



• contribution of the spectral interference

$$S_{\text{interference}} = \frac{1}{2} \sum_{\mathbf{k}} \left(\frac{\partial \epsilon(\mathbf{k})}{\partial \omega} \right)^2 \left(\frac{\partial \omega}{\partial \mathbf{k}} \right)^2 \left(\frac{\partial \epsilon(\mathbf{k})}{\partial \omega} \right)^2$$

where: $\epsilon(\mathbf{k}) = \epsilon(\mathbf{k}, \omega)$ is the dielectric function

Observations:

- $\epsilon(\mathbf{k})$ is a nonlocal function of the phase ϕ
- $\epsilon(\mathbf{k})$ changes sign of the spectral components

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