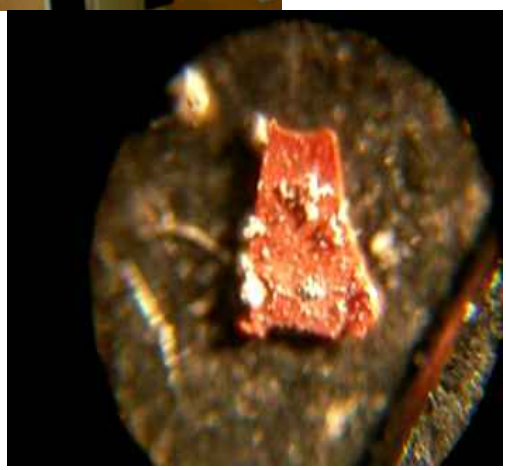


Fig 1

Red but ... one shiny gray spot at the surface. This chip was heated in a furnace up to 900°C resulting in the curvature (the aspect was the same before heating except that the chip was flat).

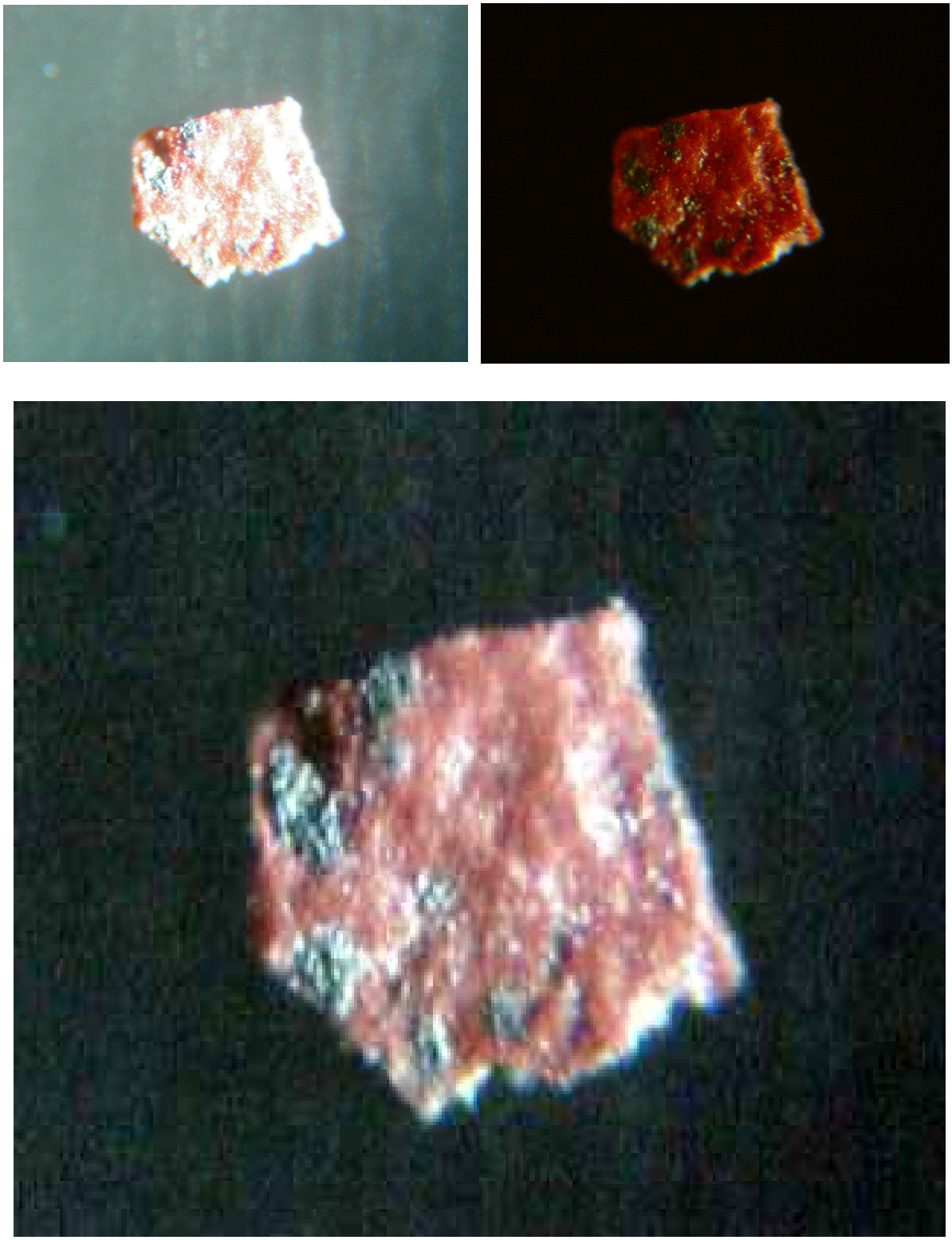


Fig 2

The chips commonly present shiny gray areas even before heating!

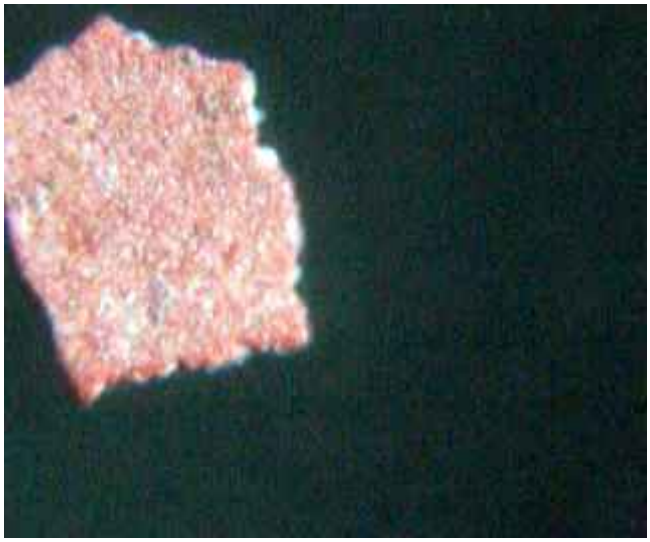


Fig 3

Side 1 Side 2

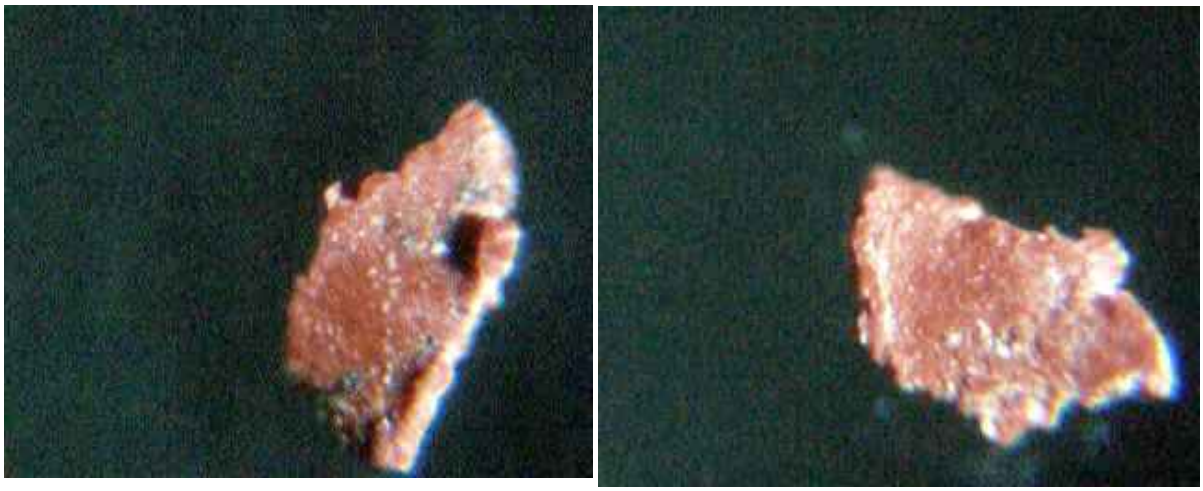


Fig 4

Same aspect on both faces

Spectra of previous chips after Heating at ~900°C

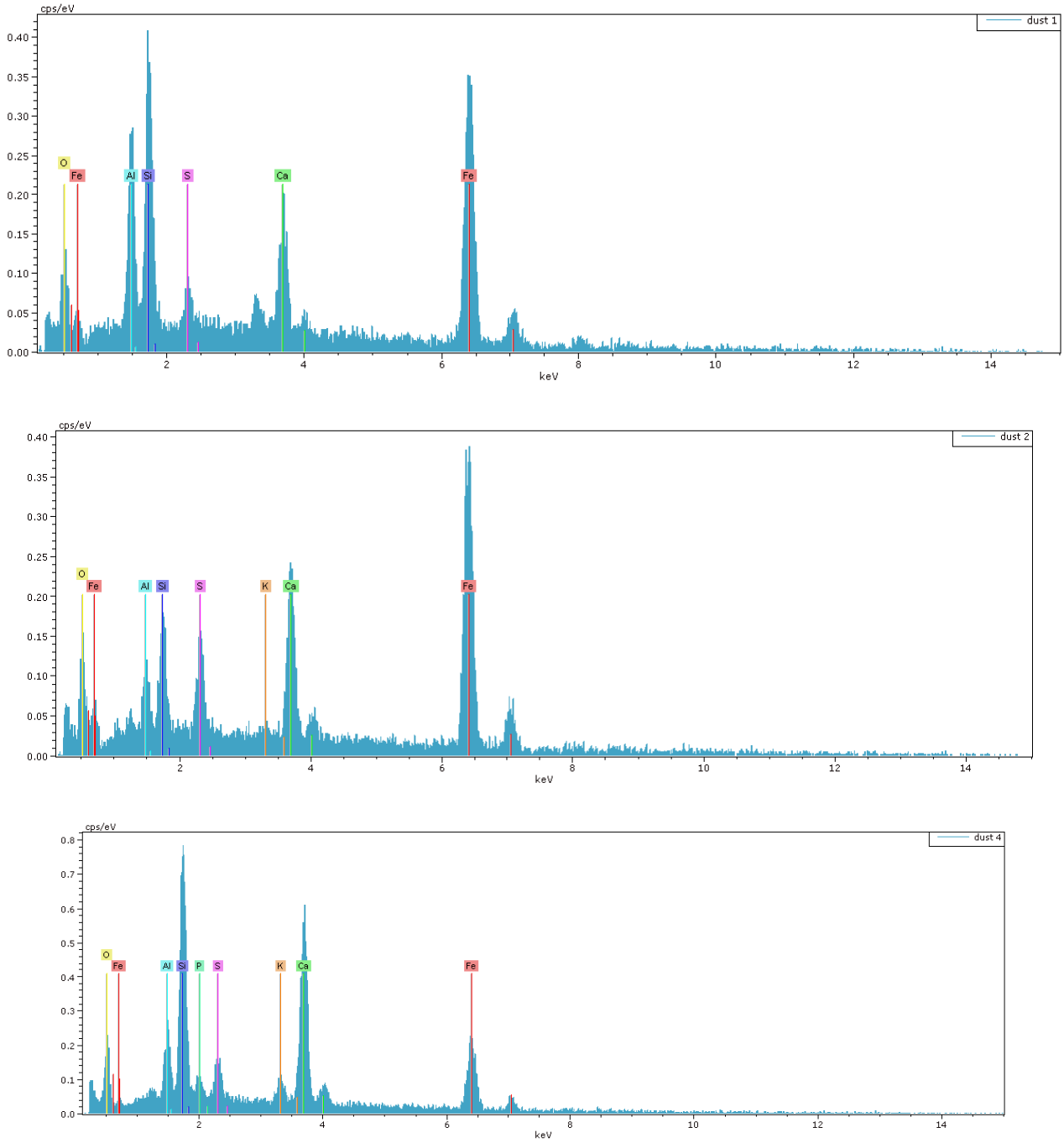


Fig 5

Very similar to red layer of red/gray chips spectra except no carbon peak ! (Ca, S can be from contamination)

Same kind of red-red chips in all four samples

Fig 6

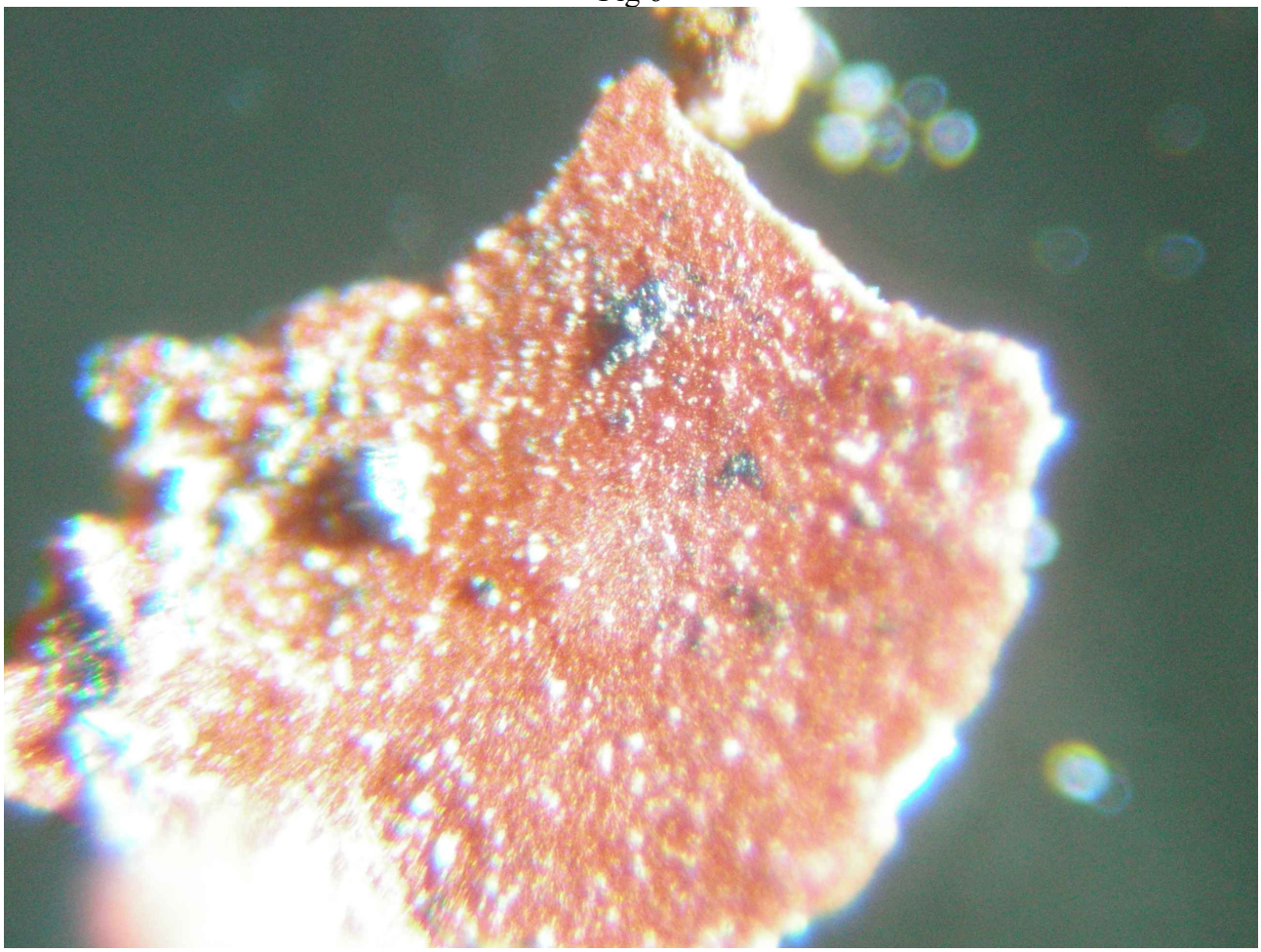


Fig 7

Many shiny gray metallic spots at the surface or inclusions (?) in the red material

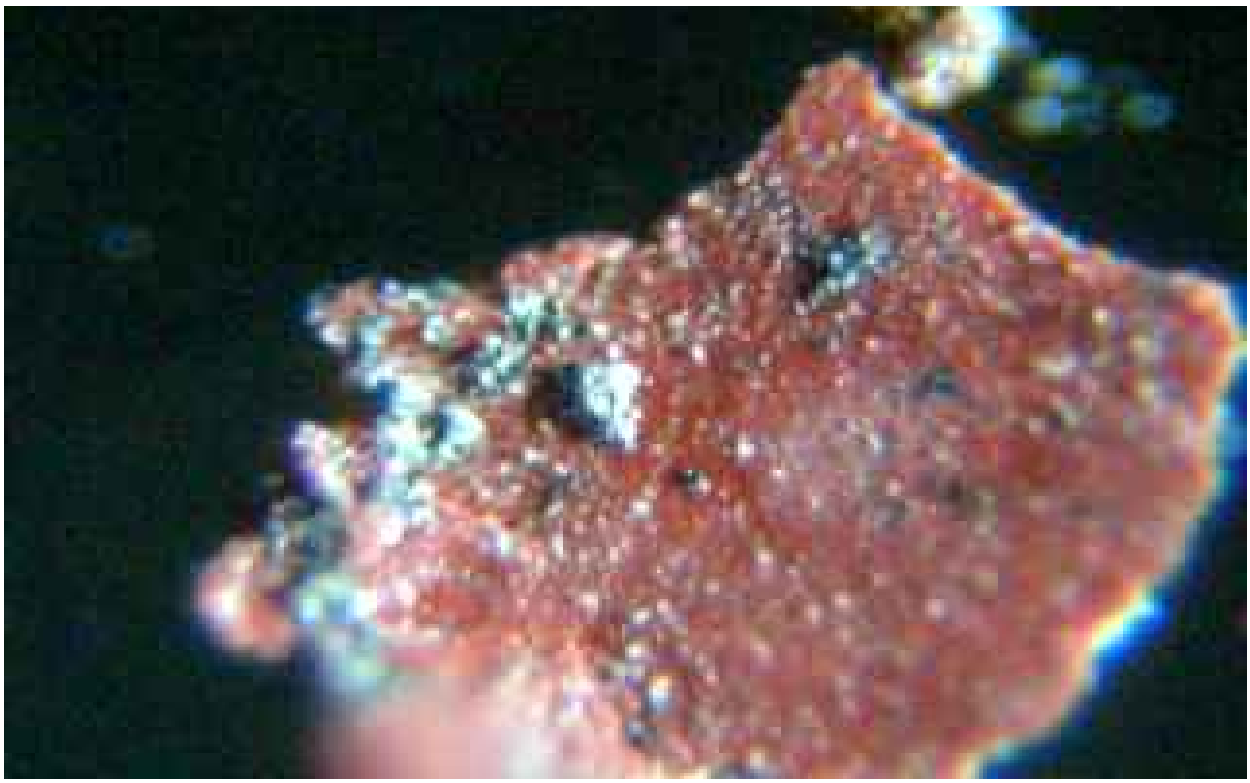
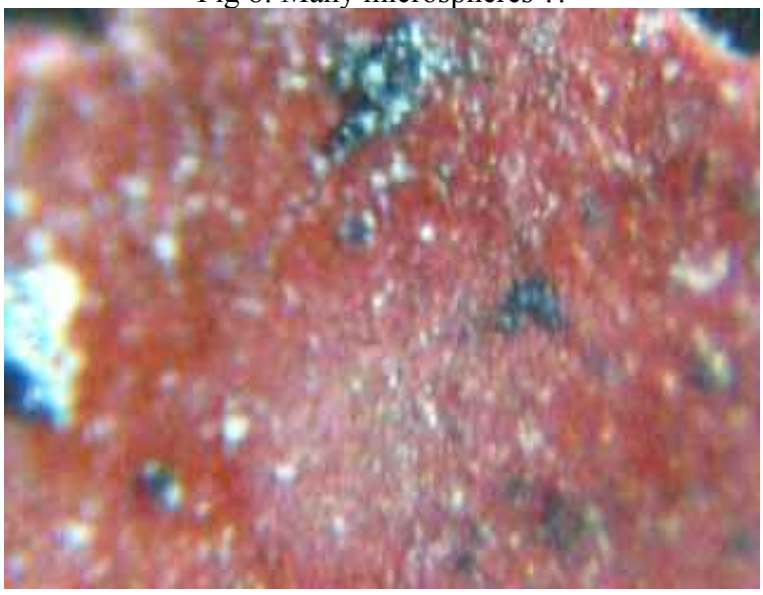
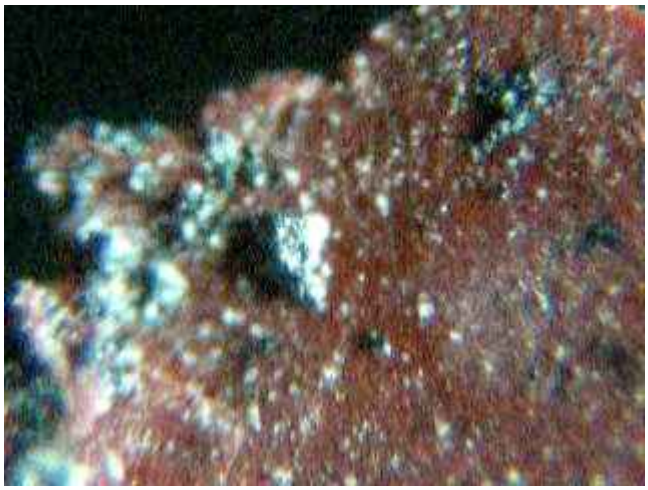
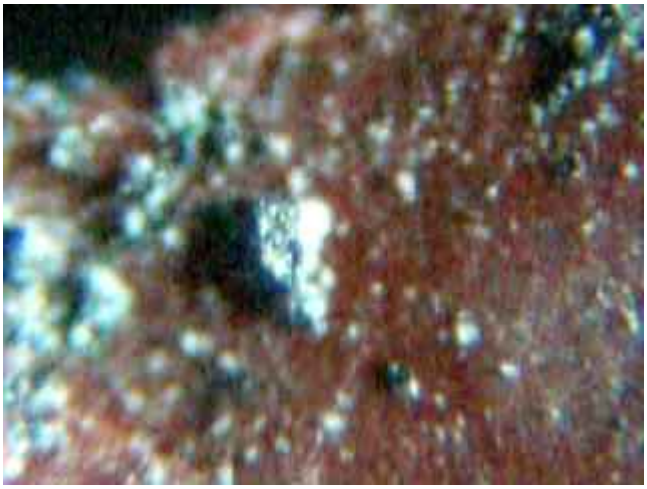


Fig 8: Many microspheres ?!







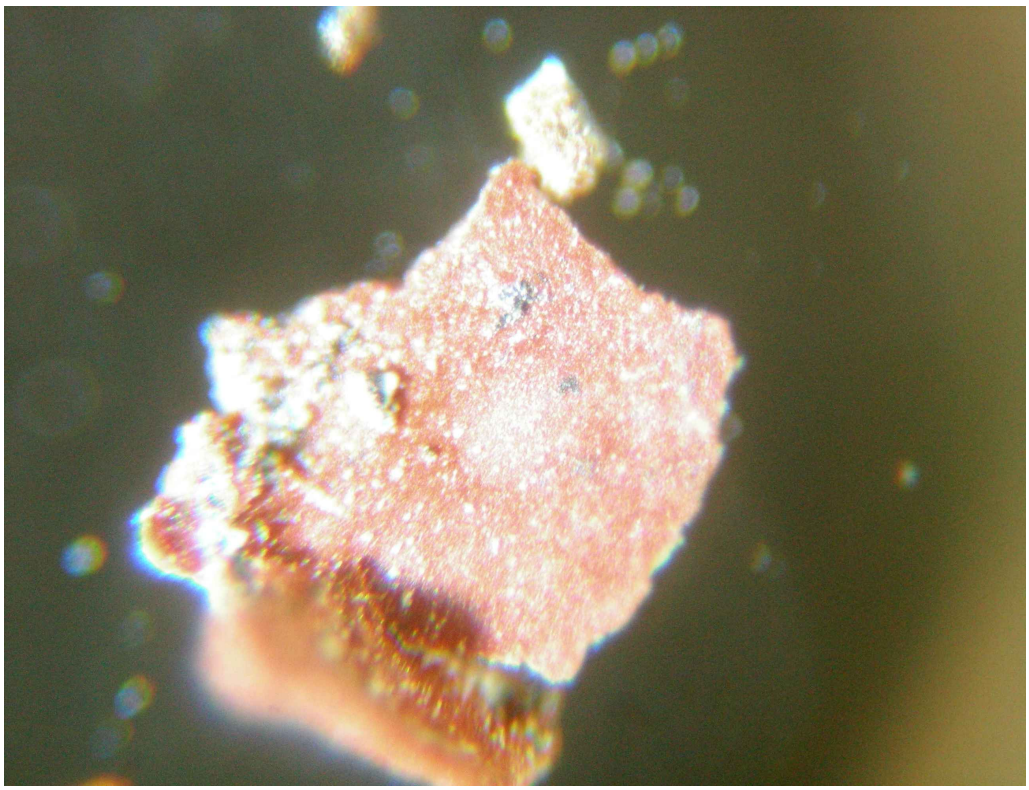


Fig 9
After folding: Redred chip has same aspect on both sides

The same after heating up to ~800°C: deformed by the heat, but still red!

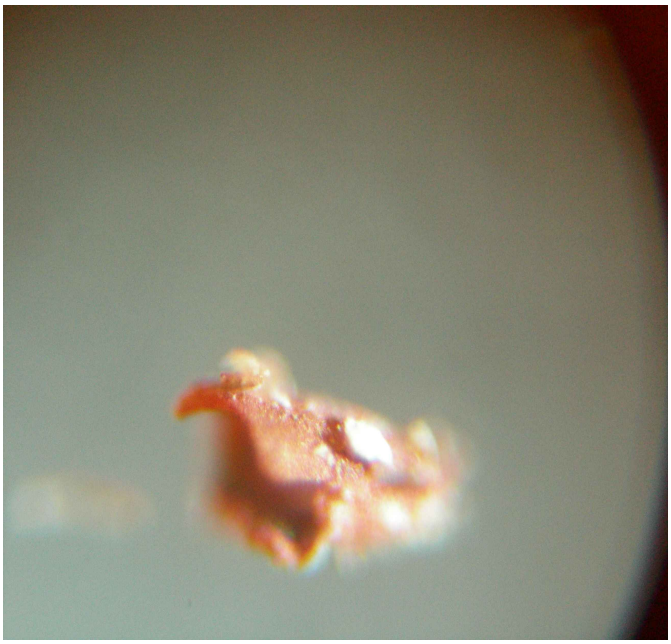


Fig 10

(White particles sticked to red-red chip probably from the alumina container in the skin.)

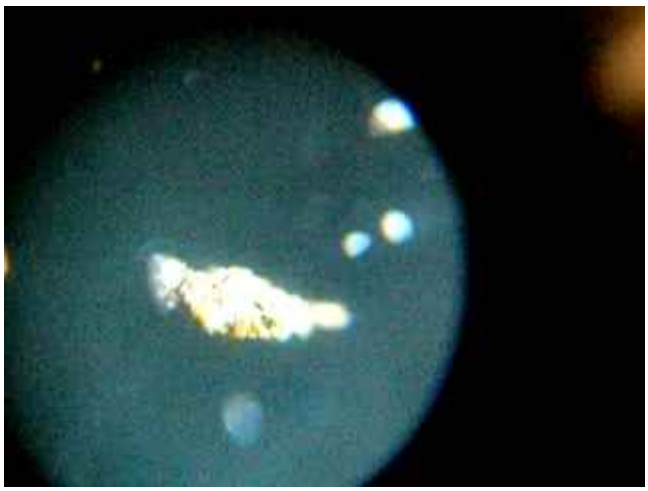


Fig 11

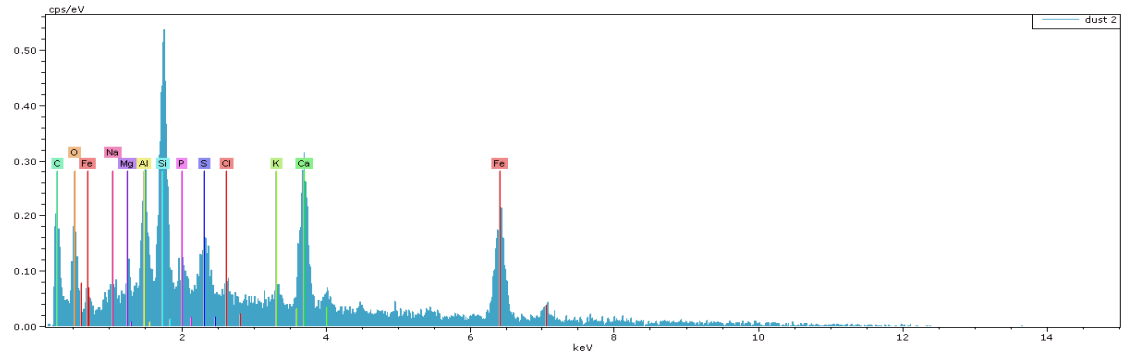
Sometimes many small particles expelled: shiny gray pieces, red-yellow pieces and even:

Fig 12

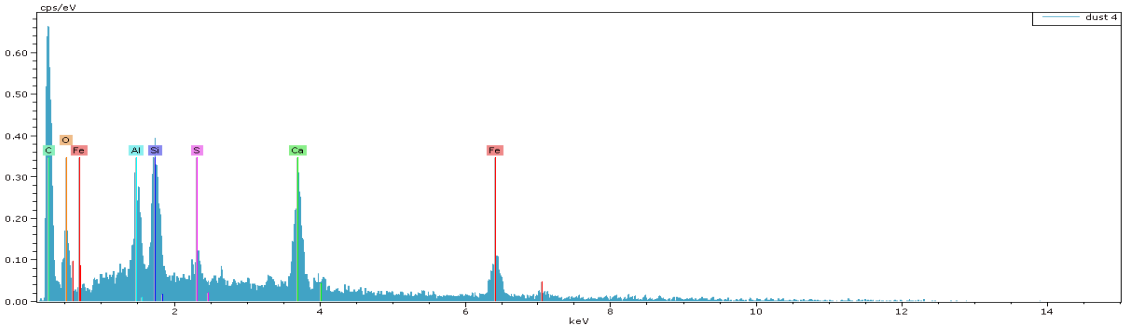
Very small microsphere (maximum magnification used here as in Fig 8_below)?:
Most probably one of the microspheres from the surface of the red material was expelled.
Encountered only once after heating more than ten red-red chips. Very different from what we see when a red/gray chips has reacted : always produce molten iron (much bigger microspheres, chips looses its red color).

Spectra of red-red chips before heating

chip 1 (sample 1):



chip 2 (sample 1):



chip 3 (sample 2):

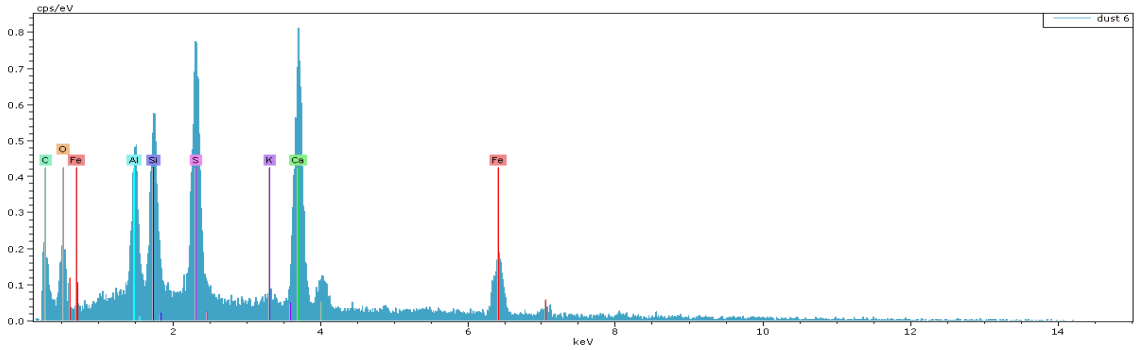


Fig 13

Fraction of carbon varies from chip to chip (depends on the surface state), but clearly chips often show high concentrations of carbon before heating, while we already saw that there is no more Carbon after heating: Carbon burns but no Aluminothermic reaction: Al still there and red color unchanged!