Comunicazione

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The low-temperature specific heats of normal and densified (at 2 GPa) vitreous B_2O_3 were investigated between 0.4 K and 25 K. When reported in a plot of C_p/T^3 *vs.* T between 2 K and 25 K, the specific heat C_p shows a bump which shifts towards higher temperatures and decreases markedly in magnitude with increasing density. At temperatures below 2 K, an additional contribution over that predicted by the Debye theory is observed: C_p follows a nearly linear temperature dependence disclosing a well-defined decrease with increasing density. By comparison with the observations in normal v-B_2O_3 , it is concluded that glass densification reduces both the excess density of low-energy vibrational states and the density of two-level systems which are the source for the linear term.