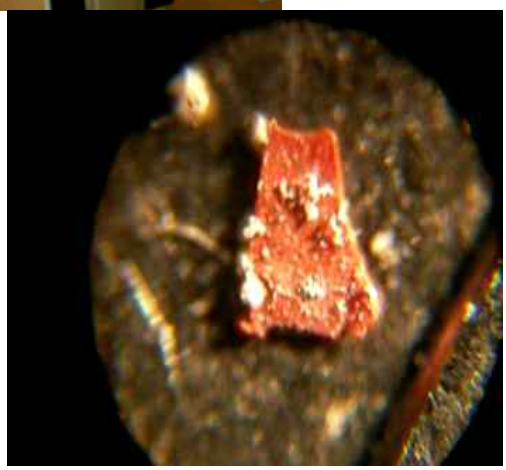


Fig 1

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).

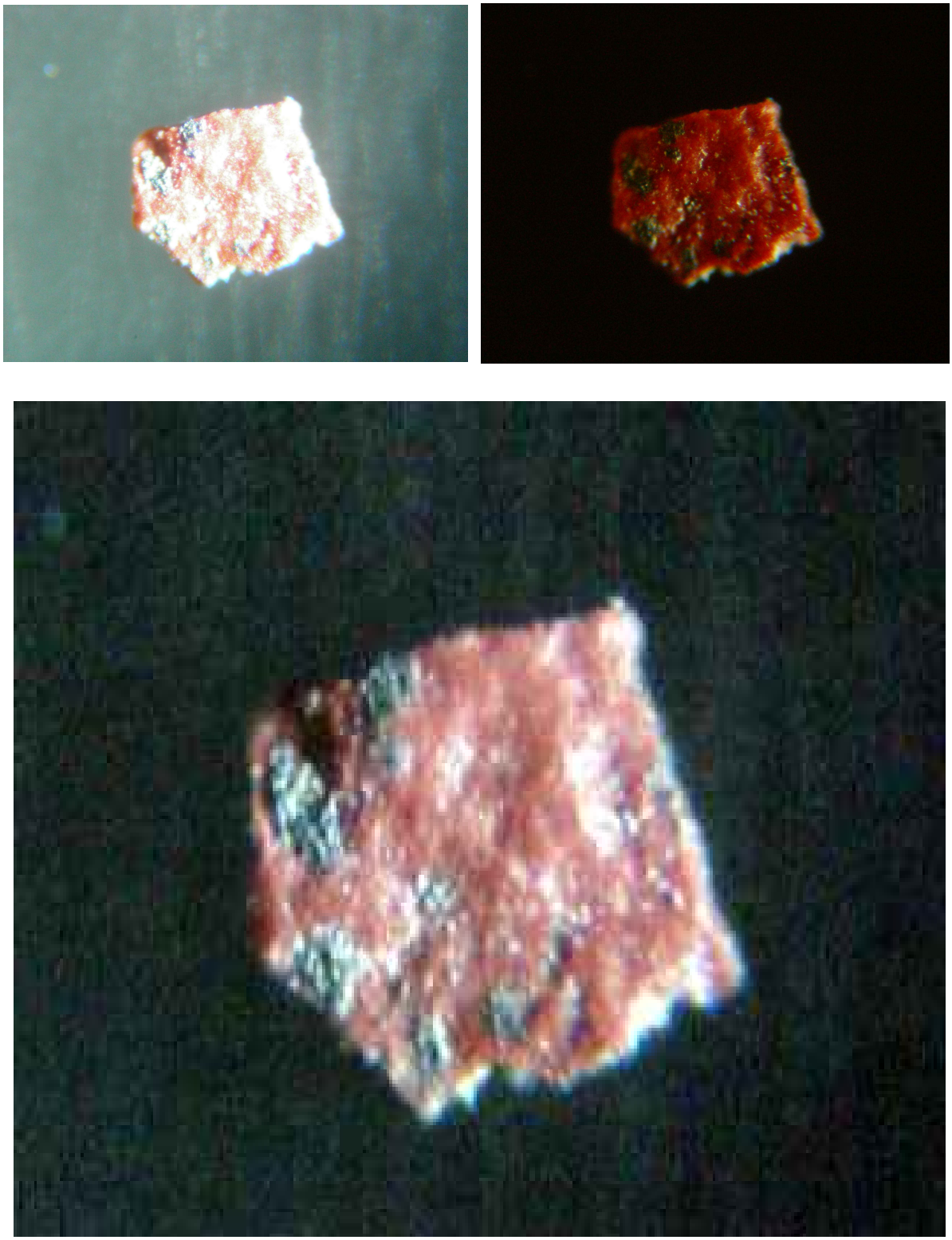


Fig 2

The chips commonly present shiny gray areas even before heating!

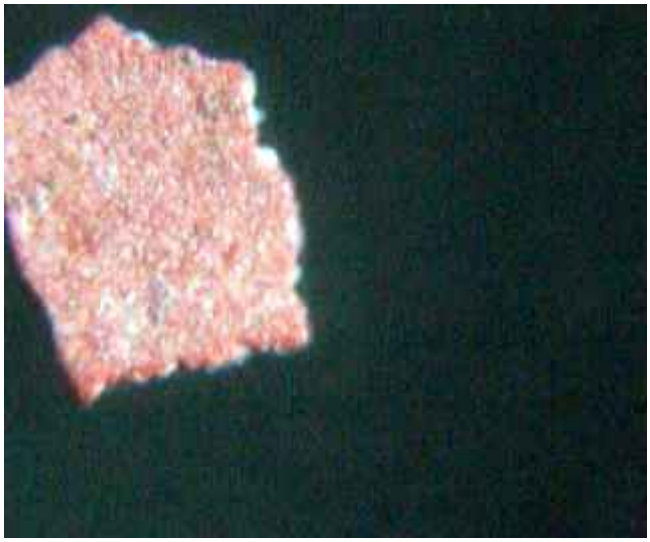


Fig 3

Side 1 Side 2

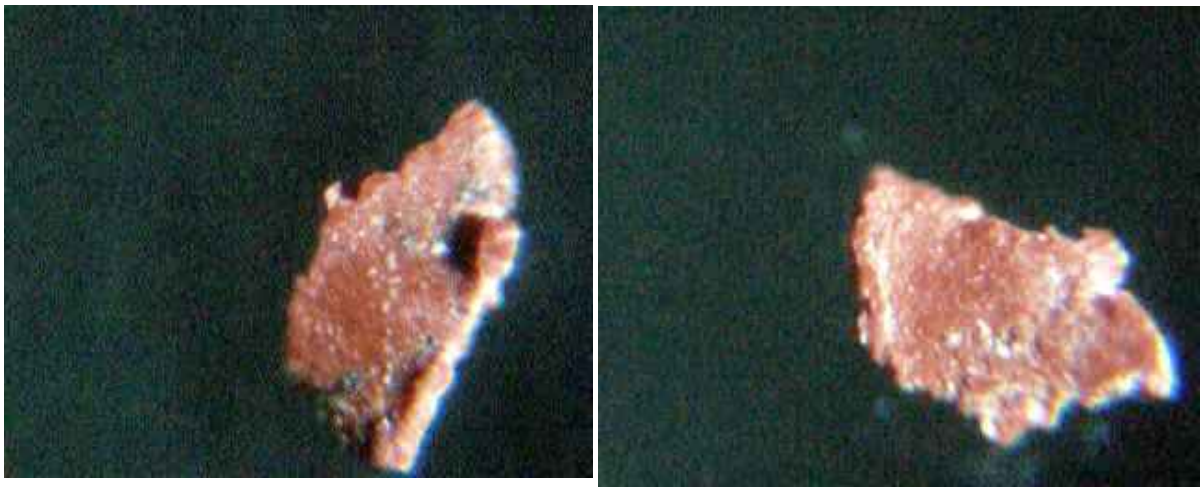


Fig 4

Same aspect on both faces

Spectra of previous chips after Heating at ~900°C

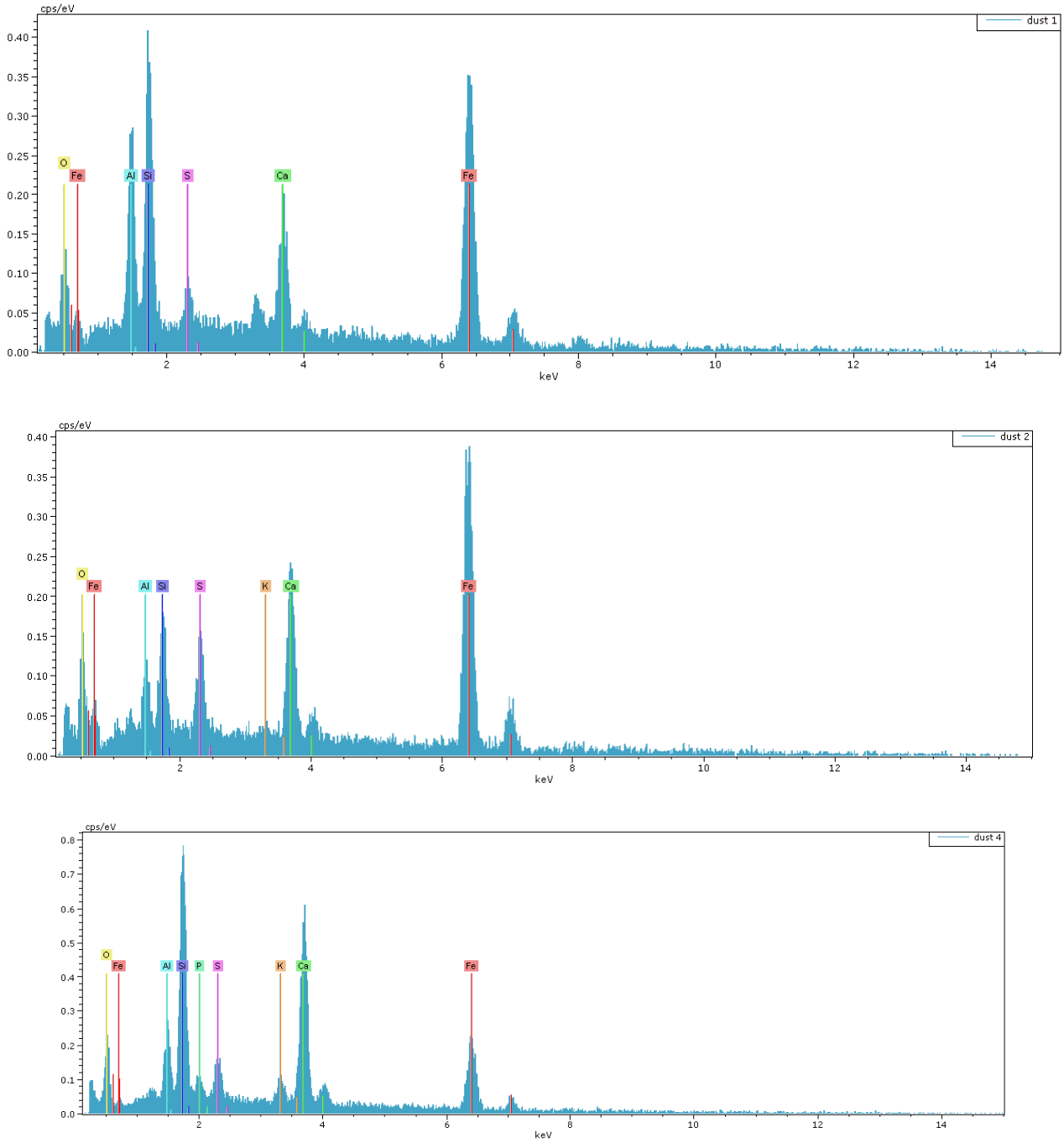


Fig 5

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

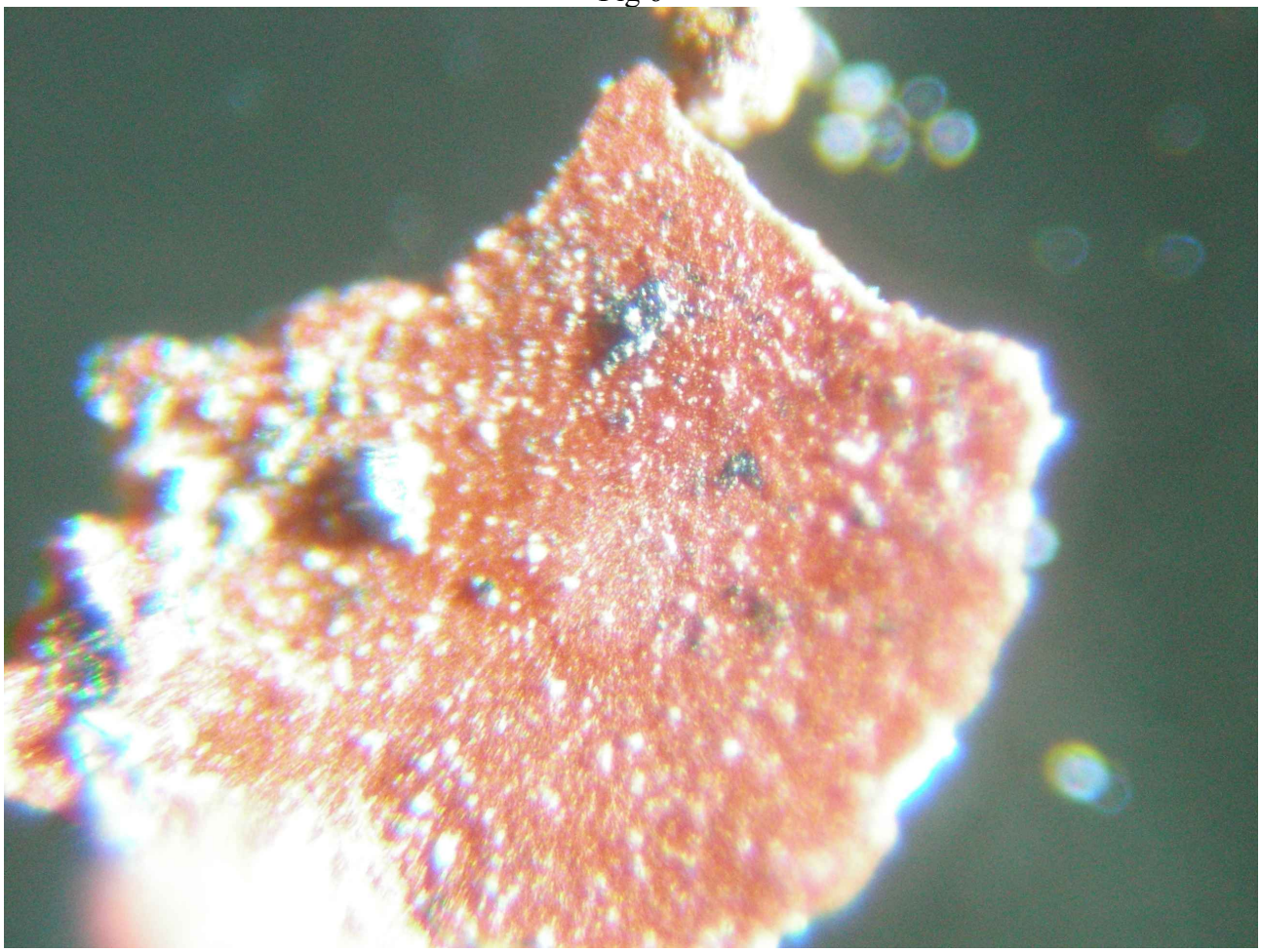


Fig 7

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

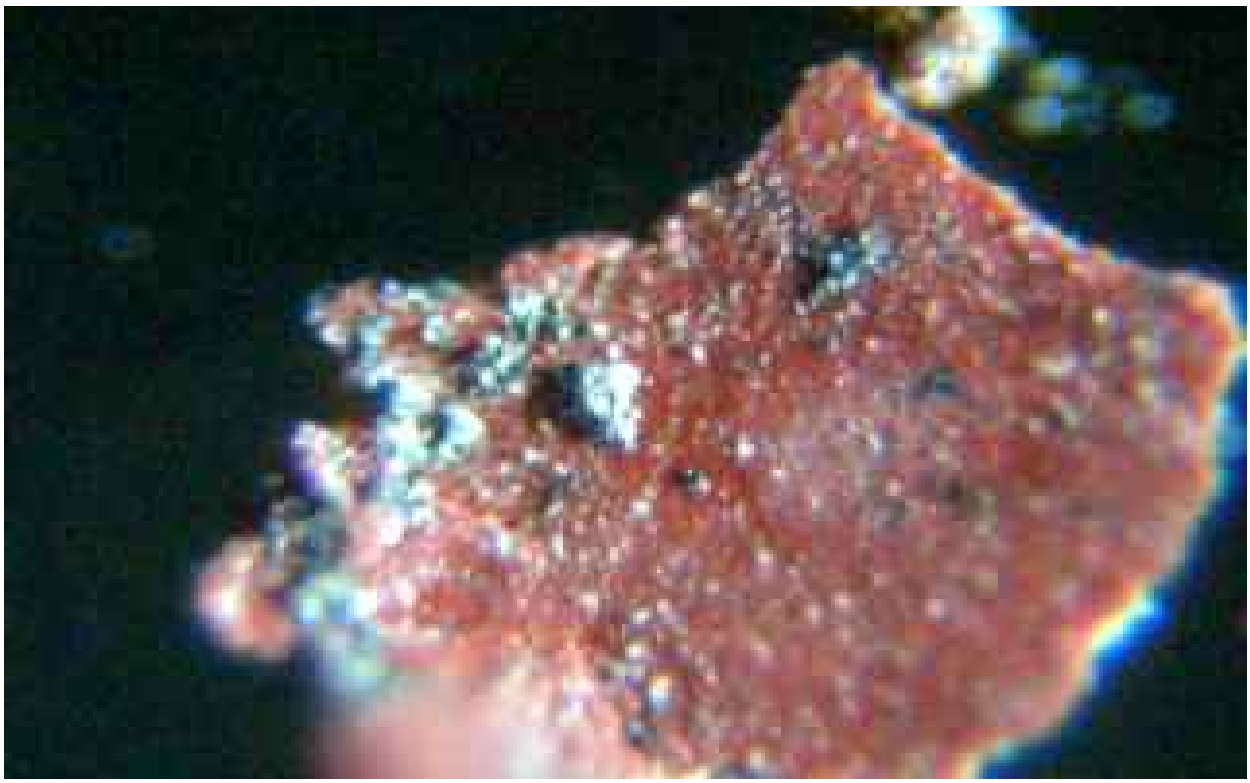
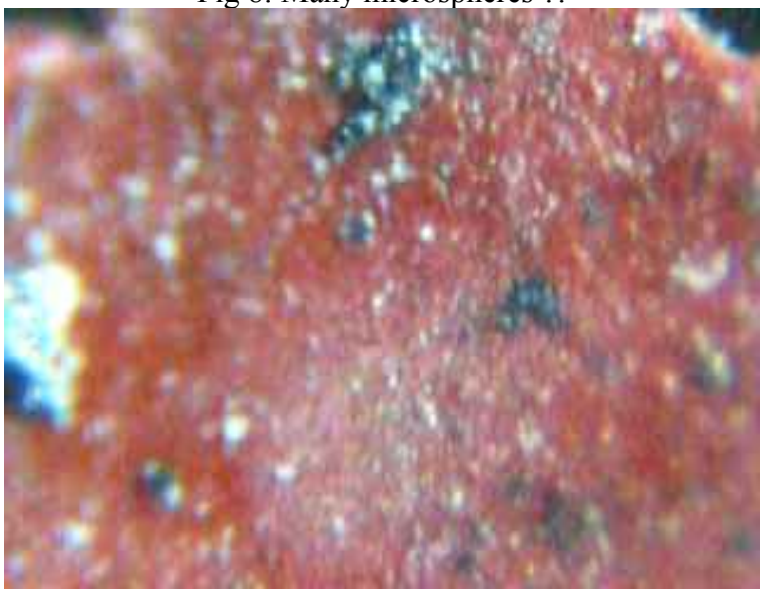
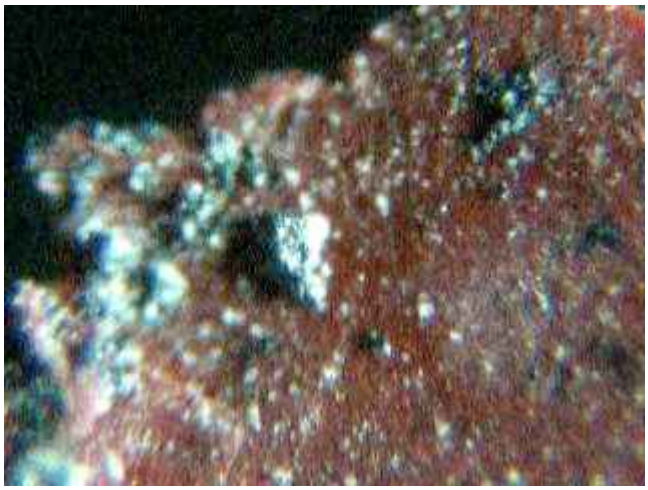
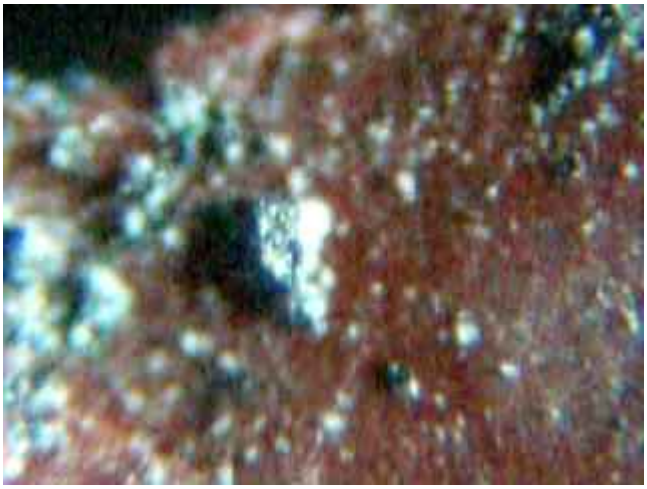


Fig 8: Many microspheres ?!







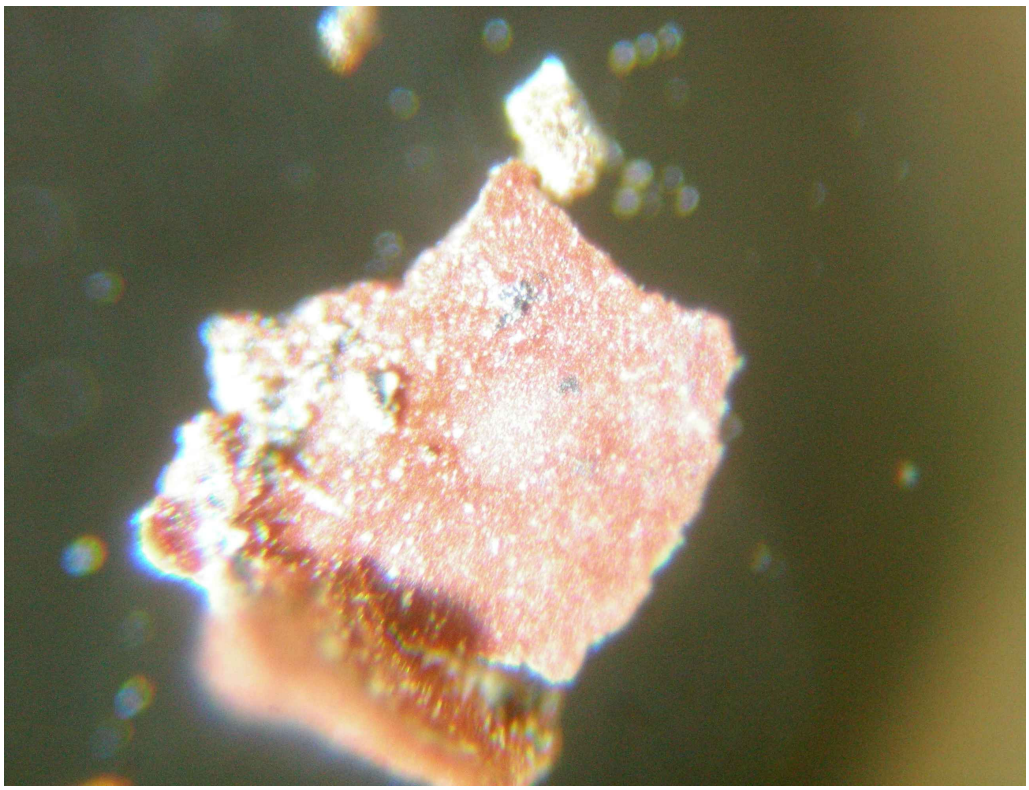


Fig 9
After folding: Redred chip has same aspect on both sides

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

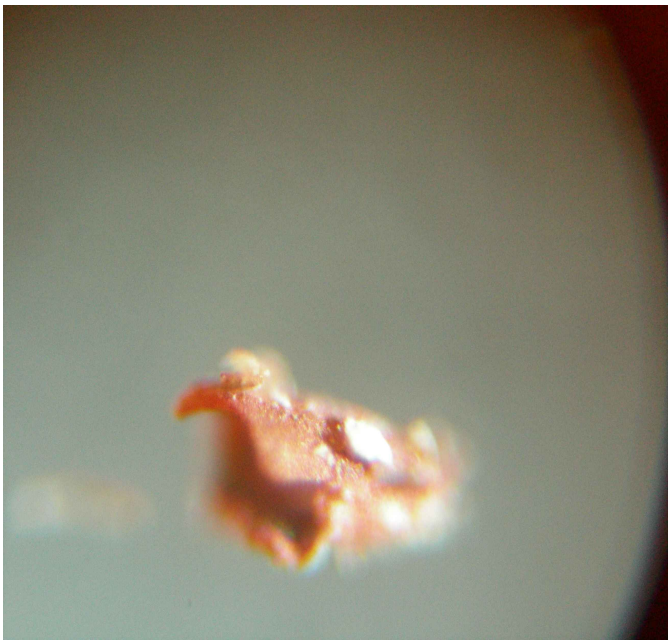


Fig 10

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

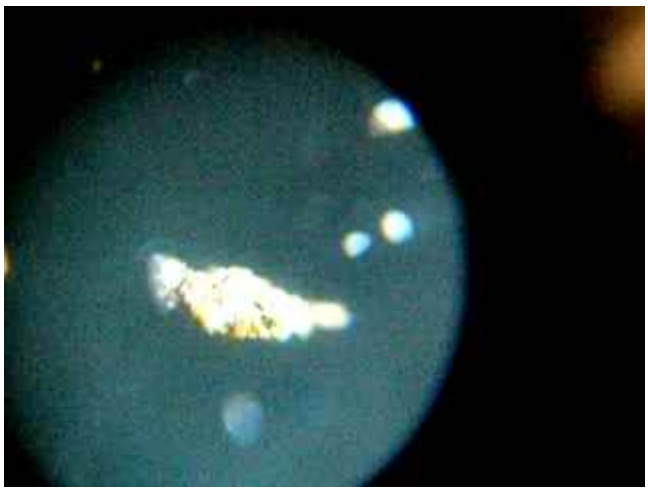


Fig 11

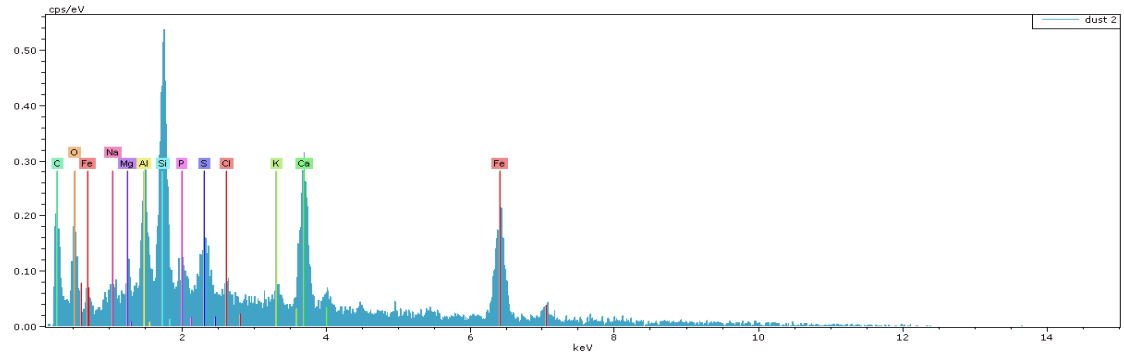
Sometimes many small particles expelled: shiny gray pieces, red-yellow pieces and even:

Fig 12

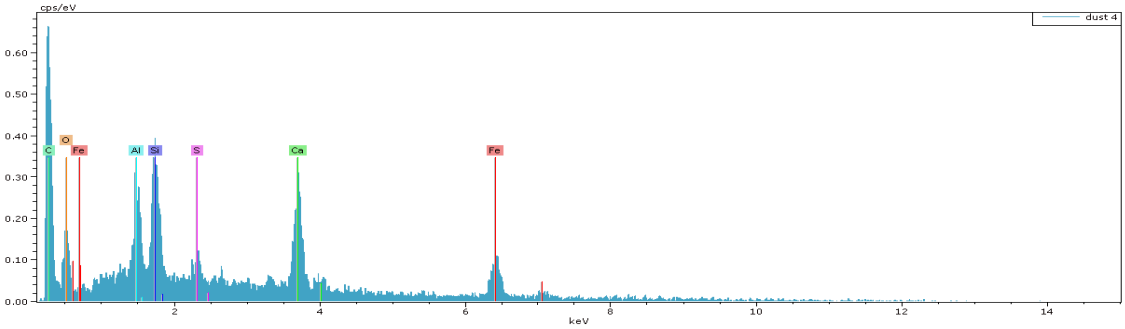
Very small microsphere (maximum magnification used here as in Fig 8_below)?:
Most probably one of the microspheres from the surface of the red material was expelled.
Encountered only once after heating more than ten red-red chips. Very different from what we see when a red/gray chips has reacted : always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

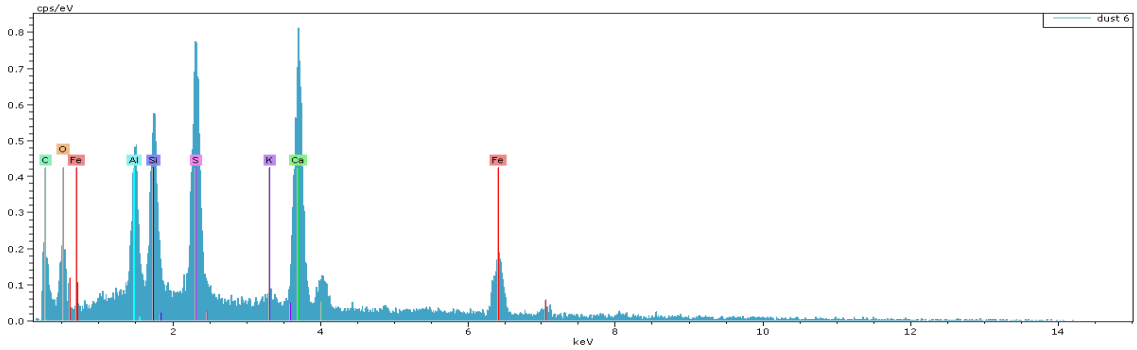


Fig 13

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!

chip 4 , sample 2 (Carbon peak variations in same chip)

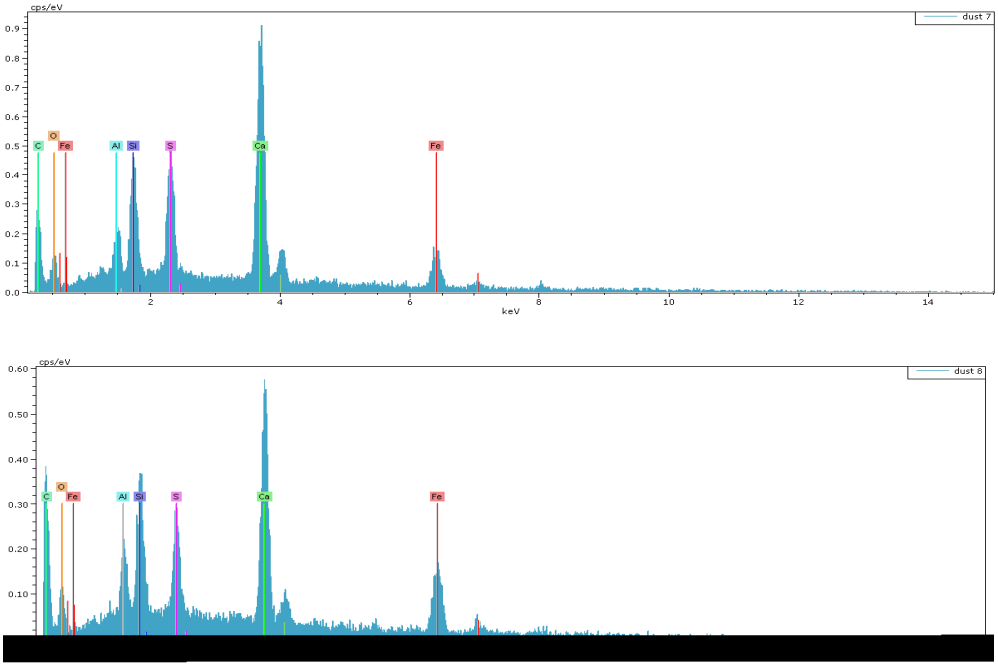


Fig 14

Large contamination unavoidable due to many spots of various contaminants visible at the surface (i could not fracturate or select a clean area).

I had also obtained the same spectra with very large Carbon peaks in earlier observations on similar redredchips from these and other samples, but not saved: sorry!

Conclusion:

If the redred chips have nothing to do with the red layer of the redgray chips then these redred chips are either designed to mimic the red layer of the red/gray chips or the red/gray chips were invented to mimic something which is indeed very abundant in the dust : the red-red chips.

Indeed they seem (the level of surface contamination by foreign elements is unknown) to have the same raw composition, almost same aspect and same abundance in my sample as the one reported for the red/gray chips in other samples: not by chance!!. The redredchips can even burst when heated and expel iron rich particles, even microspheres which often seem to appear at their surface.

But red-red chips dont react in an aluminothermic way! Instead carbon burns, material remains red is deformed by the heat but there is no evidence of molten iron production as the ones presented in the article by Jones, Harrit and co ...

In my samples the red-red chips replace the red/gray ones reported to be found in other samples... except for, may be, one exceptional red/gray chip i found and described elsewhere...

So, may be, the red-red chips are just fragments originating from red-grey chips that already reacted at the WTC and for this reason cannot react anymore.