

# Charge density wave formation near band degeneracies

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We present Raman scattering experiments on rare-earth tri-telluride single crystals to study low dimensional interacting electron gases and the transition into a charge density wave (CDW) phase. In the case of  $\text{ErTe}_3$  there are two CDW phase transitions at 265K and 155K with orthogonal ordering vectors. We analyze the data and the Raman selection rules and find a strong enhancement of the light scattering intensity near band degeneracies. For symmetry reasons the electron-phonon coupling is also enhanced at these points. This is an additional contribution to the phonon renormalization and therefore influences CDW formation in multiband systems.

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