The structure of CeB₄ has been determined by single crystal X-ray diffraction. The compound crystallizes in the ThB₄ structure type (space group $P4_{2}1mbm$, $a = 7.2034(8)$ Å, $c = 4.1006(5)$ Å; 270 reflections with $F_o \geq 4\sigma(F_o)$, $R1 = 0.023$, $wR2 = 0.052$). The results of the magnetic and electrical resistivity measurements indicate a strong $f$-$d$ hybridization of the $4f$ electrons of the cerium atom.

**Key words:** Cerium Boride, Crystal Structure, Magnetic Behaviour, Electrical Resistivity