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S. Anas Boussaa, A. Kheloufi, N. Boutarek Zaourar

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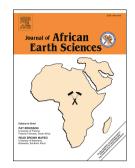
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## Characterization of impurities present on Tihimatine (Hoggar) Quartz, Algeria S. Anas Boussaa<sup>a,b</sup>, A. Kheloufi<sup>a</sup>, N. Boutarek Zaourar<sup>b</sup> <sup>a</sup> Divion croissance cristalline et procédés métallurgiques Centre de recherche en technologie des semi-conducteurs pour l'énergétique (C.R.T.S.E) 02 Bd Frantz Fanon BP. 140 Alger 7 merveilles, Alger 16200 <sup>b</sup> Laboratoire des technologies des matériaux, USTHB, B.P. 32 El Alia, Bab Ezzouar, Alger, Algérie16111. *Corresponding author: sabiha.anas@gmail.com* anassabiha@crtse.dz Abstract optical Microscopy with reflected and transmitted Many of today's advanced materials depend on lights, infra-red spectrometer, Raman spectrometer. Despite the high concentration of SiO<sub>2</sub> in studied quartz as a raw material. Quartz usually contains abundant inclusions, both quartz reaching 98%, several harmful inclusions solid and liquid, and due to the number of these were found and identified as hematite, anatase, inclusions and their small size, complete separation muscovite, graphite, it contains: Fe, Ti, Al, K, Ca. Some fluid inclusions were found. We detect the is most difficult. Typical properties of raw quartz that must be presence of carbon dioxide and water using raman characterized are: Size and Chemical composition spectroscopy. of inclusions, their spatial distribution, localization The repartition of solid impurities is aleatory and of isomorphic substitutional elements (e.g. Al, Fe). not homogeneous with maximum size of 10 µm. The aim of this study has been to test experimental Concerning the fluid impurities, their diameter vary methods for investigating some inclusions between 5 to 20 µm and their repartition is aleatory. (impurities) present in the Tihimatine quartz from El Hoggar region deposits (southern Algeria) using Key words: Silica, Quartz, Tihimatine, Hoggar, X Ray Fluorescence, scanning electron microscopy, Inclusions, Characterization.

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