

Spectral intensities in cubic systems. III. The Cs₂NaEuCl₆ system

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The optical properties of Cs₂NaEuCl₆ system are reinvestigated on the basis of new and updated experimental data from Raman, electronic Raman, Infrared absorption and visible luminescence. These experimental studies have enable scientist to identify and assign all of the energy levels and corresponding electronic transitions up to 21 500 cm⁻¹. Futhermore, the crystal field level identification from absorption spectroscopy has been confirmed from the additional emission and electronic Raman studies. We decided to study the most likely intensify mechanisms for this system, based upon these new experimental data and a modified version of a combined vibronic formalism, which takes into account the closure procedure for the intermediate electronic states. The total and relative vibronic intensity distributions are calculated and compared with the experimental data, when available. It is shown that the present calculation model although complex uses a minimum set of adjustable parameters fro