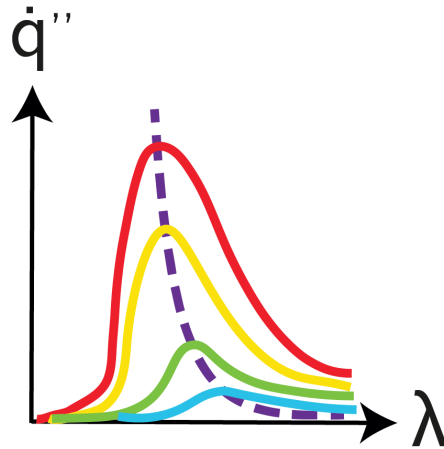


Radiation - Kirchoff 03

Give an expression for the emissivity ϵ of a grey body in terms of its known spectral properties.



Kirchoff's law states for a grey body:

$$\epsilon = \alpha$$

Furthermore, for a radiating body ($\rho + \alpha + \tau = 1$), so therefore:

$$\alpha = 1 - \rho - \tau$$

And keeping in mind that for a opaque body $\tau = 0$, it yields that:

$$\epsilon = 1 - \rho$$