

Abstract Submitted
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Boson peak in L-cysteine: a Raman scattering study

THAMIRES LIMA, HERCULANO MARTINHO, Universidade Federal do ABC — The Boson peak is a distinctive feature of many glassy and disordered crystalline solids. Recently it has been suggested that similar feature may be correlated to anharmonic transitions observed in macromolecules like DNA and proteins. In the present work we studied the low frequency ($15 - 600 \text{ cm}^{-1}$) Raman scattering response of L-cysteine and L-Cysteine hydrochloride with different hydration levels in the $15 - 270 \text{ K}$ temperature range. Our analyzes will be concerned to understand the water rule in the Boson peak inelastic light signal, its correlation to the dynamic transitions at $T^* \sim 80 \text{ K}$ and $T_D \sim 280 \text{ K}$, and its microscopic origin as well.

Herculano Martinho
UNIVERSIDADE FEDERAL DO ABC

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