Pressure-induced amorphization of quasibinary GeTe–Sb_2Te_3: The role of vacancies

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The authors demonstrate that the cubic phase of quasibinary GeTe–Sb_2Te_3 alloys (GST), the material of choice in phase-change optical recording (such as digital versatile disk-random access memory) can be rendered amorphous by the application of hydrostatic pressure. The amorphization pressure depends on the GST composition. The pressure-induced amorphous phase possesses a local structure around Ge atoms similar to that of laser-amorphized GST. They argue that vacancies are crucial for the pressure-induced amorphization.

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