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Polymorphism in $\text{Cu}_{20}\text{Te}_{11}\text{Cl}_3$

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$\text{Cu}_{20}\text{Te}_{11}\text{Cl}_2$ is a new polymorphic Cu-ion conducting material with order-disorder phase transitions occurring at 288 and 450 K. The α - β -phase transition occurs via symmetry reduction from the hexagonal to the orthorhombic crystal system that is attended by twinning and additional quintuplication of the a- and duplication of the c-axis. The compound features dynamic disorder in the cation and statistical disorder in the anion substructure.

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