

## Sample ID and provenance

Sample ID: SP56\_Jor

Outcrop: Jordana

Lithology: Chert

Unit/facies: Upper Jurassic

Collection: LusoLit

Thinsection: Yes

## Macroscopic description

### ❖ COLOR

The color distribution is Mix diffuse. The main colors are light gray (10YR 7/1 and 7/2) and white (10YR 8/1).

### ❖ FABRIC

The luster is Dull and the translucency is Opaque. The feel is Semi-smooth and the grain is Fine. The structure is Uneven with a Gradual variation. The patterns are Shaded and Spots (1-49%), which are Splotched and Speckling with an Uneven distribution.

### ❖ INCLUSIONS AND FOSSIL CONTENT

Tiny oxide grains seem to be common in the sample and scattered unevenly. There are also areas and fossils which have a concentration of oxide grains or oxide patina.

There seems to be the rare presence of tiny, silvery and shiny minerals in the chert.

Fossil content is common, but not identifiable. Most of the fossils (~80%) are round and small, with different coloration, although long fossils replaced by quartz are also present. There is a concentration of round fossils, very opaque and white, which seem to have been completely replaced by chalcedony.

### ❖ CORTEX

Cortex, whenever present, is Thin with a Sharp transition. However, in the sample there is also the contact between the chert and the encasing rock without an alteration surface. The nodules are round and medium sized. When tested with

dilute hydrochloric acid (HCL 10%), the reaction was Strong on the parent rock. The parent rock may be a Limestone. The alteration cortex between the chert and the parent rock showed no reaction.

❖ **QUALITY**

The fracture is Conchoidal and there are Fractures or Cleavage plains. The quality is Medium.

❖ **OBSERVATION**

The chert has a common presence of pits across the surface.

## Outcrop description

### ❖ OUTCROP CHARACTERISTICS

**Type of outcrop:** Secondary

**Visibility:** Reasonable

**Accessibility:** Easy

**State of site:** Bad

### ❖ CHERT NODULES/BEDS DESCRIPTION

**Type of chert nodule:** Nodule

**Sample variability:** Homogeneous

**Frequency:** Abundant

**Nodule description:** Nodular to irregular, 2-20cm wide

### ❖ SHORT DESCRIPTION

The cherts can be found in smaller boulders scattered in an abandoned field, sometimes as loose, small chunks in the dirt. The parent rock is similar to the other JOR samples, however, these boulders are clearly broken and moved from their original location. Because of this, the chert is also frequently very altered.

## Petrography analysis form

### ❖ TEXTURAL COMPOSITION

**Texture:** Wackestone

**Microstructure:** Massive

### ❖ COMPOSITION

ORTHO-CHEM	Type	%	Description
MiC quartz (gr)	SE	99	-
Chalcedony (fb)	SE	1	Replacing fossils.
MG quartz (gr)	-	<1	Replacing fossils.
Dolomite	SE	<1	Rare rhomboid grains in the sample.

ALLO-CHEM	Freq	Description
Oxide grains	Very frequent	Evenly scattered across the sample.
Oxide patina	Common	Concentrated in some areas of the sample.

BIO-CLASTS	Freq	Description
Unidentifiable fossils (ghosts)	Common	Fossils are very poorly preserved, completely replaced by chalcedony or quartz, and without any traces of their original shape or structure.

Calcspheres	Common	Concentrated in some areas of the sample.
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## ❖ OTHER TEXTURAL CHARACTERISTICS

**Total porosity (%):** 1

**Porosity type:** Vuggy

**Other sedimentary structures:** -

## Observations

- ❖ The sample has fractures filled with oxides.
- ❖ There are concentrations of oxide patina in the chert. One of those concentrations seems to form a rectangular shape, which may represent a burrow (photo SP56\_Jor\_004).
- ❖ Some of the unidentifiable fossil ghosts are long and thin, similar to sponge spicules in longitudinal cross-section.

## Analysis information

- ❖ ANALYST: JB
- ❖ DATE: 06.27.2022
- ❖ EQUIPMENT: Nikon DS-Ri2

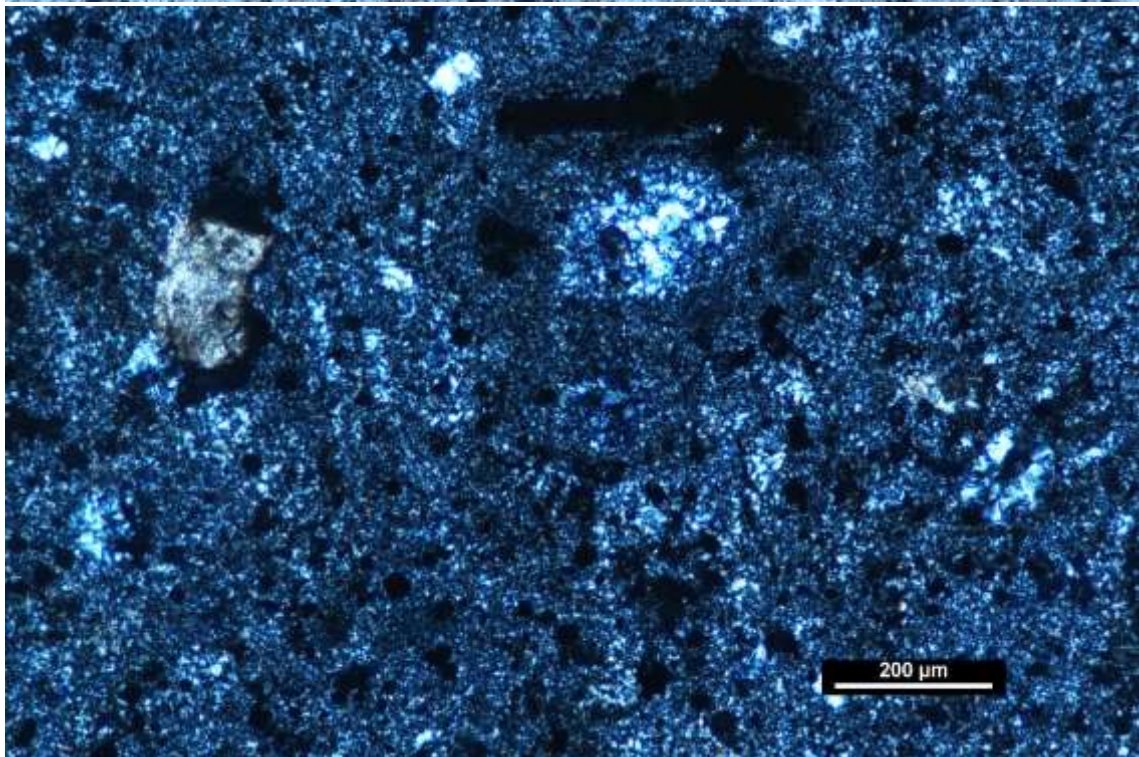
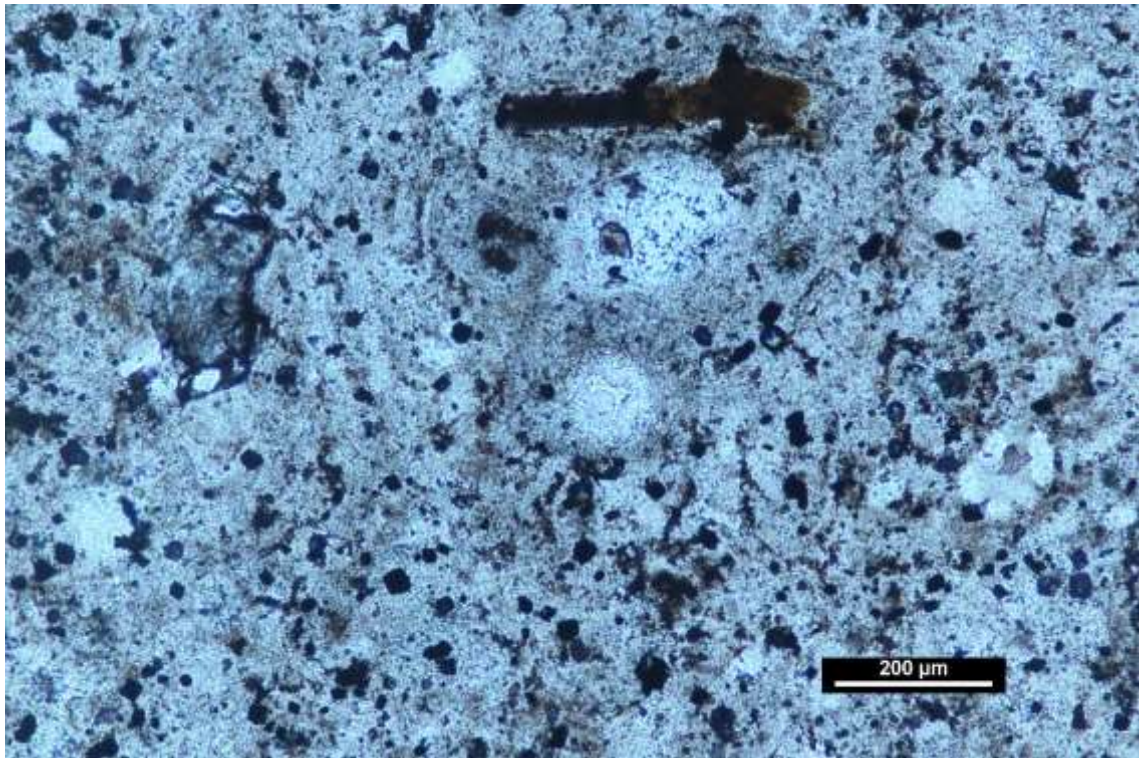
## Photos

Photo ID	Aug.	Description
SP56_001	10x	Detail of a dolomite crystal, surrounded by oxide patina. Several fossil ghosts replaced by chalcedony can be seen.
SP56_002	10x	Detail of a long fossil ghost replaced by chalcedony and an oxide patina concentration.

SP56_003	4x	General view of the calcispheres in an area of the chert characterized by a large concentration of oxide patina and opaques.
SP56_004	4x	General view of a fracture within the chert, filled with oxides.

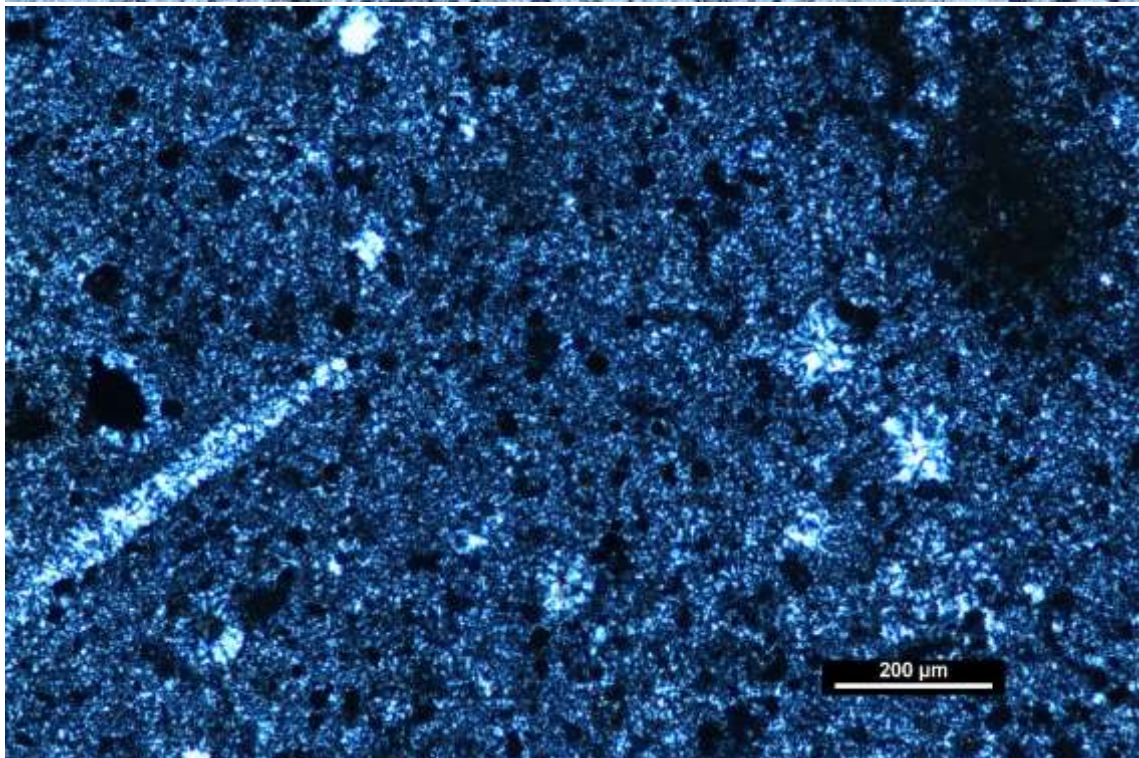
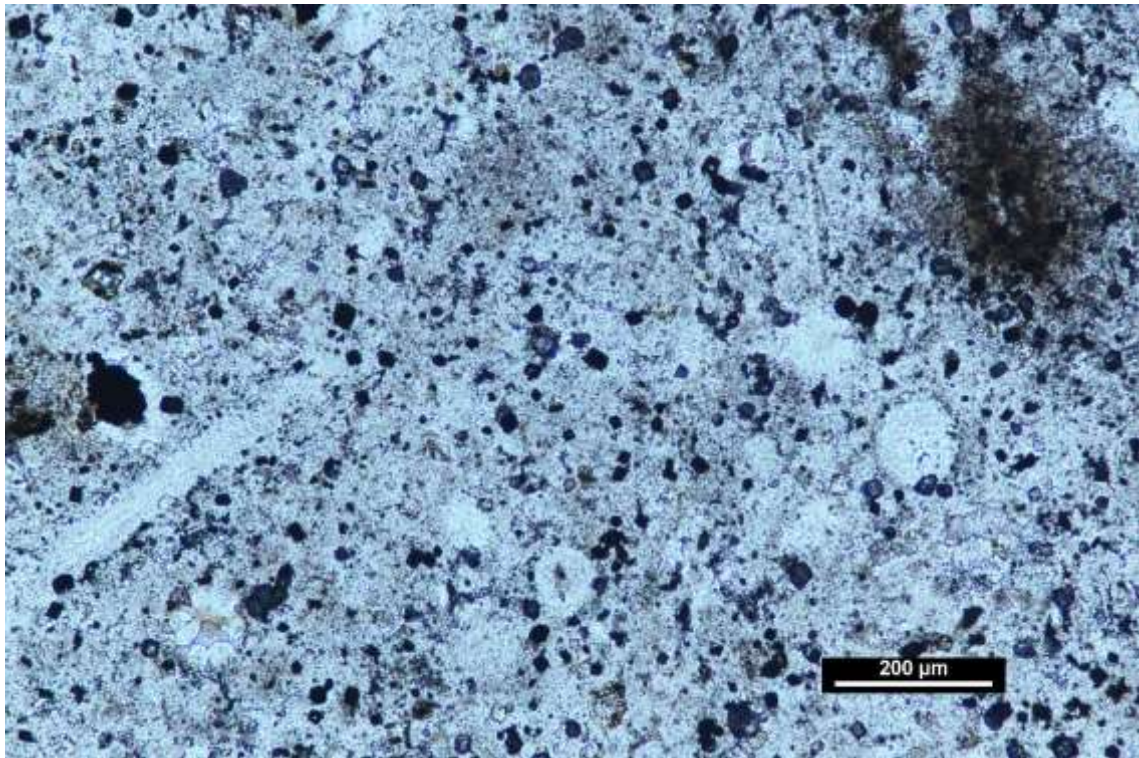


Petrography photos



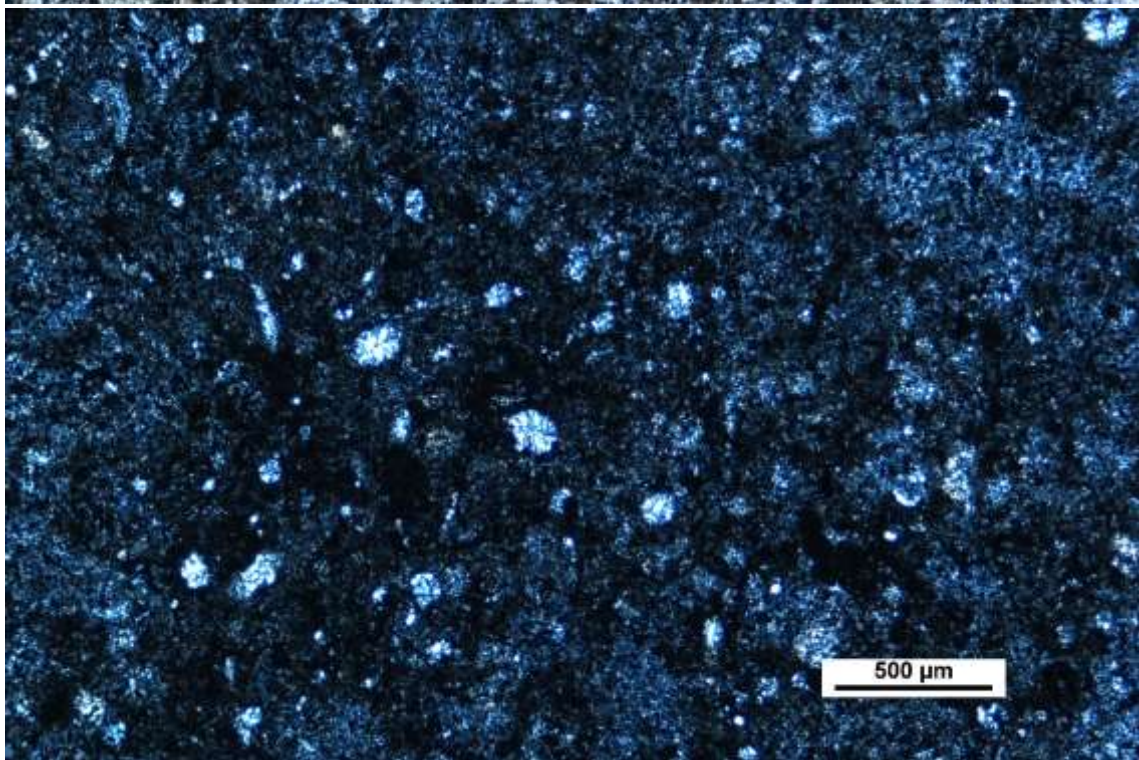
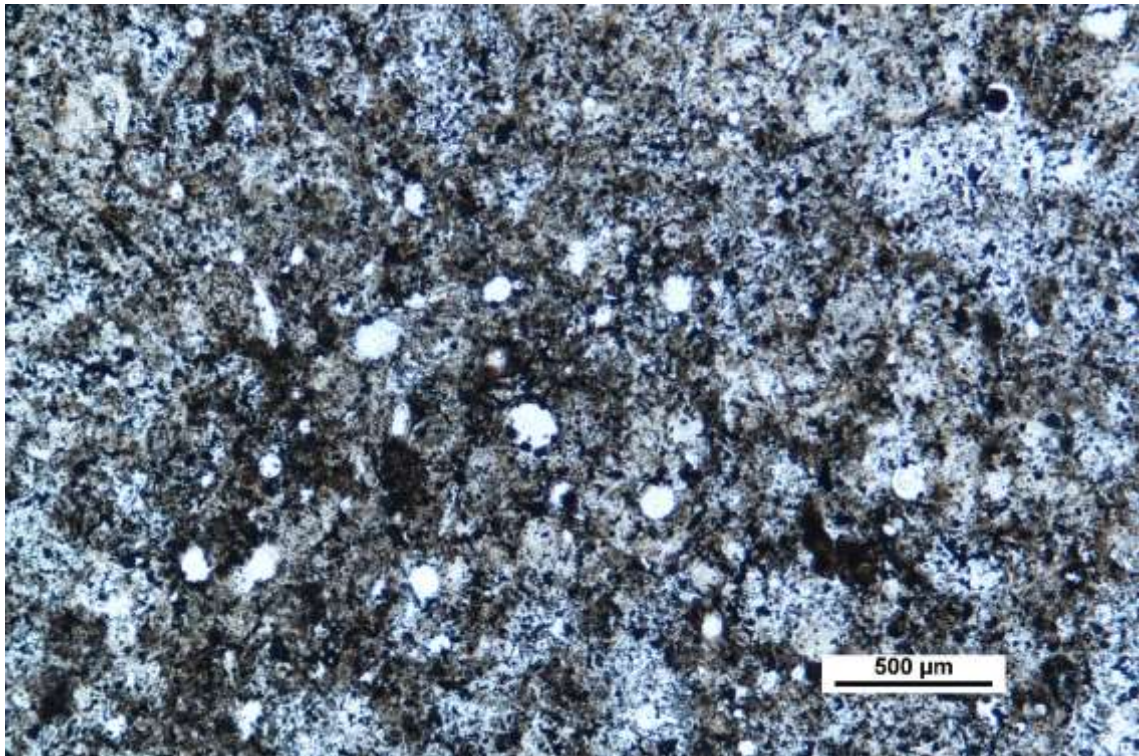
SP56\_Jor\_001 (PPL and XPL)





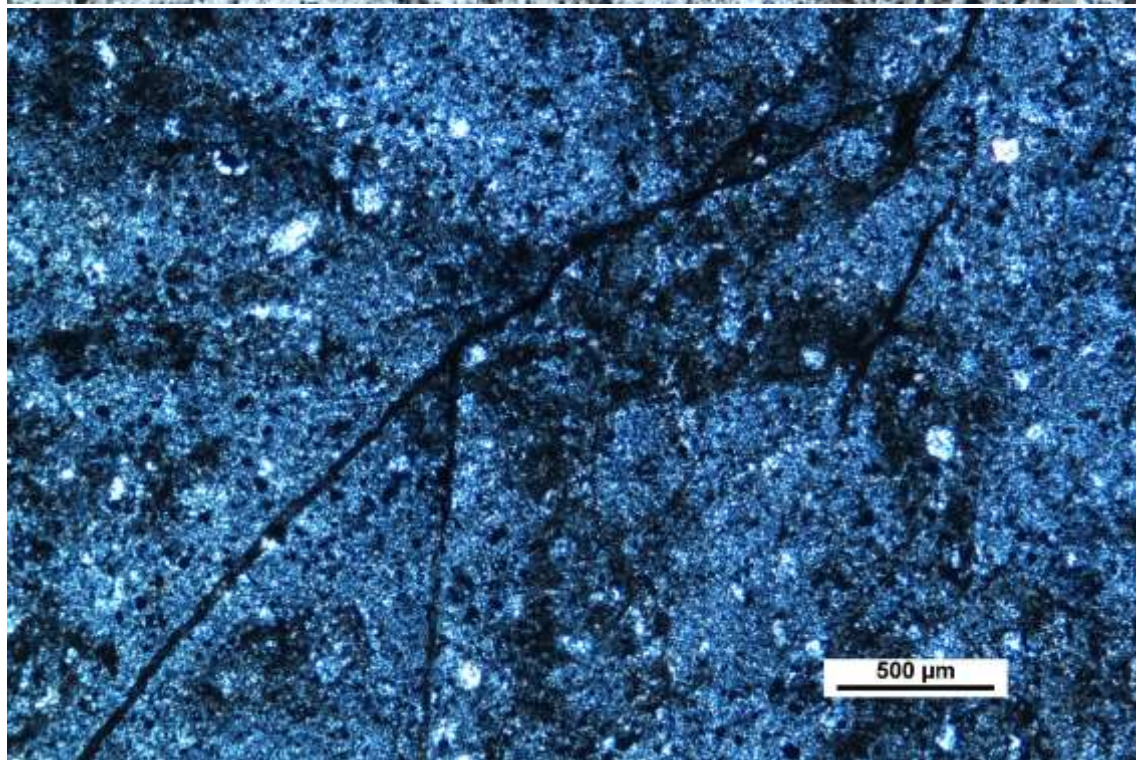
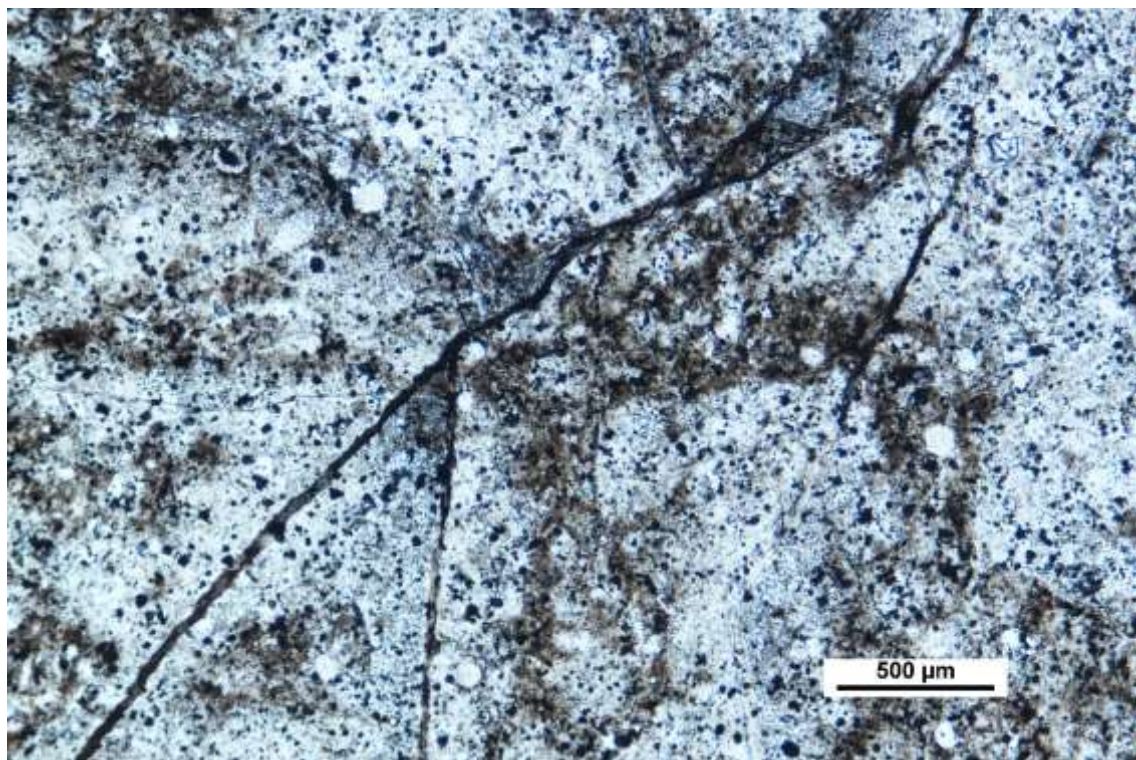
SP56\_Jor\_002 (PPL and XPL)





SP56\_Jor\_003 (PPL and XPL)





SP56\_Jor\_004 (PPL and XPL)



Macroscopic photos



