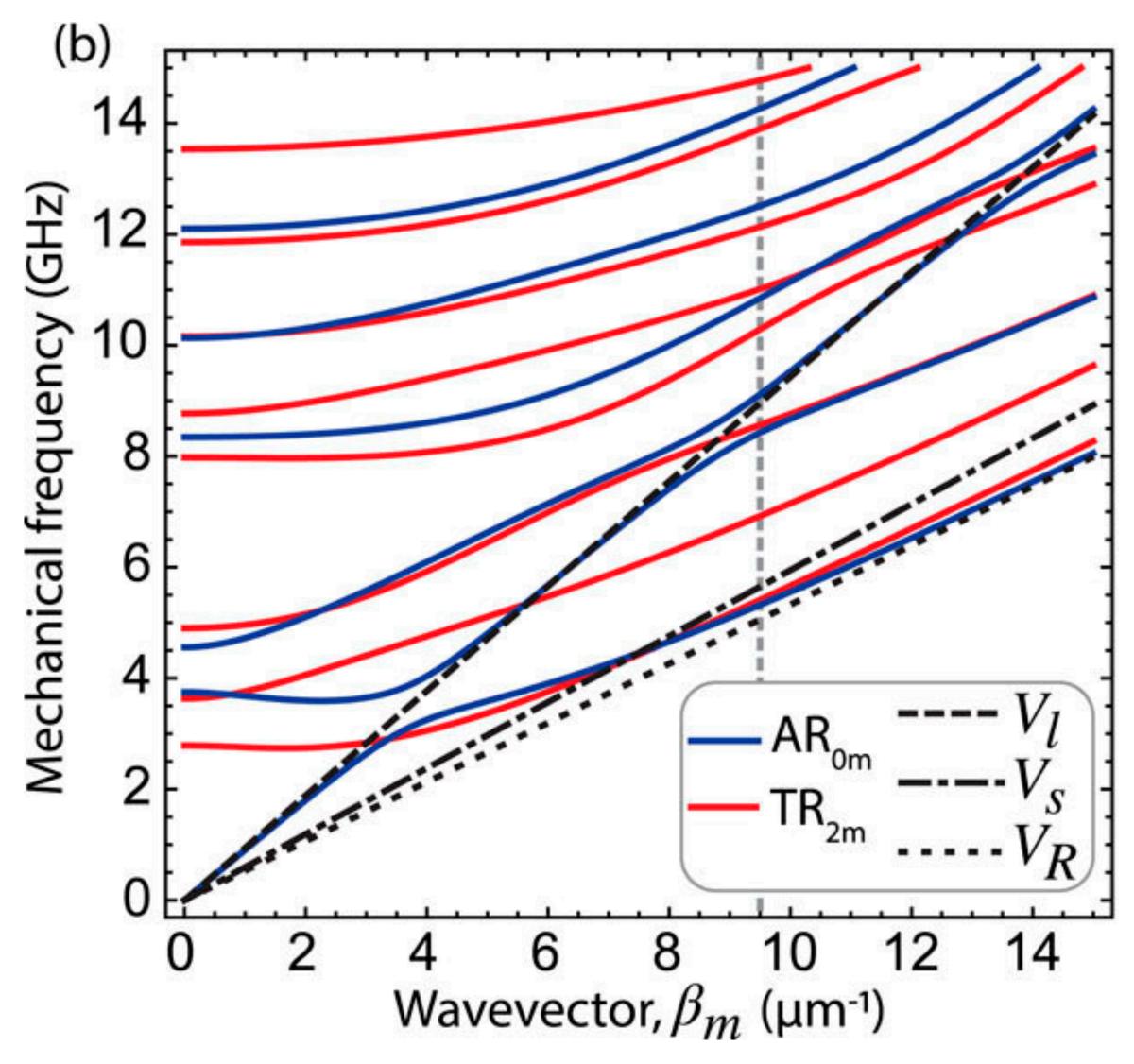
Mechanical modes



$$\left[(\lambda + 2\mu) + \eta_{11} \frac{\partial}{\partial t} \right] \nabla (\nabla \cdot \boldsymbol{U}) - \left[\mu + \eta_{44} \frac{\partial}{\partial t} \right] \nabla \times \nabla \times \boldsymbol{U} = \rho \frac{\partial^2 \boldsymbol{U}}{\partial t^2}$$

$$\text{longitudinal waves } (\nabla \times \boldsymbol{u} = 0) \qquad \text{shear-only } (\nabla \cdot \boldsymbol{u} = 0)$$

Elastic wave equation



Mechanical modes



