

LAÛE BACK-REFLECTION METHOD FOR CRYSTALLOGRAPHIC ORIENTATION OF A MARTENSITIC Cu-Zn-AI SINGLE CRYSTAL OF THE MONOCLINIC SYSTEM

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A Laue camera (Figure 1S) and a goniometer (Figure 2S) were constructed in the precision mechanical laboratory of Chemistry Institute of São Paulo University at São Carlos, based on a schematic diagram provided by Prof. A. Hamelin. The Laue camera consists of a collimator system with 6 cm length and a hole with 1 mm diameter in the center (c) followed by a support for the film (b) totally protected from the light (the hole in the center of the support indicated by d must be sealed preferably with a metallic head). The goniometer, placed inside the piece indicated by a and a', holds the sample in the desired position and has a large angular freedom degree (18 °) in X and Y axes. The crystal is fixed by Teflon pieces to the goniometer and placed 3 cm far from the film.

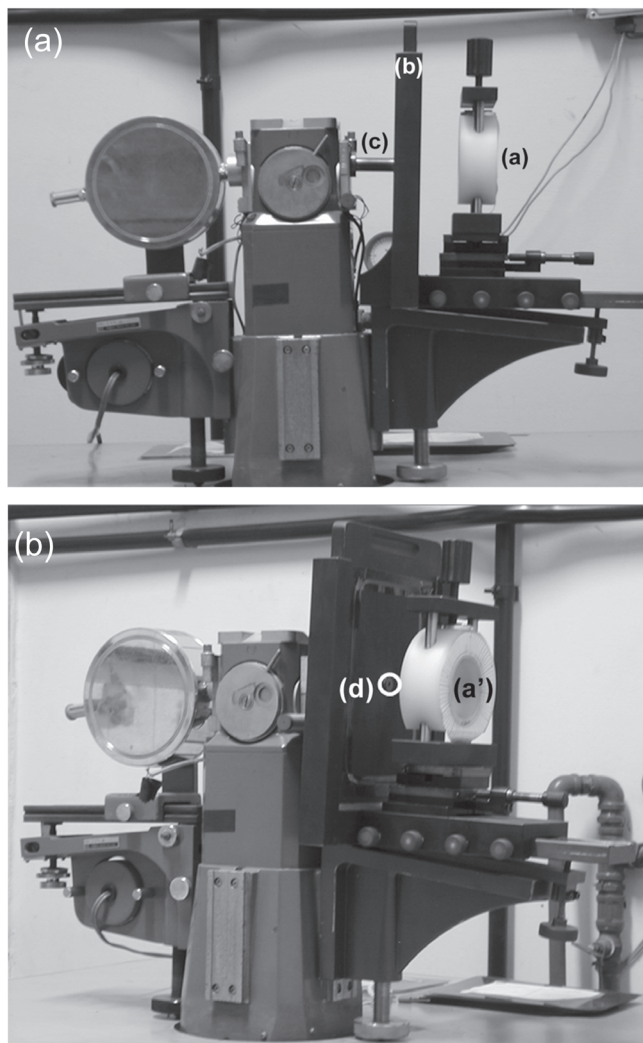


Figure 1S. Profiles of the X-ray camera used for crystallographic orientation. Support of the goniometer (a, and a'); film holder (b); trajectory of the X-ray beam going to the crystal (c); X-ray collimator (d)

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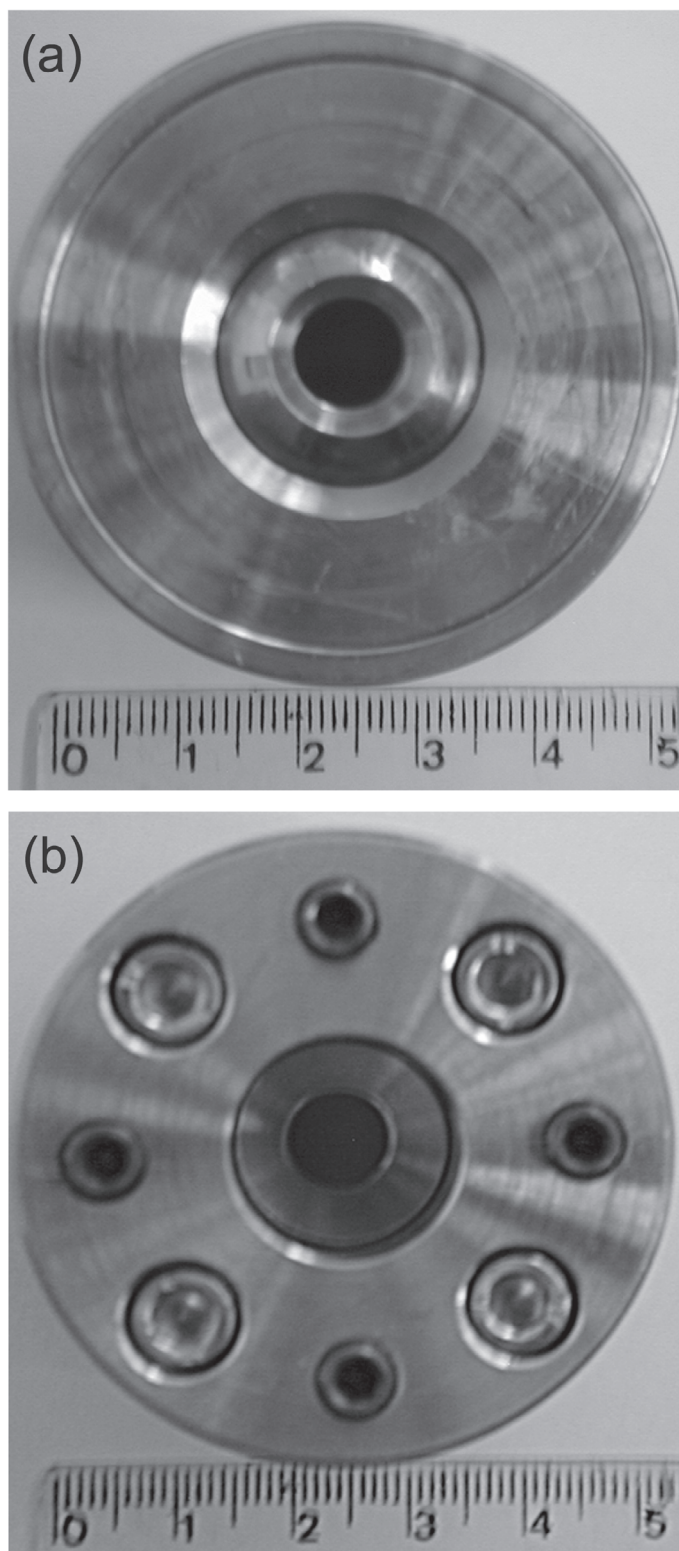


Figure 2S. Illustrative photos of the goniometer used in crystallographic orientation assays of the single crystal. (a) Front and (b) Backside of the goniometer: the smaller screws are used to provide the needed freedom degree for the angular movement