

A method for producing semiconducting chalcogenide monocrystals comprises the charge preparation from elementary components, alloy synthesis, annealing, crystallization and cooling to room temperature. The alloy synthesis is carried out with heating to temperature 1320 K with homogenizing anneals during synthesis at 1110 K during 240 hours and at 820 K during 300 hours. Monocrystals are grown by a method of collecting recrystallization in preheated two-zone furnace at temperature gradient along a crystal of 2-3 K/mm using two annealing operations in this process, the first operation is carried out at 1110 K during 48 hours and the second operation is carried out at 820 K during 100 hours, the monocrystal is cooled with the rate of 0.1-0.15 mm/hour between final annealings.