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High Pressure Phases of Cu₂O DAVID GROH, Gannon U, RAVI PANDEY, Michigan Technological U, MIGUEL BLANCO, Universidad de Oviedo — Copper Oxide's ambient phase is cubic. The copper atoms are in a simple face centered cubic packing sequence of hexagonal layers, with the oxygen atoms at alternating tetrahedral sites. As the pressure increases, cubic symmetry breaks. While the basic packing sequence is maintained, the distance between layers is no longer cubic – a hexagonal structure results. At even further pressures, a major crystal structure change occurs to the CdI₂ structure. The calculated phase change pressures and volumes tend to compare well with experiment.

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