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Time correlation functions in Light Harvesting Complexes embedded in Glassy Hosts[1] FELIPE CAYCEDO, FERNEY RODRIGUEZ, Universidad de los Andes — Using a Monte Carlo Wave function approach we describe the dynamics and correlation functions of light harvesting complexes (LH2) embedded in glassy hosts interacting with a classical light field. Using a dipolar interaction, we investigate the general features of coherence and (anti) bunching on a multiple-molecular system subject to cw excitation light. Spectral difusion due to environmental perturbations, produces distinct features on the fluorescent intensity and statistical properties of light emitted by the chromophores. We demonstrate how it is possible to quantify the number of chromophores involved in emission through the second-order correlation function $g^{(2)}(\tau)$ at small τ values. By changing properly the incident field, it is possible modulate the bunching or antibunching features. Finally we compare $g^{(2)}(\tau)$ for different environment conditions.

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