

MAGNETITE

Chemical formula: Fe_3O_4

Crystal system: cubic

Color in thin section: opaque

Form: octahedral crystals, allotriomorphic grains, granular masses, skeletal crystals

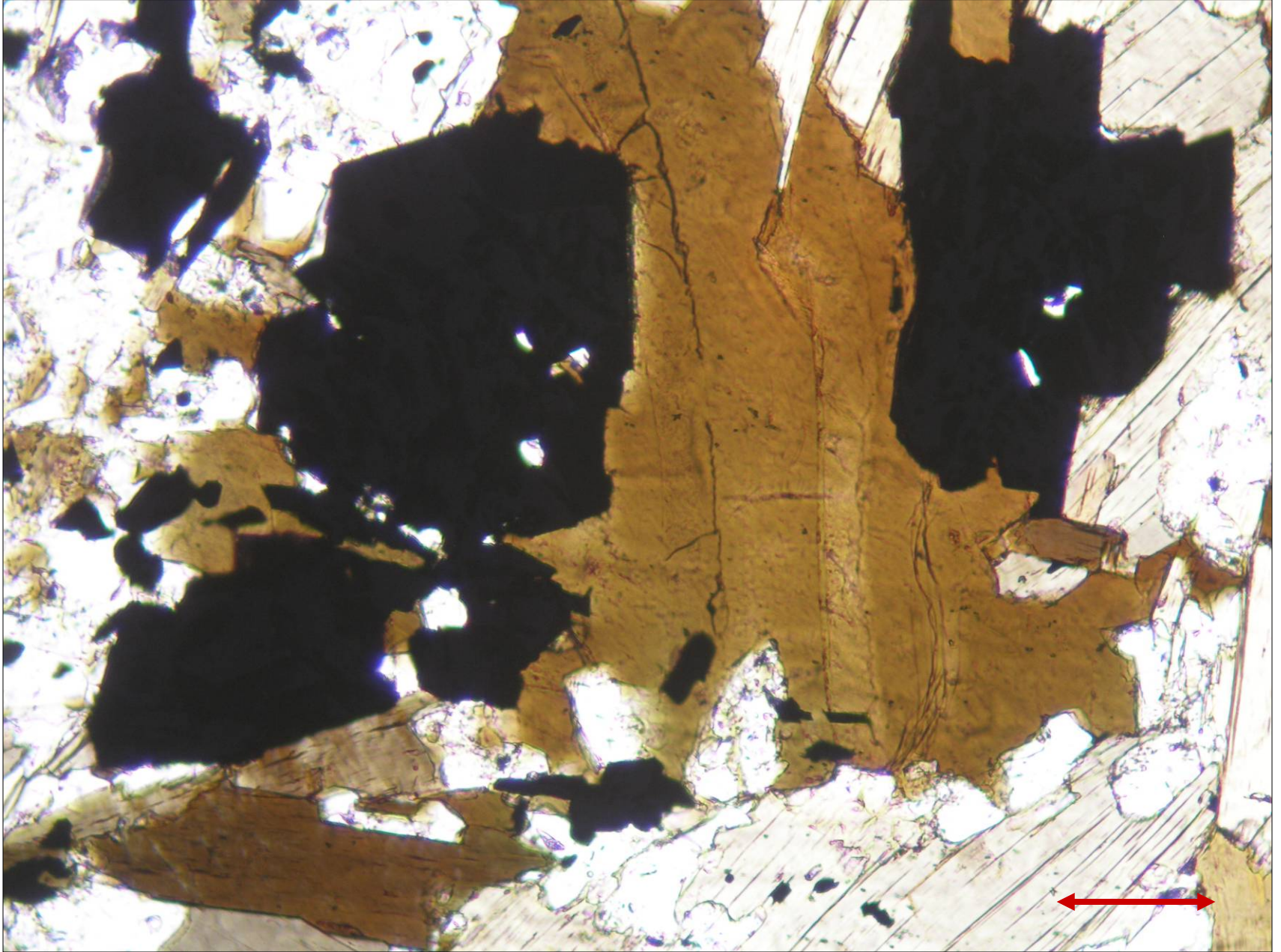
Alteration: may be altered to hematite, or goethite (limonite)

Occurrence: igneous rocks (gabbro, basalt), metamorphic rocks (chlorite schist, greenschists, phyllite, skarn, serpentinite, marble, iron ores)

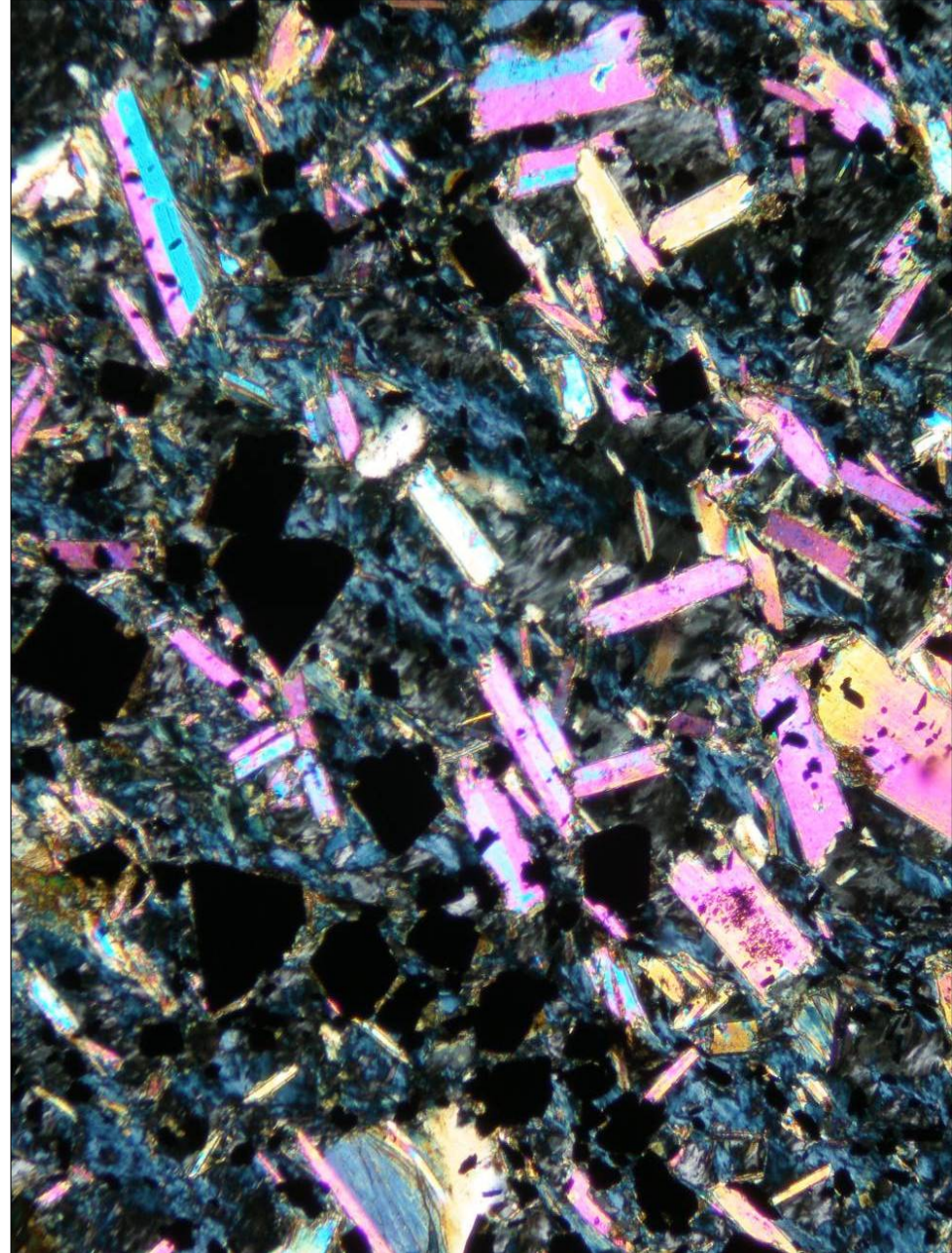
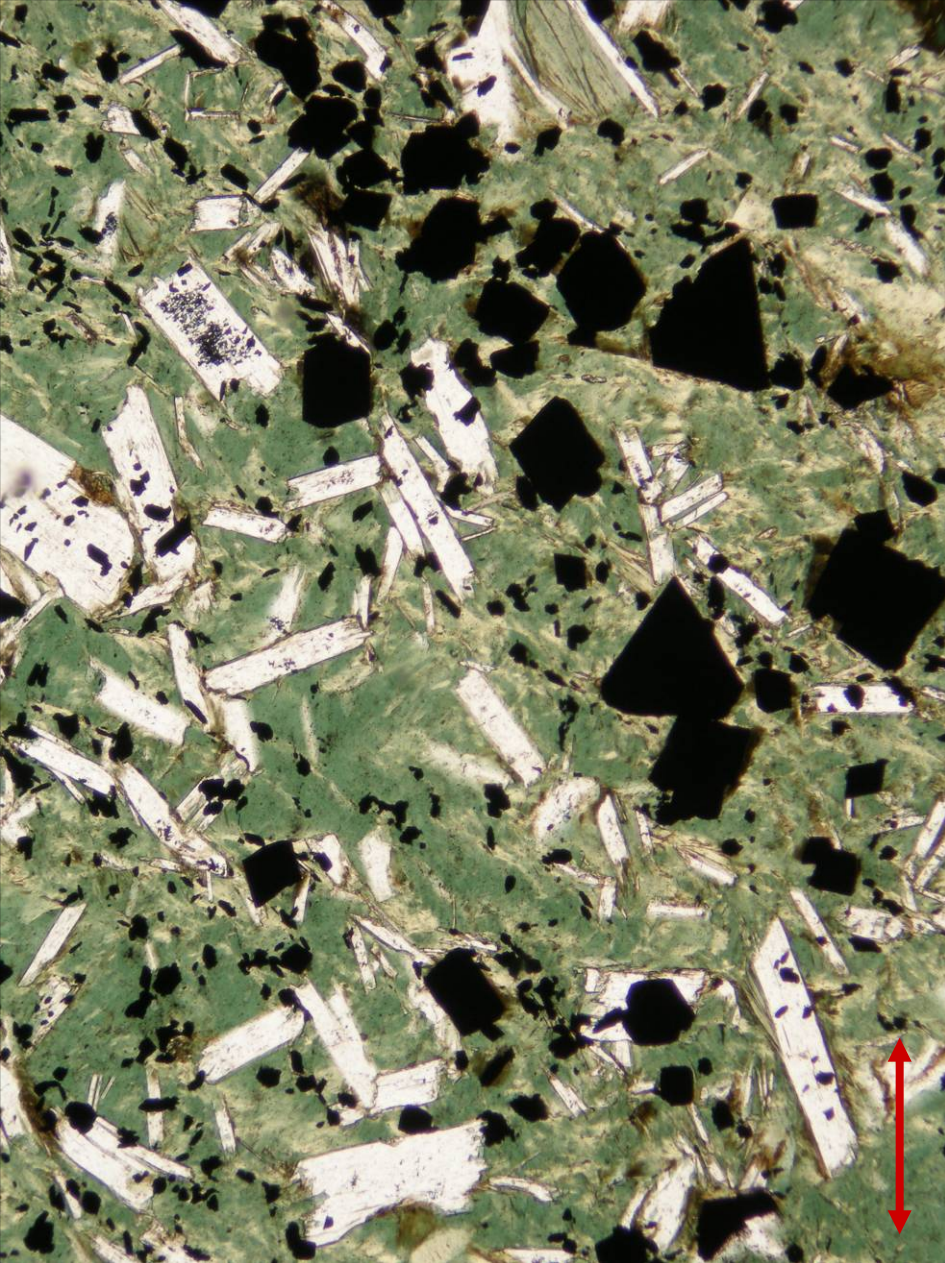
Similar minerals in thin sections: may be mistaken with pyrite, hematite, or ilmenite



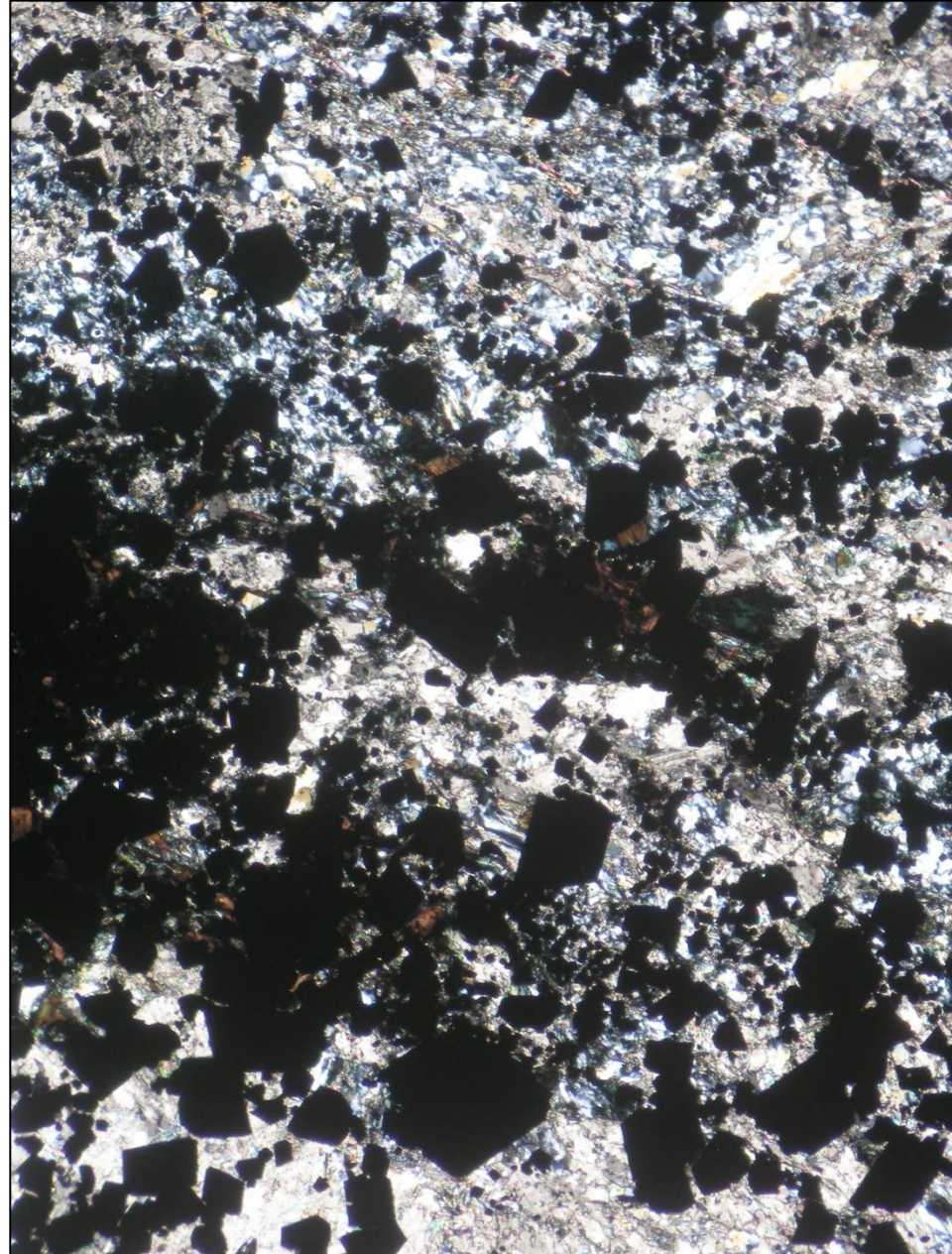
Magnetite in syenite from Tasov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.4 mm. Photo: JiZi.



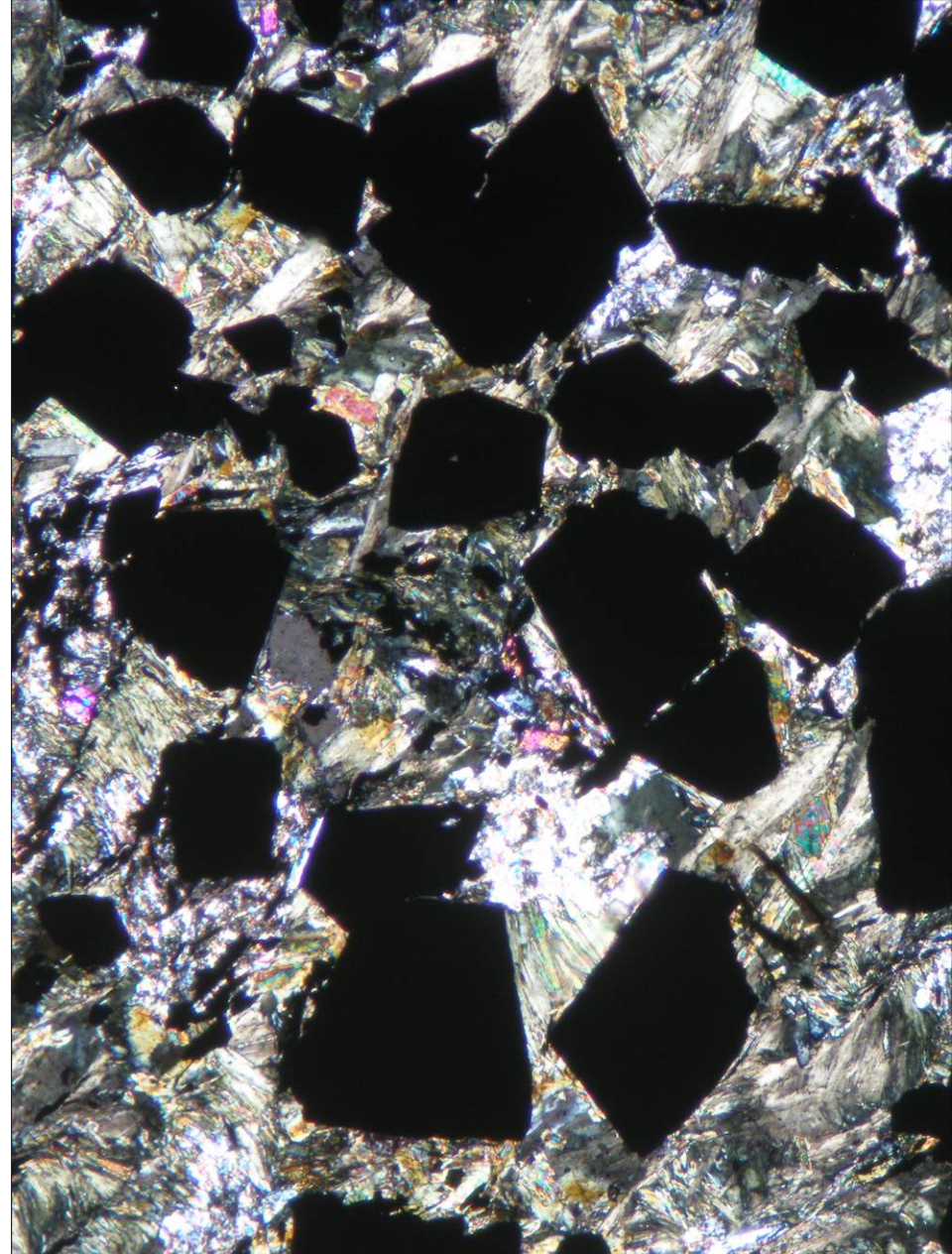
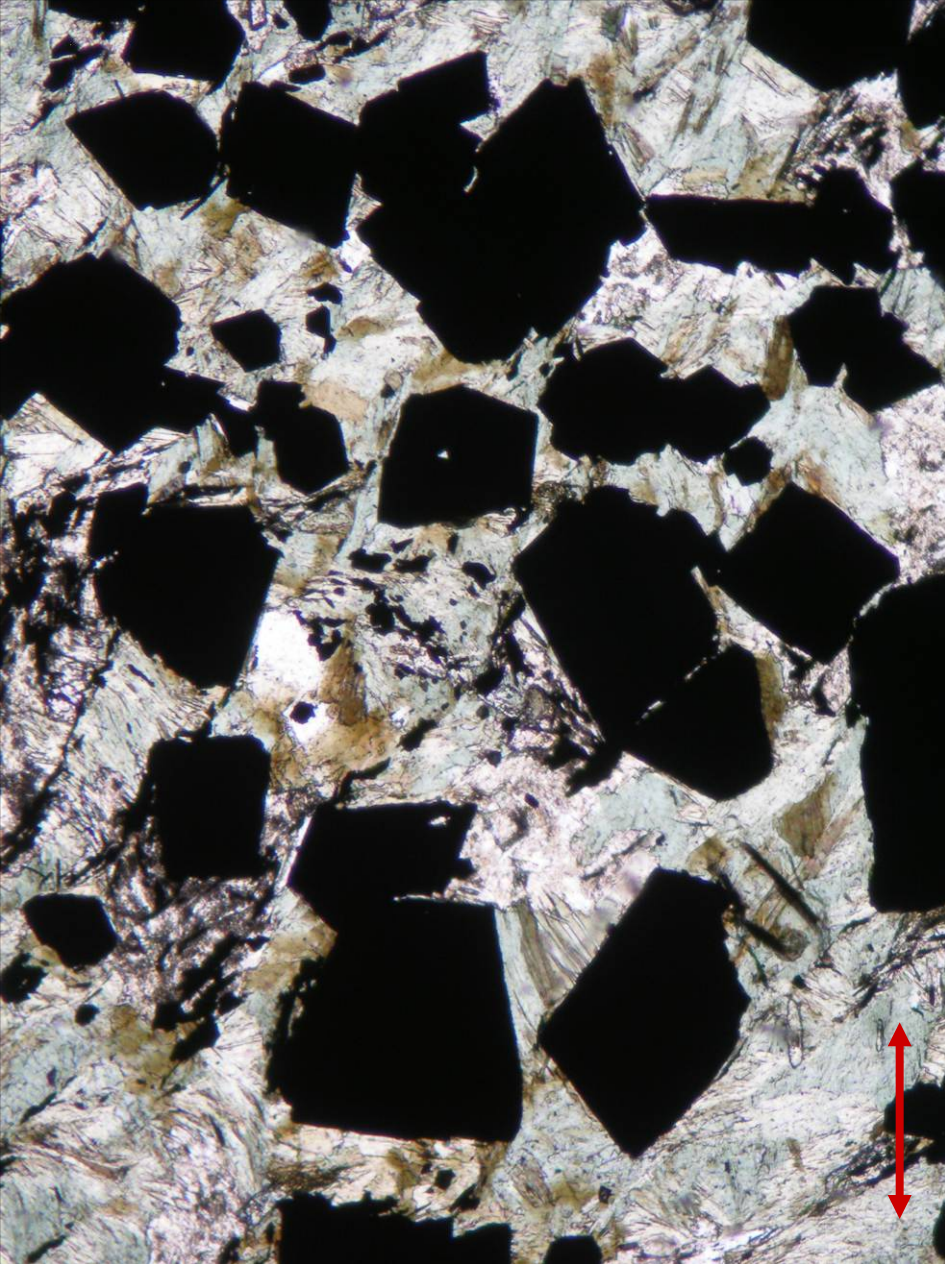
Magnetite in metabasite from Seč, the Czech Republic; PPL. Field of view is ca. 1.0 mm wide. Photo: JiZi.



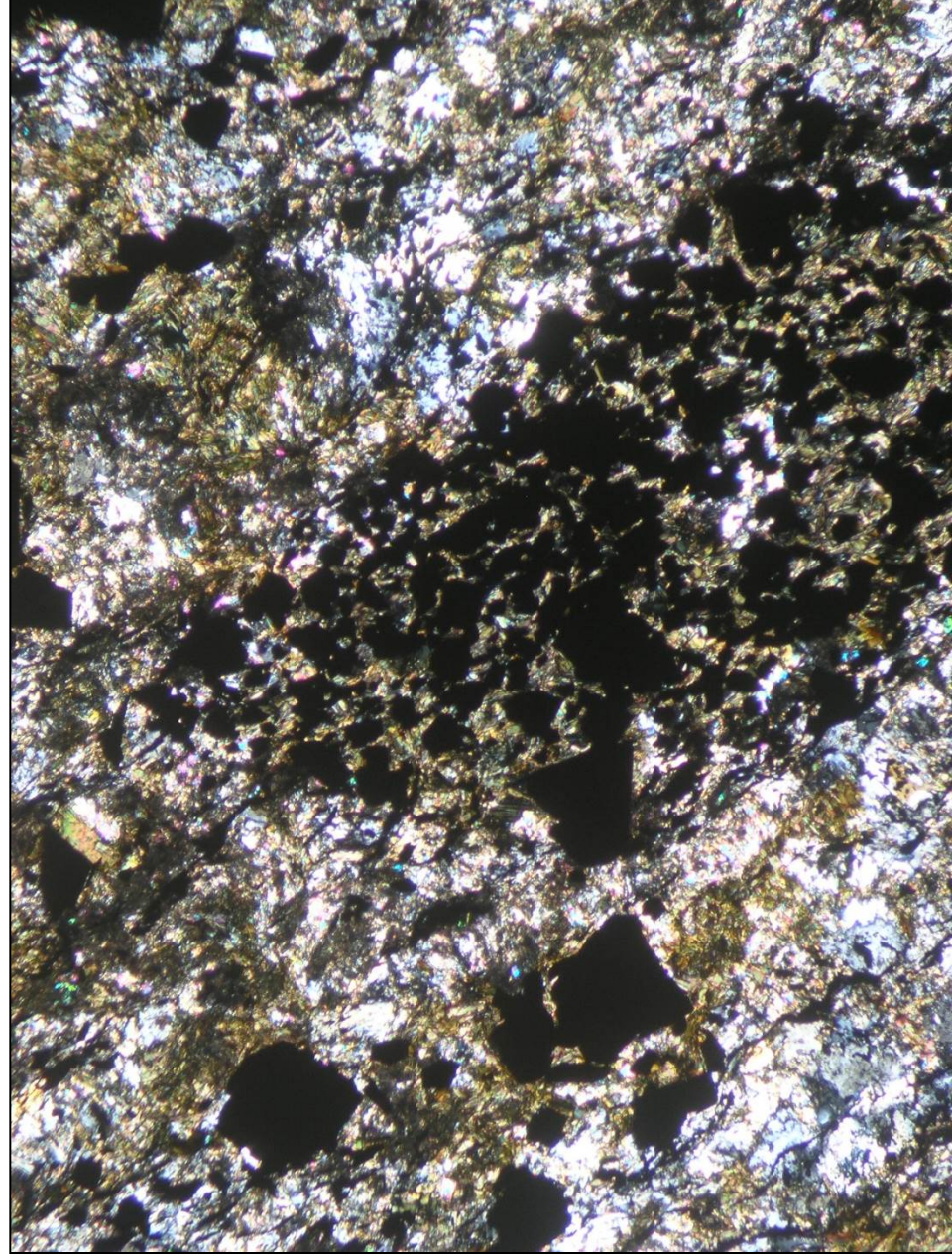
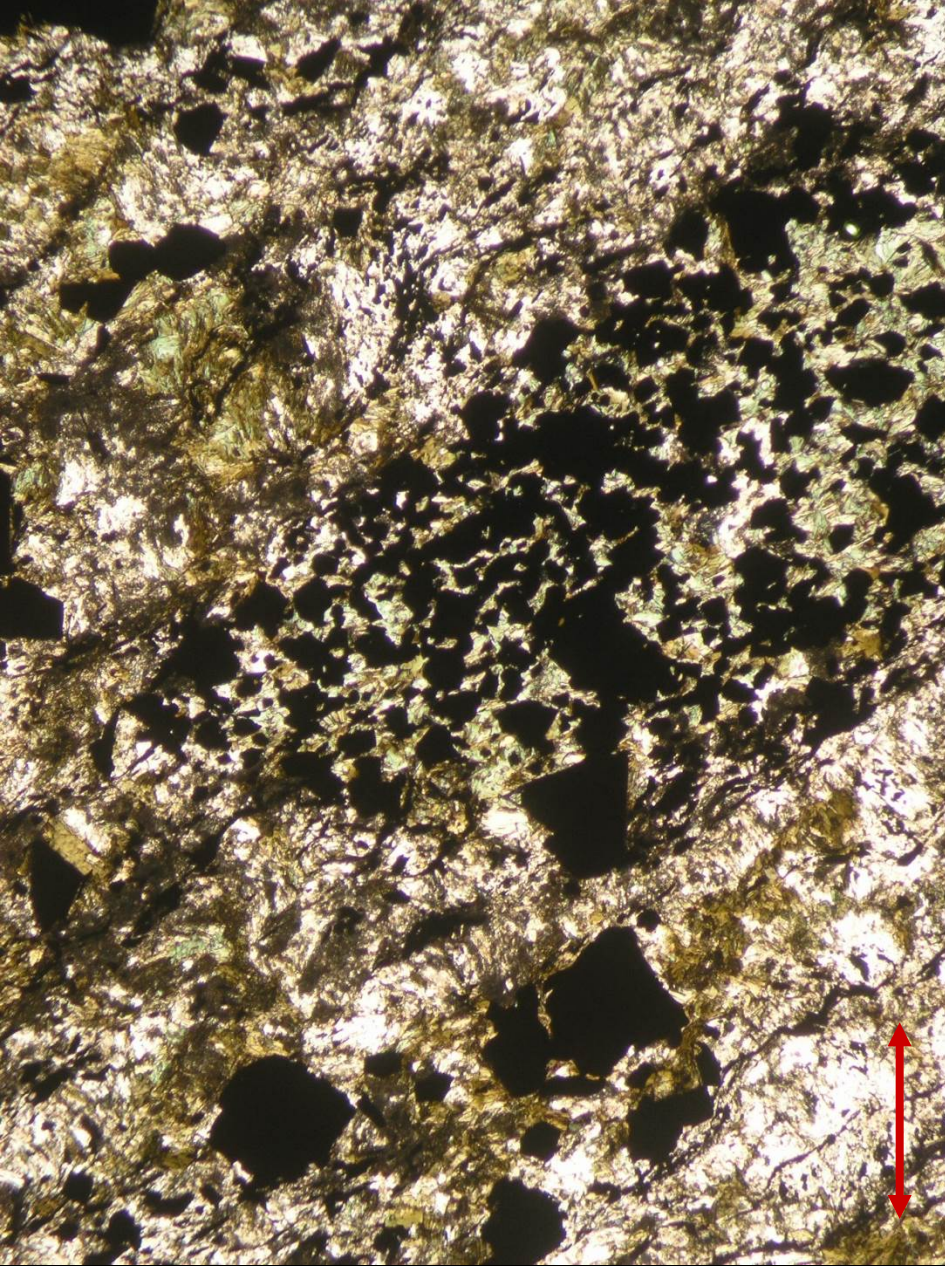
Magnetite, chlorite and muscovite in muscovite-chlorite schist from Malá Morávka, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.5 mm. Photo: JiZi.



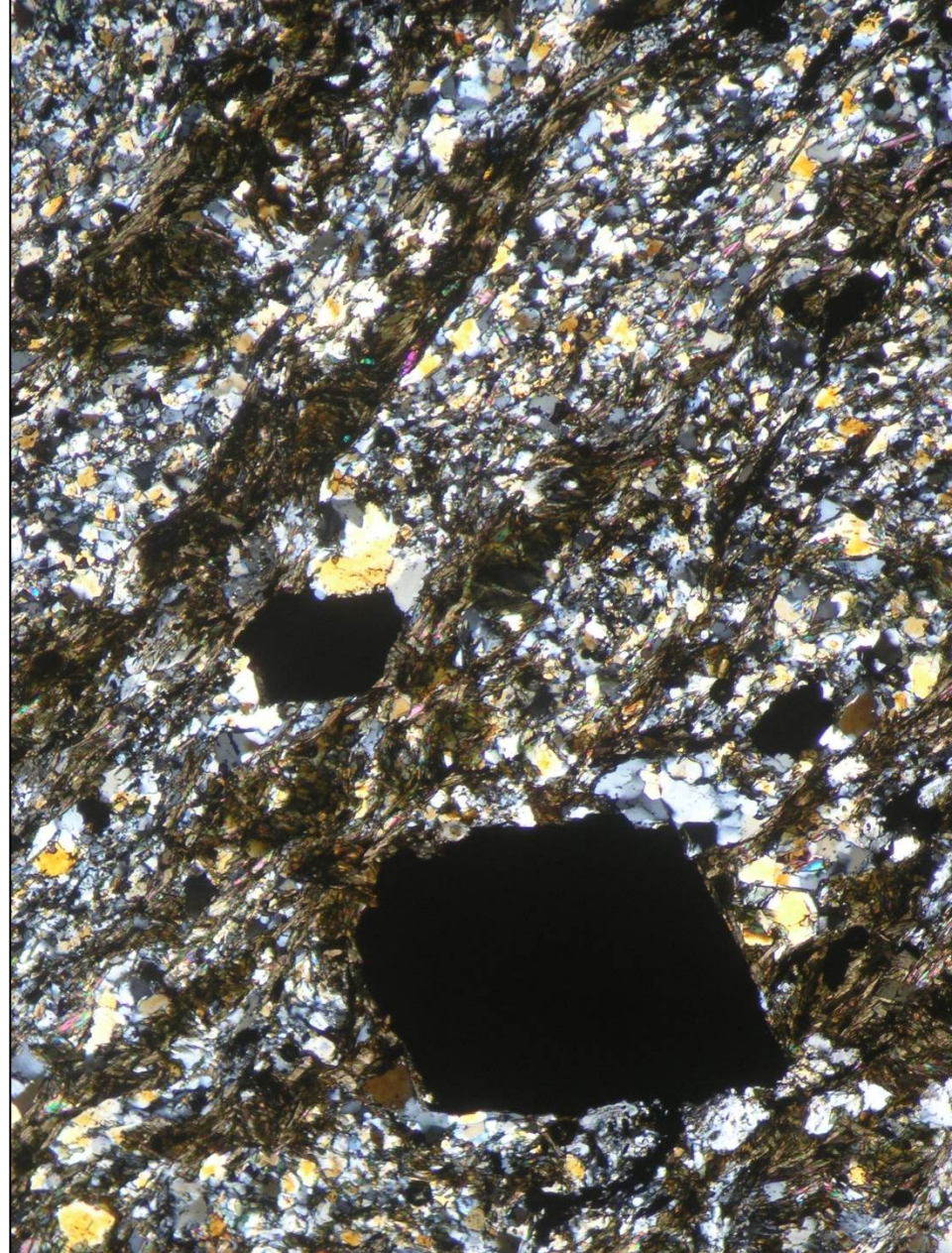
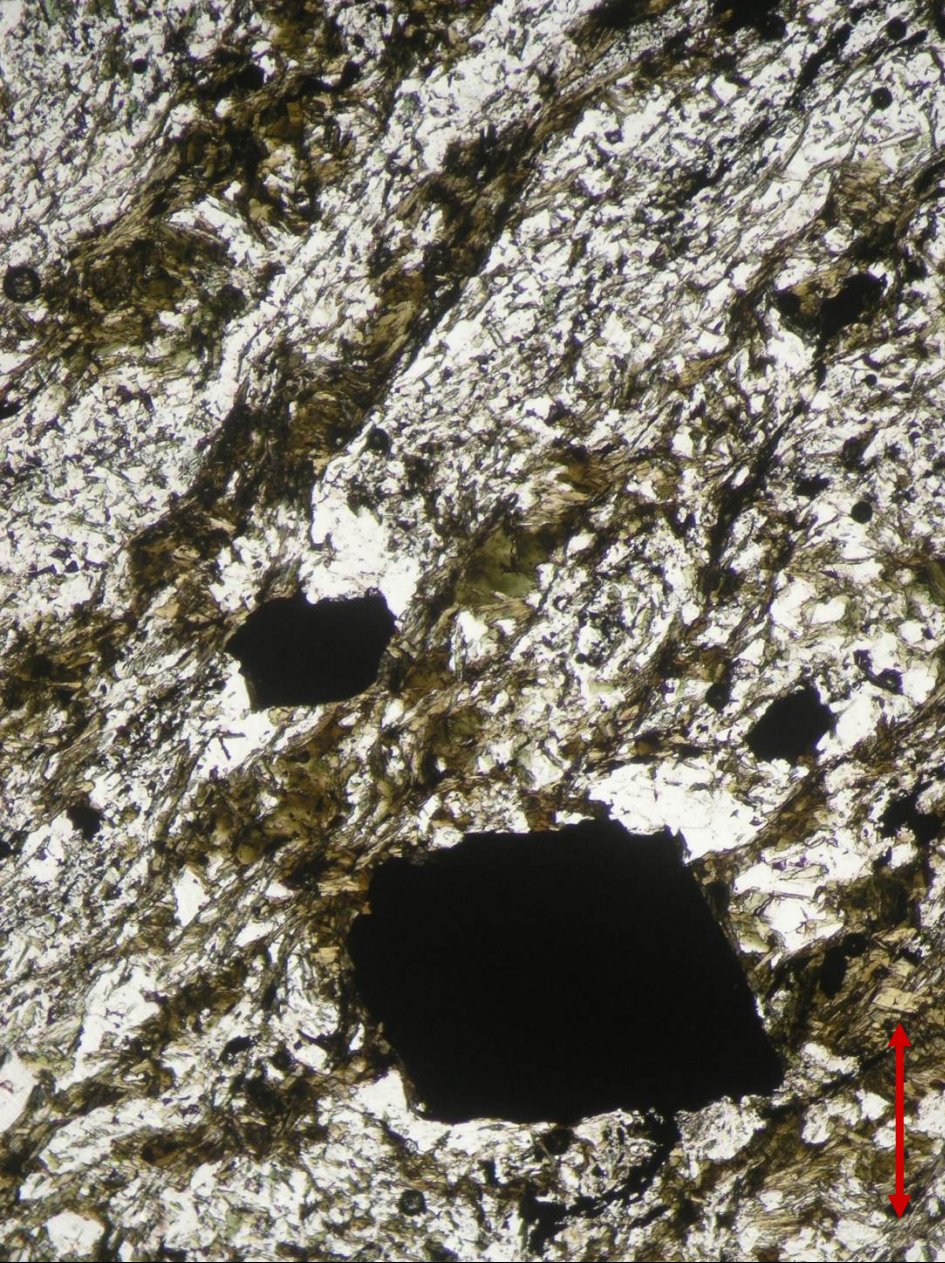
Magnetite, chlorite and calcite in iron ore from Horní Moravice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.2 mm. Photo: JiZi.



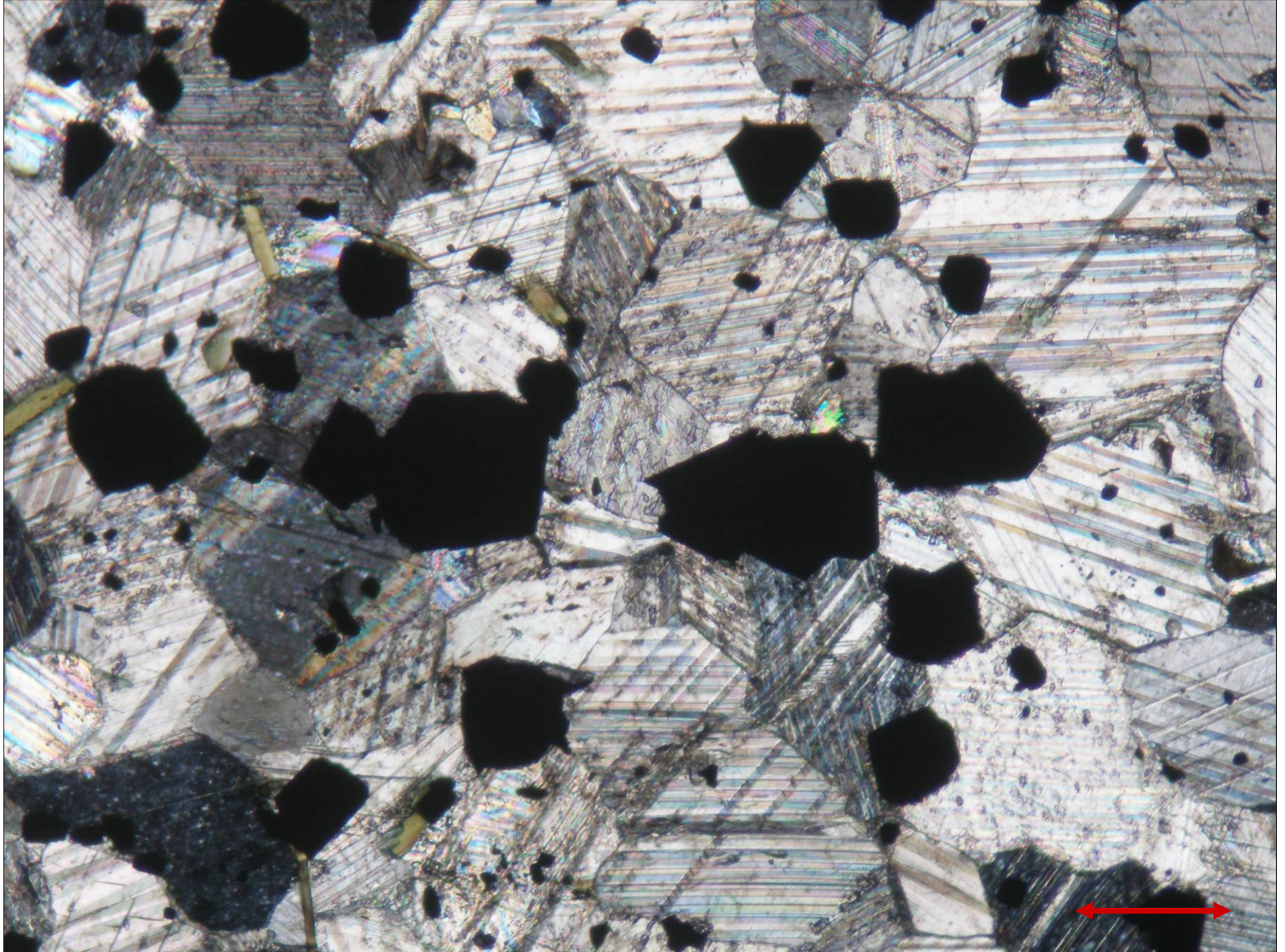
Magnetite in greenschist from Dolní Údolí, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.



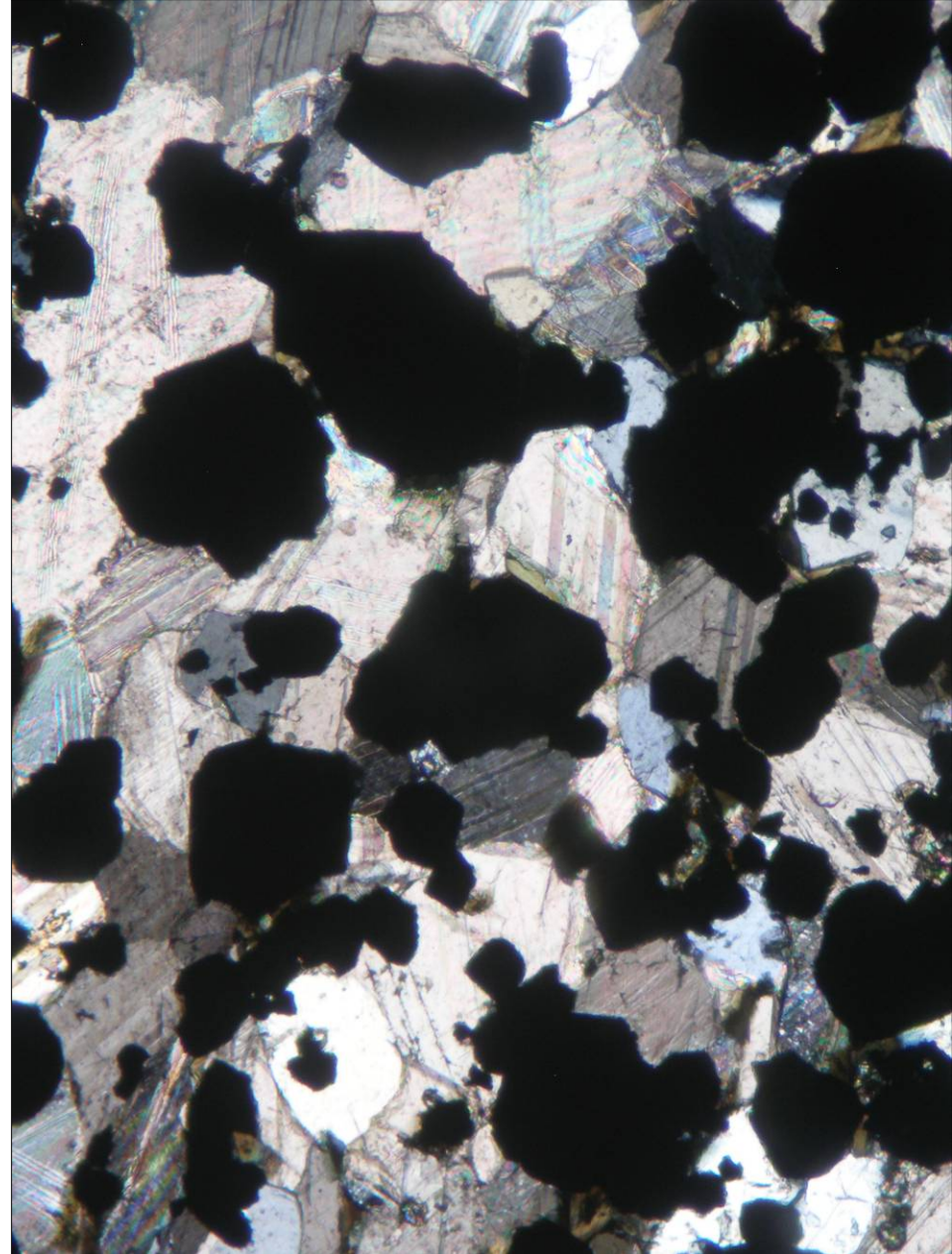
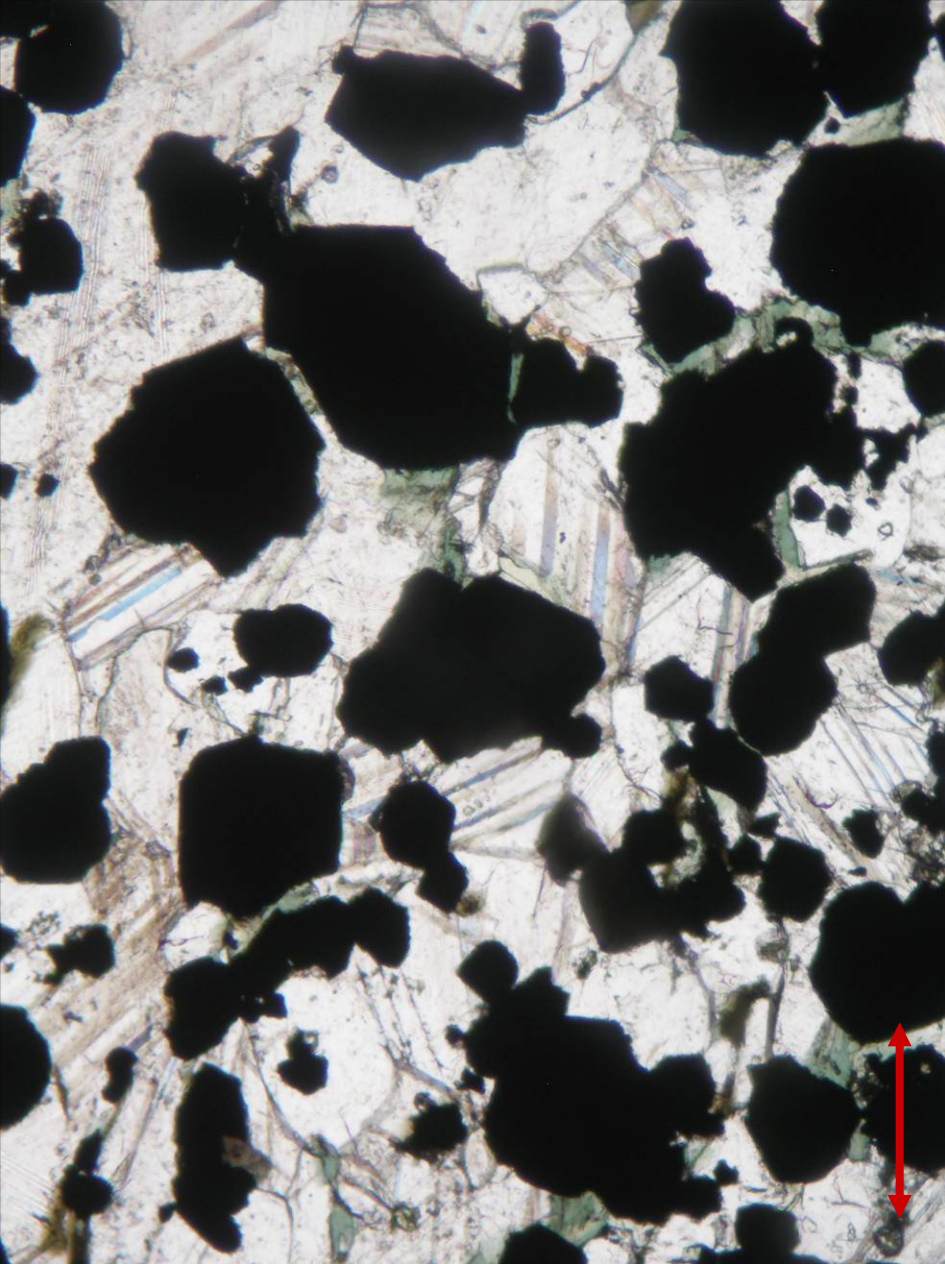
Magnetite in iron ore from Dolní Údolí, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.4 mm. Photo: JiZi.



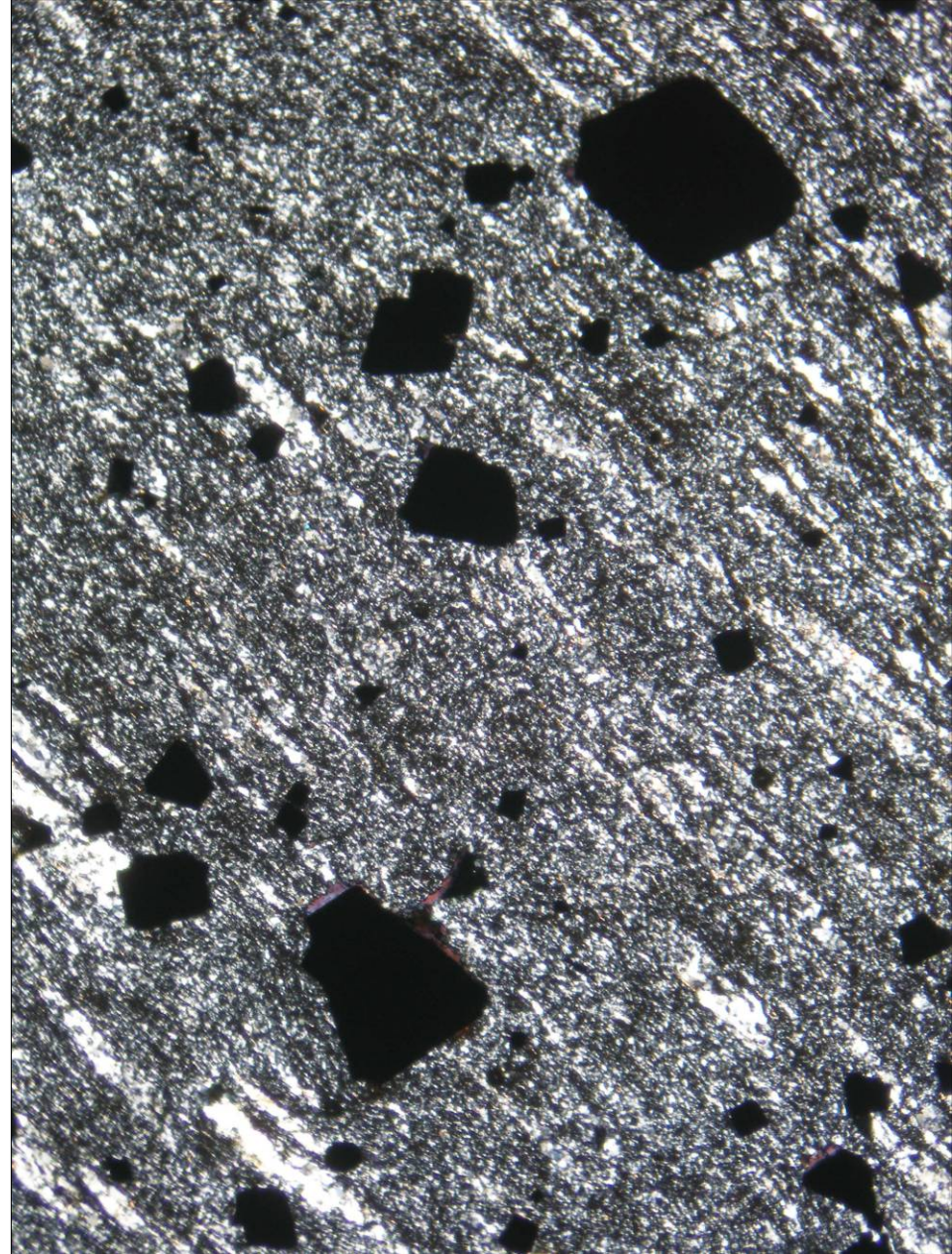
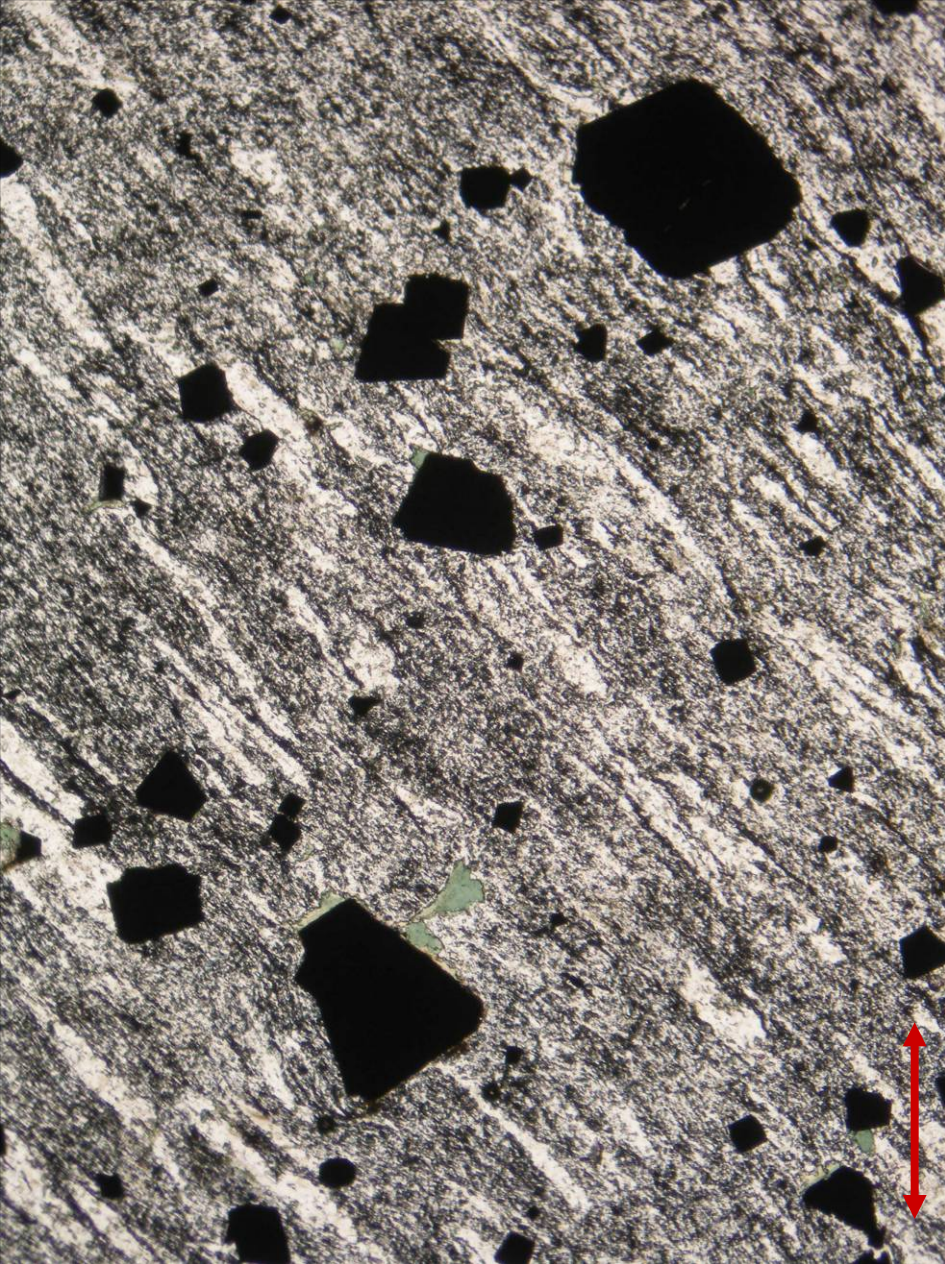
Magnetite in iron ore from Dolní Údolí, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.4 mm. Photo: JiZi.



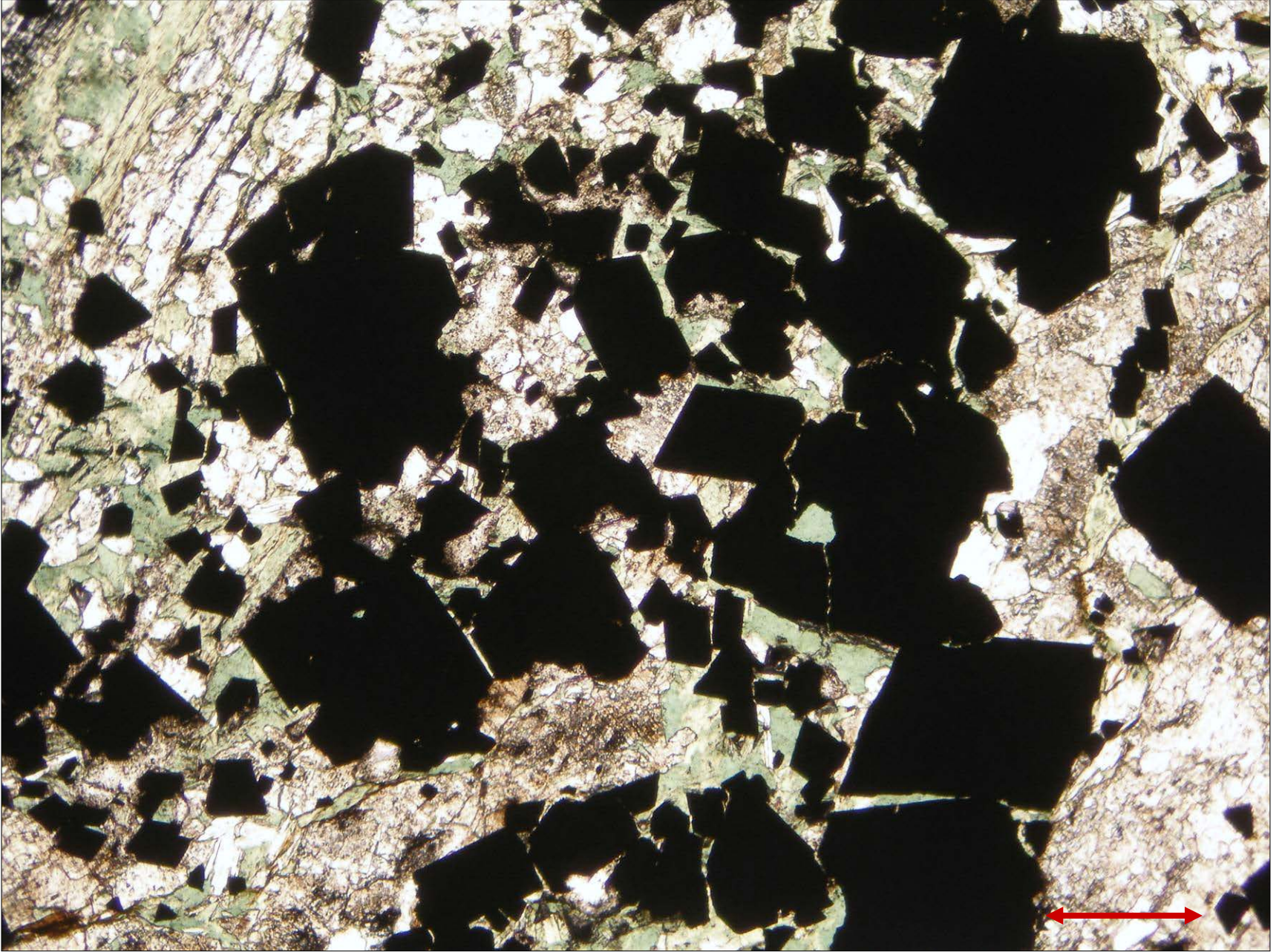
Magnetite in marble from Heřmanovice, the Czech Republic; XPL. Width of the field of view is ca. 2.2 mm. Photo: JiZi.



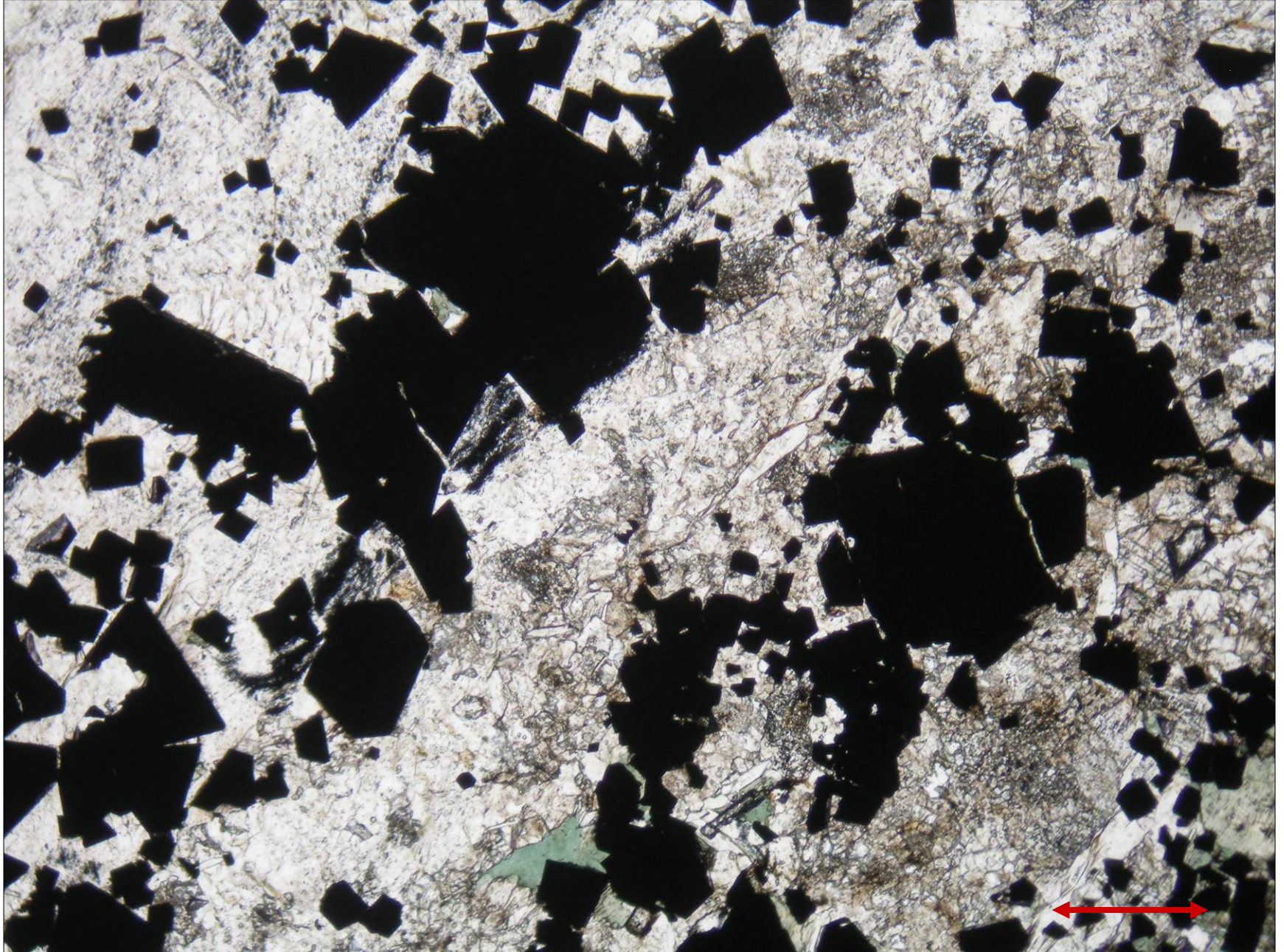
Magnetite in marble from Heřmanovice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.



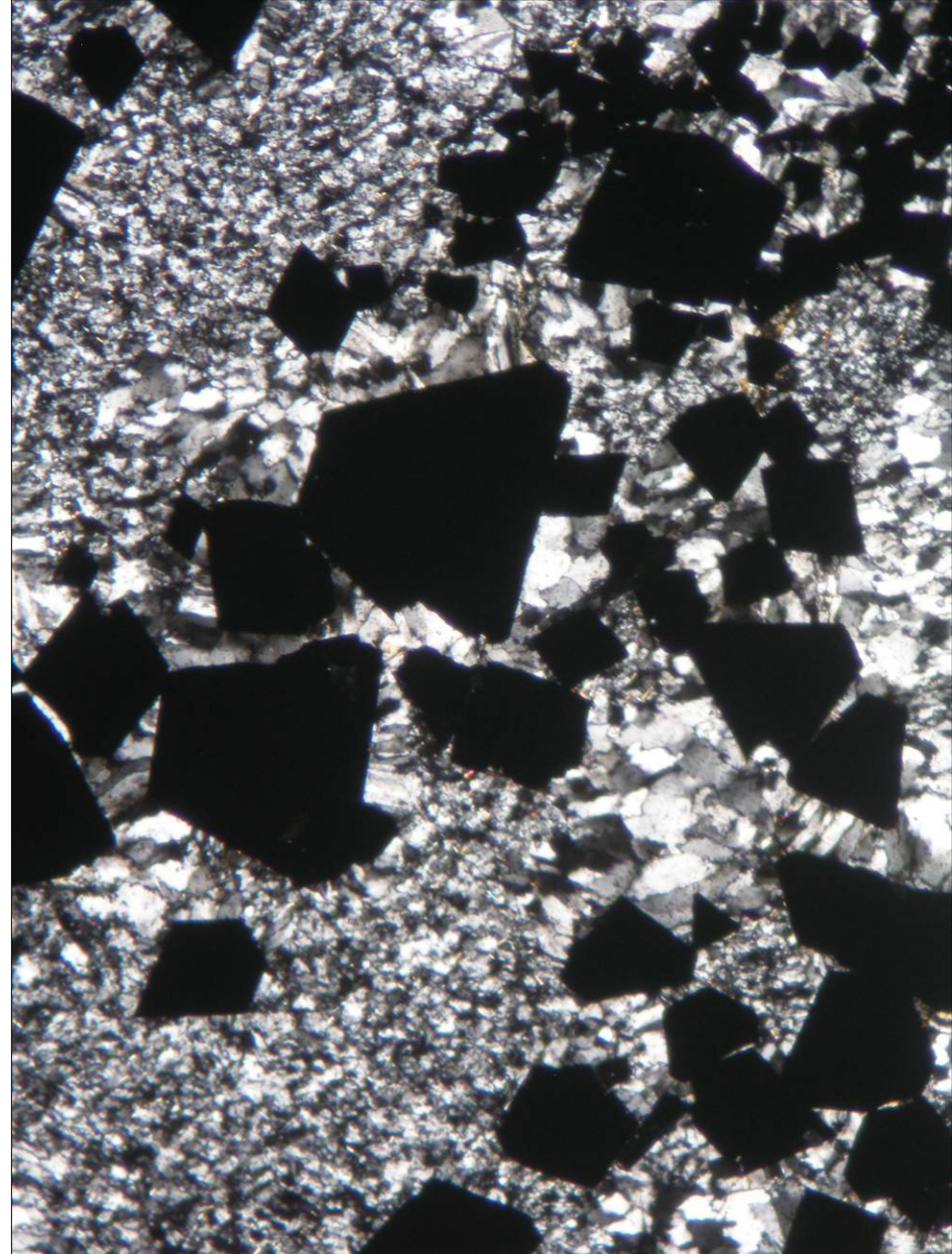
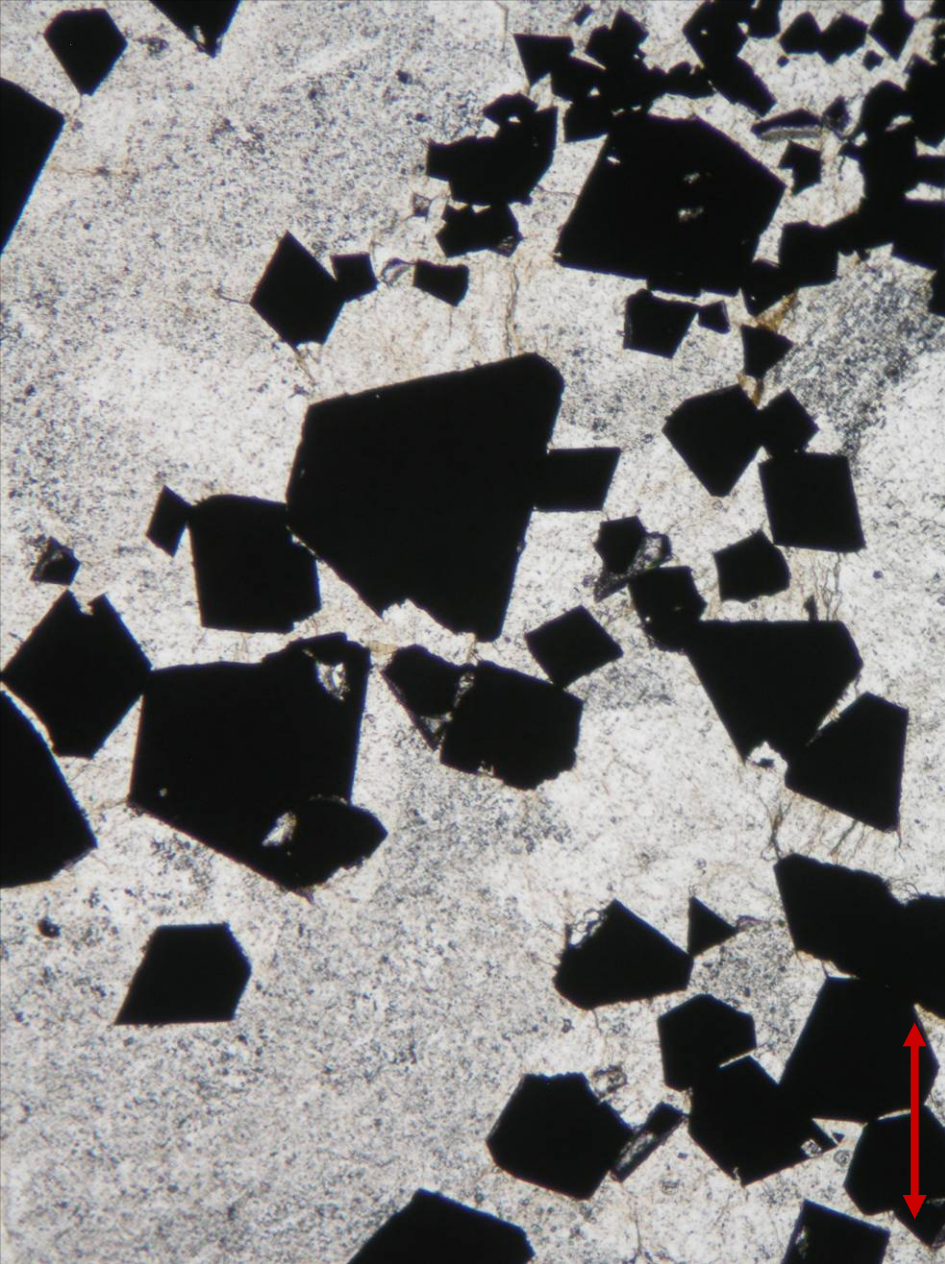
Magnetite porphyroblasts in acid metatuff from Horní Město, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.0 mm. Photo: JiZi.



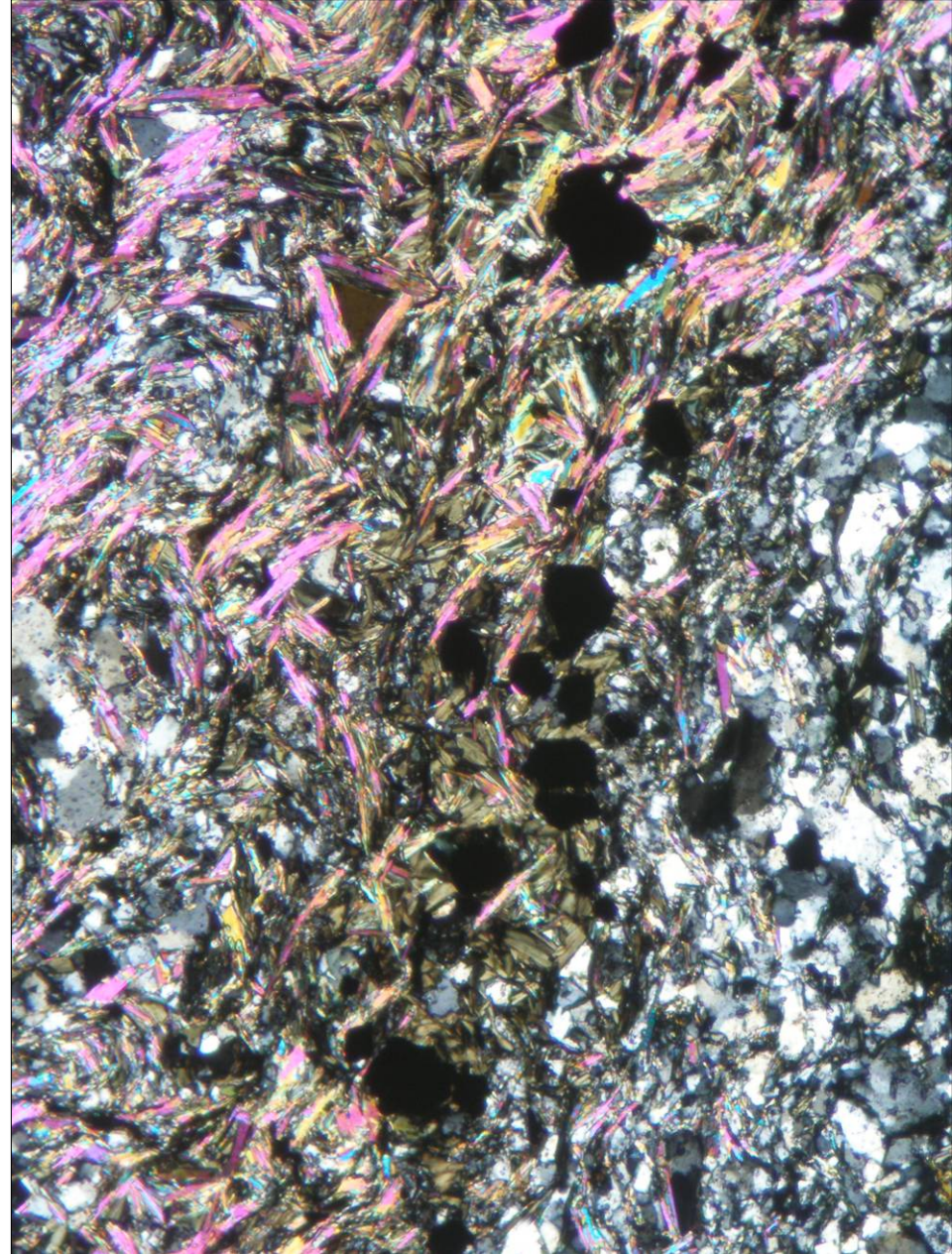
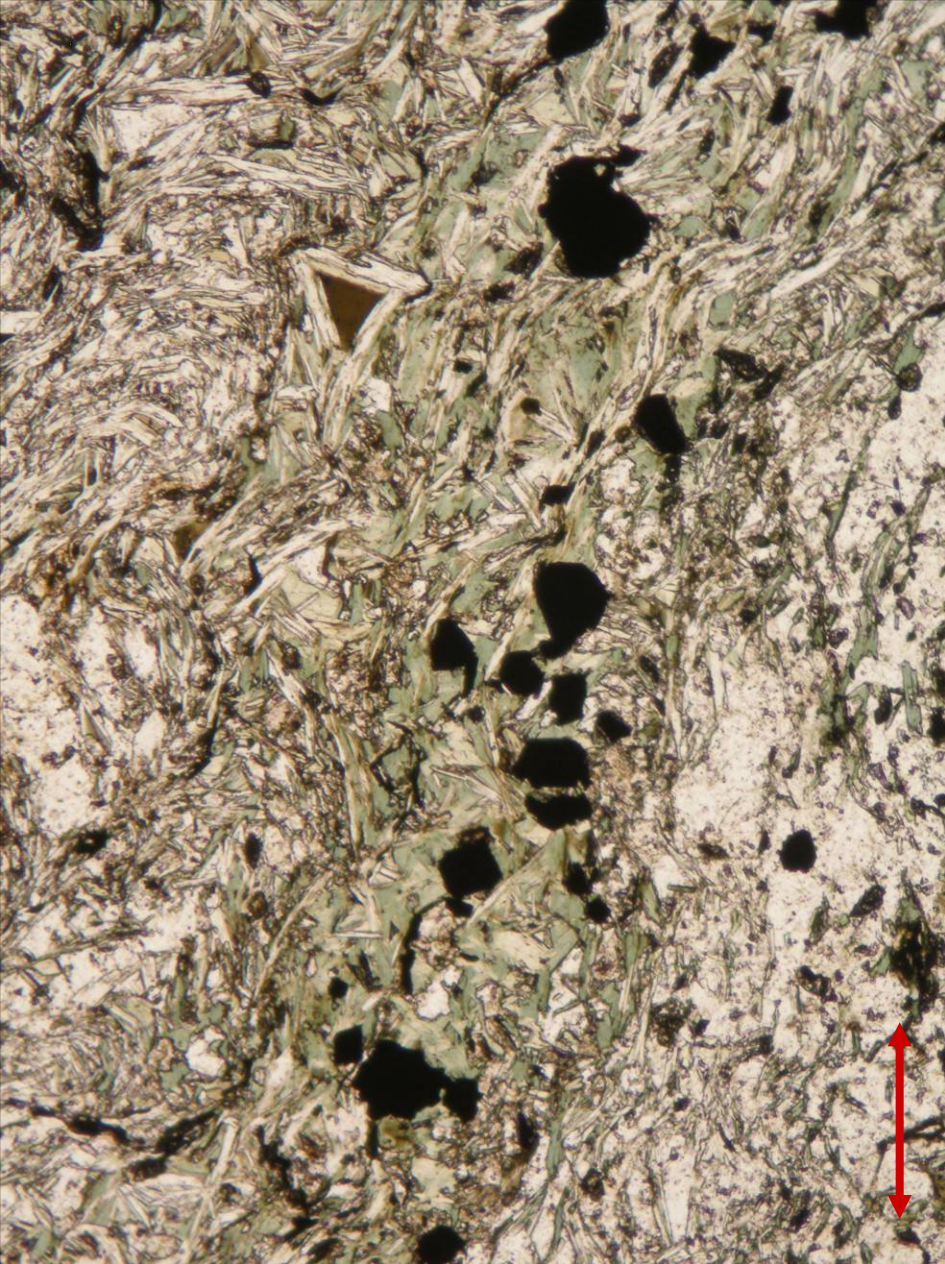
Magnetite in iron ore from Horní Město, the Czech Republic; PPL. Width of the field of view is ca. 2.5 mm. Photo: JiZi.



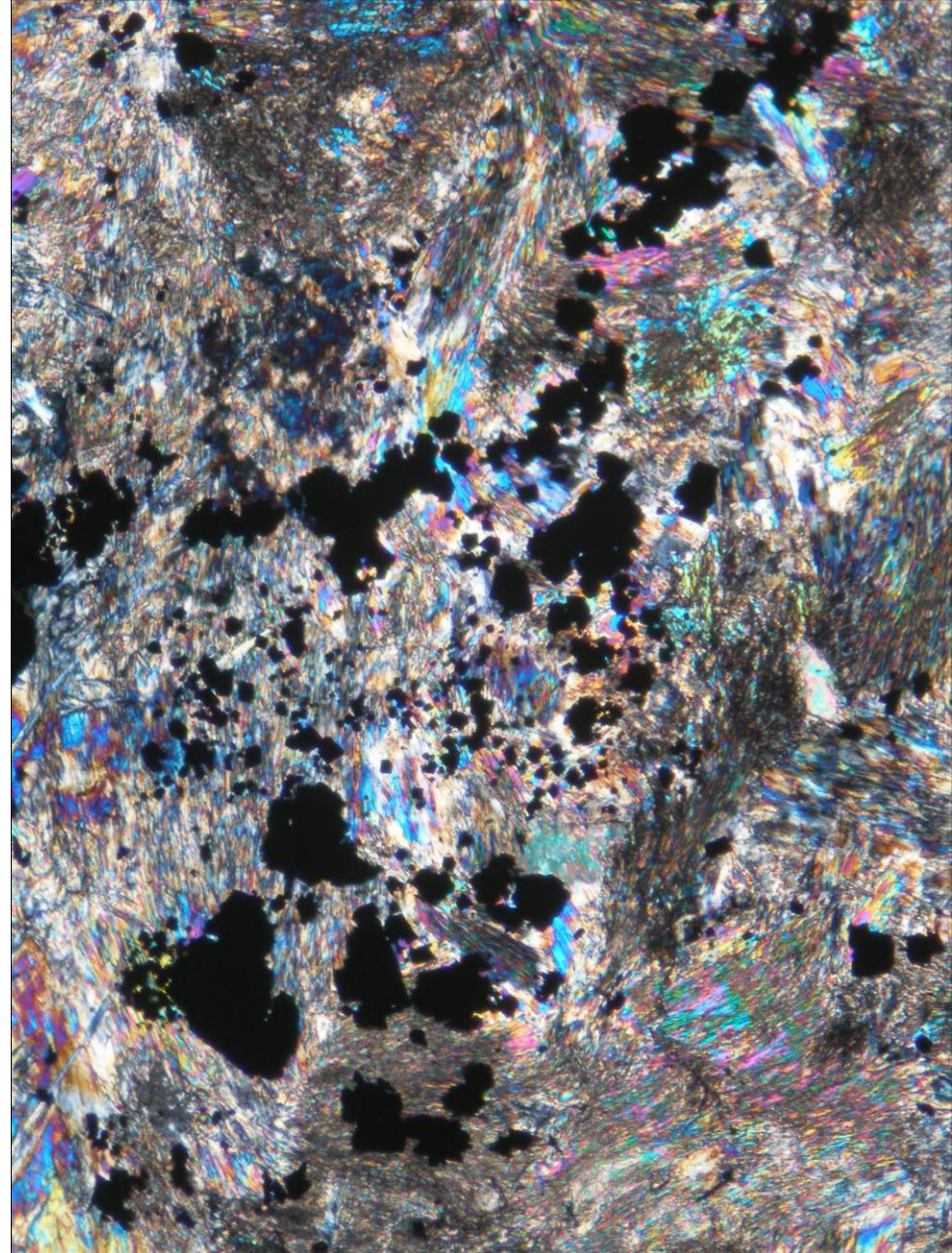
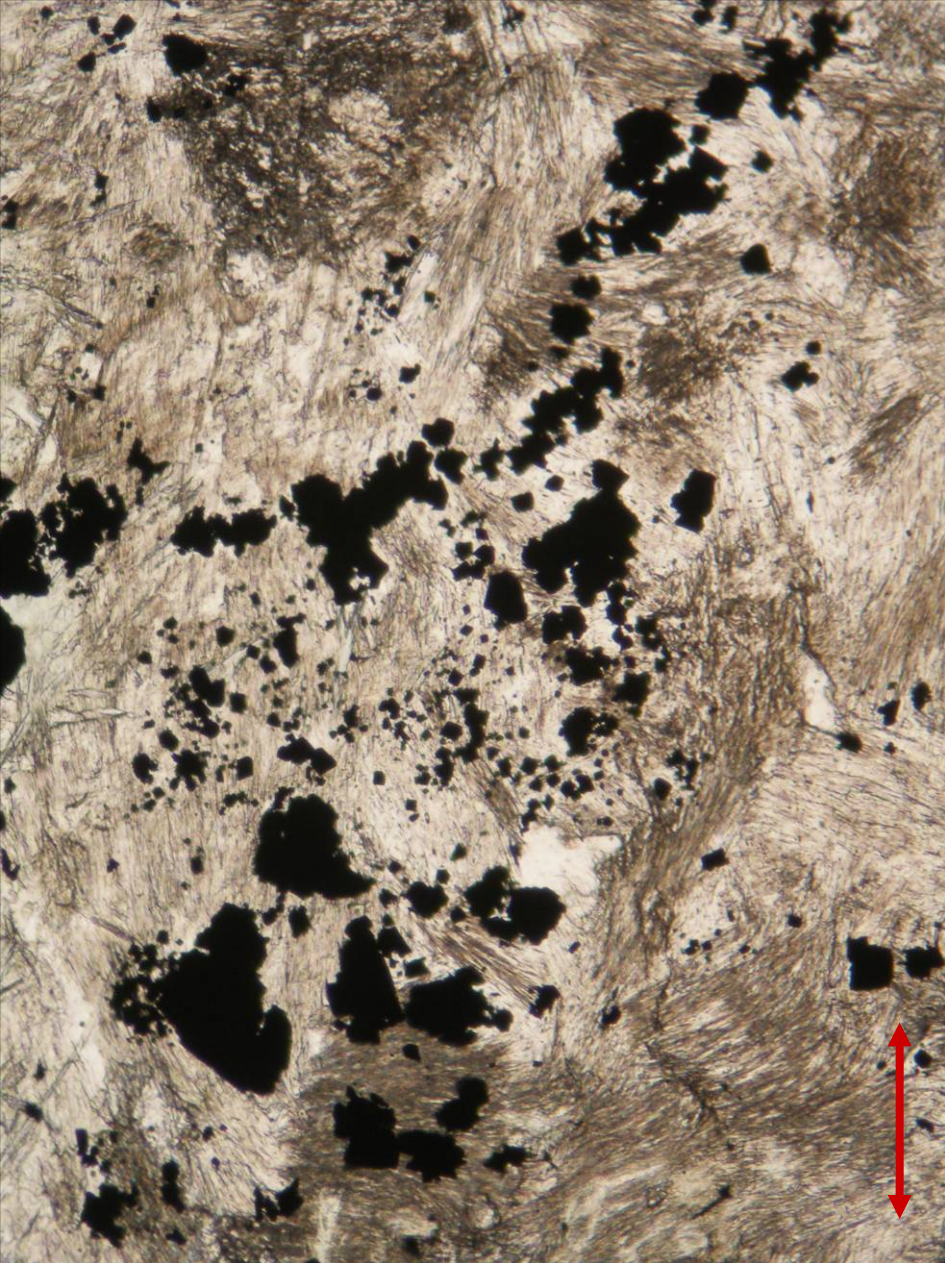
Magnetite in iron ore from Horní Město, the Czech Republic; PPL. Width of the field of view is ca. 2.2 mm. Photo: JiZi.



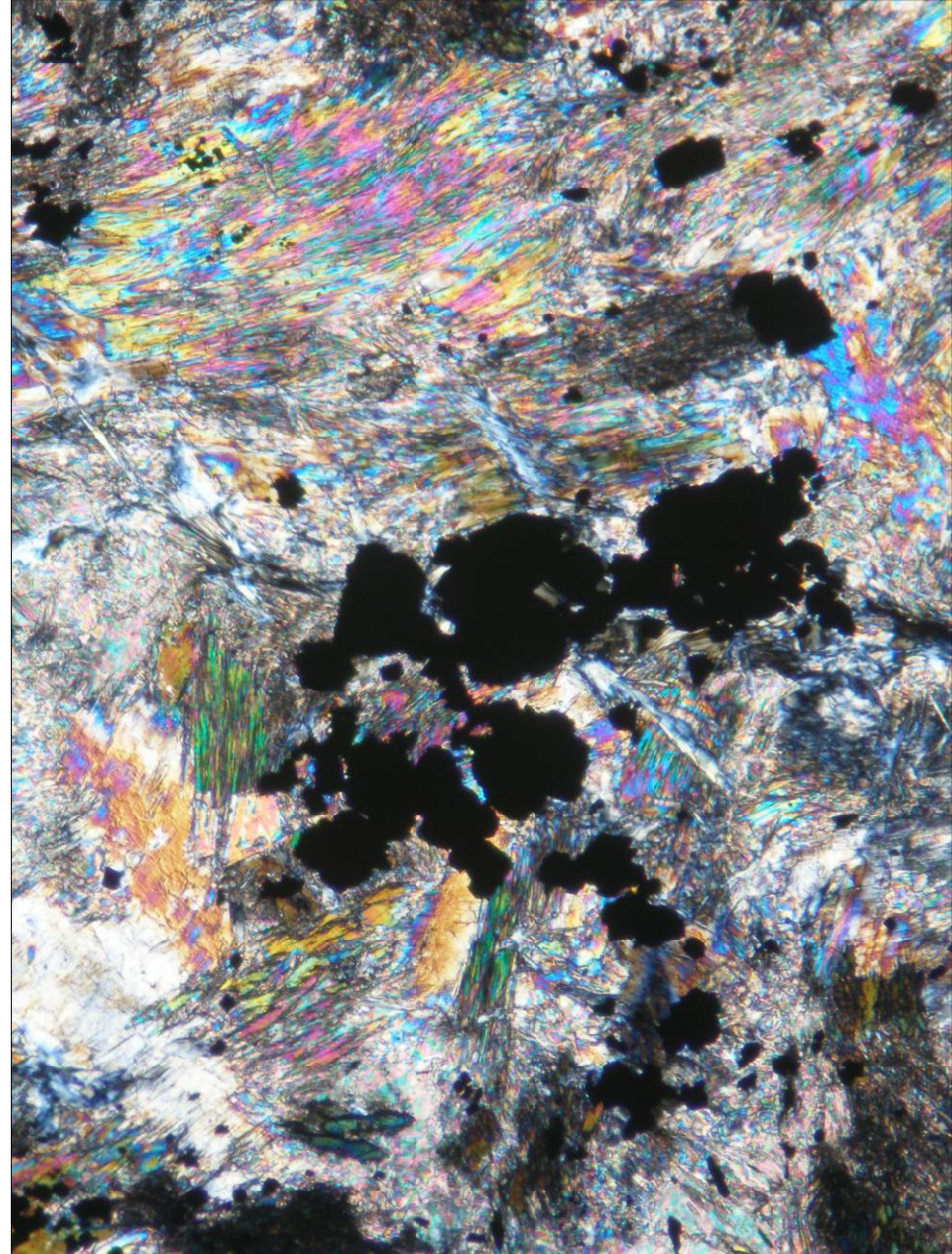
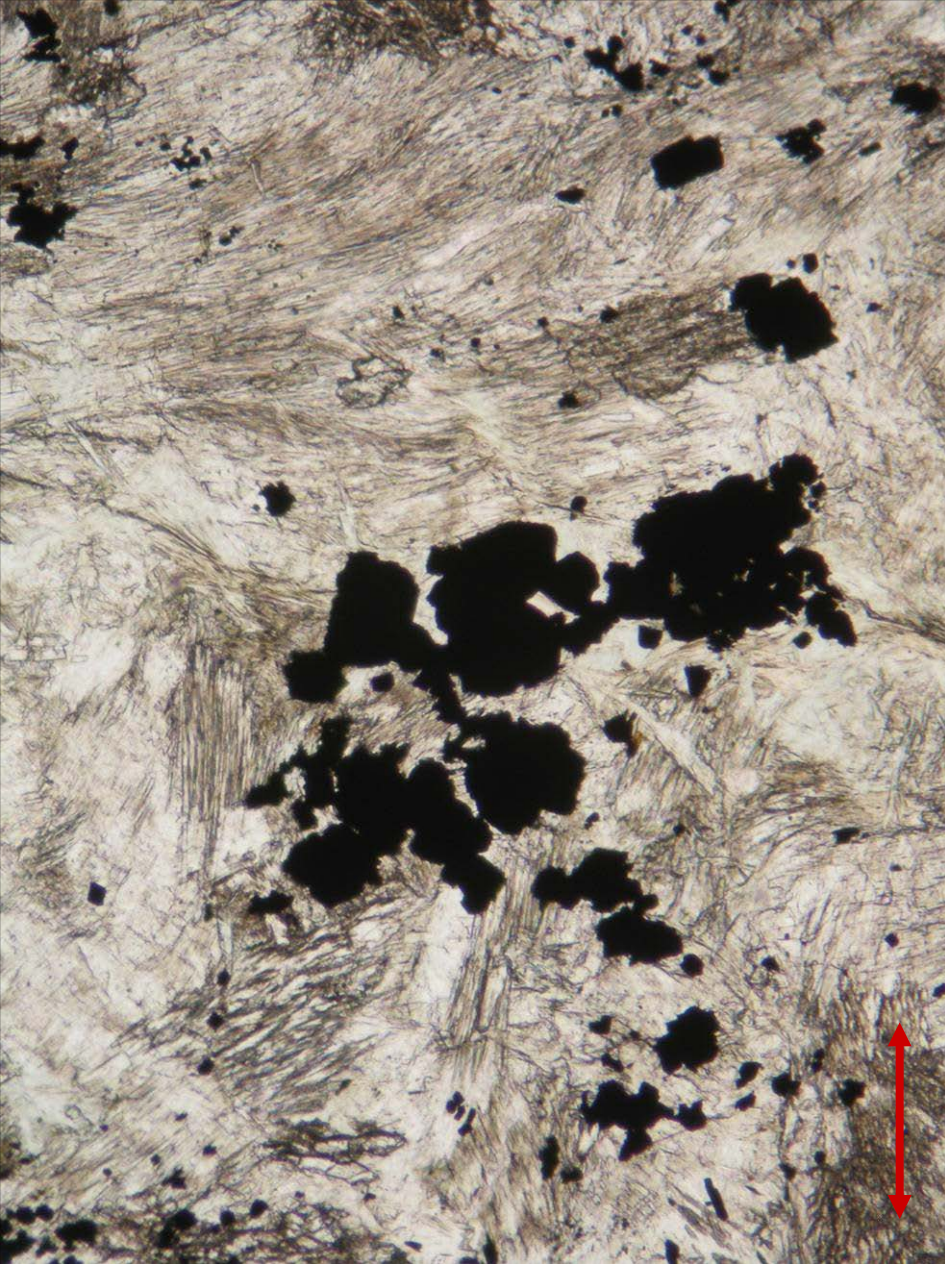
Magnetite in iron ore from Horní Město, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.0 mm. Photo: JiZi.



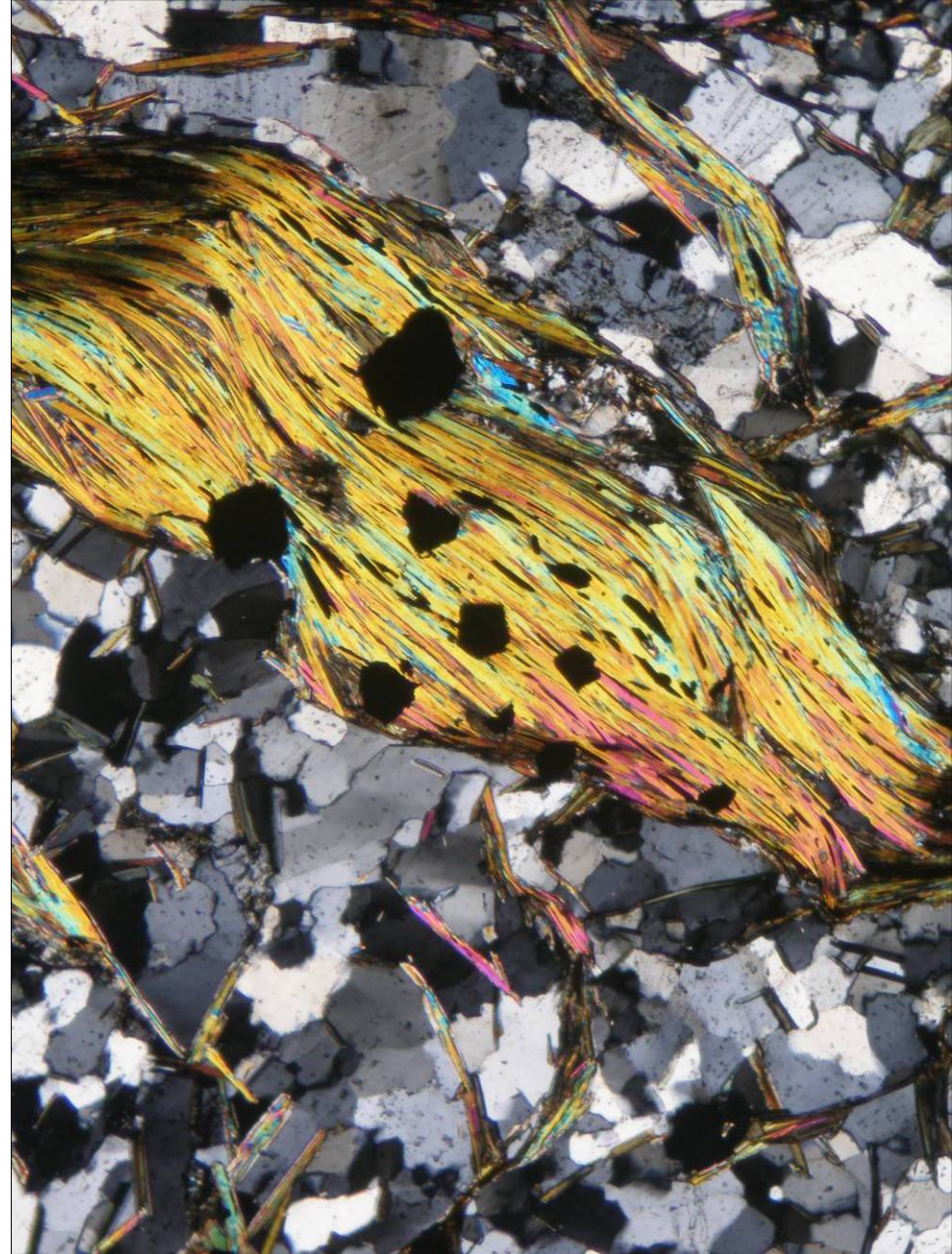
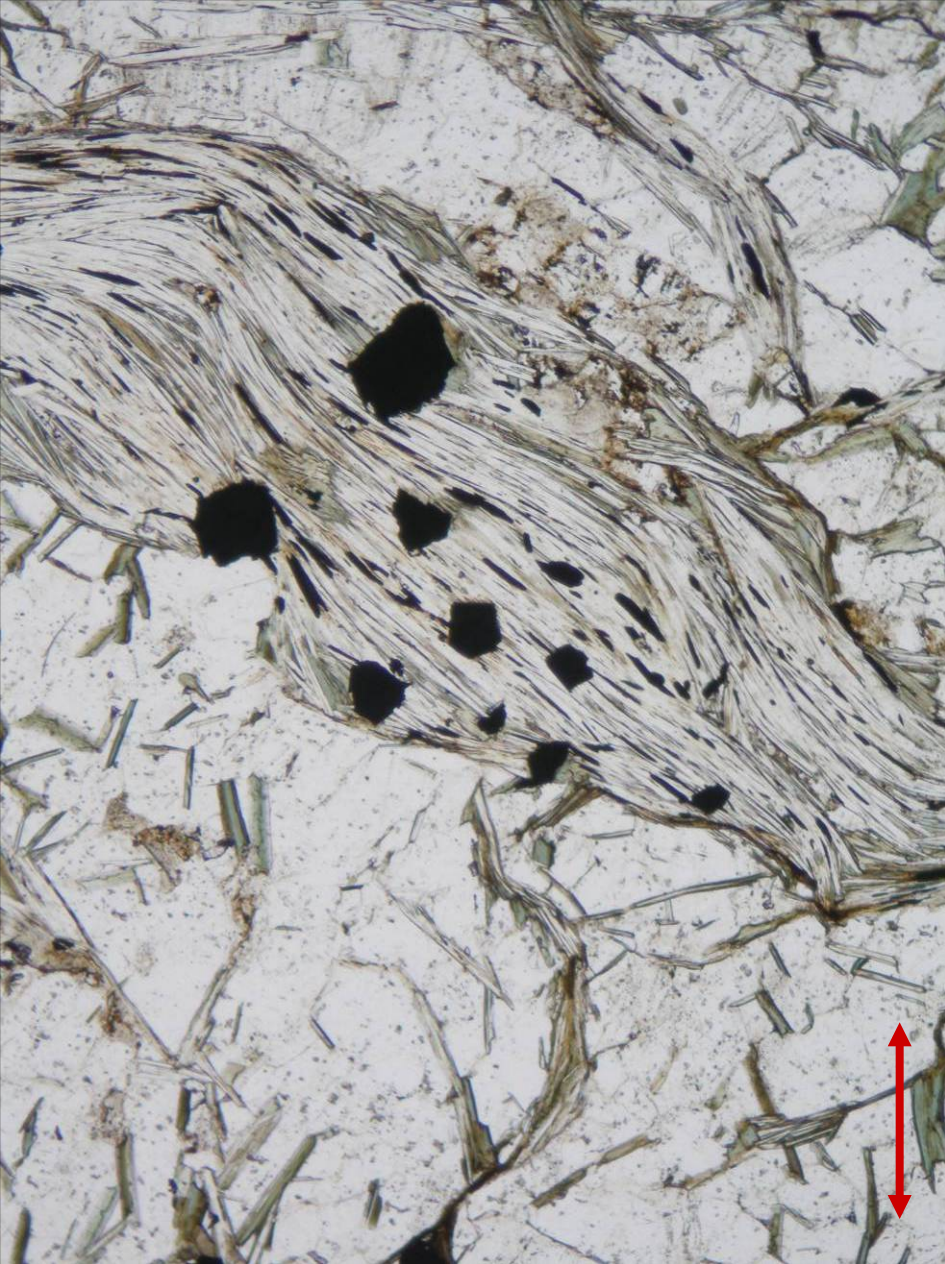
Magnetite in phyllite from Malá Morávka, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.7 mm. Photo: JiZi.



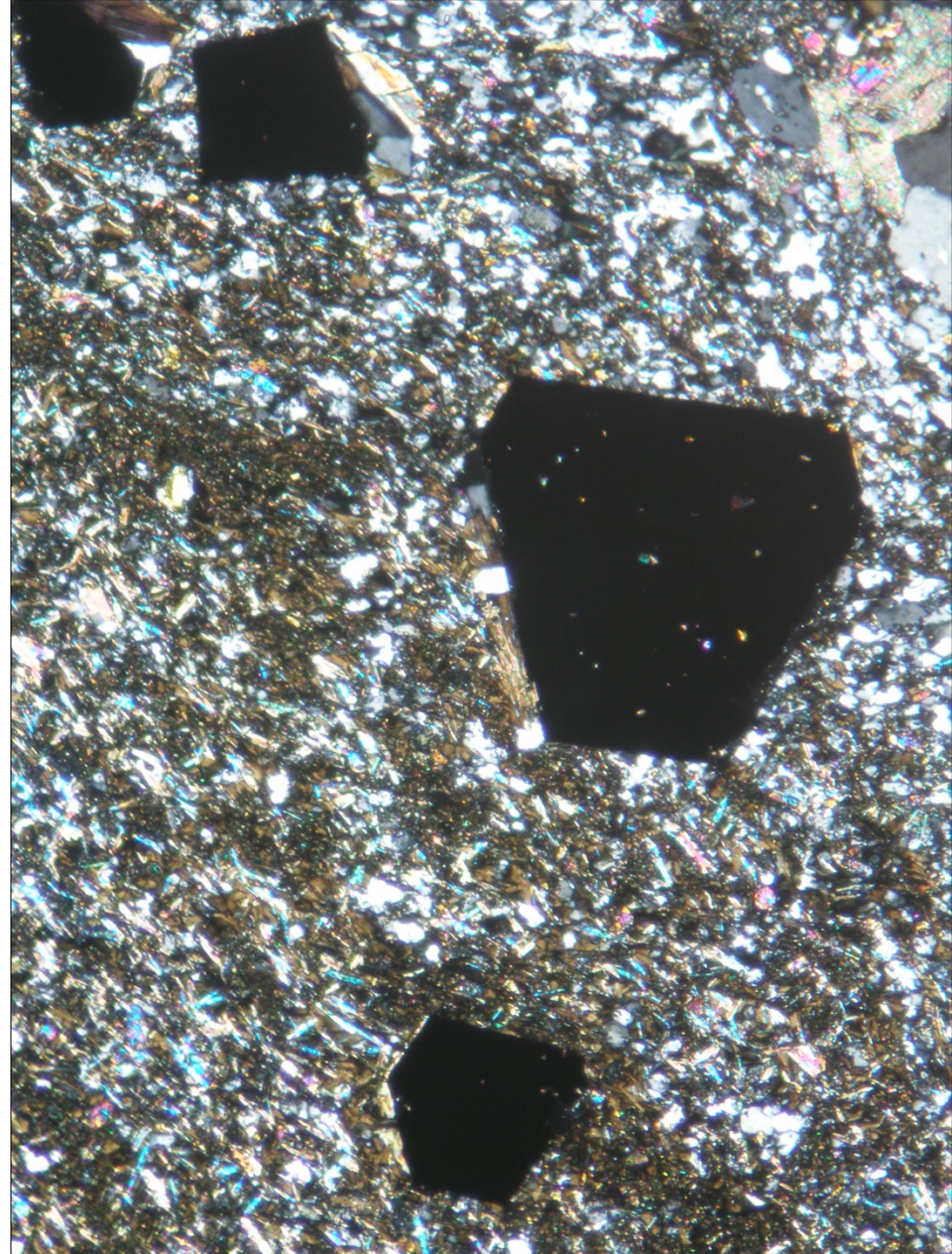
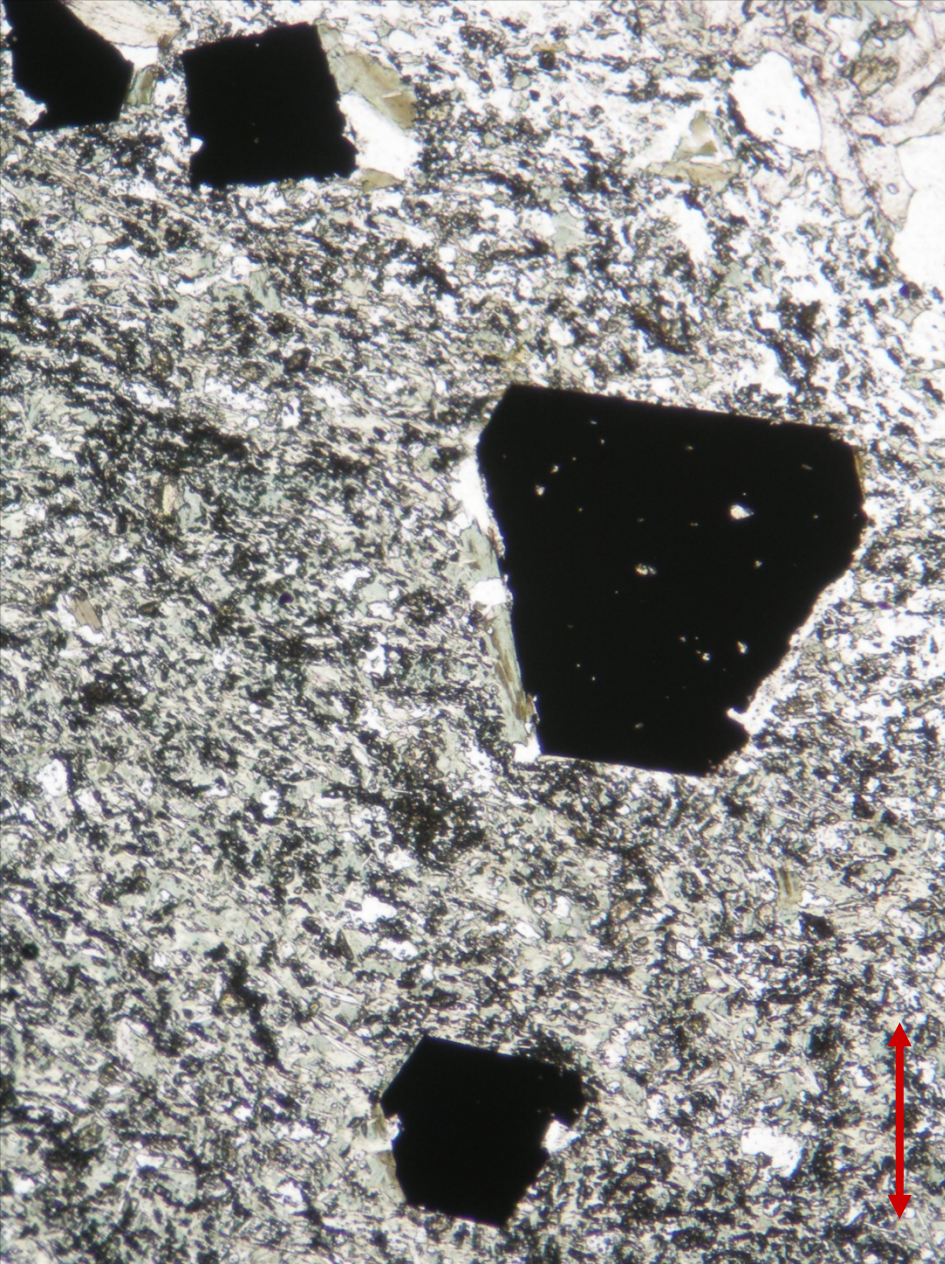
Magnetite in soapstone from Vernířovice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.



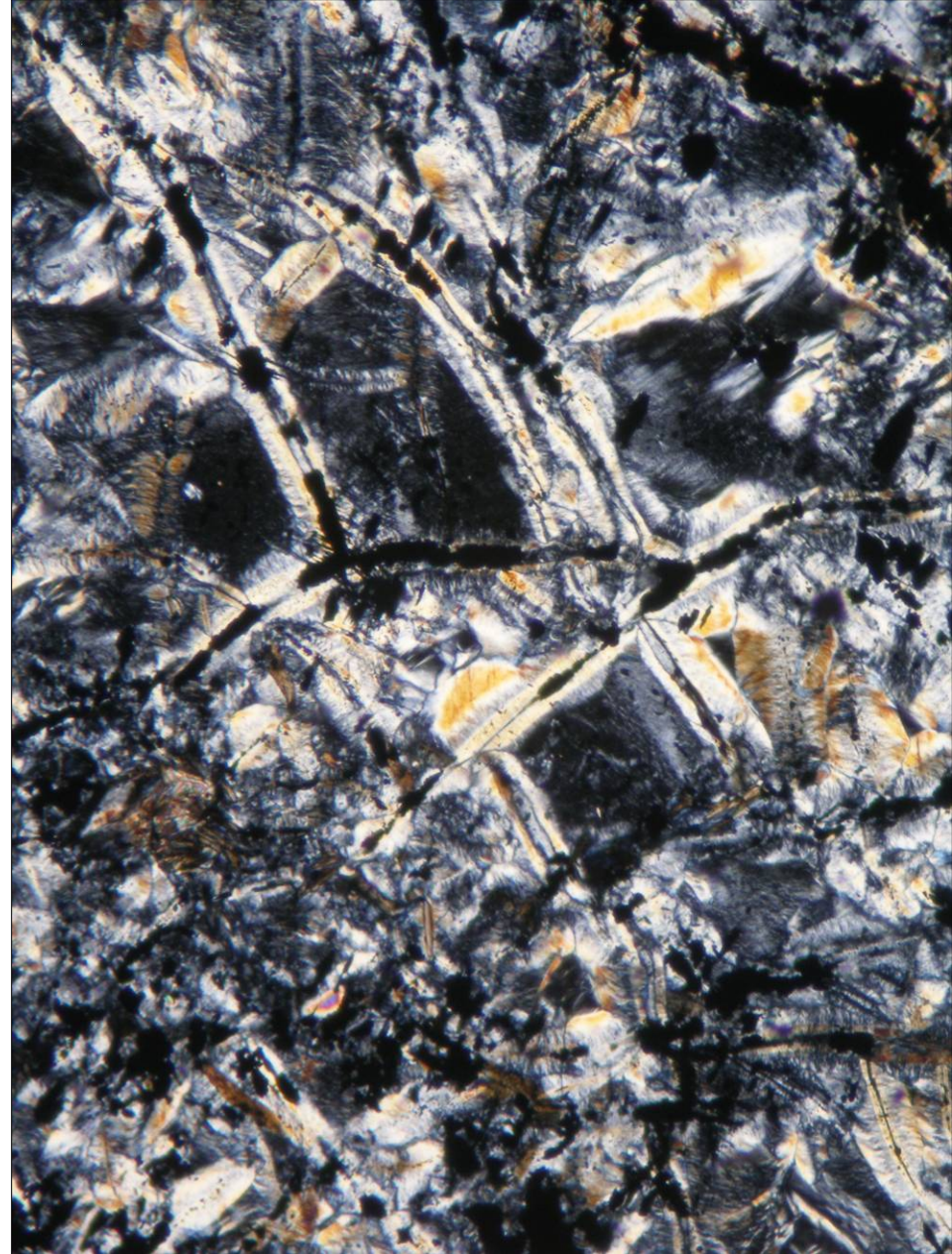
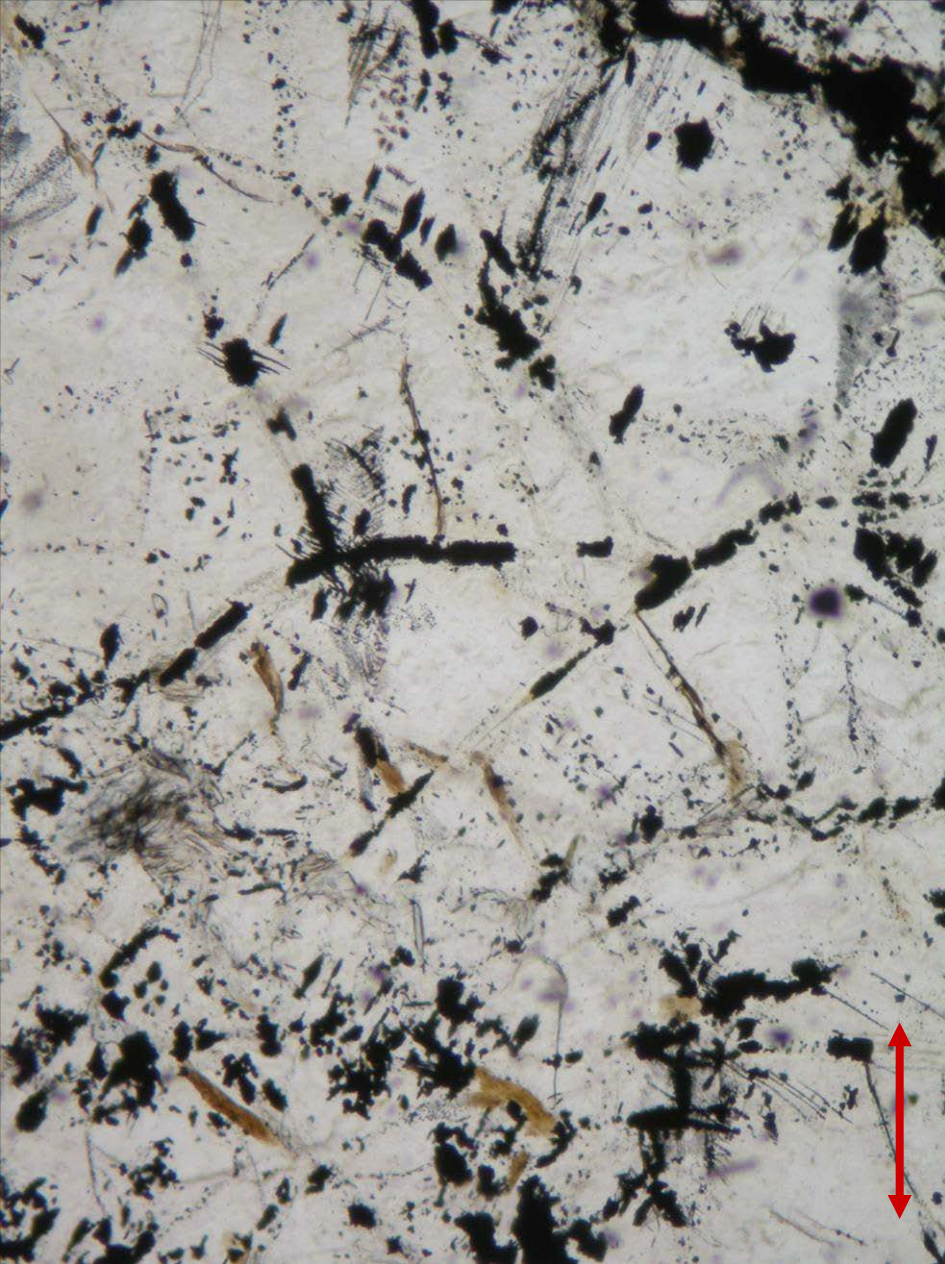
Magnetite and tremolite-actinolite in soapstone from Vernířovice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.



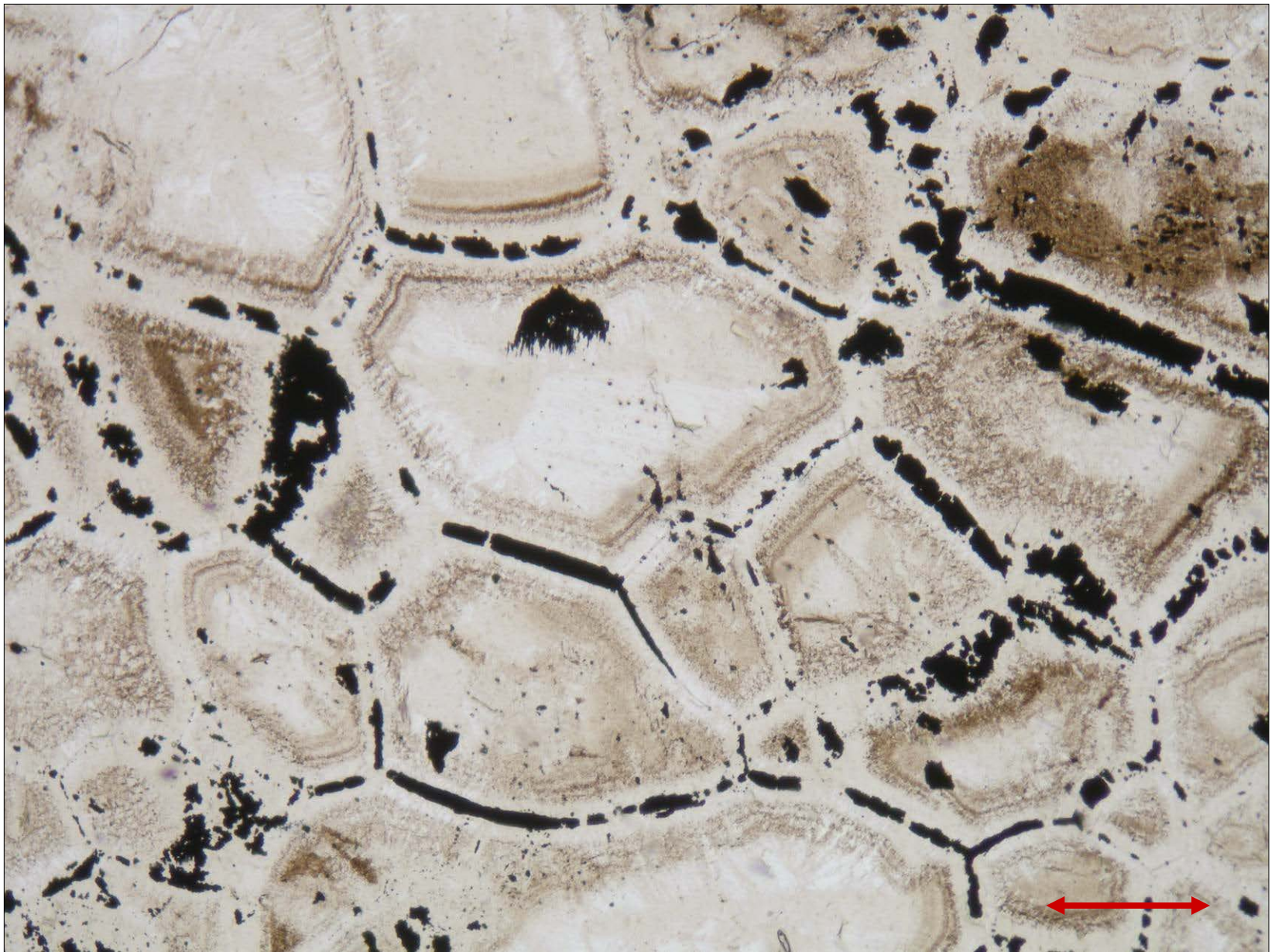
Magnetite in mica schist from Markersdorf, Austria; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.



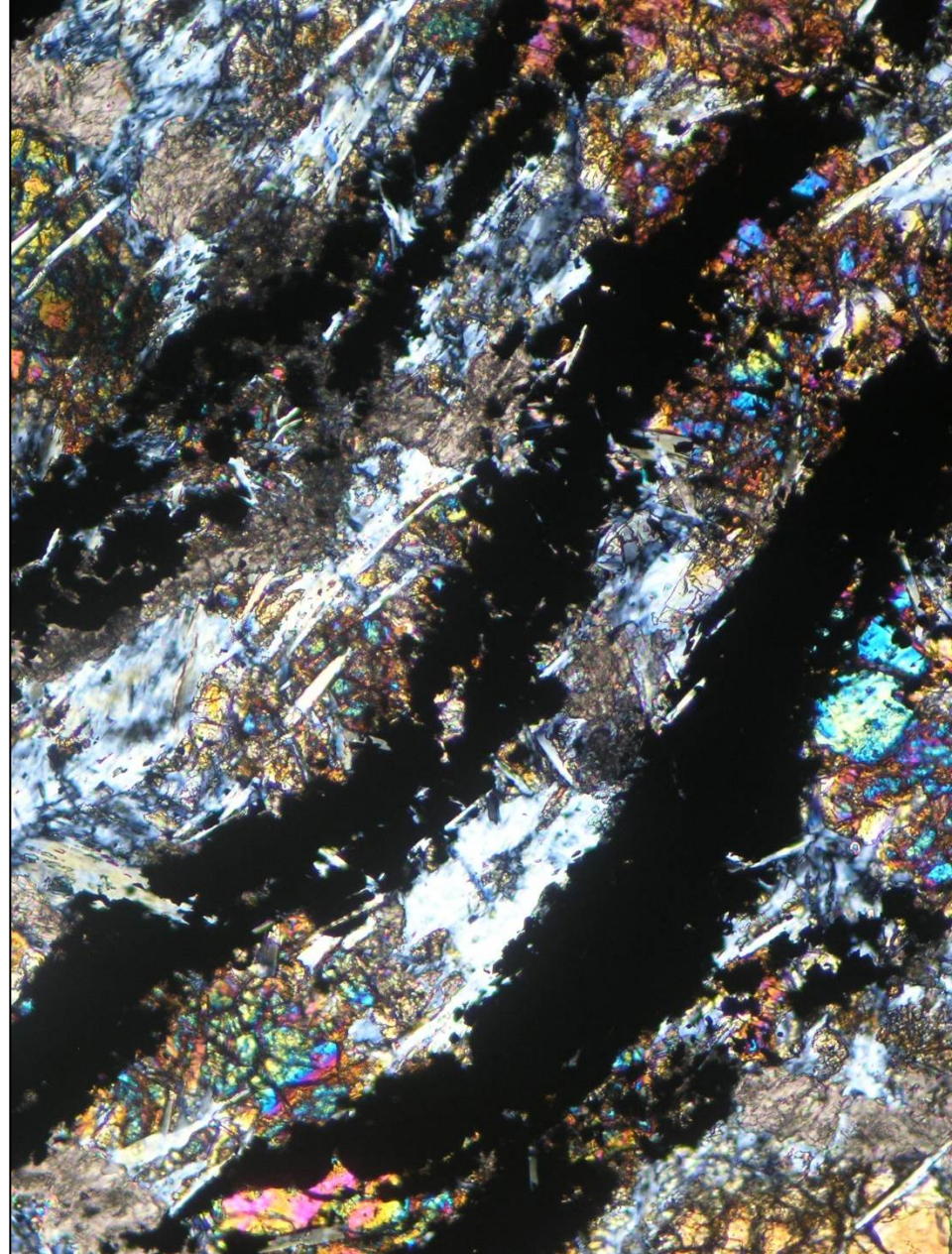
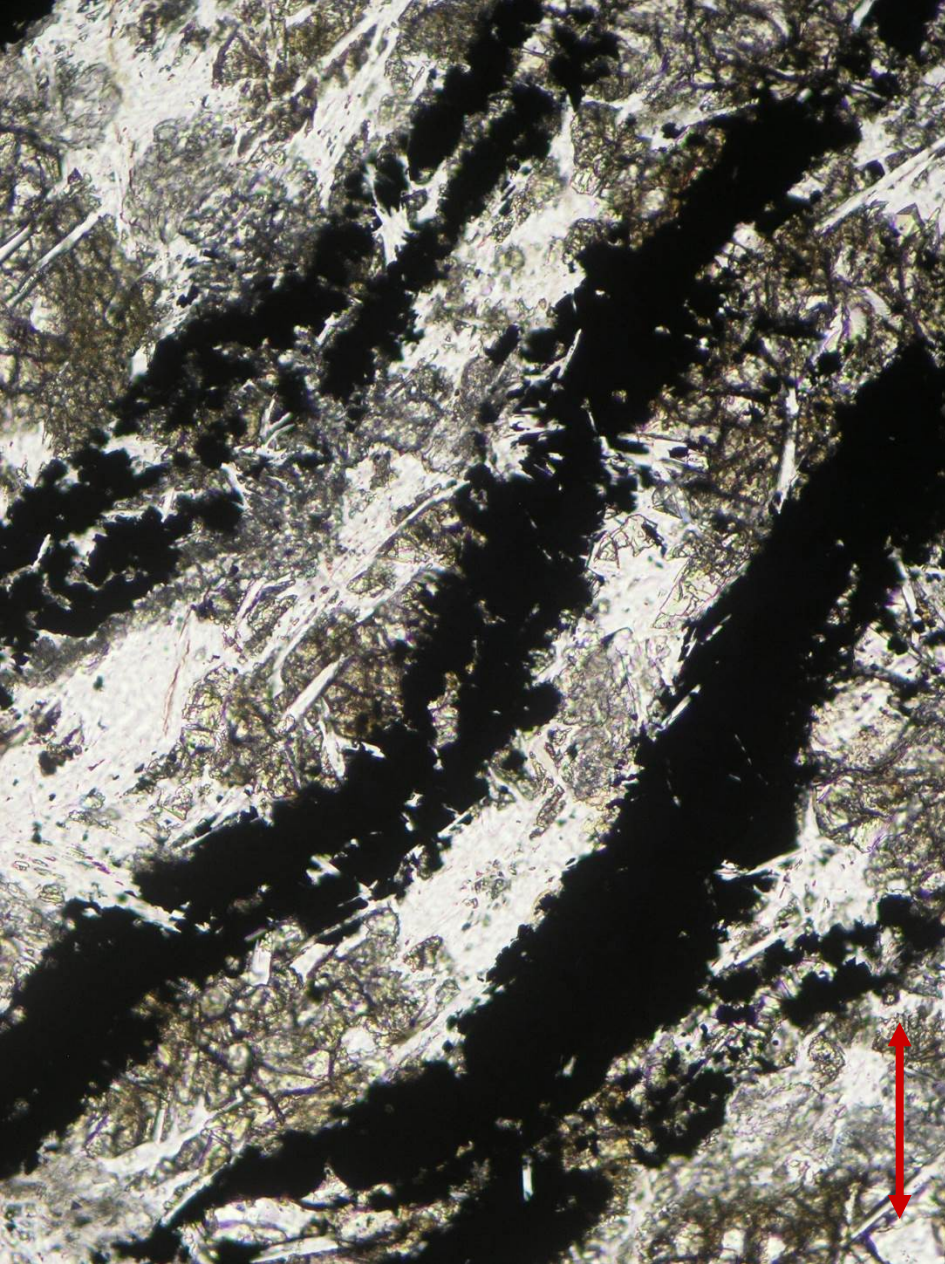
Magnetite in greenschist from Drakov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.



Magnetite in serpentinite from Vernířovice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.



Magnetite in serpentinite from Chrastice, the Czech Republic; PPL. Width of the field of view is ca. 2.0 mm. Photo: JiZi.



Magnetite in serpentinite from Brníčko, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.0 mm. Photo: JiZi.