

residual emission anisotropy

Photoselected molecules hindered in their rotation (e.g., in lipid bilayers or liquid crystals) do not become randomly oriented even after long time periods. Thus, the emission anisotropy does not decay to zero but to a steady value, r_∞ , called residual emission anisotropy. In the case of a single rotational correlation time, τ_c or θ , the decay of emission anisotropy following δ -pulse excitation is given by:

$$r(t) = (r_0 - r_\infty) \exp\left(-\frac{t}{\tau_c}\right) + r_\infty$$

where r_0 is the fundamental emission anisotropy.

Note:

The term residual anisotropy is to be preferred to 'limiting anisotropy'.

Source:

PAC, 2007, 79, 293 (*Glossary of terms used in photochemistry, 3rd edition (IUPAC Recommendations 2006)*) on page 414