Canted antiferromagnetic order in $EuZn_2As_2$ single crystals

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Compounds containing Eu show a vast range of unique physical properties due to the interplay of electronic and magnetic properties, which can lead to a nontrivial electronic topology combined with magnetic order. We report on the growth of trigonal (*P*3*m*1 space group) $EuZn_2As_2$ single crystals and on the studies of their structural, electronic and magnetic properties. A range of experimental techniques was applied including X-ray diffraction, electron microscopy, magnetic susceptibility, magnetization, heat capacity and Mössbauer spectroscopy in the study. We found that Eu has solely a 2+ valence state and its magnetic moments below T_N = 19.2 K form a canted antiferromagnetic structure, tilted from the basal plane [1].

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