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## S1. Optical characterization: calculation details

Detailed calculation of the absorption and scattering coefficients for quantum efficiency values:

$$
K=\frac{11-R_{\infty}}{2 d 1+R_{\infty}} \ln \left(\frac{R_{\infty}\left(1-R_{\infty} R_{0}\right)}{R_{\infty}-R_{0}}\right)
$$

(1)

$$
S=\frac{1 \quad R_{\infty}}{2 d_{1}-R_{\infty}^{2}} \ln \left(\frac{R_{\infty}\left(1-R_{\infty} R_{0}\right)}{R_{\infty}-R_{0}}\right)
$$

## (2)

Linear absorption and scattering coefficients a and s can be calculated as:

$$
\begin{align*}
& K=2 a  \tag{3}\\
& S=\frac{3 s(1-g)-a}{4} \tag{4}
\end{align*}
$$

where $K, S, \mathrm{~d}$ and g are diffuse absorption coefficient, diffuse scattering coefficient,) sample thickness $(\mathrm{cm})$ and g is scattering anisotropy factor.

