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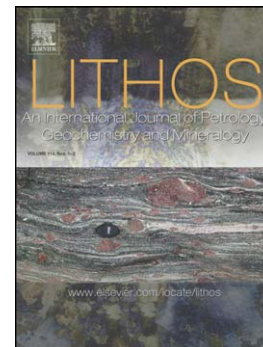
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## Structural and chemical variations in phlogopite from lamproitic rocks of the Central Mediterranean Region

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### Abstract

Micas from mafic ultrapotassic rocks with lamproitic affinity from several localities of the Central Mediterranean region were studied through single-crystal X-ray diffraction (SC-XRD), electron microprobe analysis (EMPA) and Secondary Ion Mass Spectrometry (SIMS); Mössbauer Spectroscopy (MöS), when feasible, was also applied to minimise the number of unknown variables and uncertainties. Lamproitic samples analysed cover the most important Central Mediterranean type localities, from Plan d'Albard (Western Alps) to Sisco (Corsica), Montecatini Val di Cecina and Orciatice (Tuscany, Italy) and Torre Alfina (Northern Latium, Italy). The studied crystals show distinctive chemical and structural features; all of them belong to the phlogopite-annite join and crystallise in the  $1M$  polytype, except for micas from Torre Alfina, where both  $1M$  and  $2M_1$  polytypes were found. Studied micas have variable but generally high F and Ti contents, with  $Mg/(Mg+Fe)$  ranging from  $\sim 0.5$  to  $\sim 0.9$ ;  $2M_1$  crystals from Torre Alfina radically

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