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## Interaction mechanism for energy transfer from Ce to Tb ions in silica

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Energy transfer phenomena can play an important role in the development of luminescence materials. For example, in co-doped silica samples the Tb ions producing green luminescence useful in a variety of lighting and display applications can be excited indirectly by energy transfer from the Ce ions which have a longer, more accessible excitation wavelength. As a result of energy transfer away from the Ce ions, their luminescence intensity and lifetime decreases as the Tb concentration increases. In this work we have compared experimental measurements of these effects with models developed by Inokuti and Hirayama [J. Chem. Phys. 47 (1967) 3211] for various interaction mechanisms and conclude that the energy transfer is as a result of dipole-dipole interactions.

**Are you currently a postgraduate student? (Yes/No)**

No

**At what level of studies are you currently? (Hons/MSc/PhD)**

n/a

**Please provide the name and email address of your supervisor.**

n/a

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