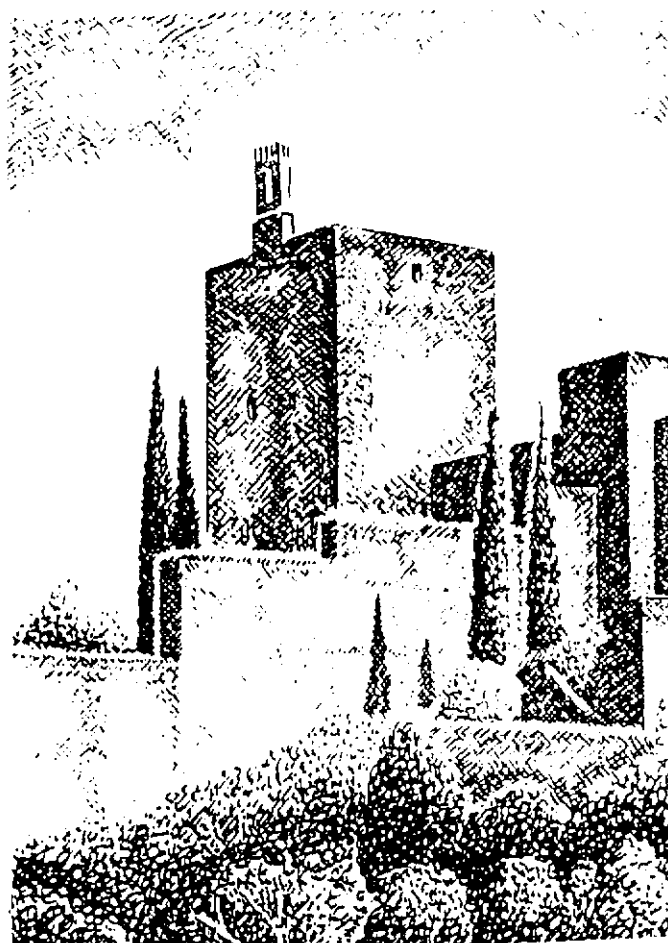


GEOCHEMISTRY OF THE EARTH SURFACE AND PROCESSES OF MINERAL FORMATION

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A B S T R A C T S

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CUPRIFEROUS CRYPTOMELANE ORIGINATED FROM THE WEATHERING OF THE COPPER
ORE DEPOSIT OF SALOBO 3A, SERRA DOS CARAJAS, BRAZIL

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The geochemical and mineralogical studies of the
weathering mantle on the copper mineralized rocks of Salobo 3A, Serra dos
Carajas, Brazil, have shown that copper, released from sulfides by disso-
lution, accumulates in situ, and is mainly localized into three minera-
logical phases:

-silicatic phase,

-ferruginous phase,

-manganesiferous phase.

Only the manganesiferous phase is presented here.
It is a cryptomelane phase (hollandite group) with variable contents of
potassium.

Through the different methods (X-ray diffraction,
Infra-red spectrometry, chemical microprobe ...) it is clearly shown that
cryptomelane contains up to 20% CuO.