CL emission mechanism of calcite type carbonates

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Cl spectra of calcite type carbonates activated by Mn2+ show similar spectral patterns, but change in peak wave-length from 610-660nm. It can be presumed that the influence of the crystal field in different host crystals may alter the magnitude of the energy levels of d-shell for Mn2+. Mn concentration more than 8000-10000ppm exhibits the effect of the CL quenching. It is thought that the transition energy of the activator could be used for the non-radiation transition, such as cross relaxation and energy transmission.The PC simulation supports such concentration quenching.