

# CALCITE

*Chemical formula:*  $\text{CaCO}_3$

*Crystal system:* trigonal

*Color in thin section:* colorless

*Form:* usually allotriomorphic grains or aggregates of grains; rhombohedrons

*Cleavage:* perfect rhombohedral

*Indices of refraction:*  $n_\omega = 1.658$   $n_\epsilon = 1.486$

*Birefringence:* 0.172

*Optic sign:* uniaxial negative

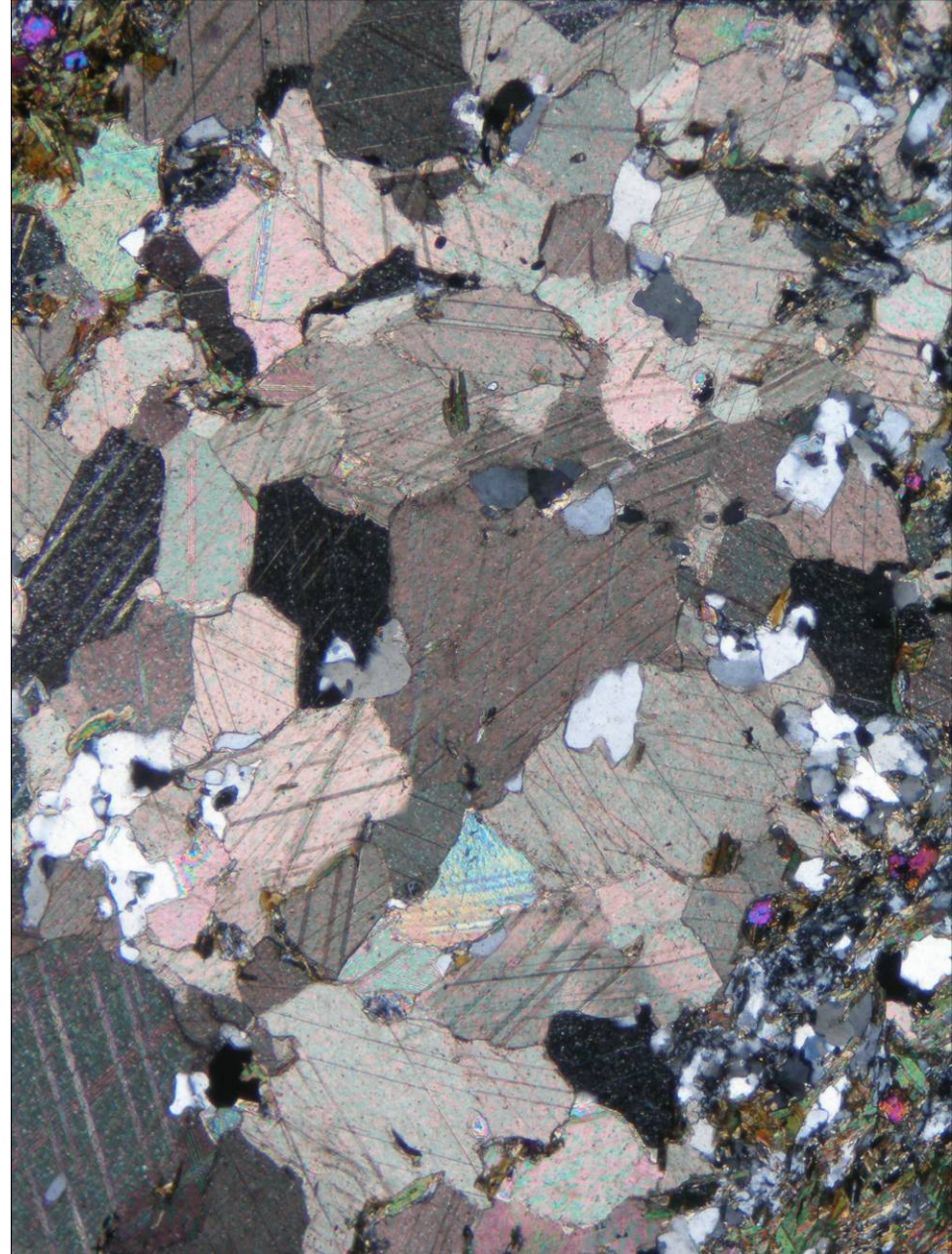
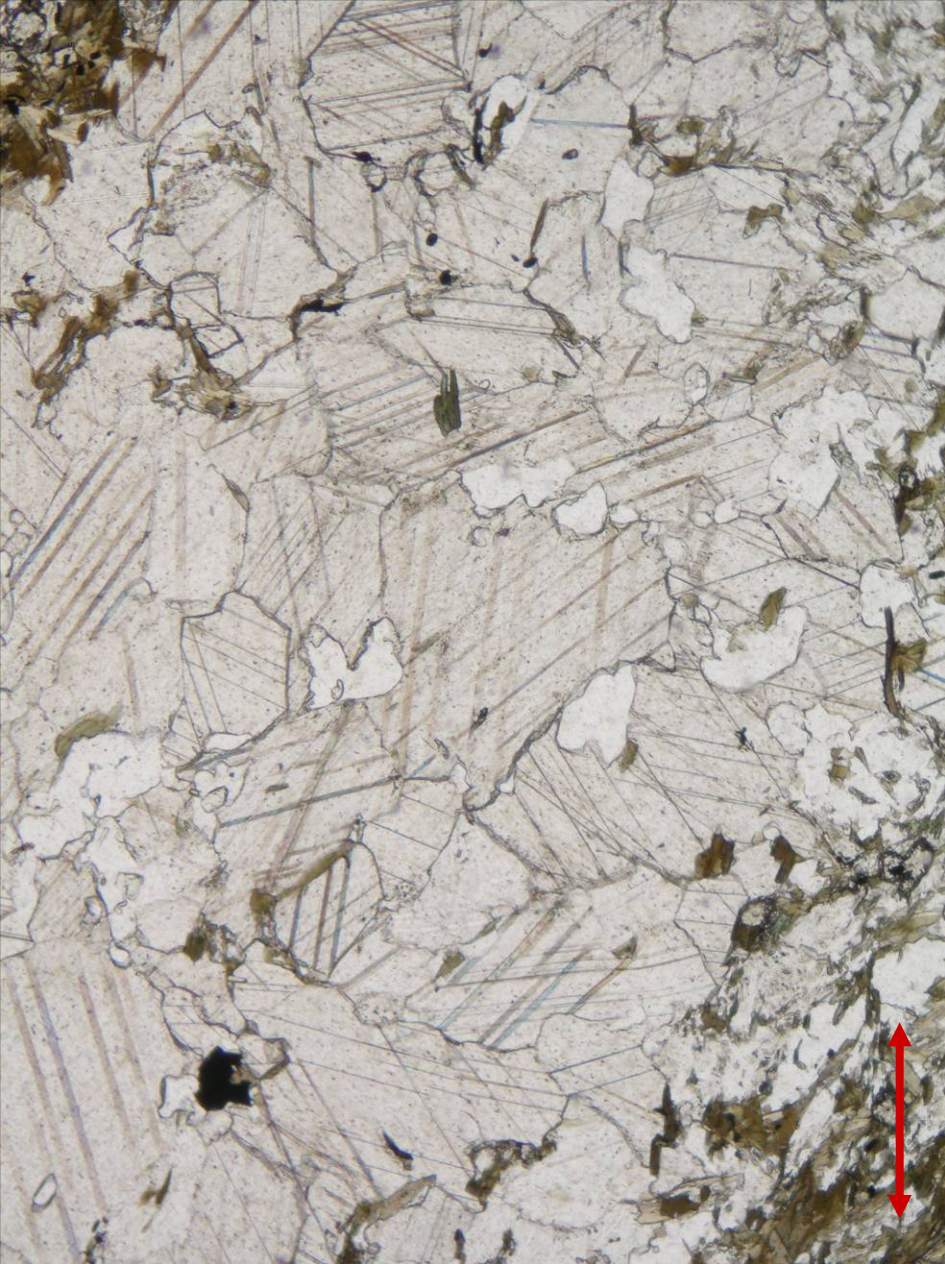
*Alteration:* may be leached from rocks by dissolution

*Occurrence:* metamorphic rocks (marble, phyllite, chlorite schist), carbonatites, as vesicle filling in volcanites; hydrothermal veins

*Similar minerals in thin sections:* titanite (higher indices of refraction, different cleavage), dolomite (it may be difficult or impossible to distinguish calcite and dolomite optically)

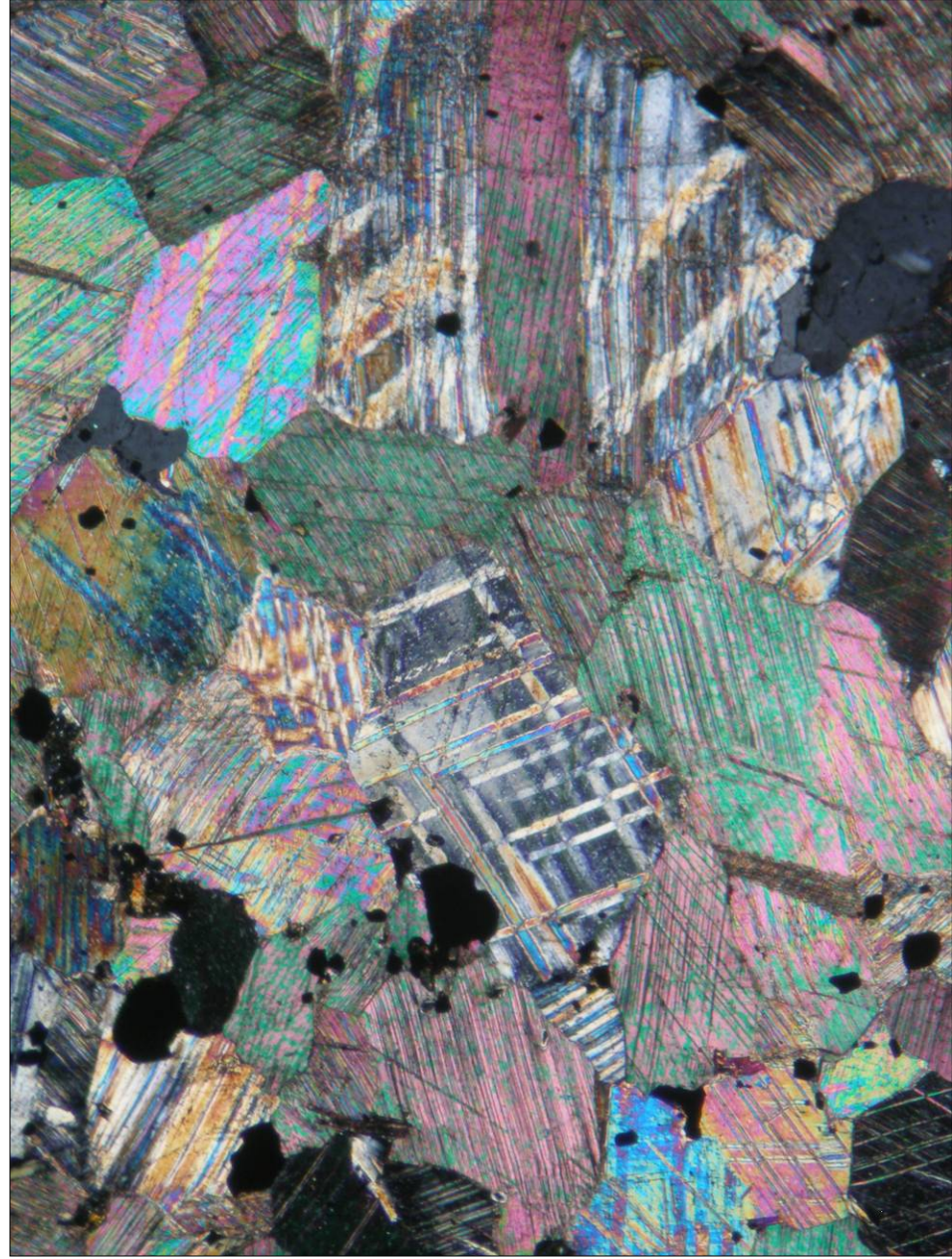
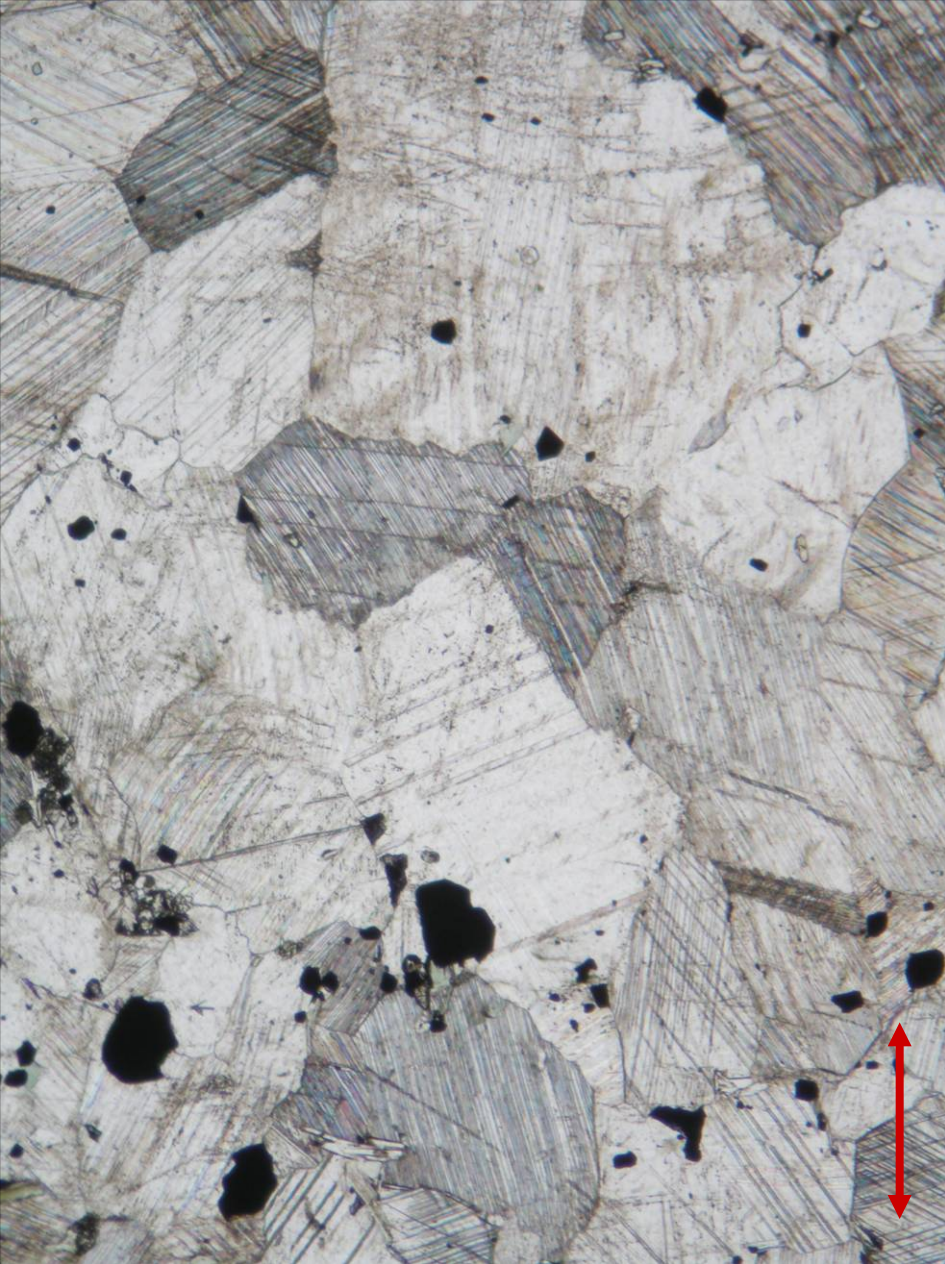
*Note:* lamellar twinning is common





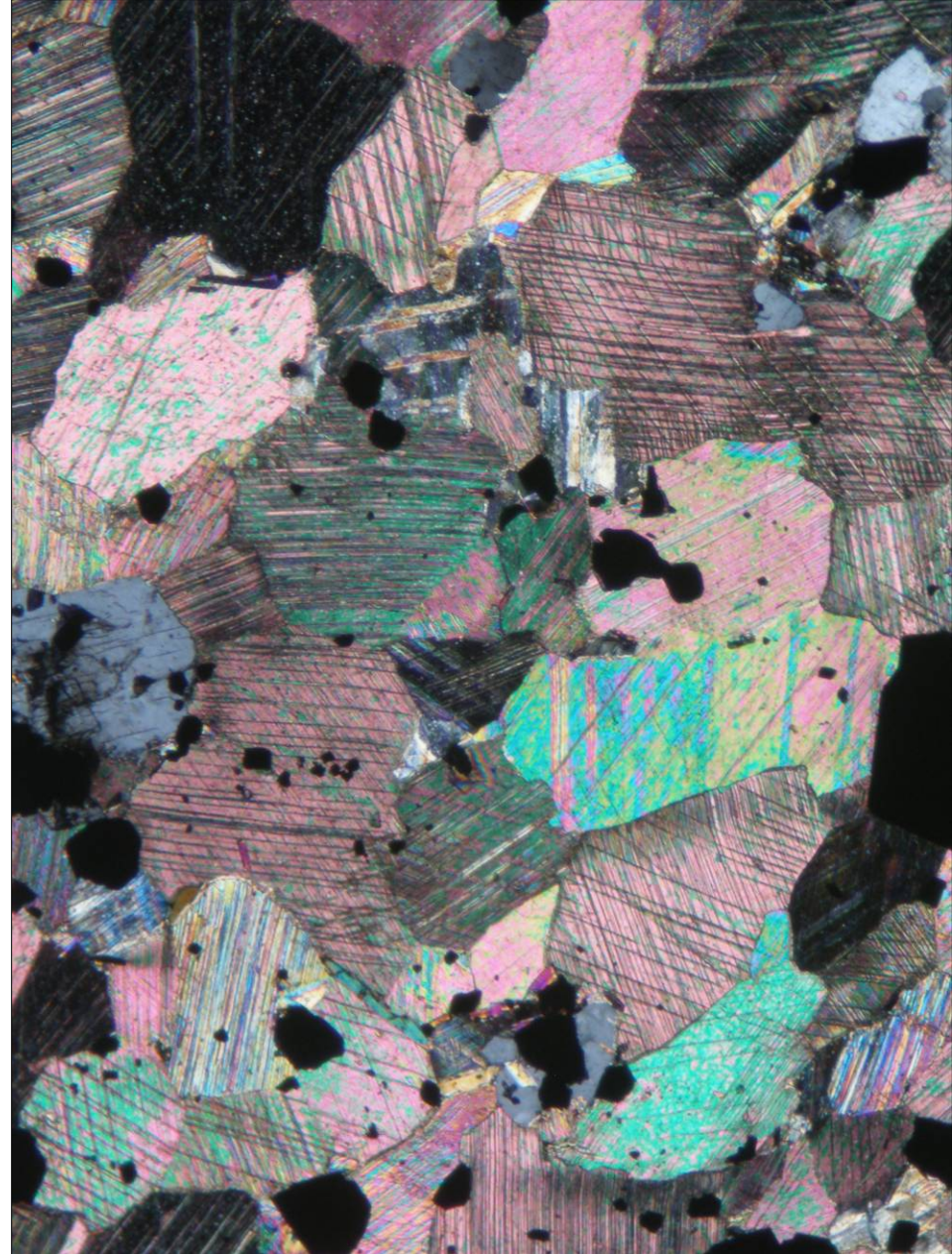
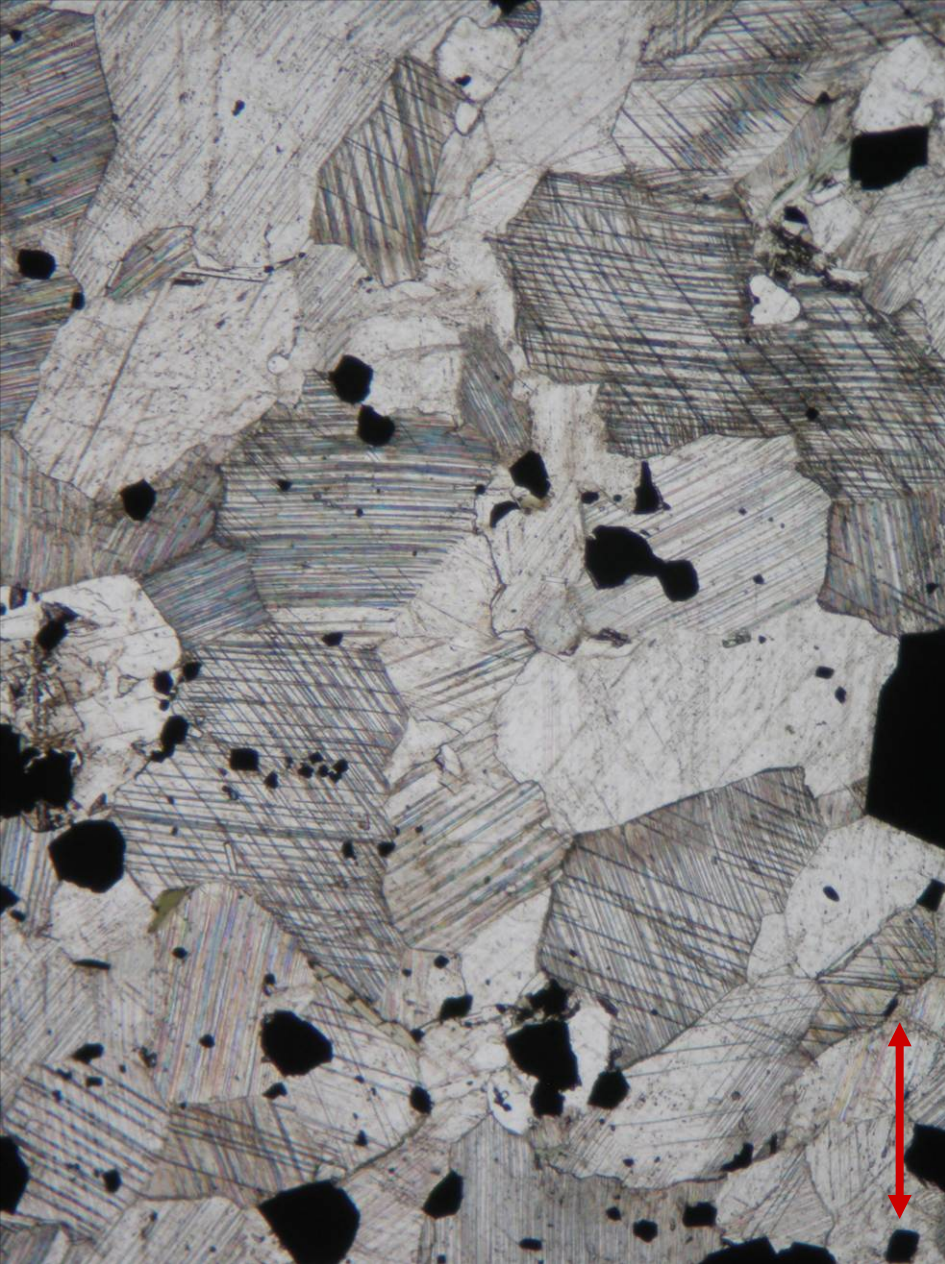
Calcite in a carbonate-rich band in greenschist from Horní Údolí, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





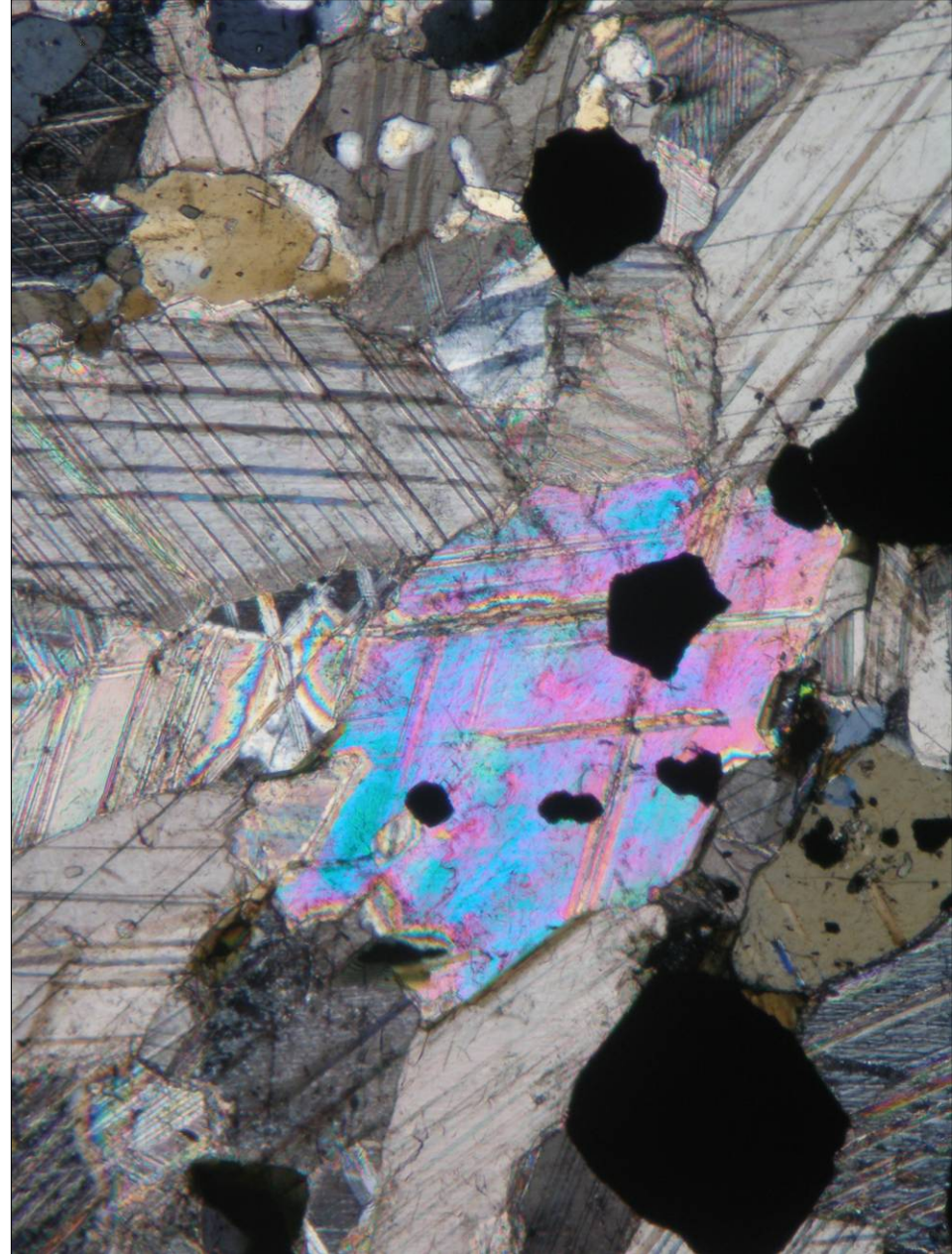
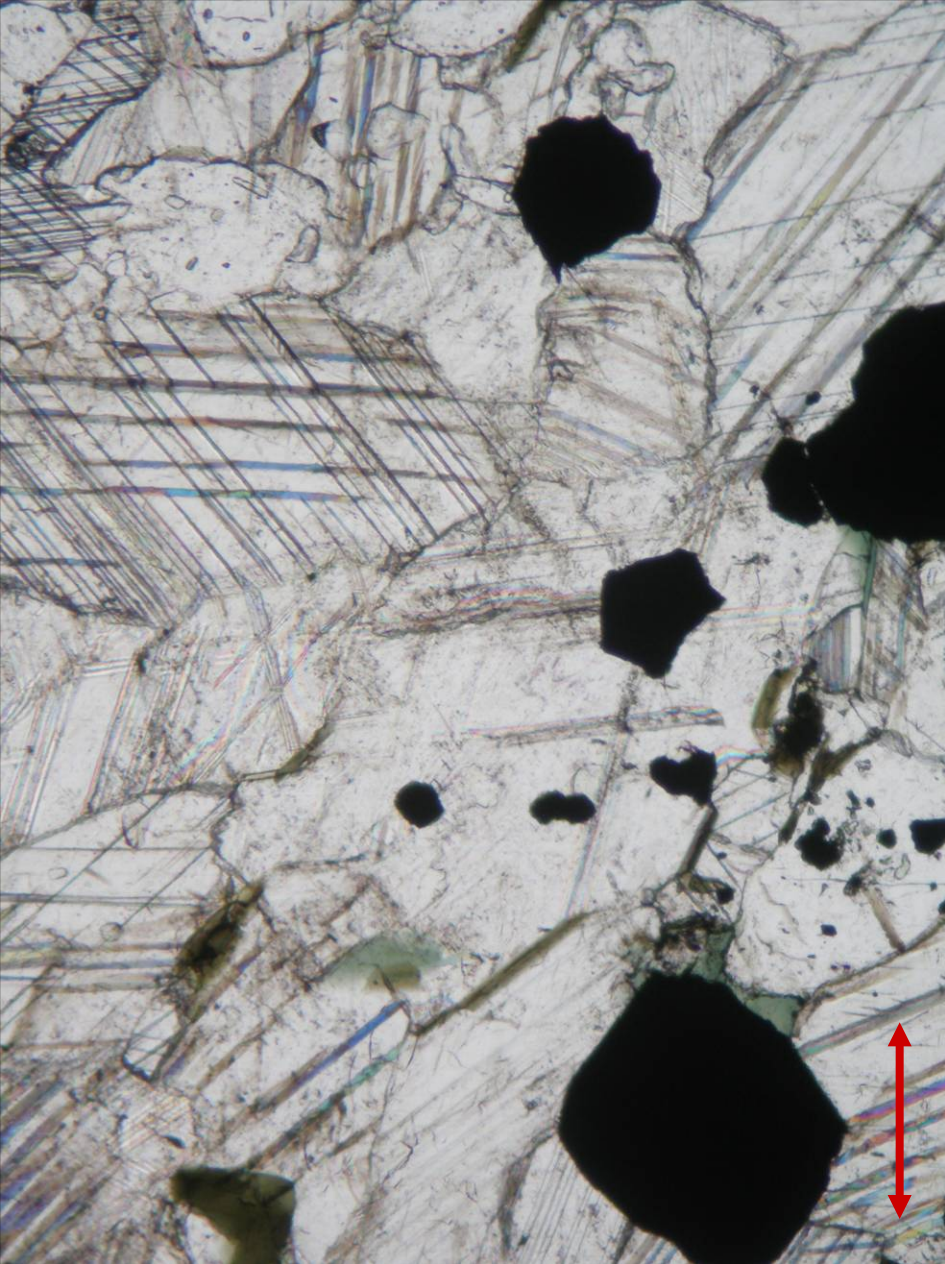
Calcite and magnetite in marble from Heřmanovice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





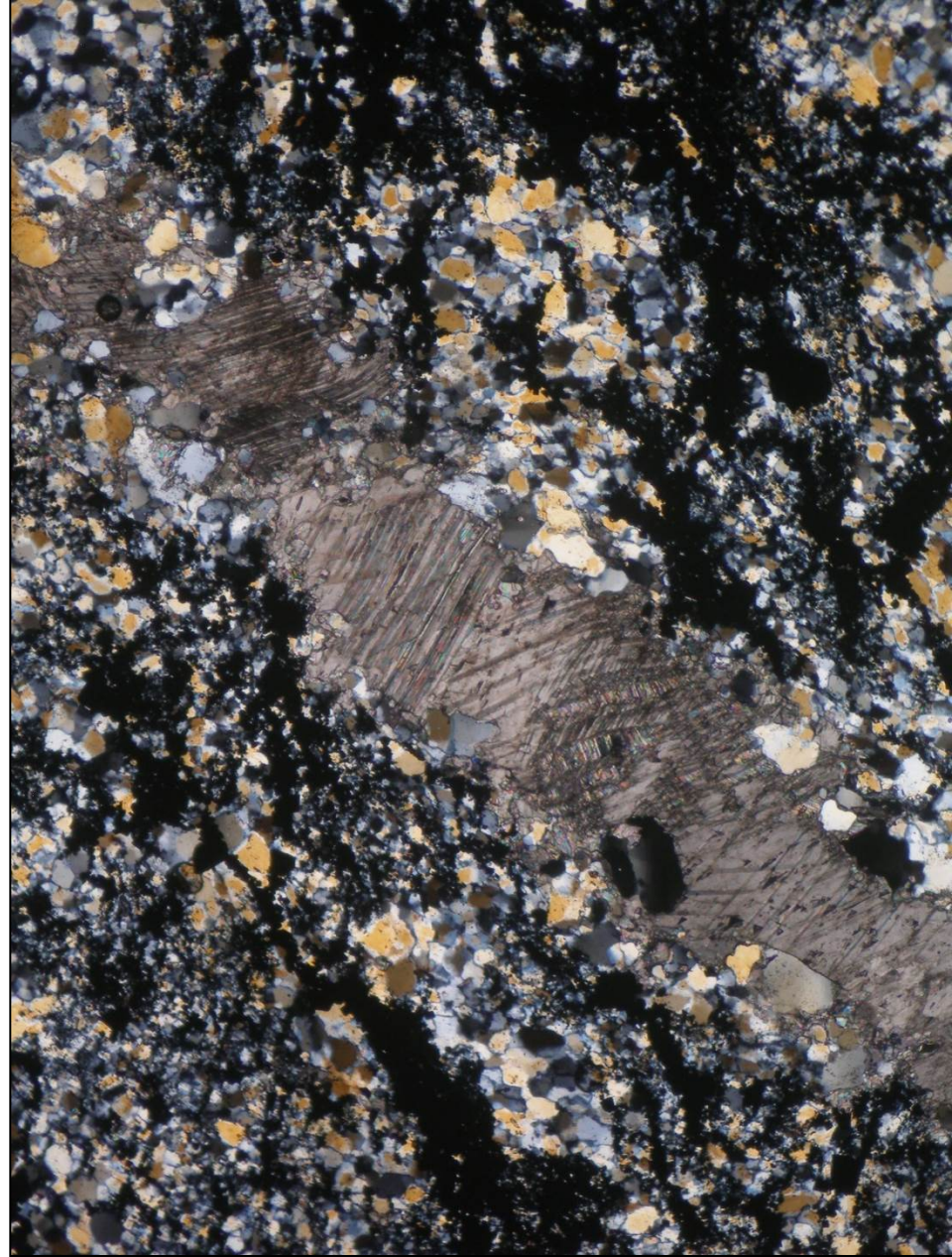
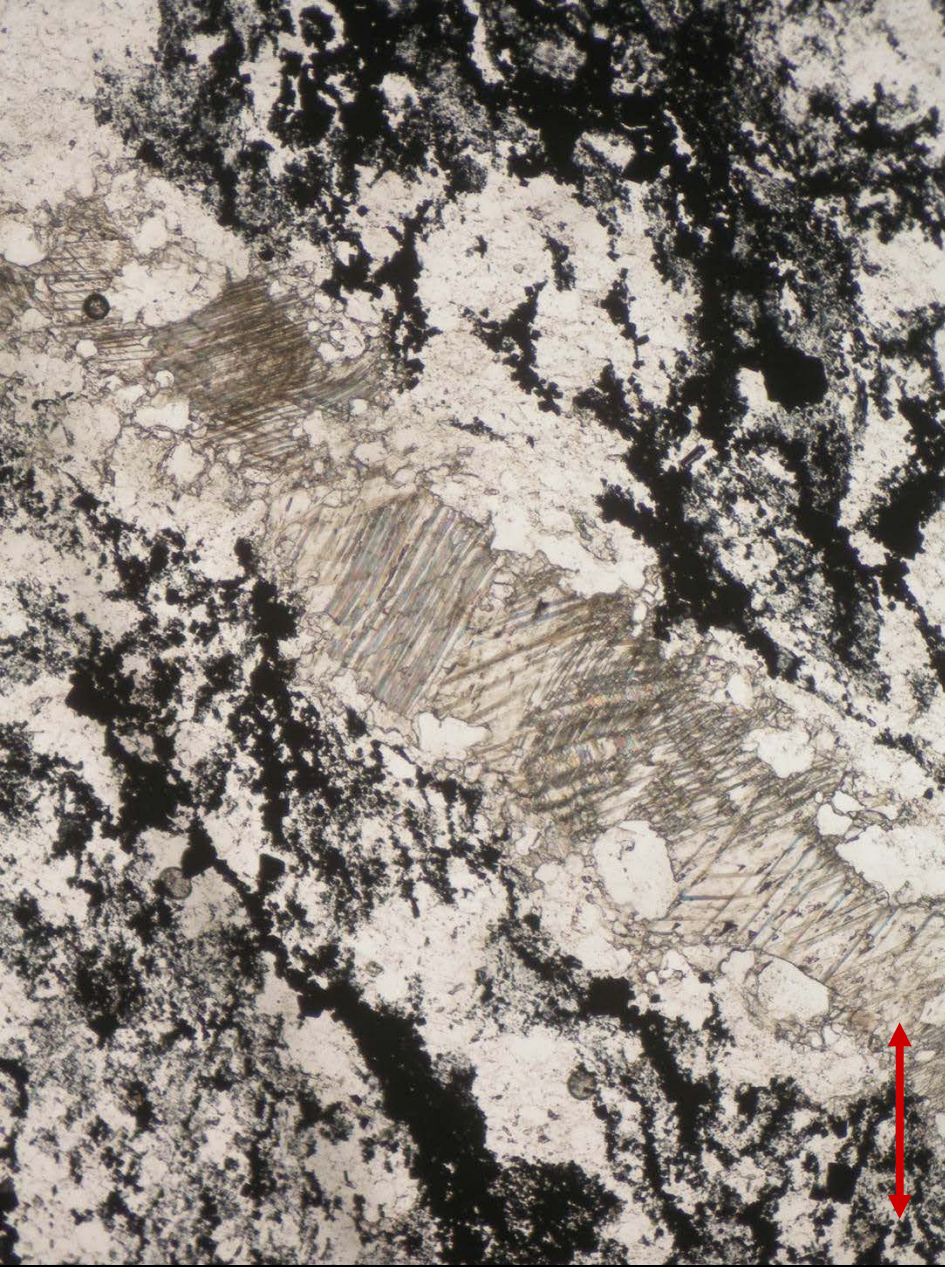
Calcite and magnetite in marble from Heřmanovice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





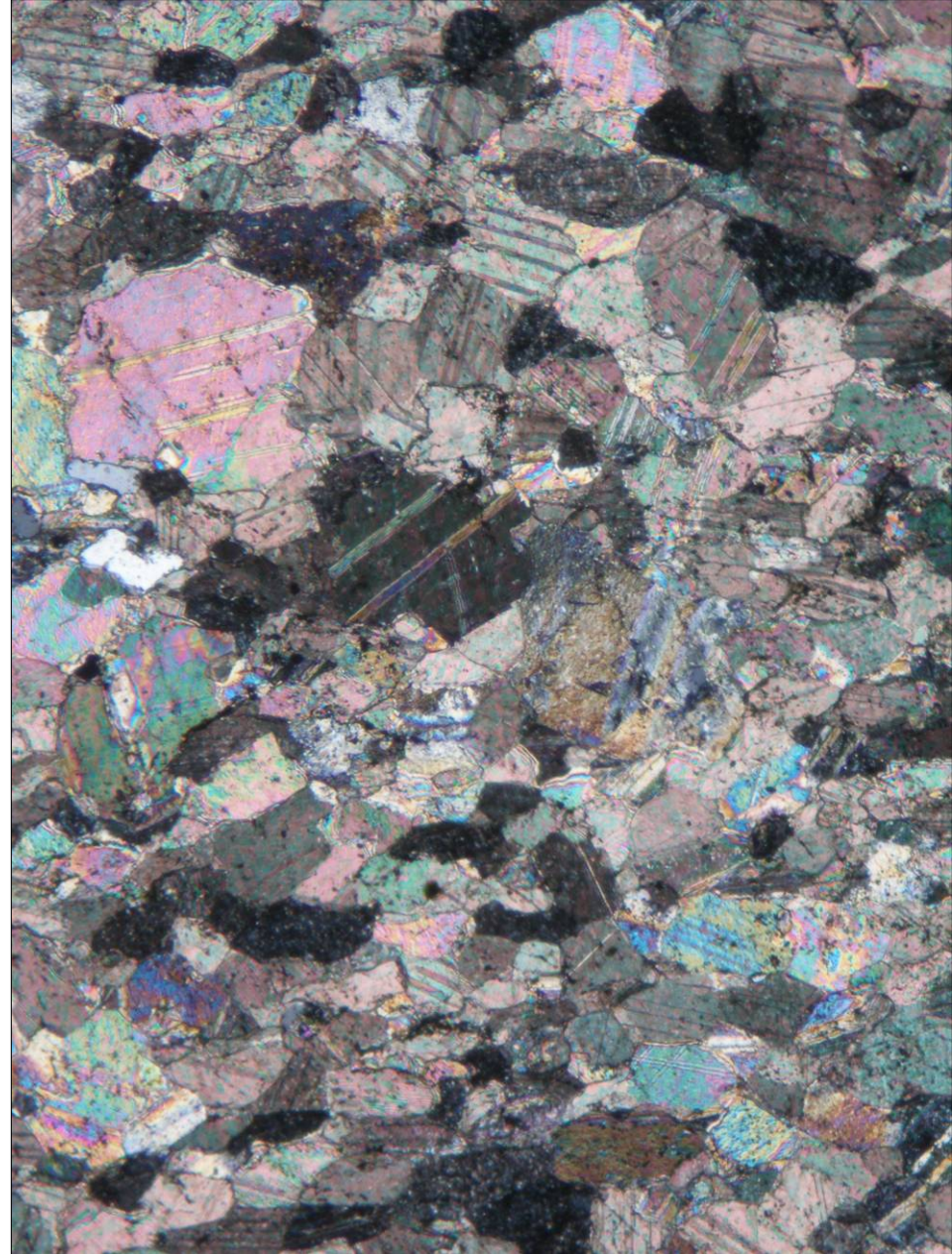
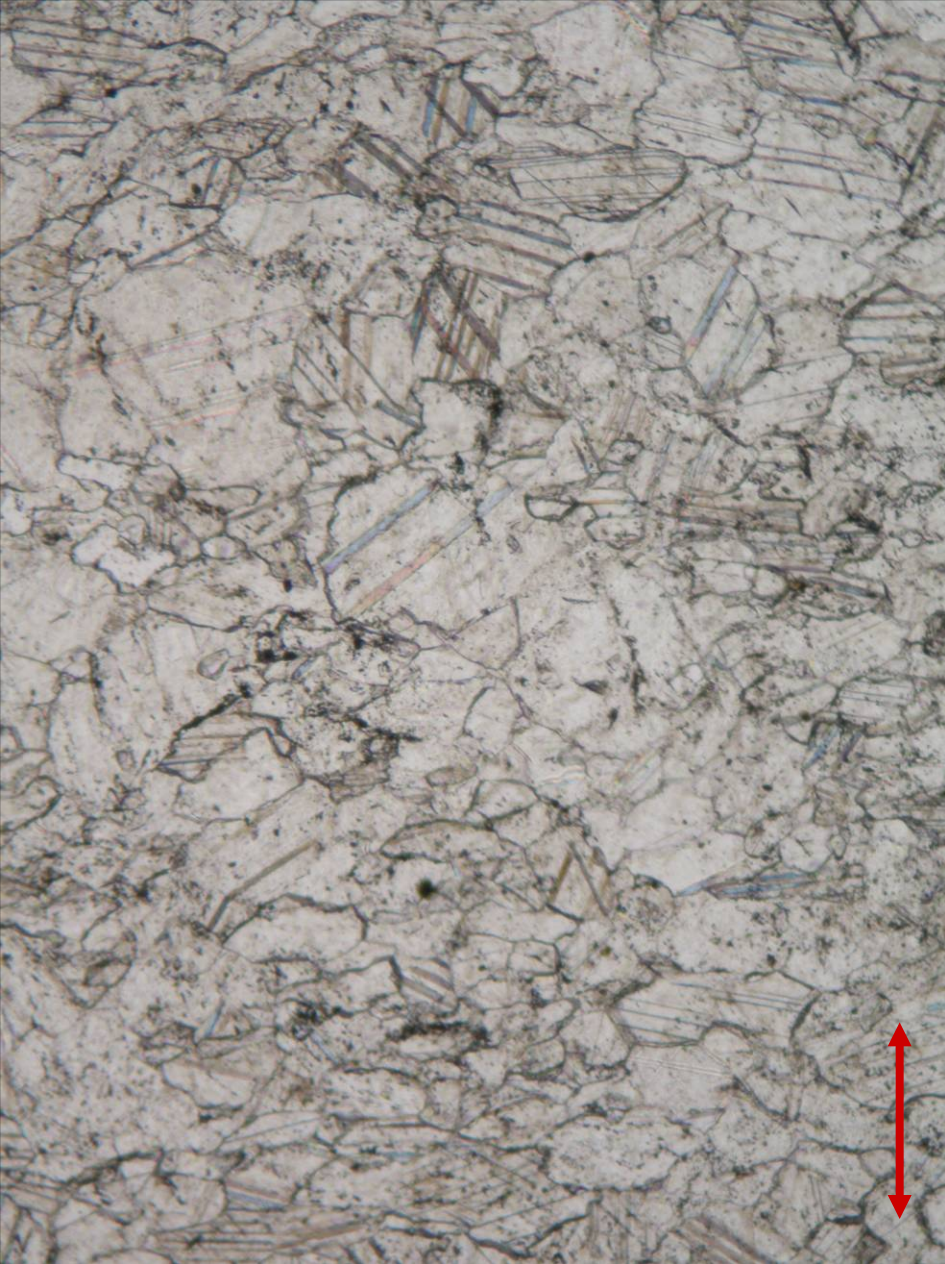
Calcite and magnetite in marble from Heřmanovice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





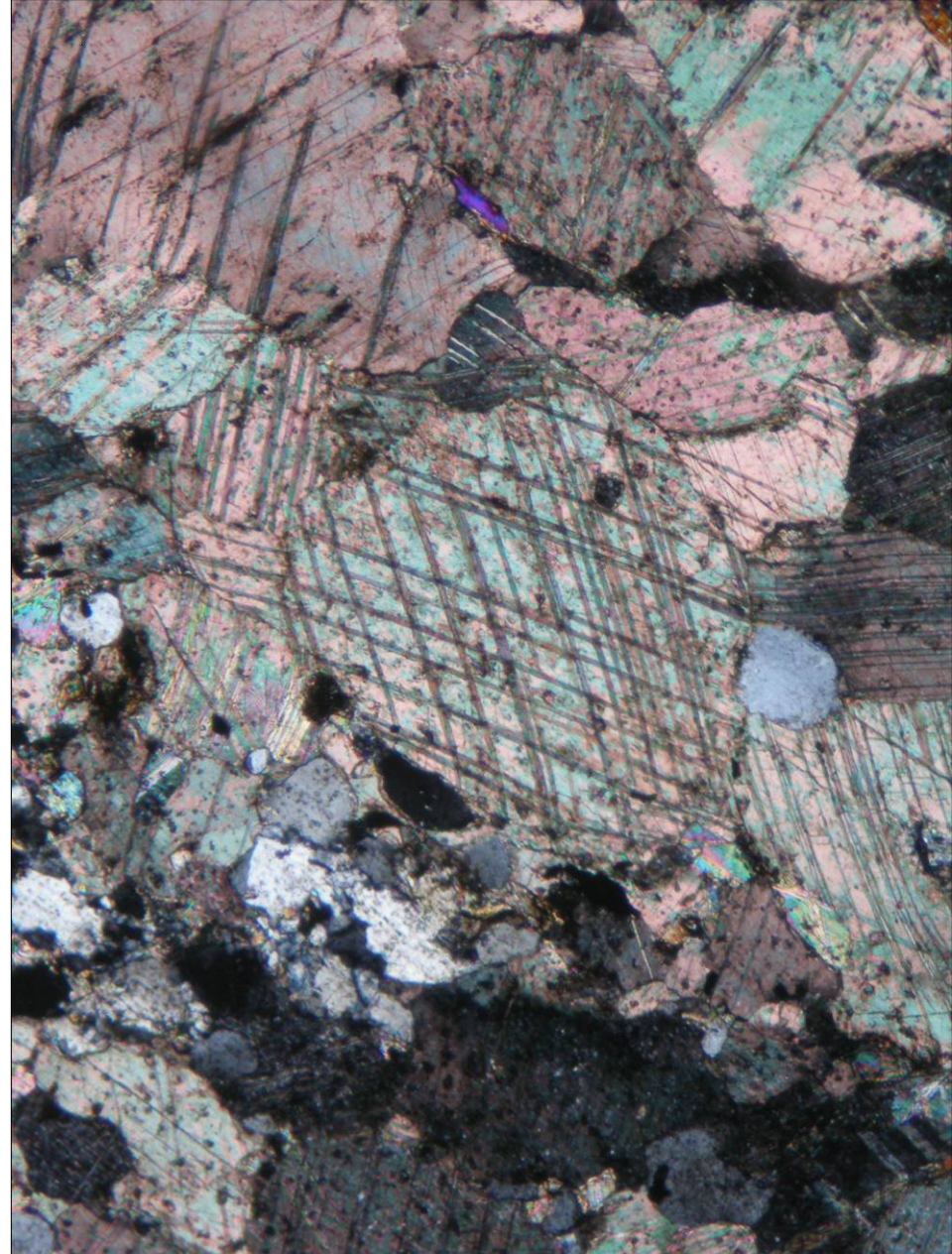
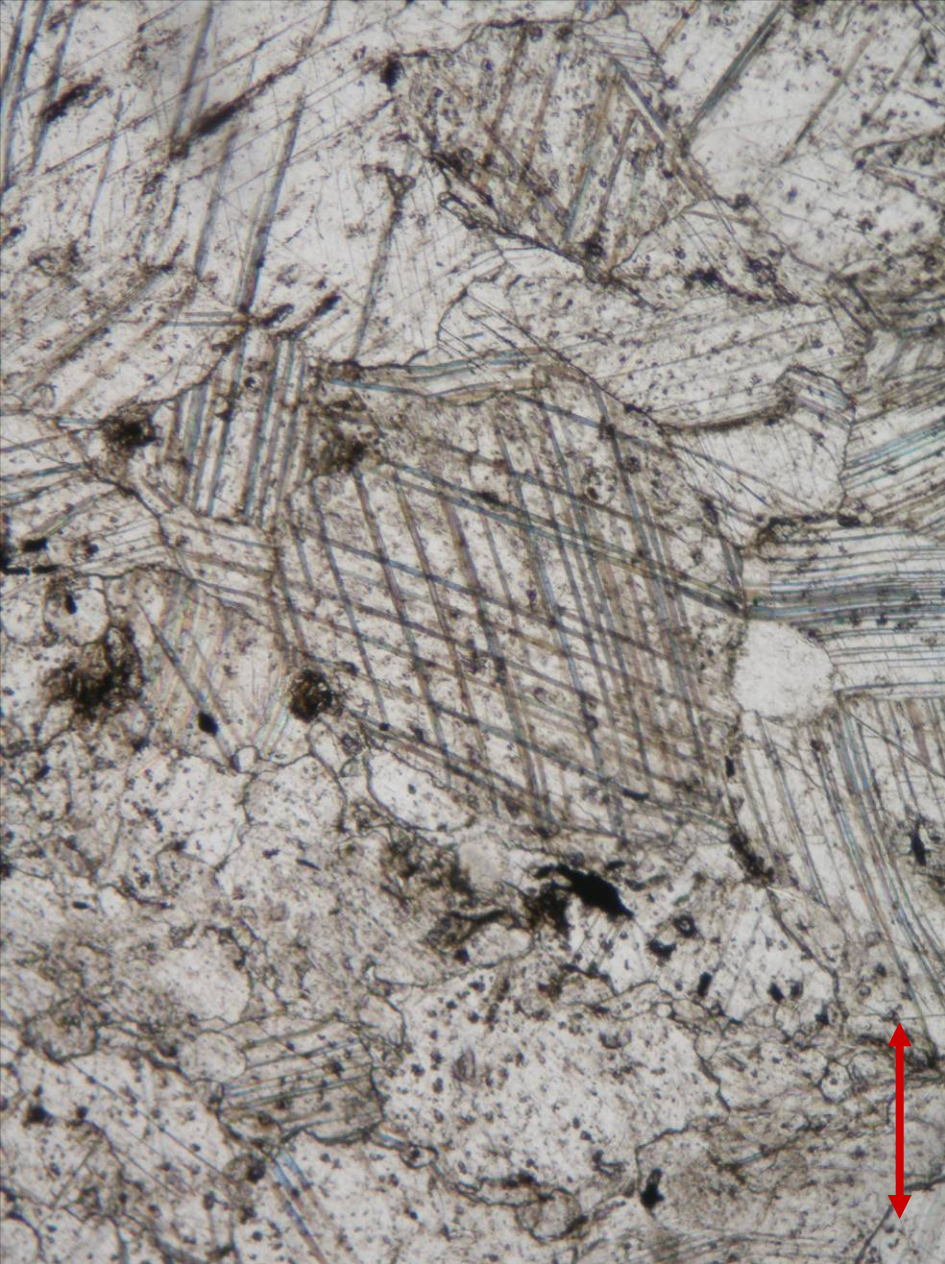
Calcite vein in iron ore from Horní Moravice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.2 mm. Photo: JiZi.





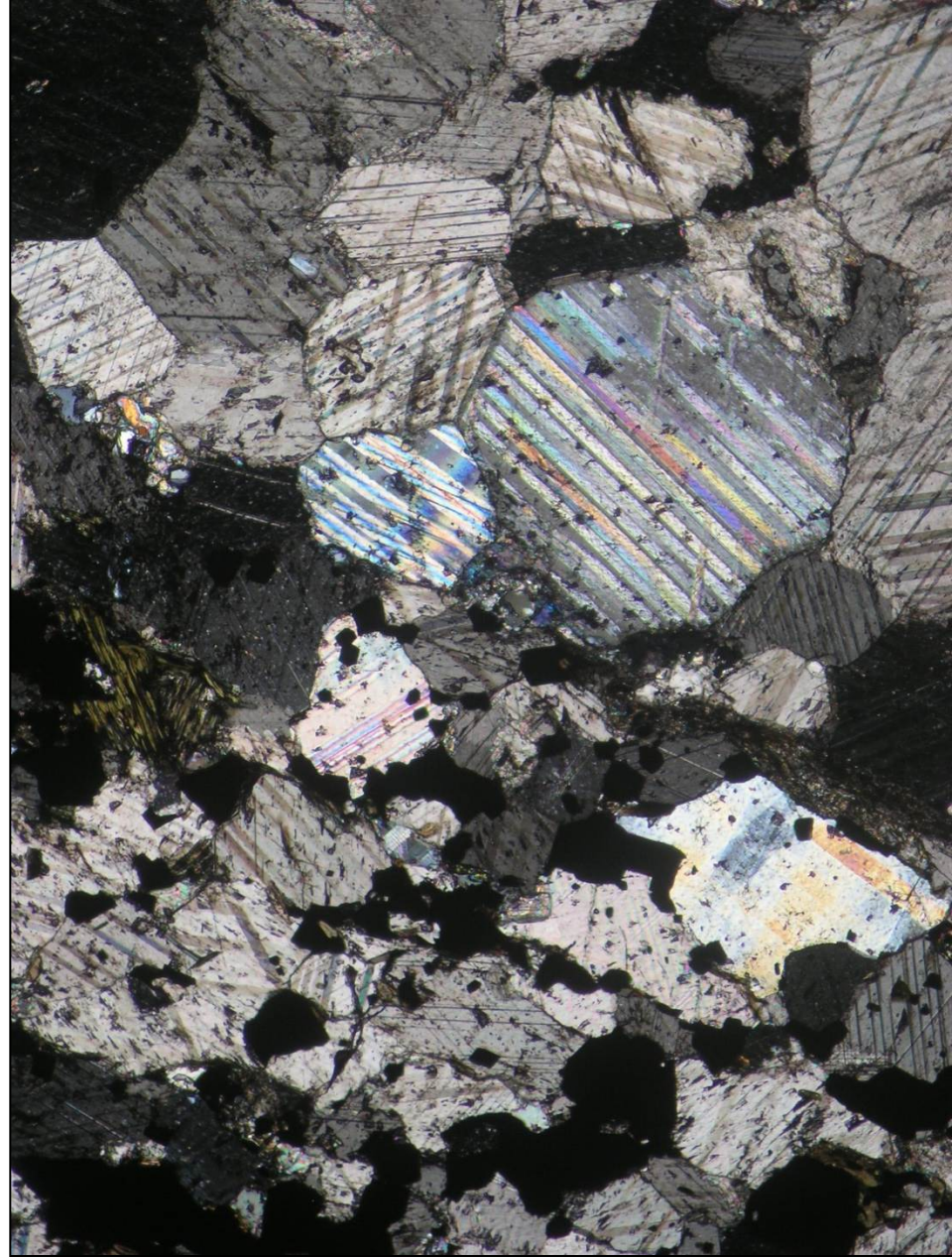
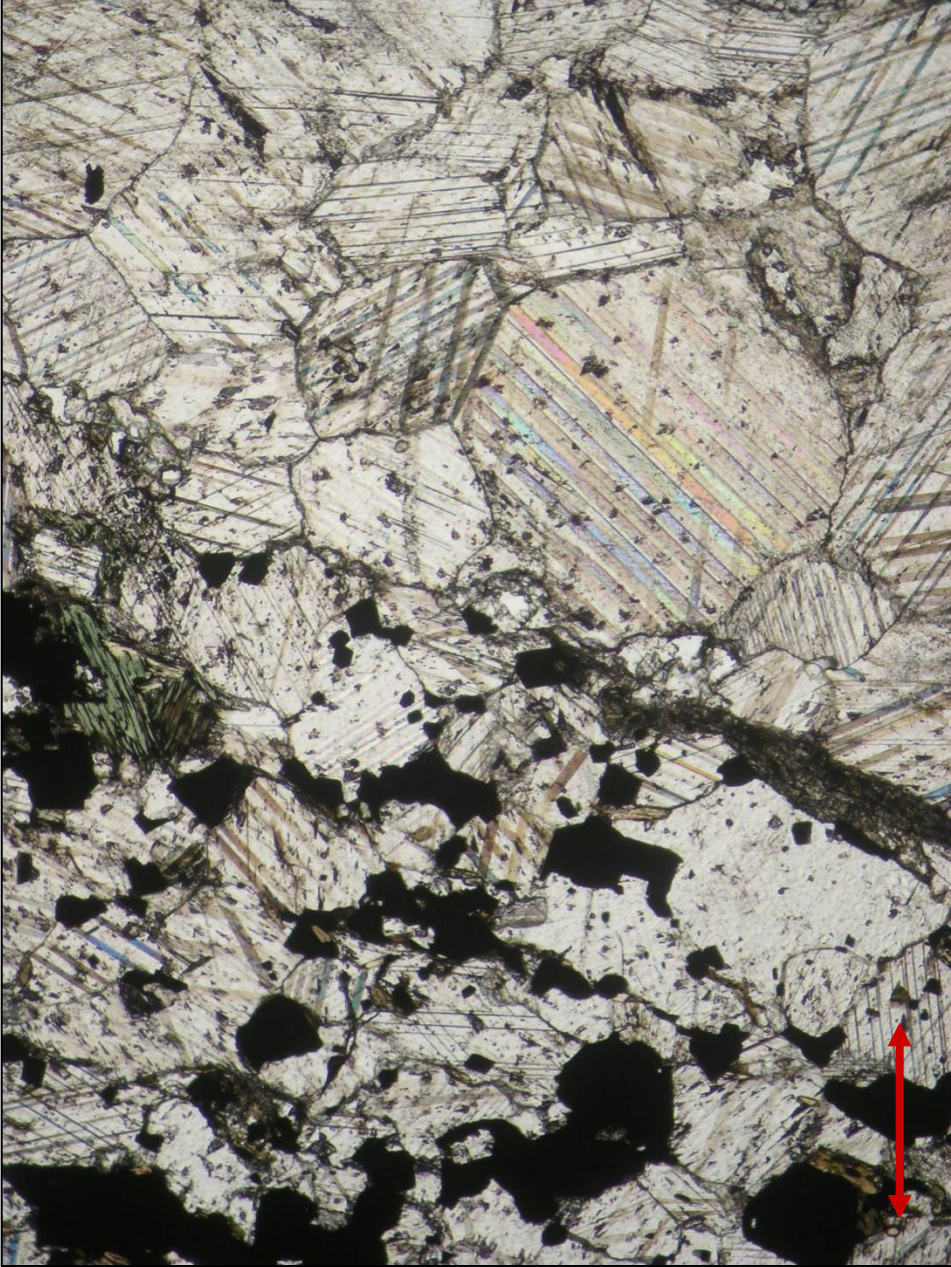
Calcite in marble from Heřmanovice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





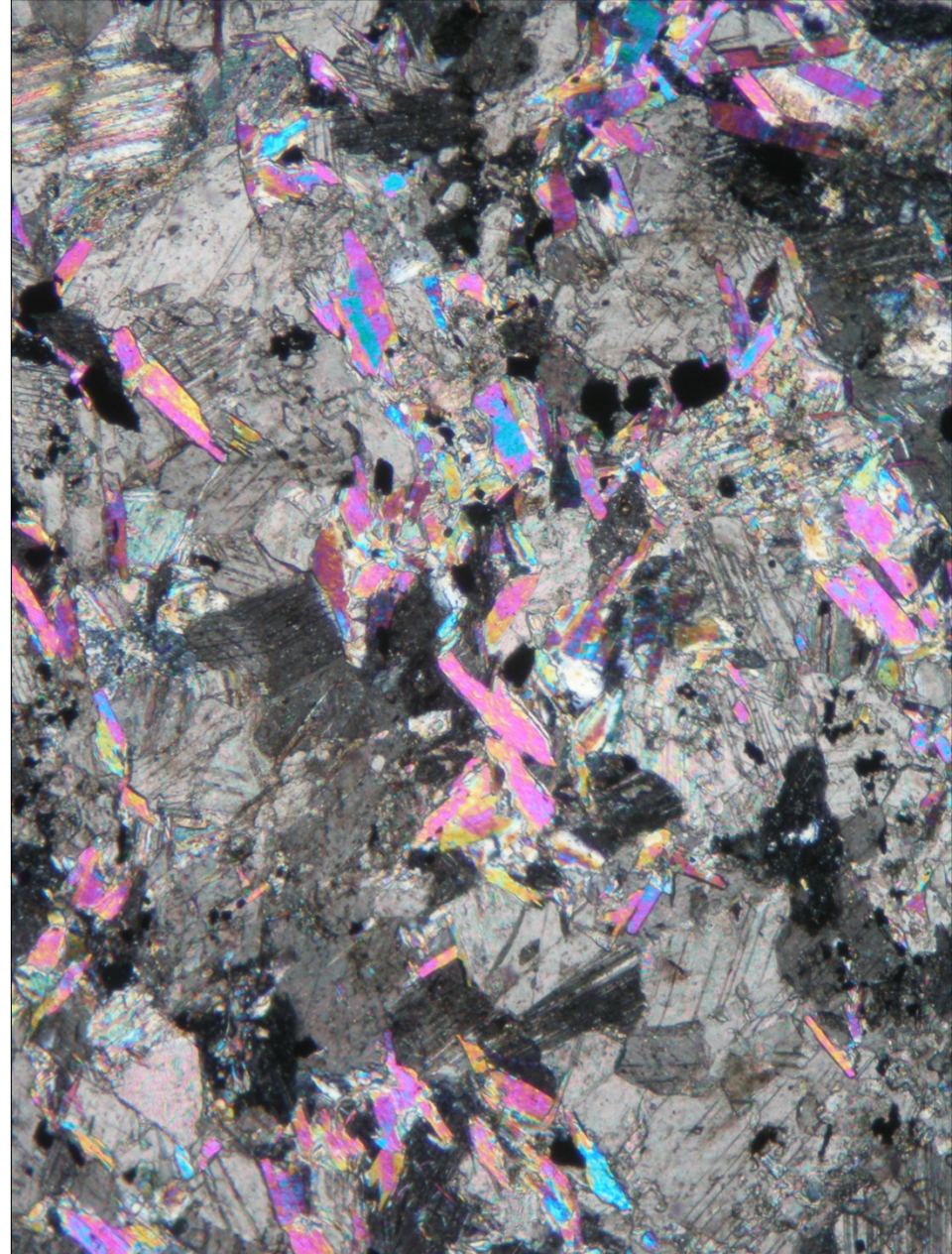
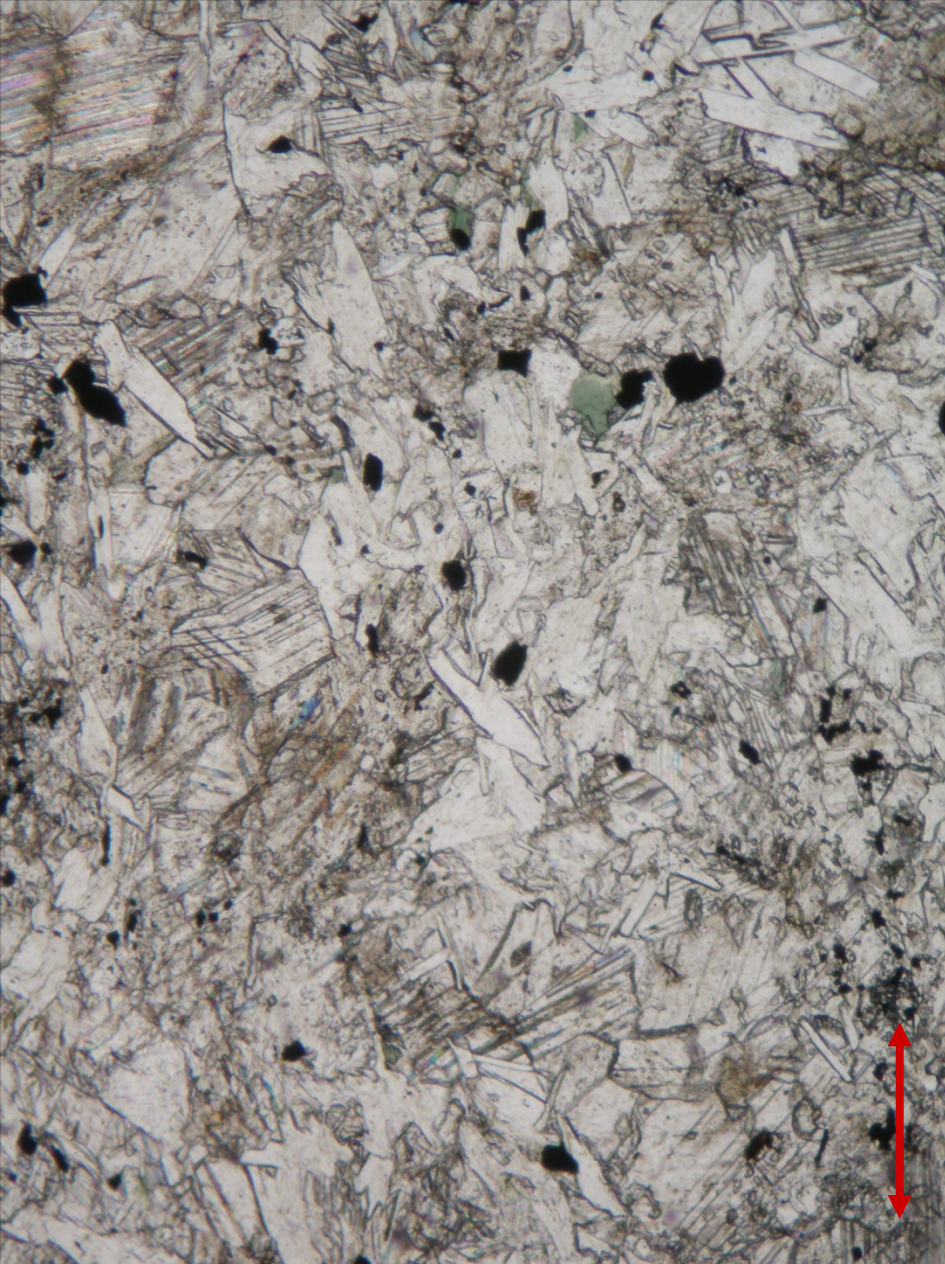
Calcite in marble from Supíkovice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





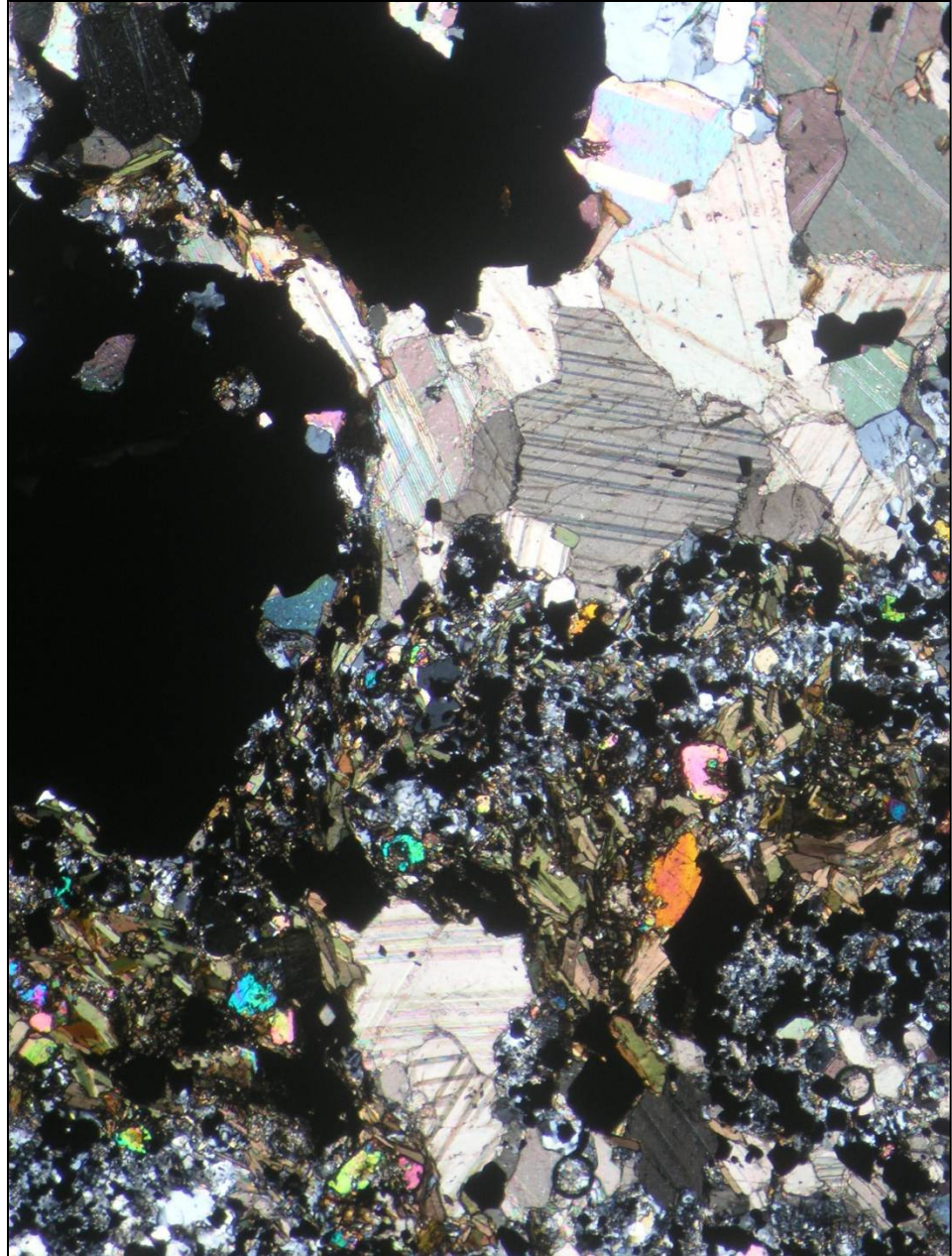
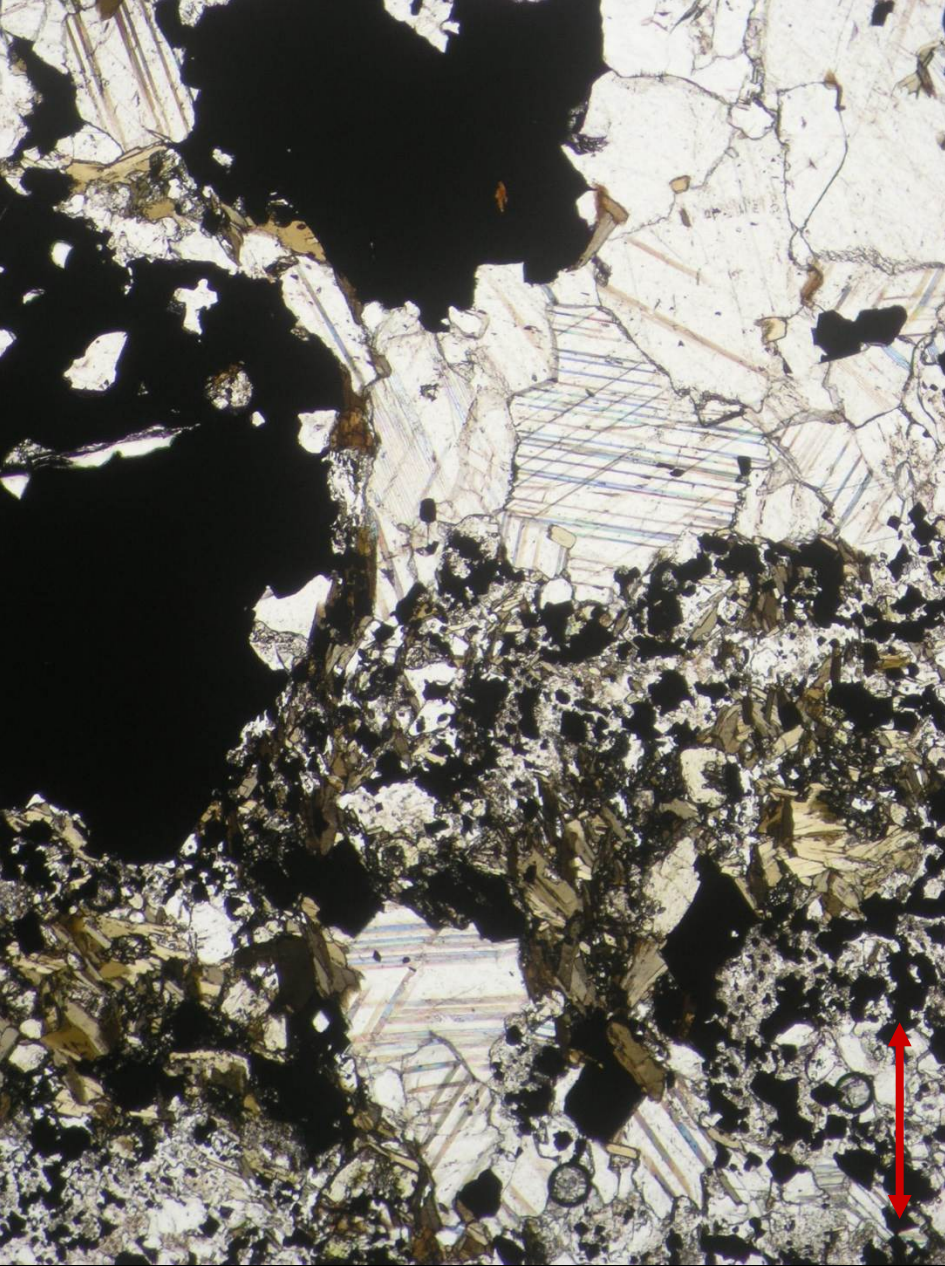
Calcite in marble with magnetite from Rejvíz, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.4 mm. Photo: JiZi.





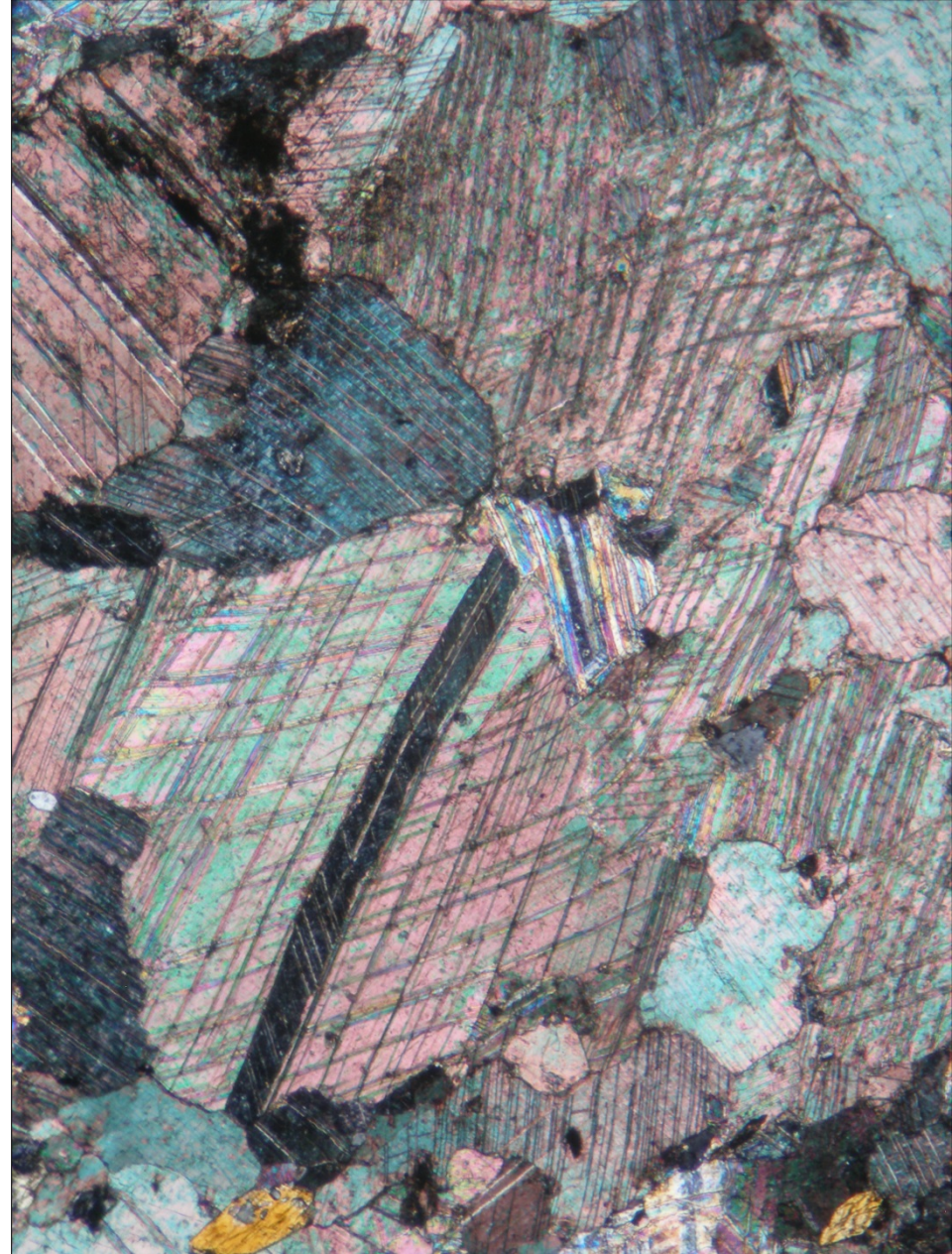
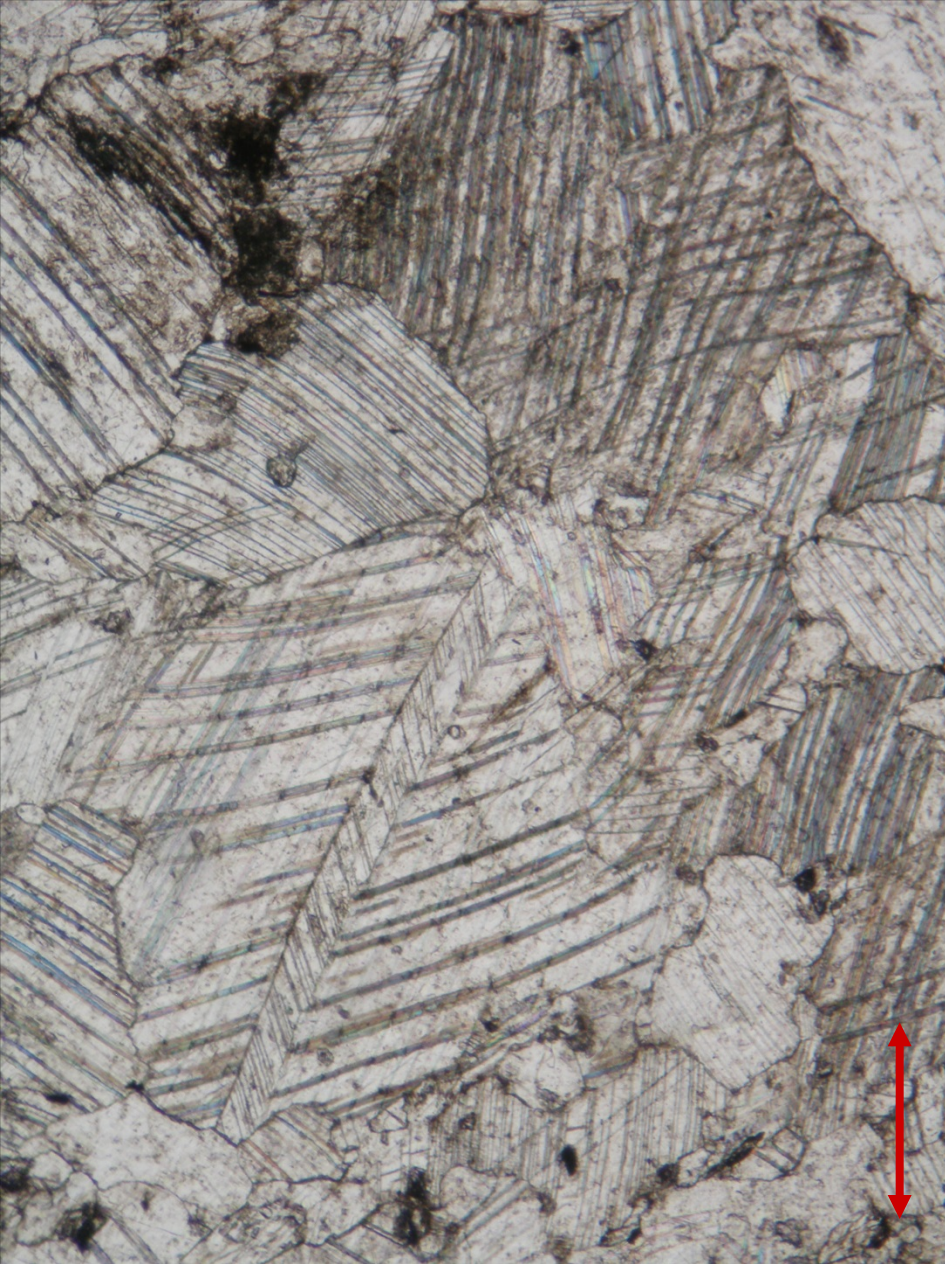
Calcite and muscovite in marble from Drakov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





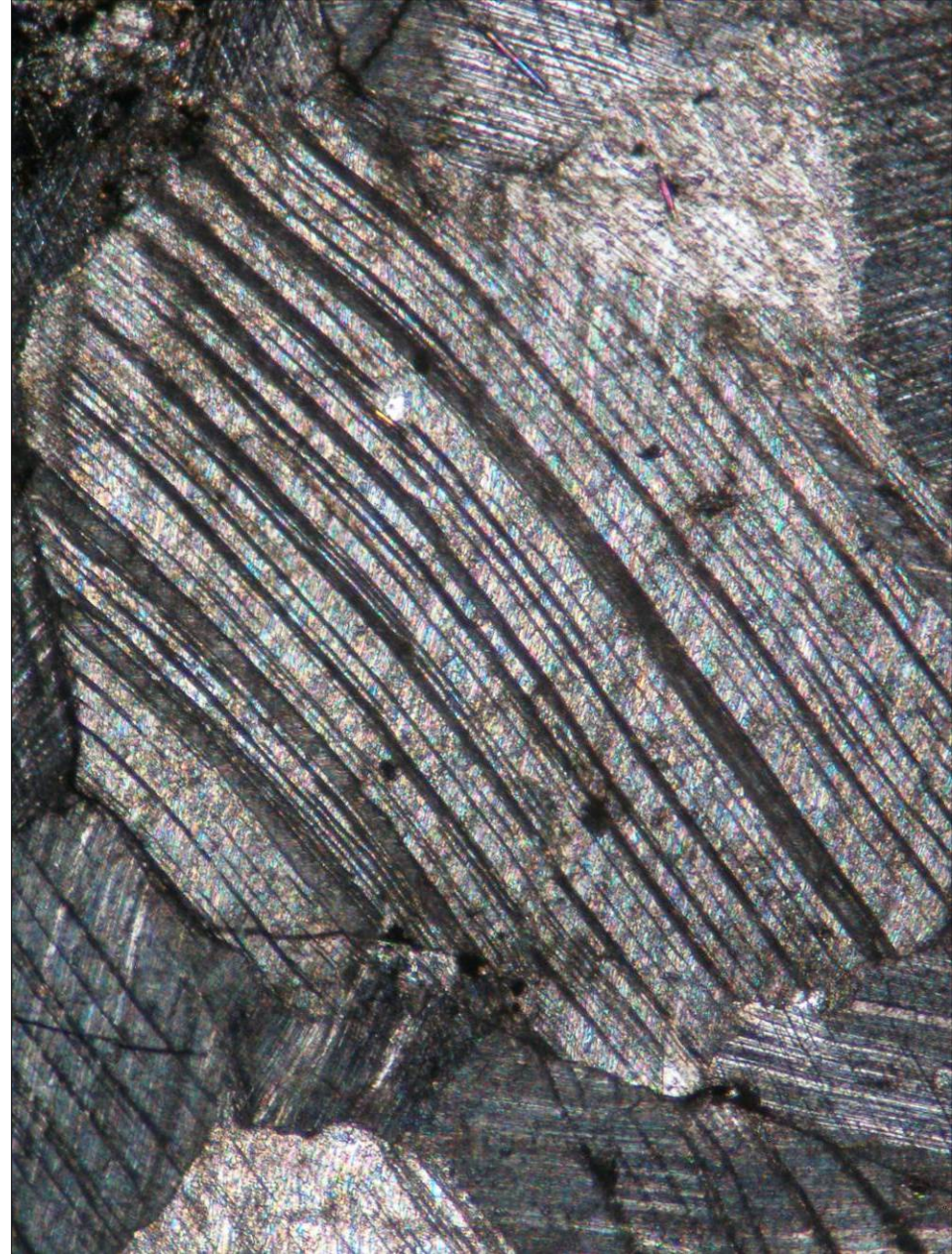
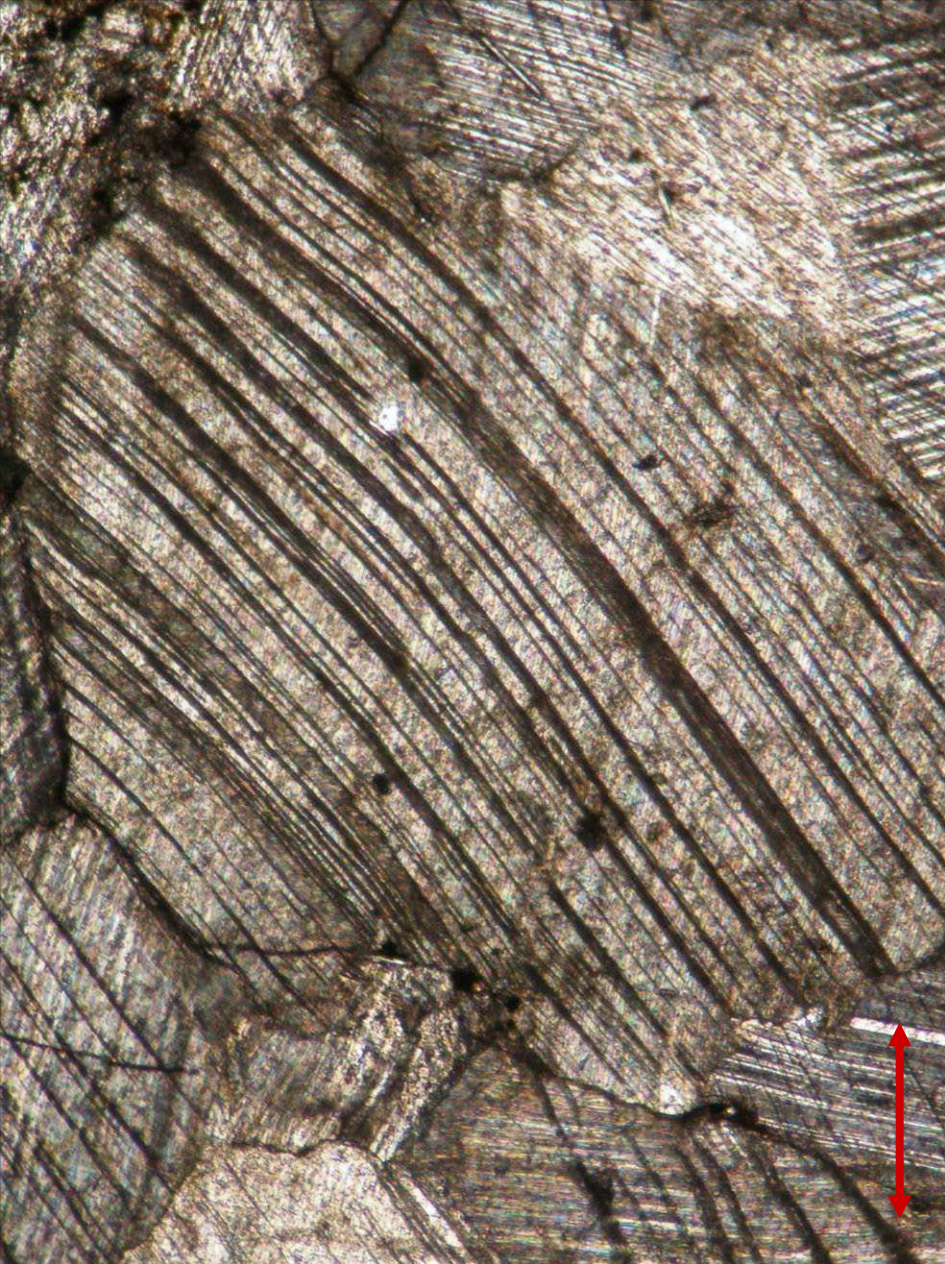
Calcite with biotite, epidote and magnetite in iron ore from Rejvíz, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.4 mm. Photo: JiZi.





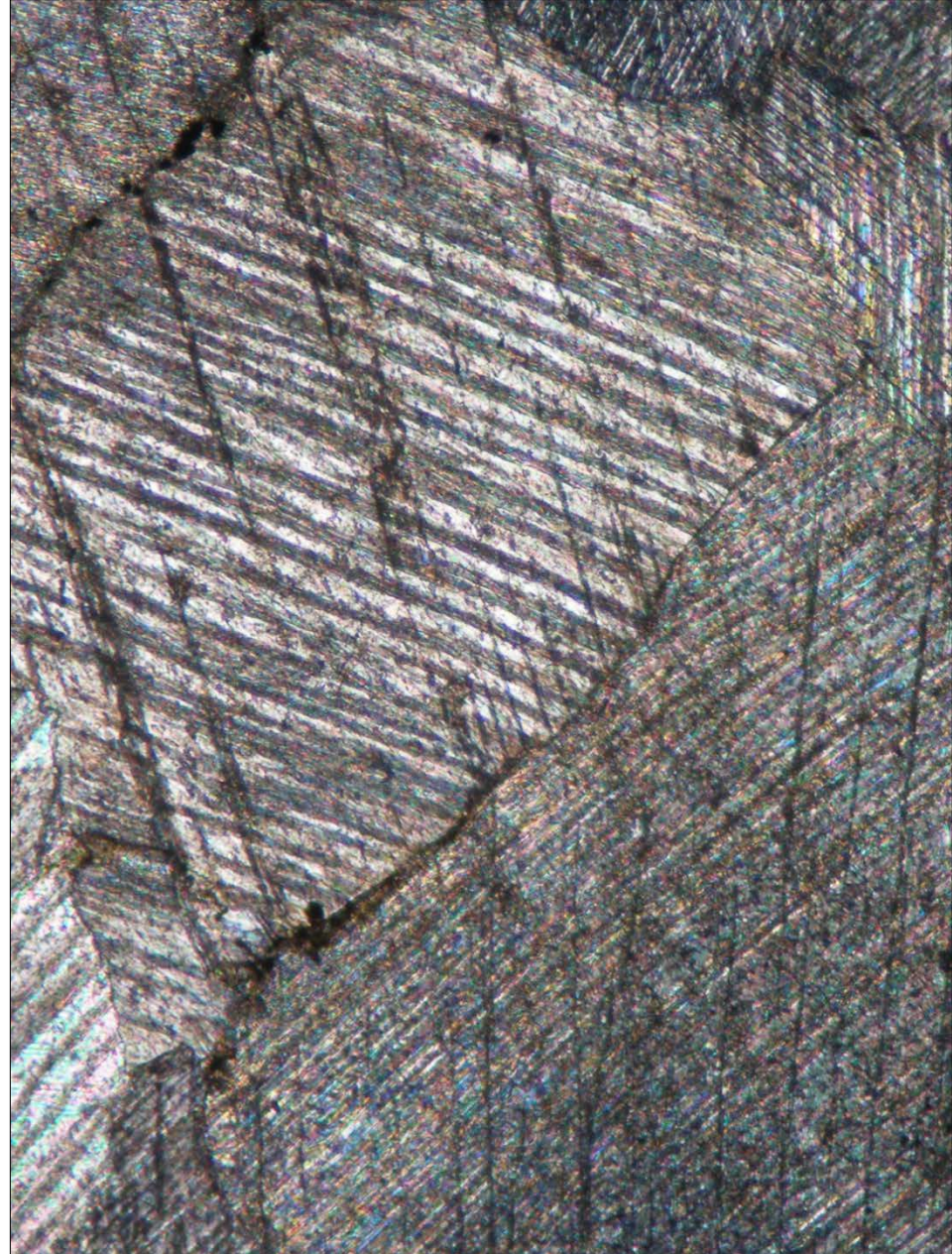
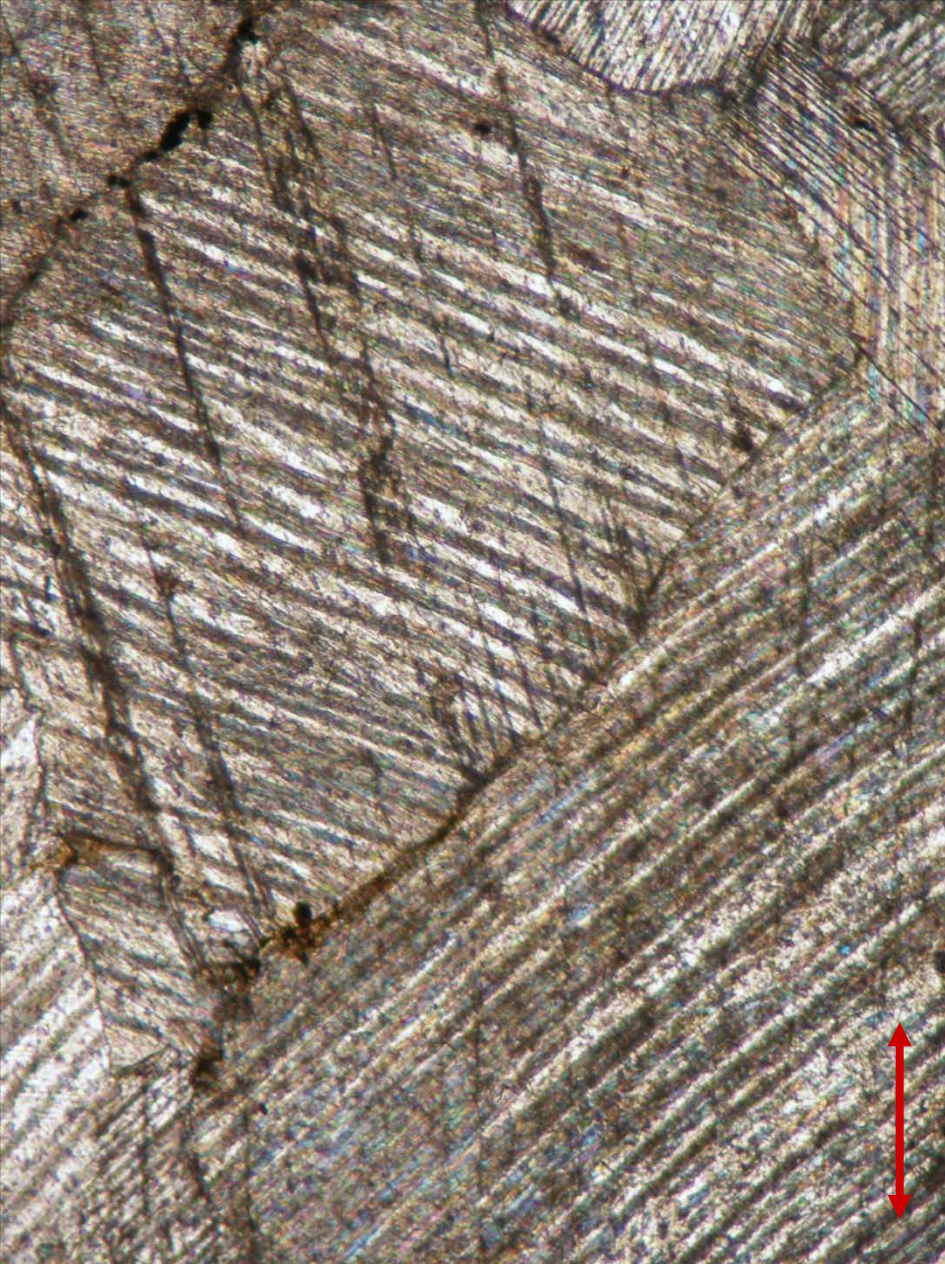
Calcite in marble from Supíkovice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





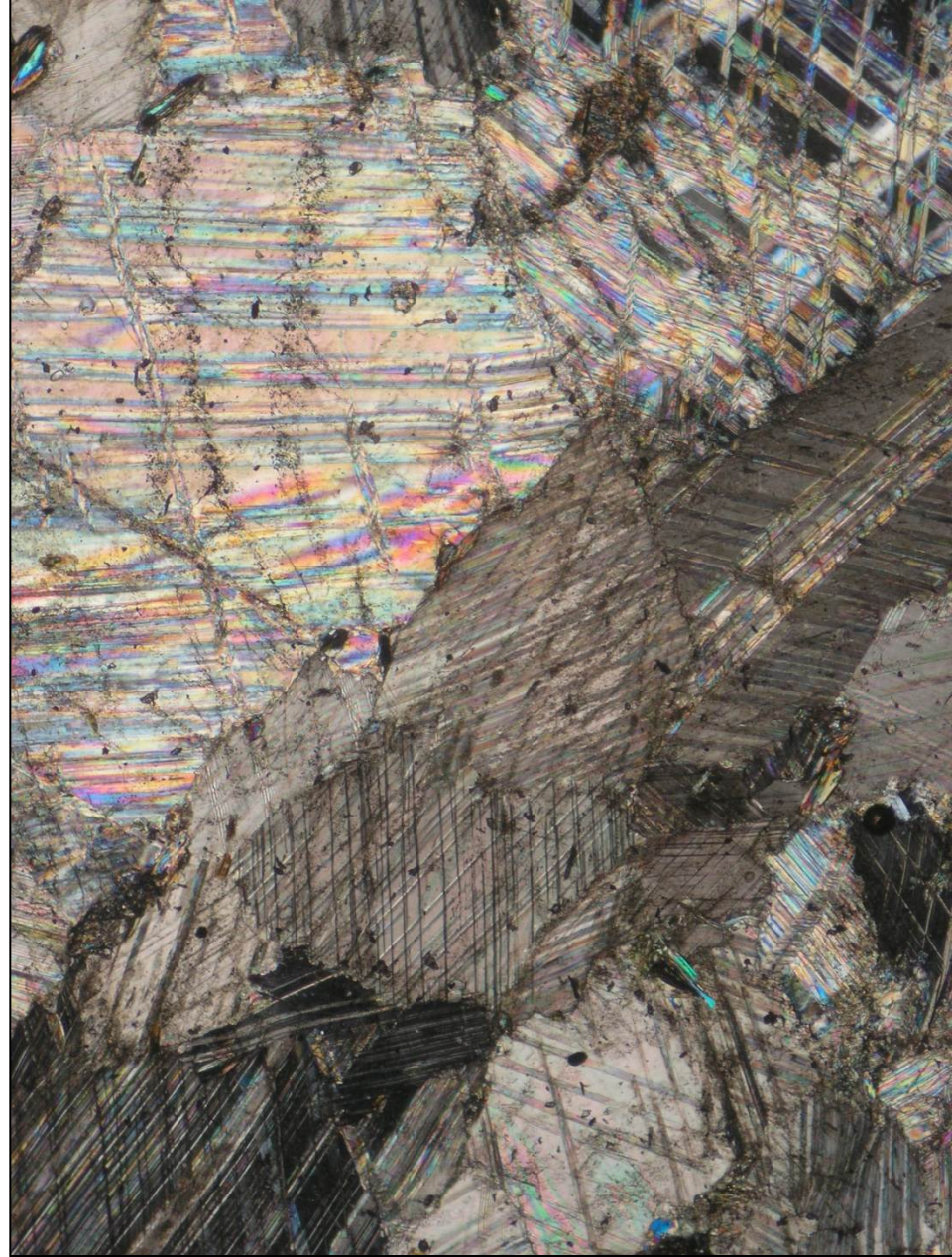
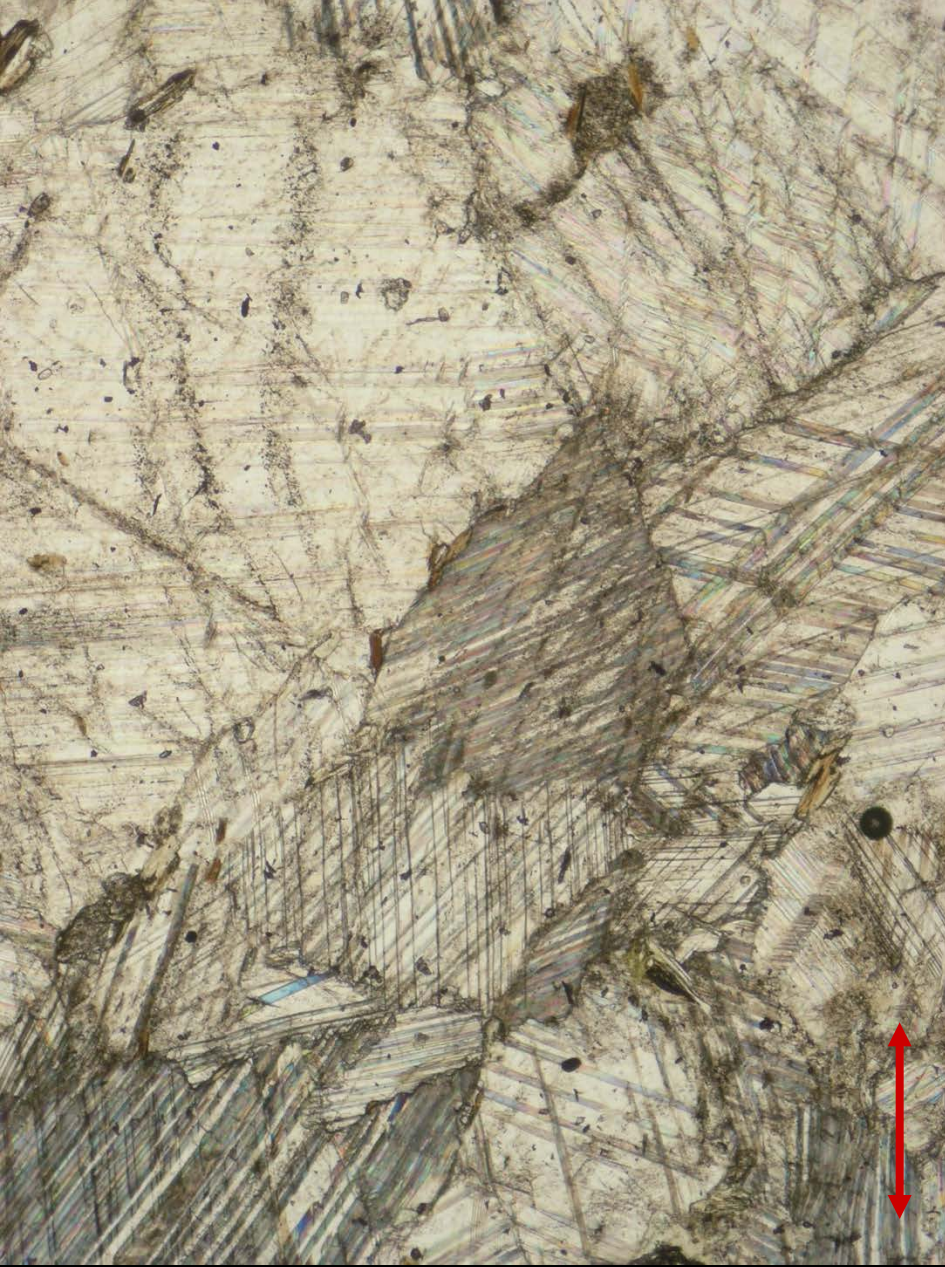
Calcite in marble from Lipová-lázně, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.6 mm. Photo: JiZi.





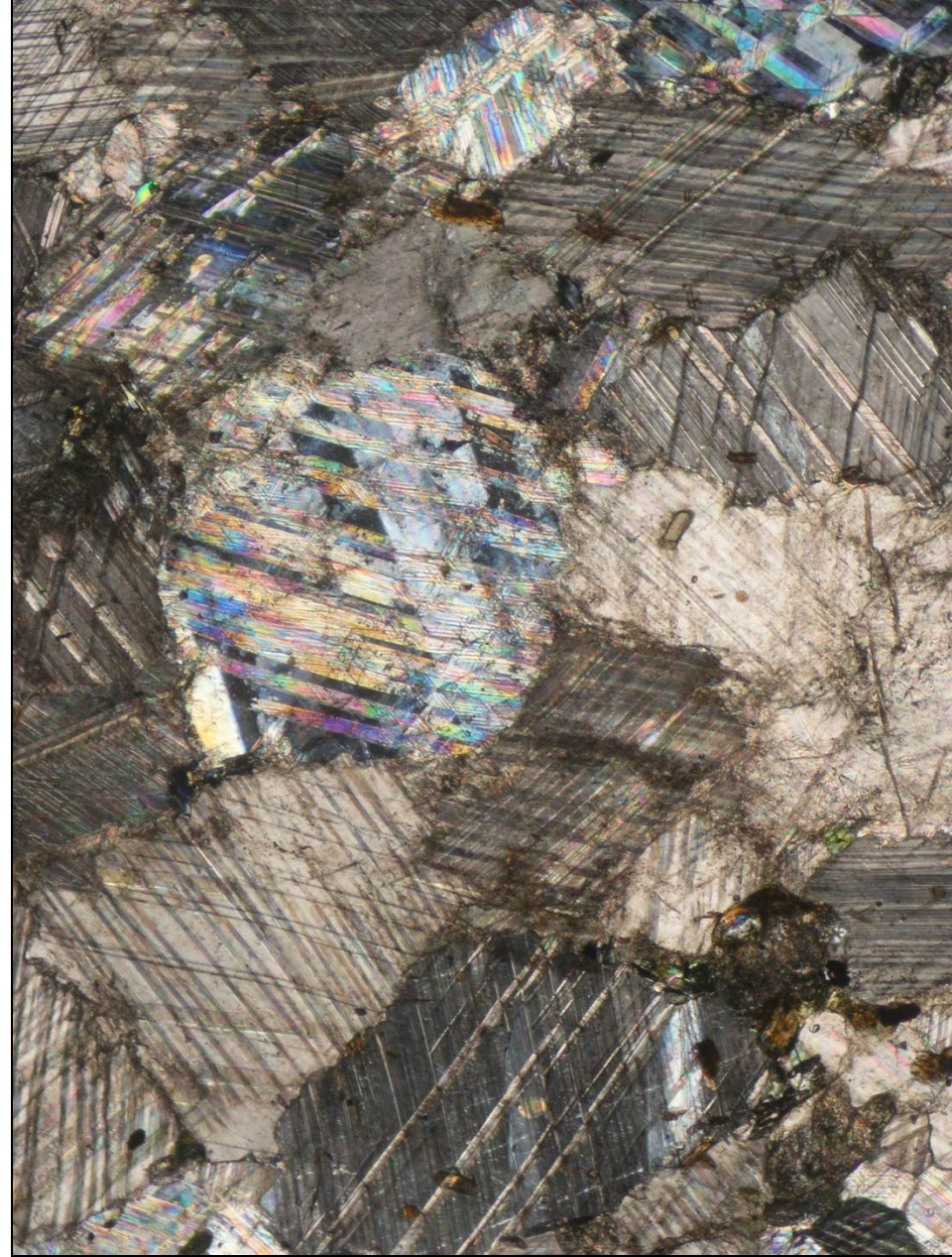
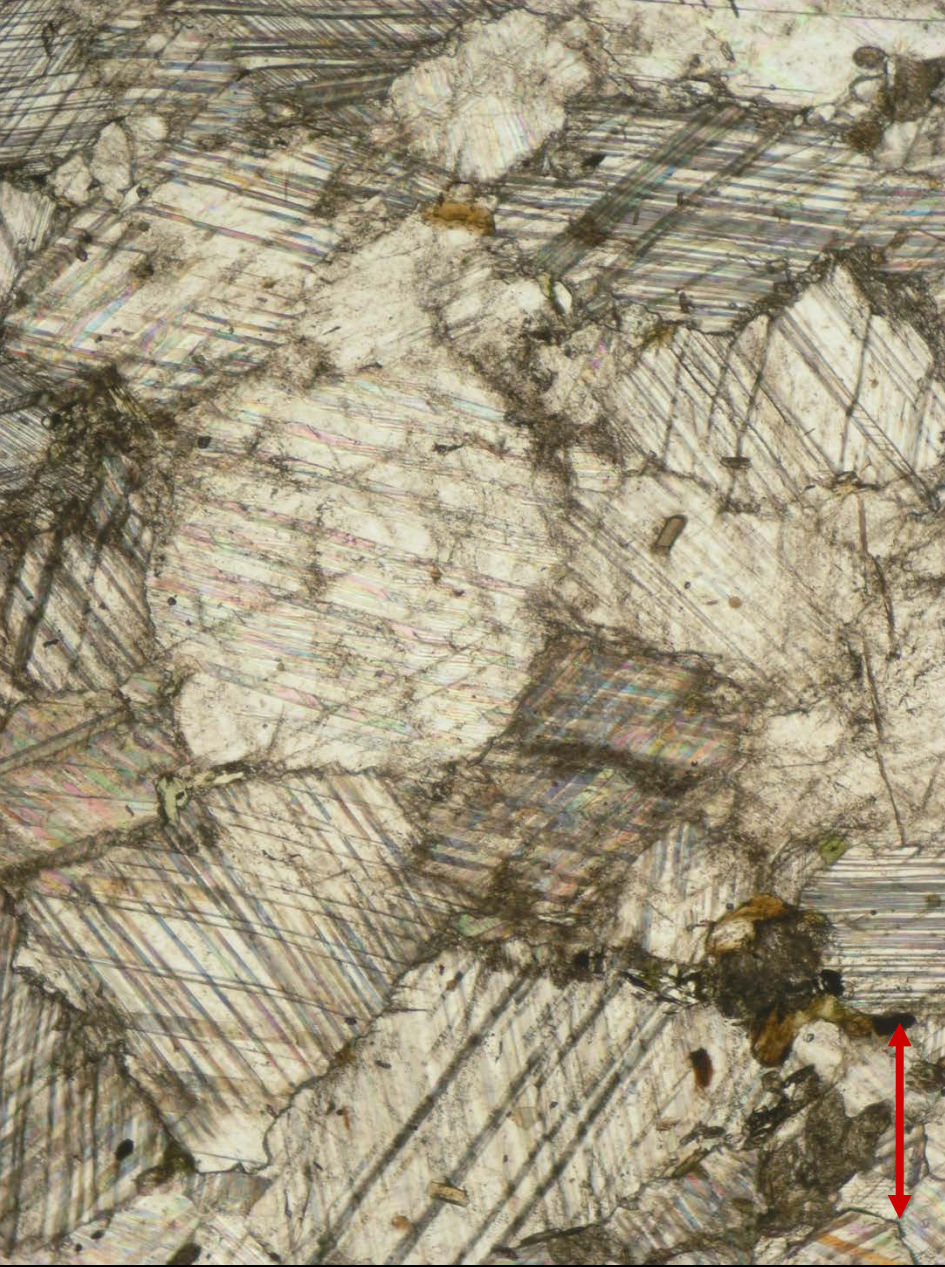
Calcite in marble from Lipová-lázně, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.5 mm. Photo: JiZi.





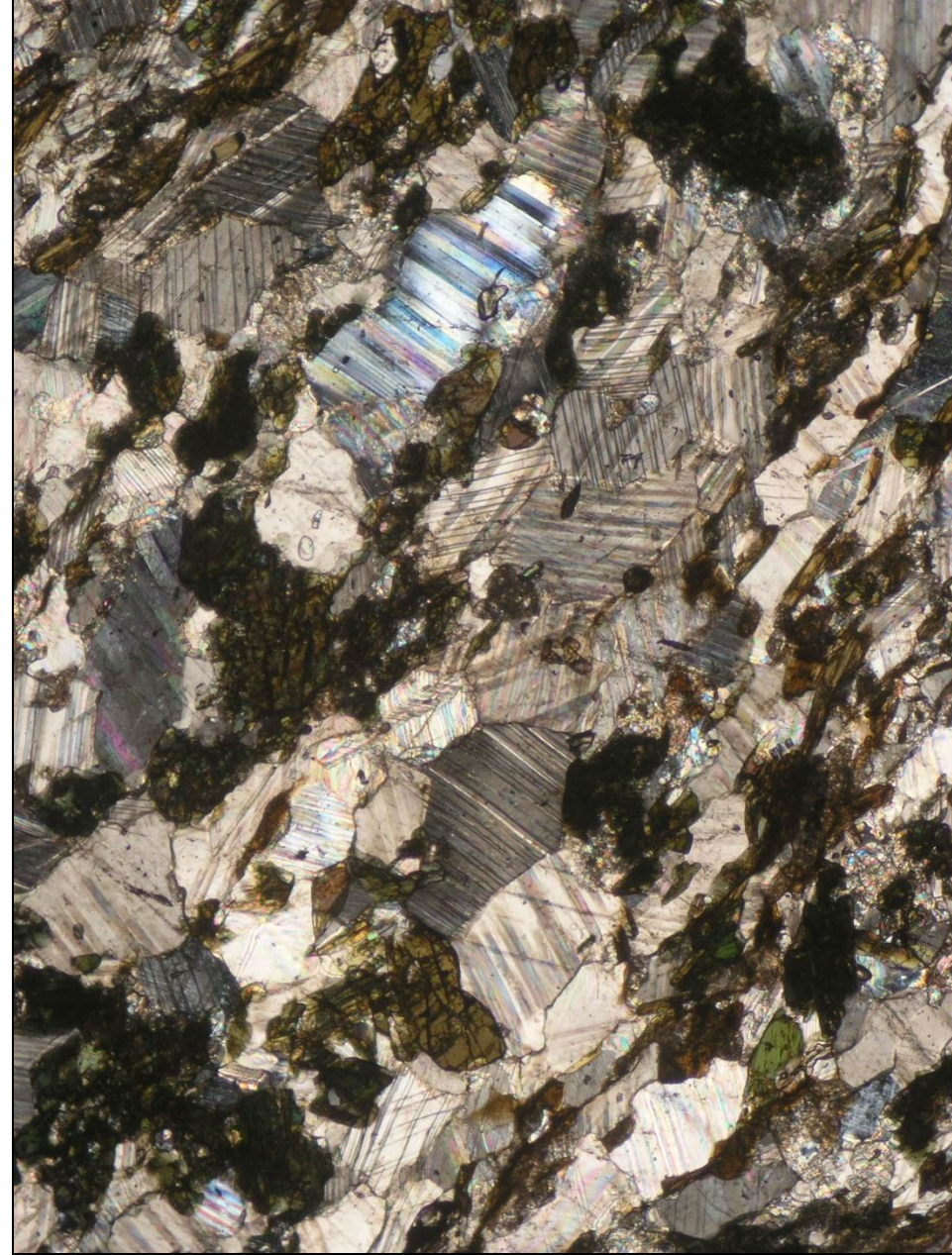
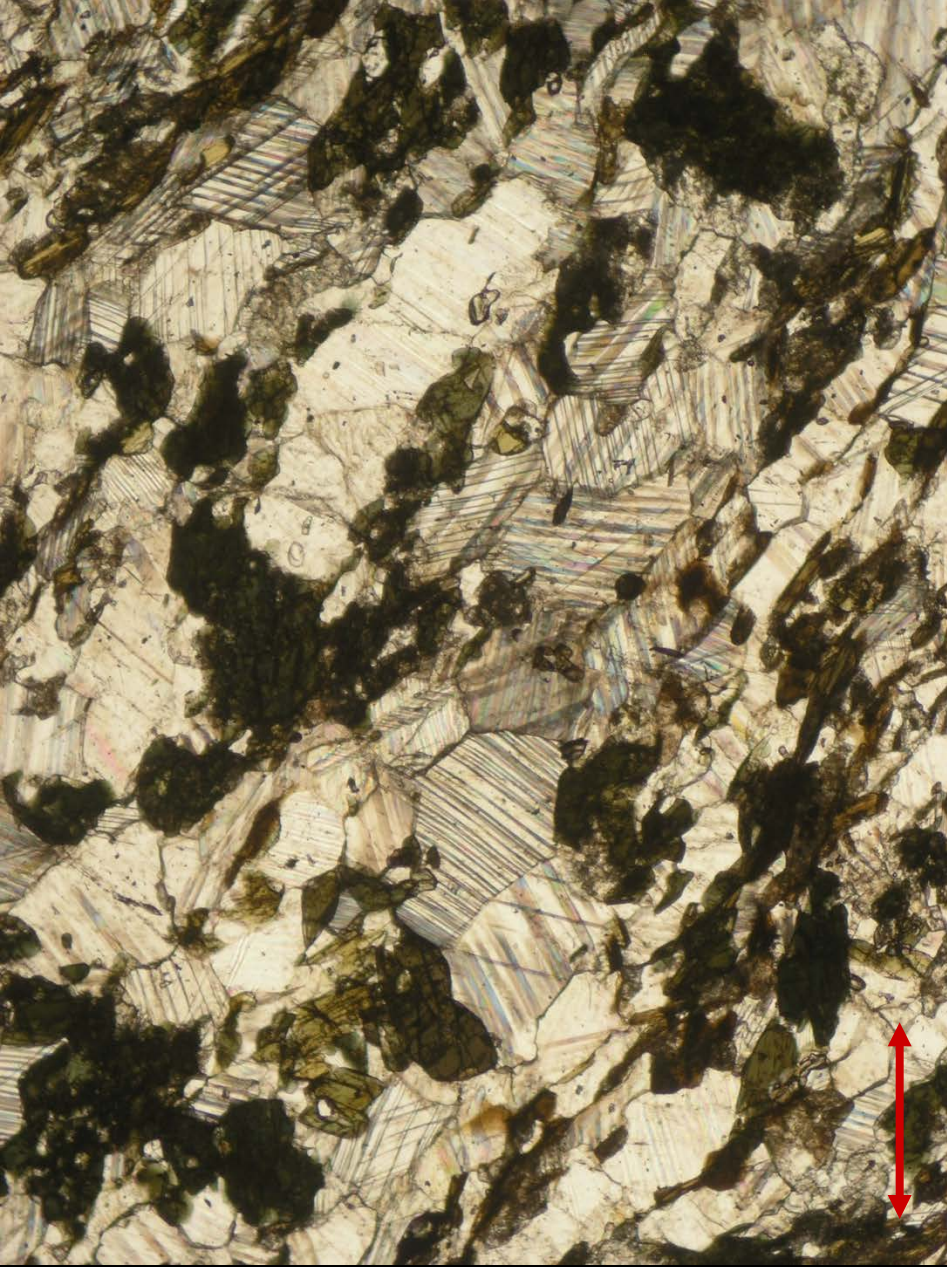
Calcite in marble from Horní Hoštice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.2 mm. Photo: JiZi.





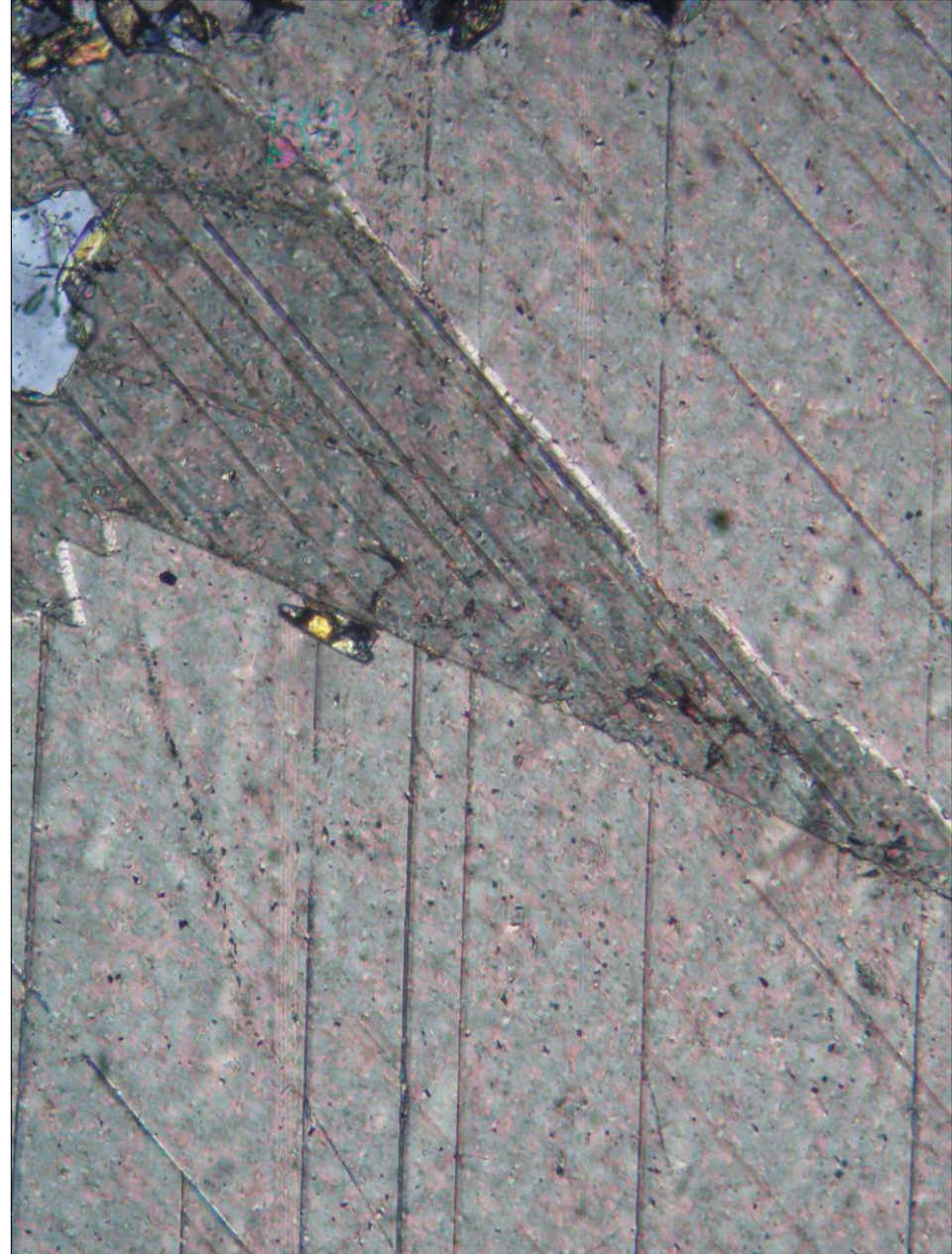
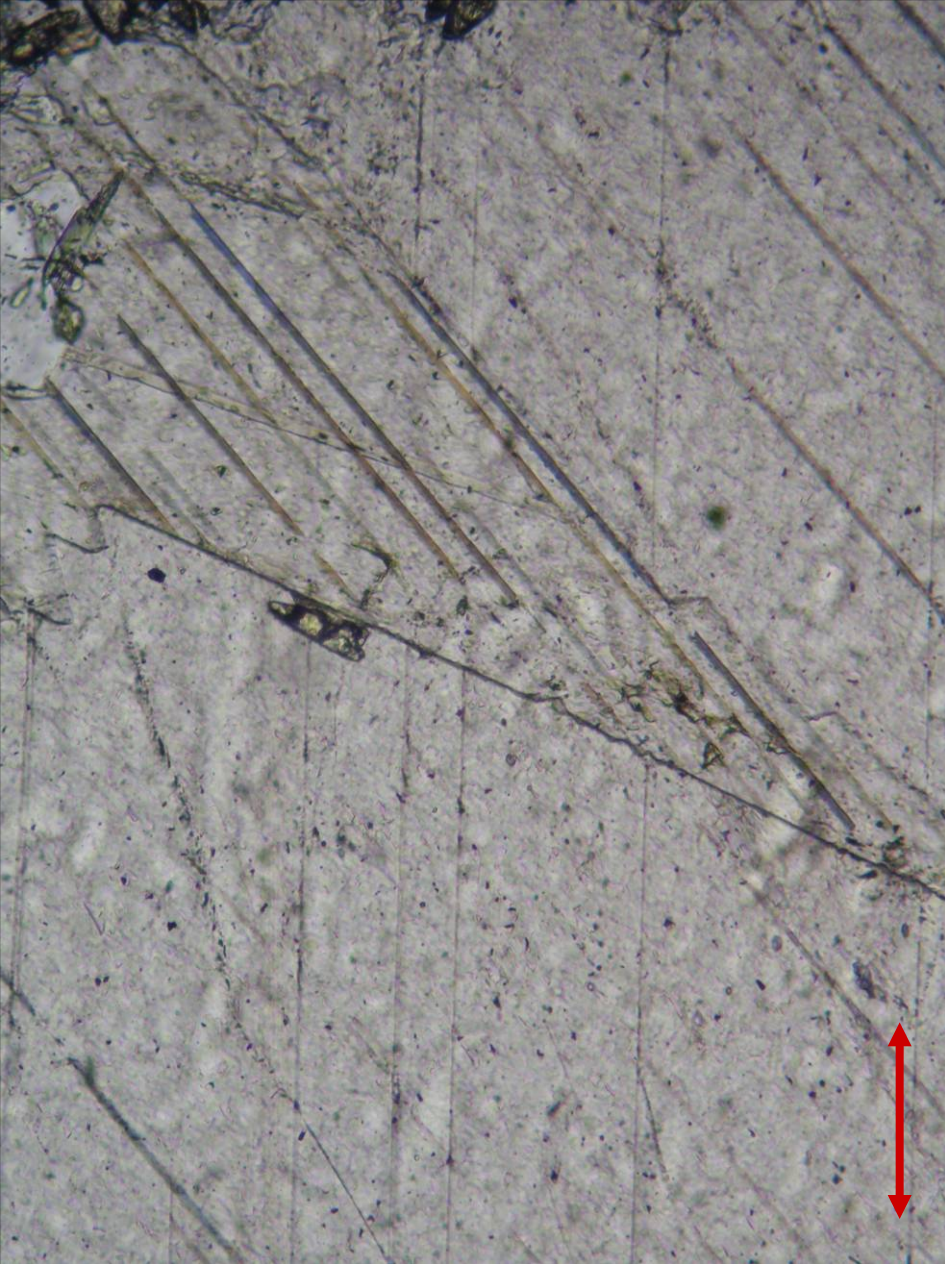
Calcite in marble from Horní Hoštice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.2 mm. Photo: JiZi.





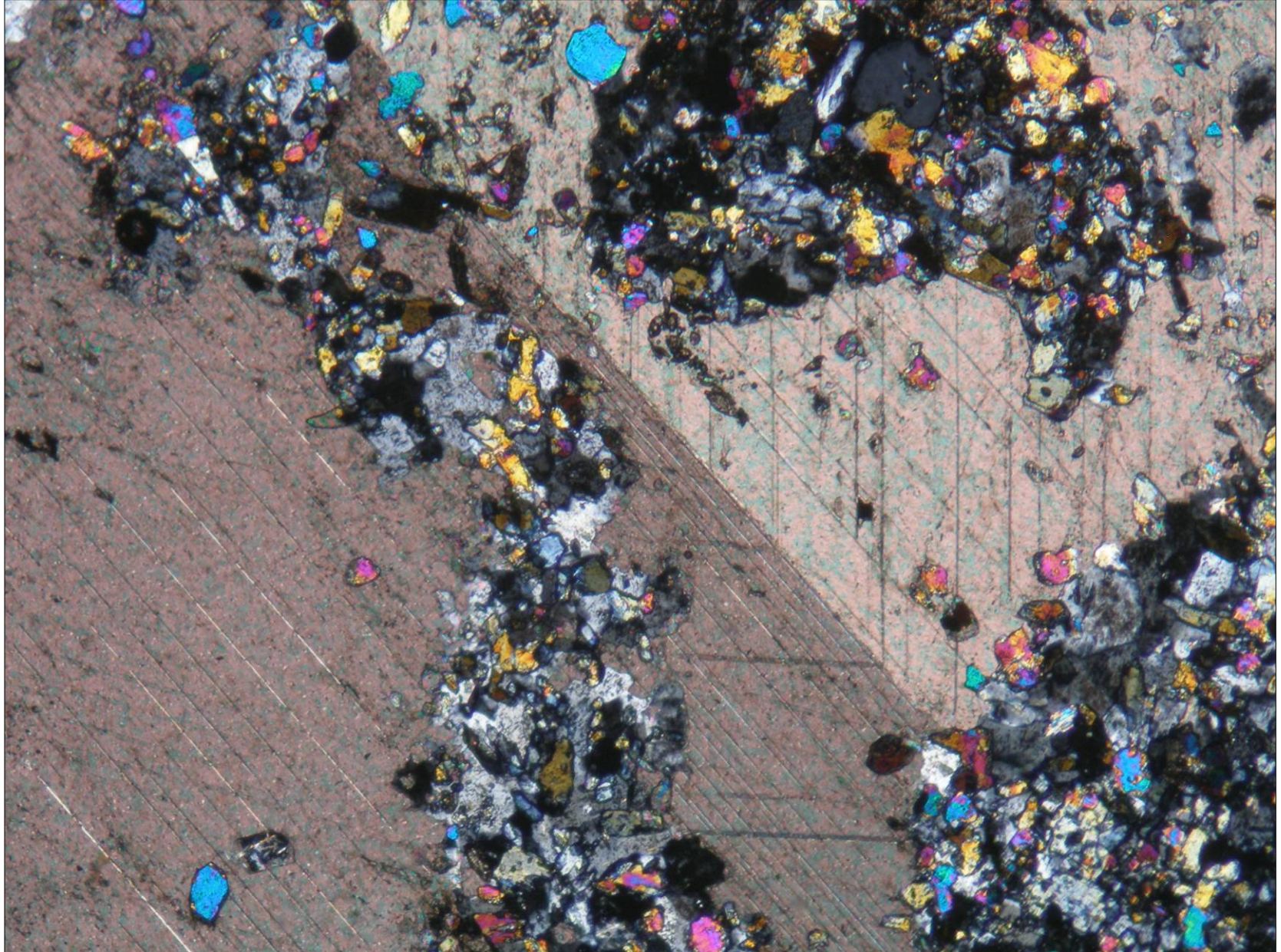
Calcite in marble-amphibolite stromatolite from Horní Hoštice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.2 mm. Photo: JiZi.





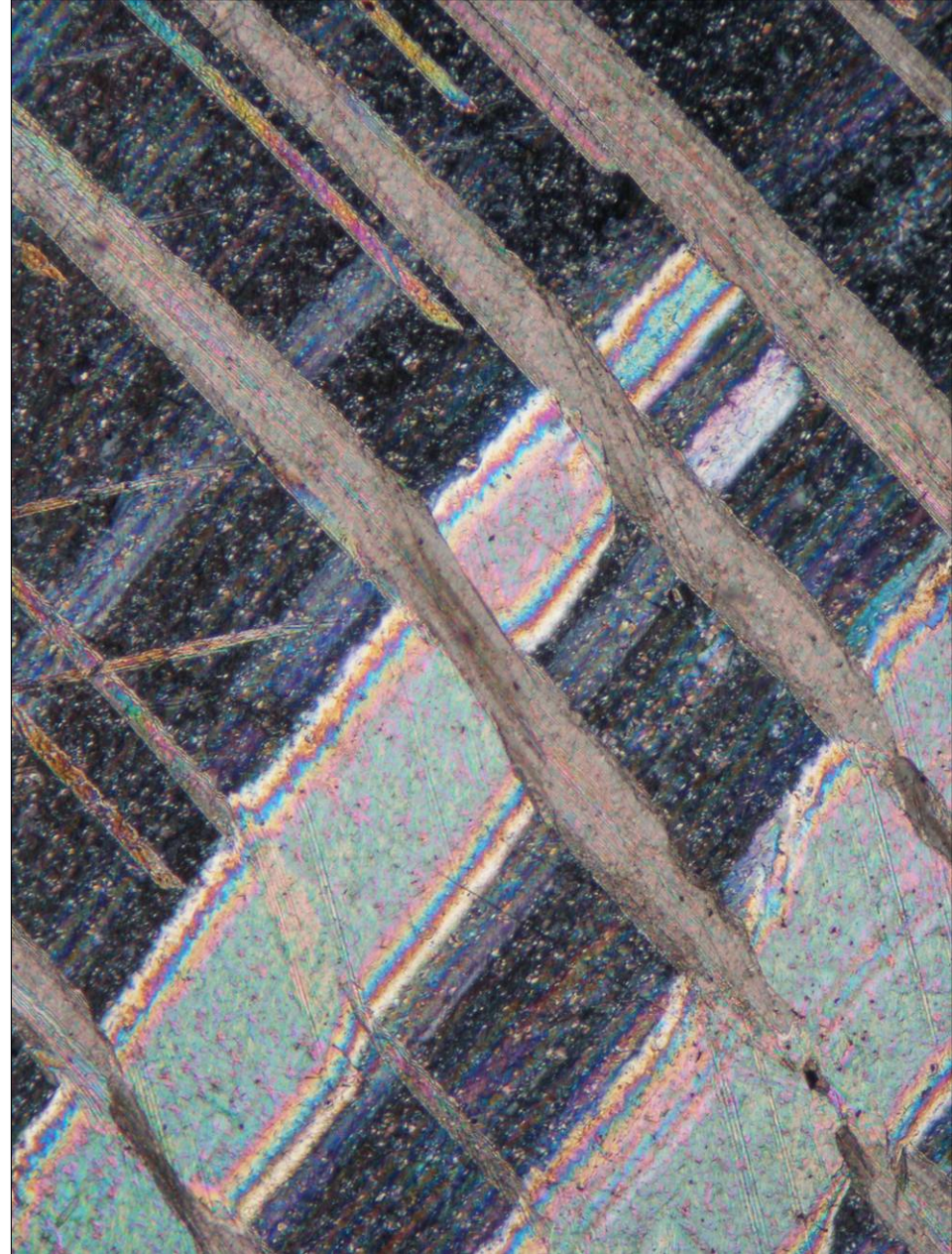
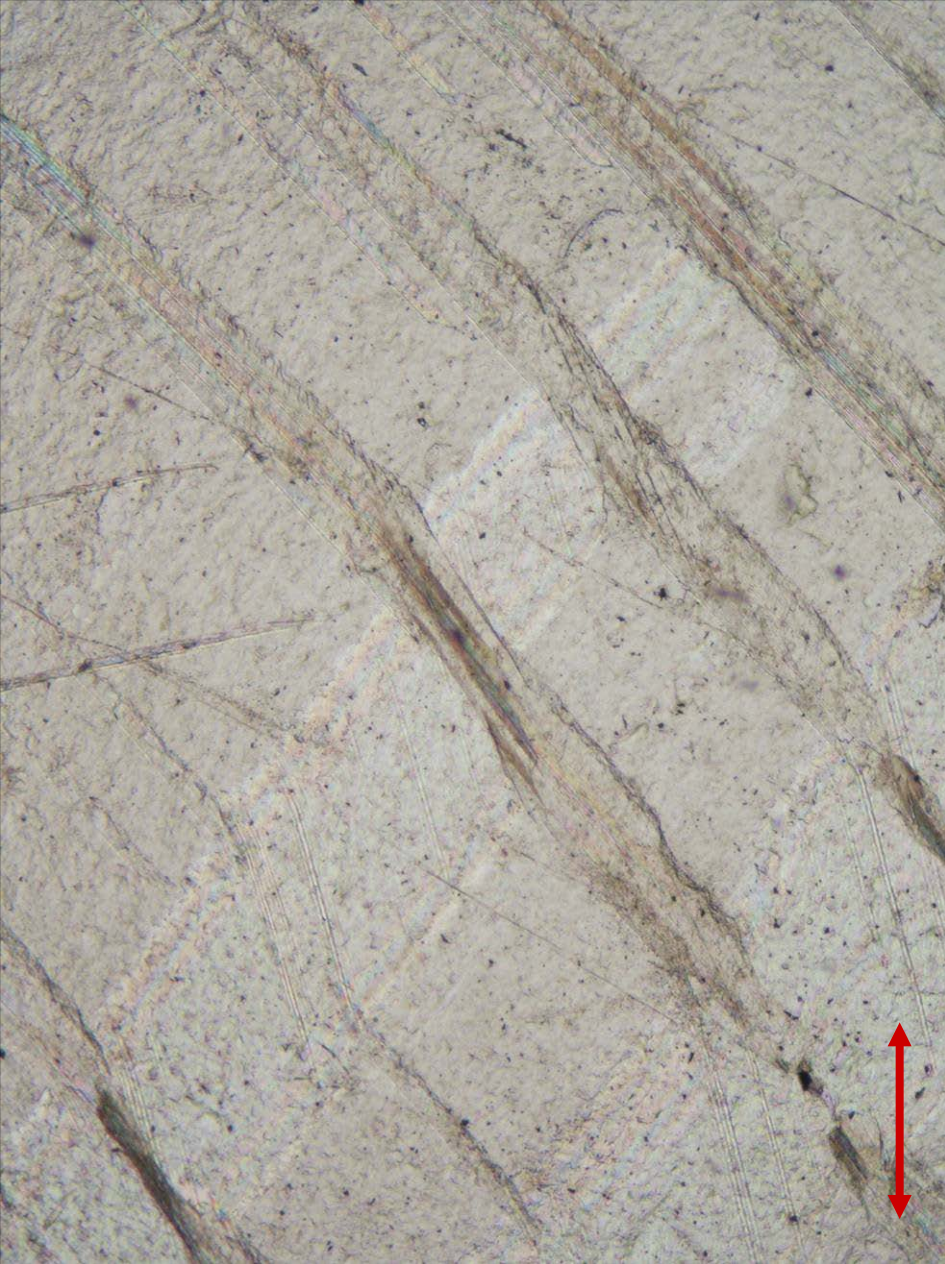
Calcite in the Alpine-type vein from Krásné near Hraběšice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 0.8 mm. Photo: JiZi.





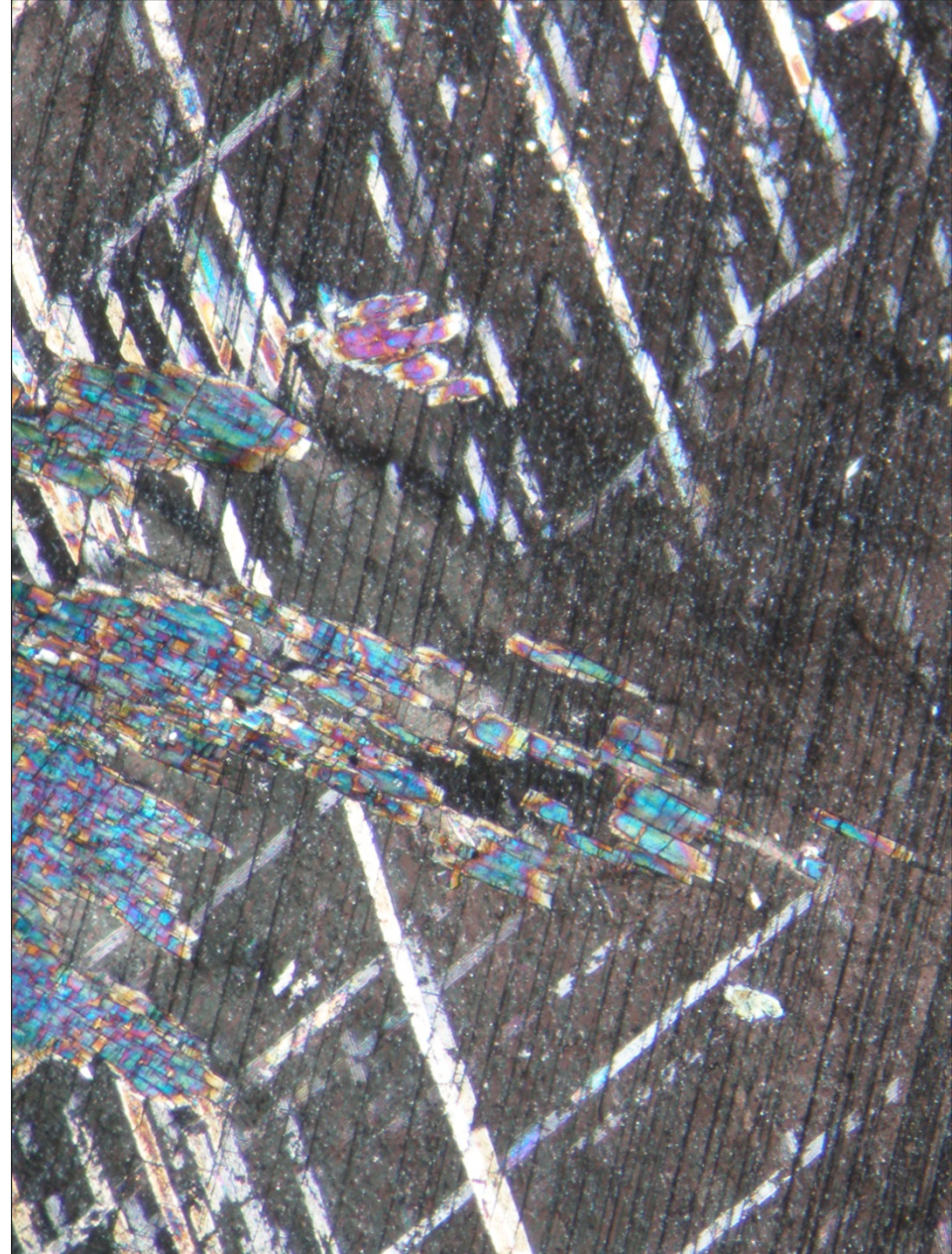
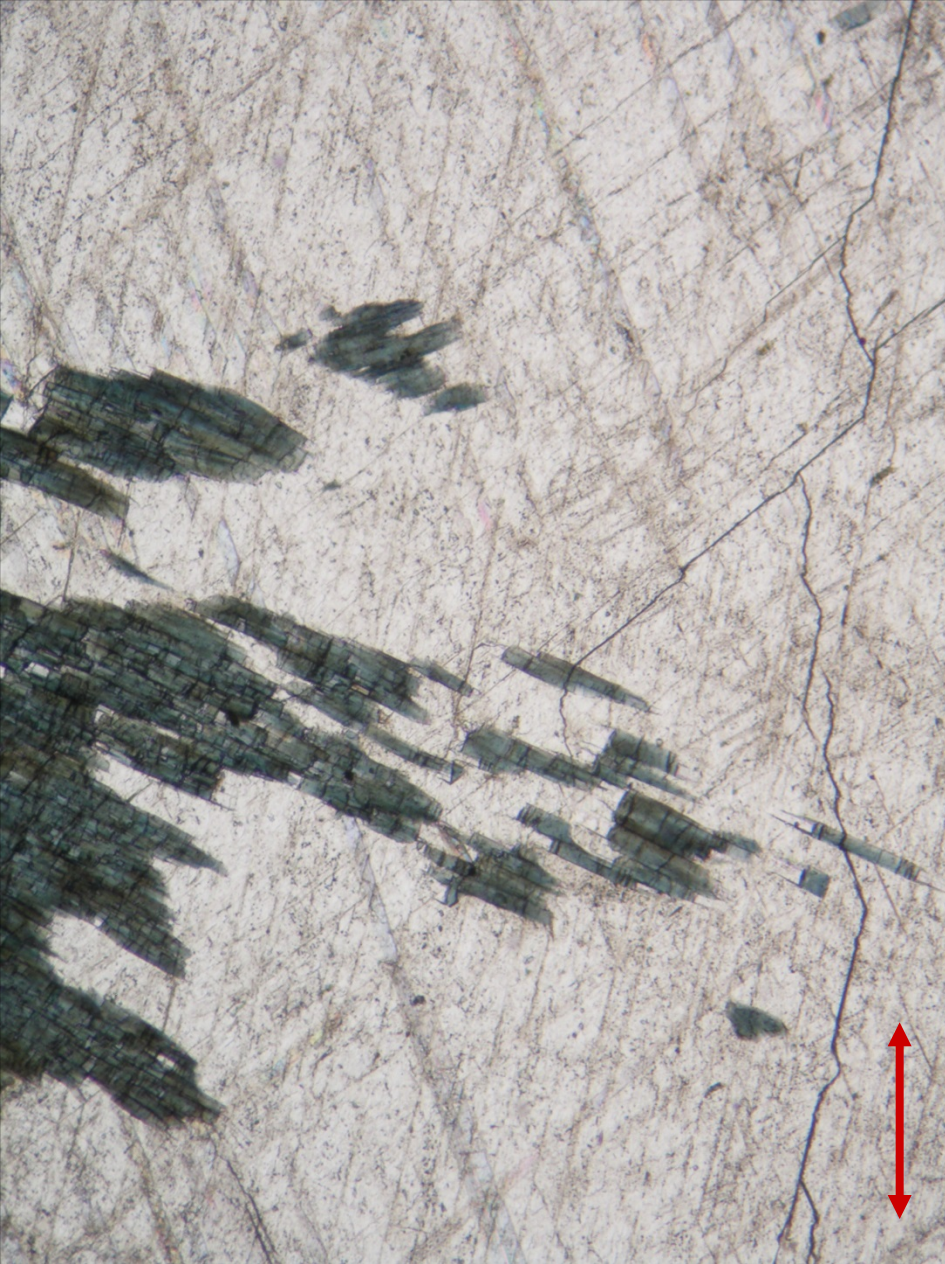
Calcite with epidote, quartz and altered feldspars in the Alpine-type vein from Krásné near Hraběšice, the Czech Republic; XPL. Width of the field of view is ca. 1.8 mm. Photo: JiZi.





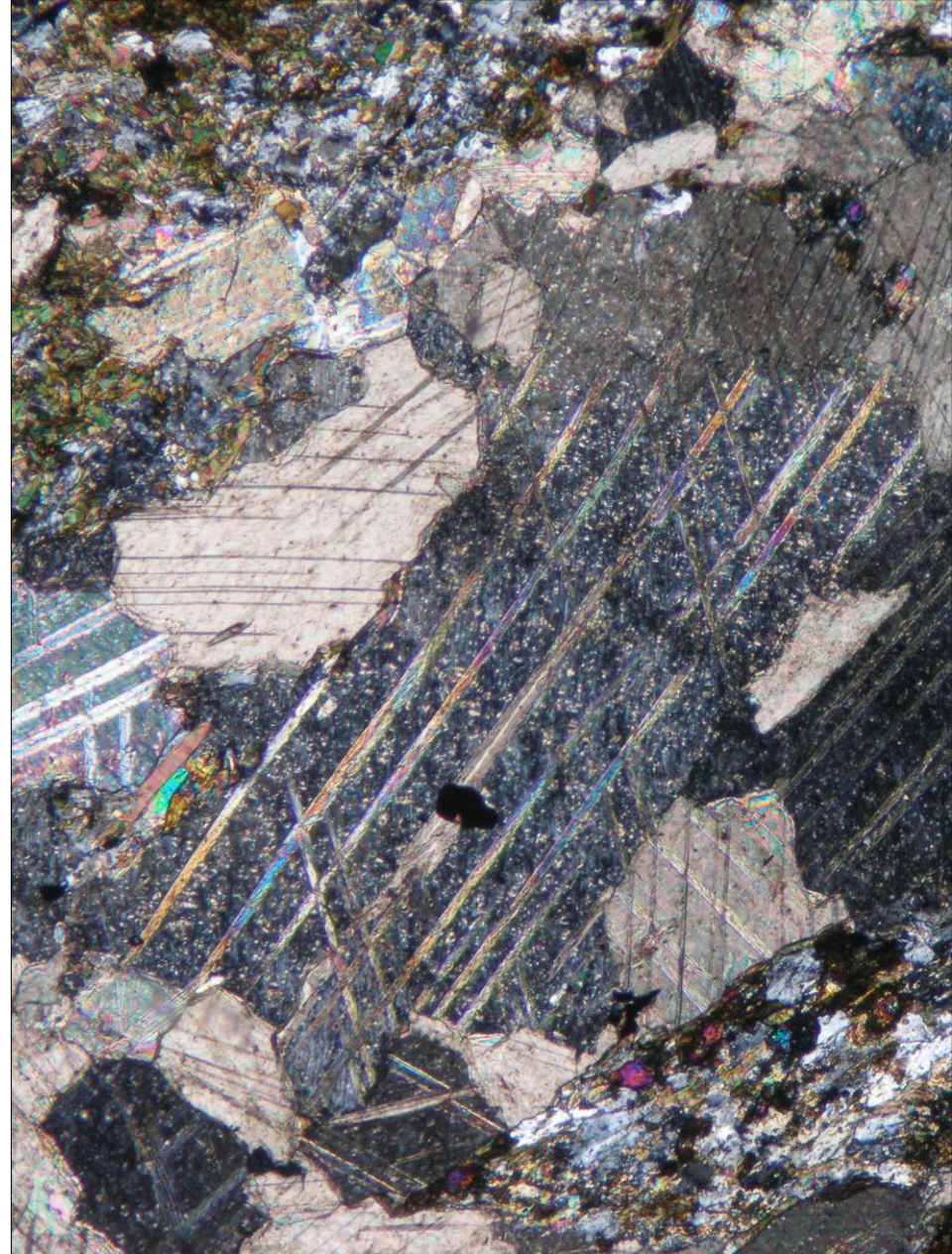
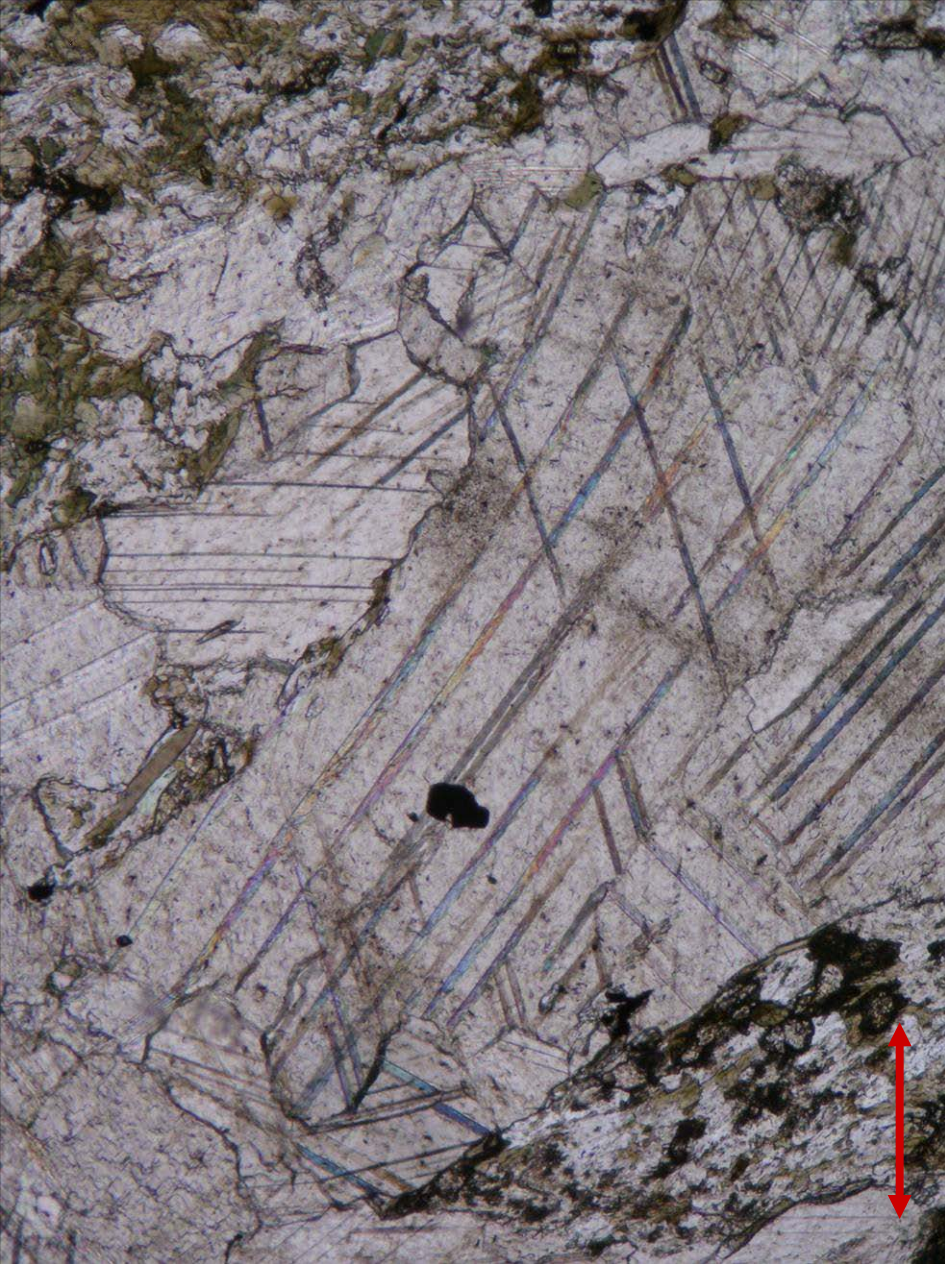
Lamellar twinning in calcite from a hydrothermal vein at Horní Údolí, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





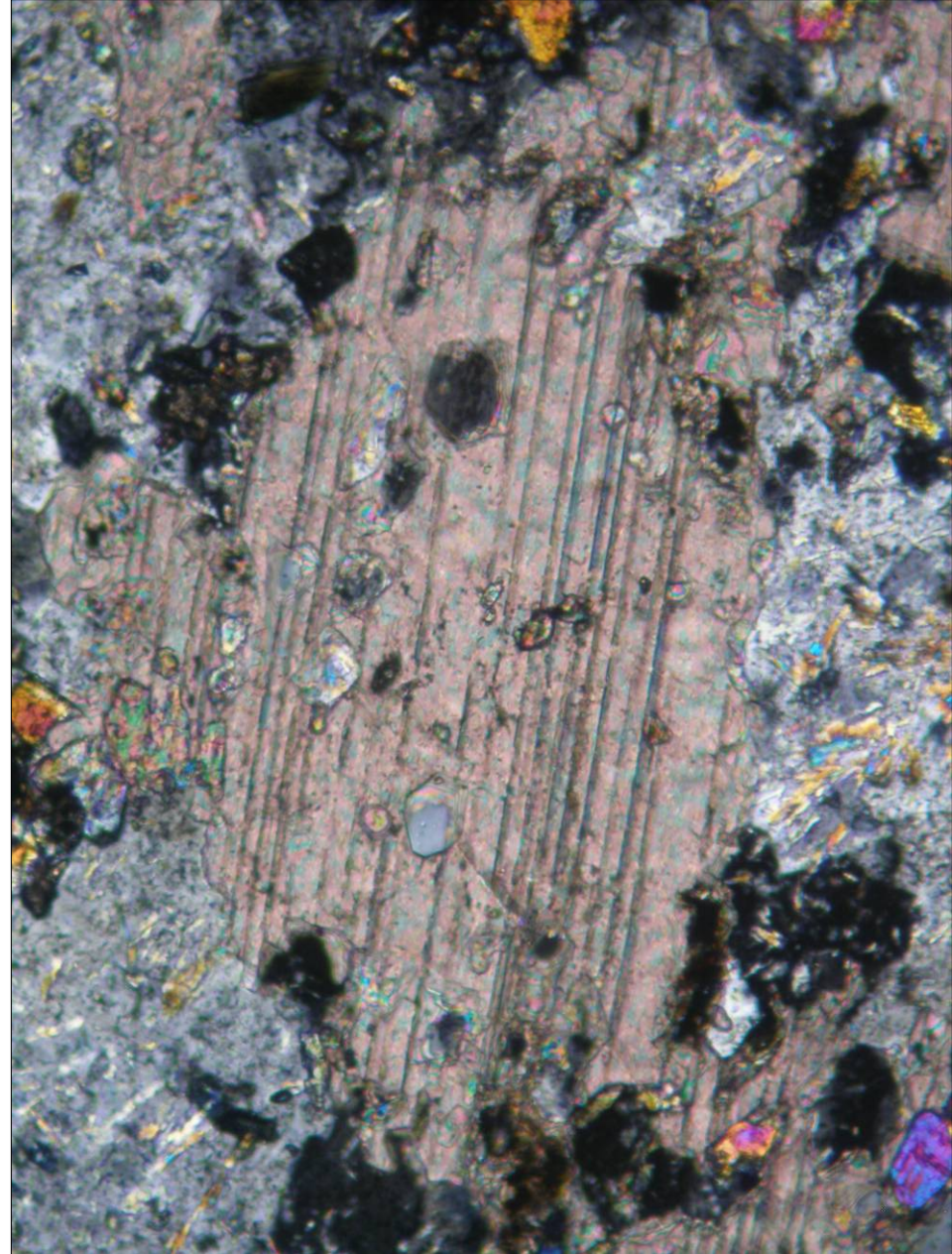
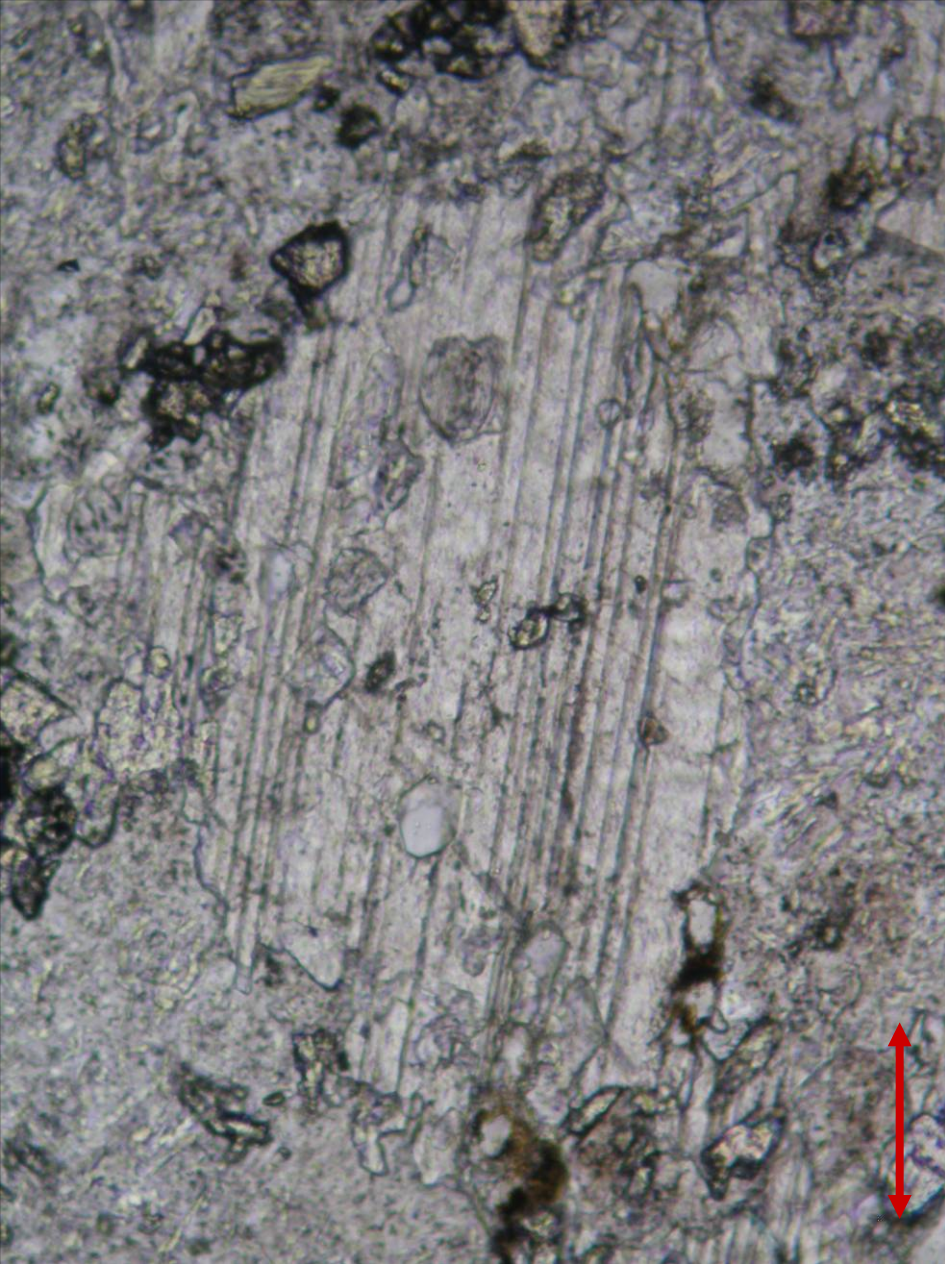
Calcite in a hydrothermal tourmaline-calcite vein from Chabičov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





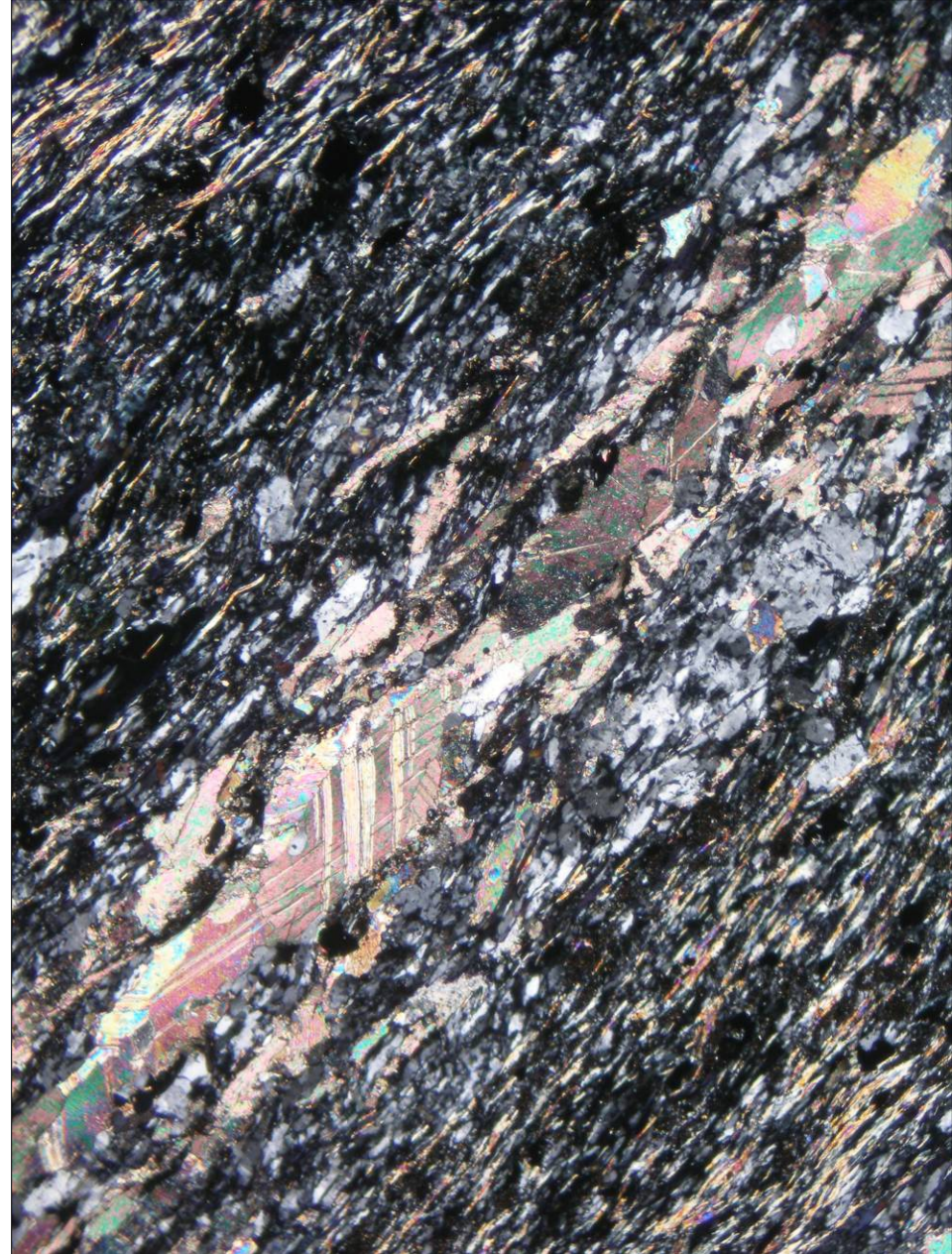
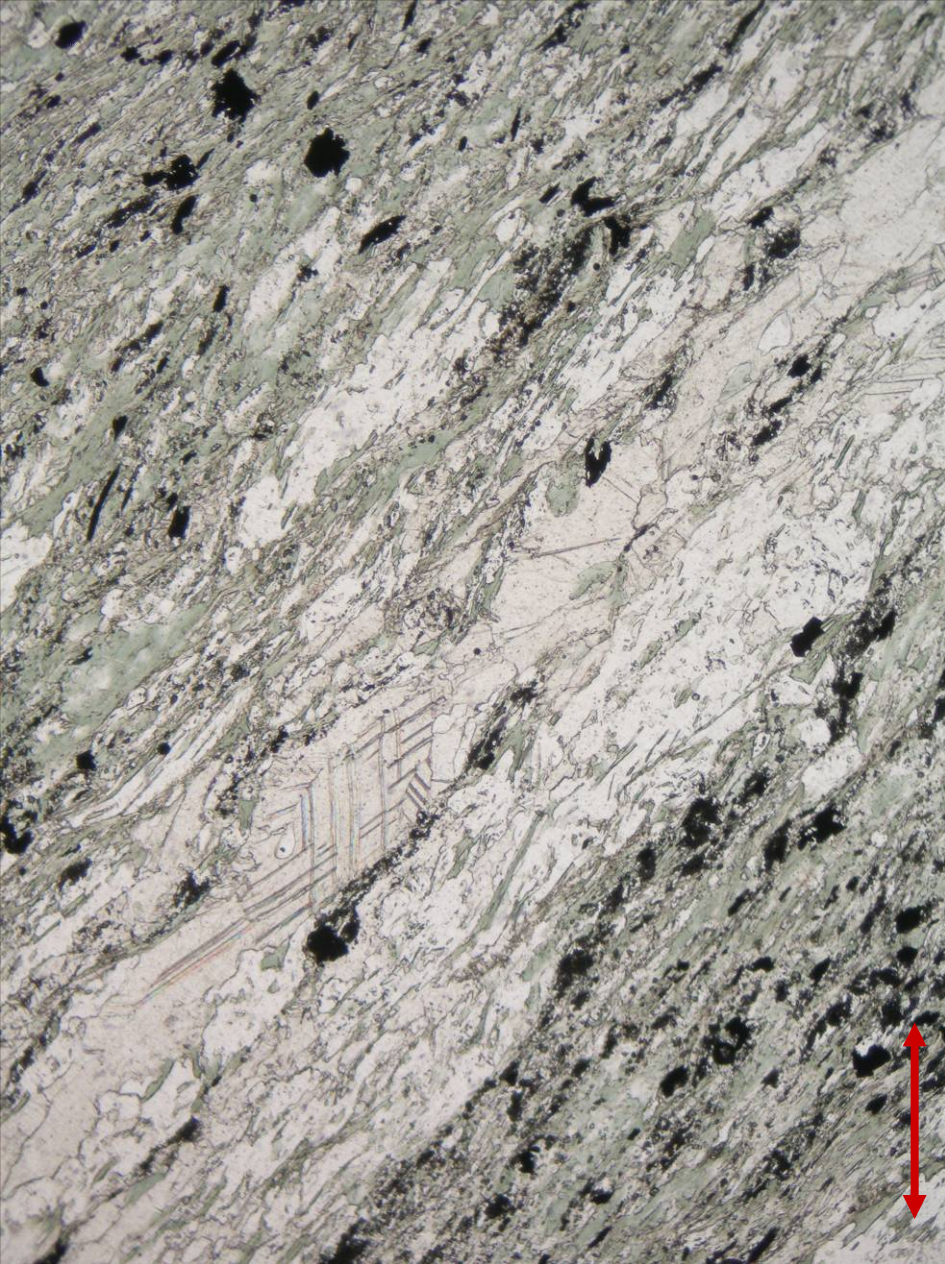
Calcite in a hydrothermal veinlet from Horní Údolí, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





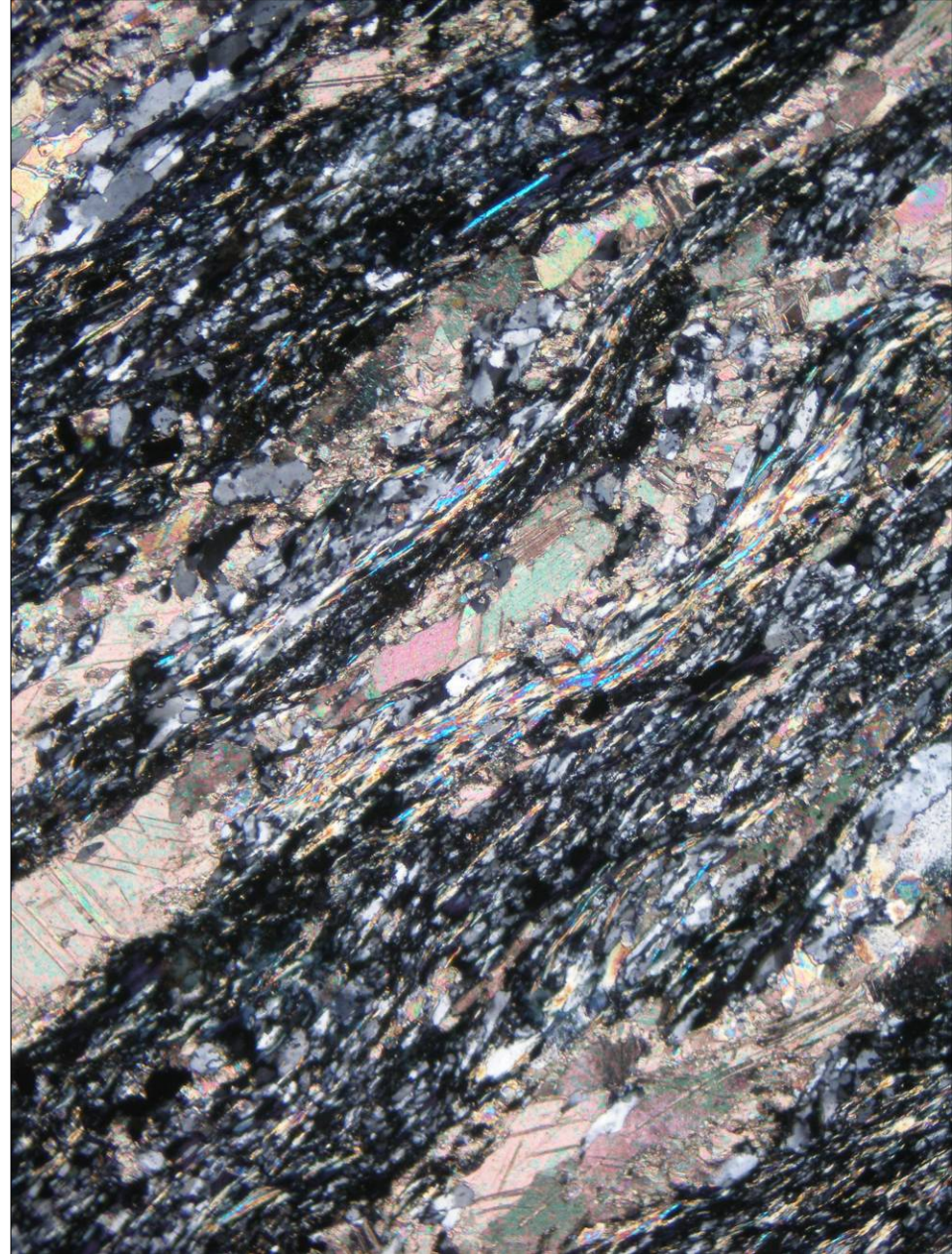
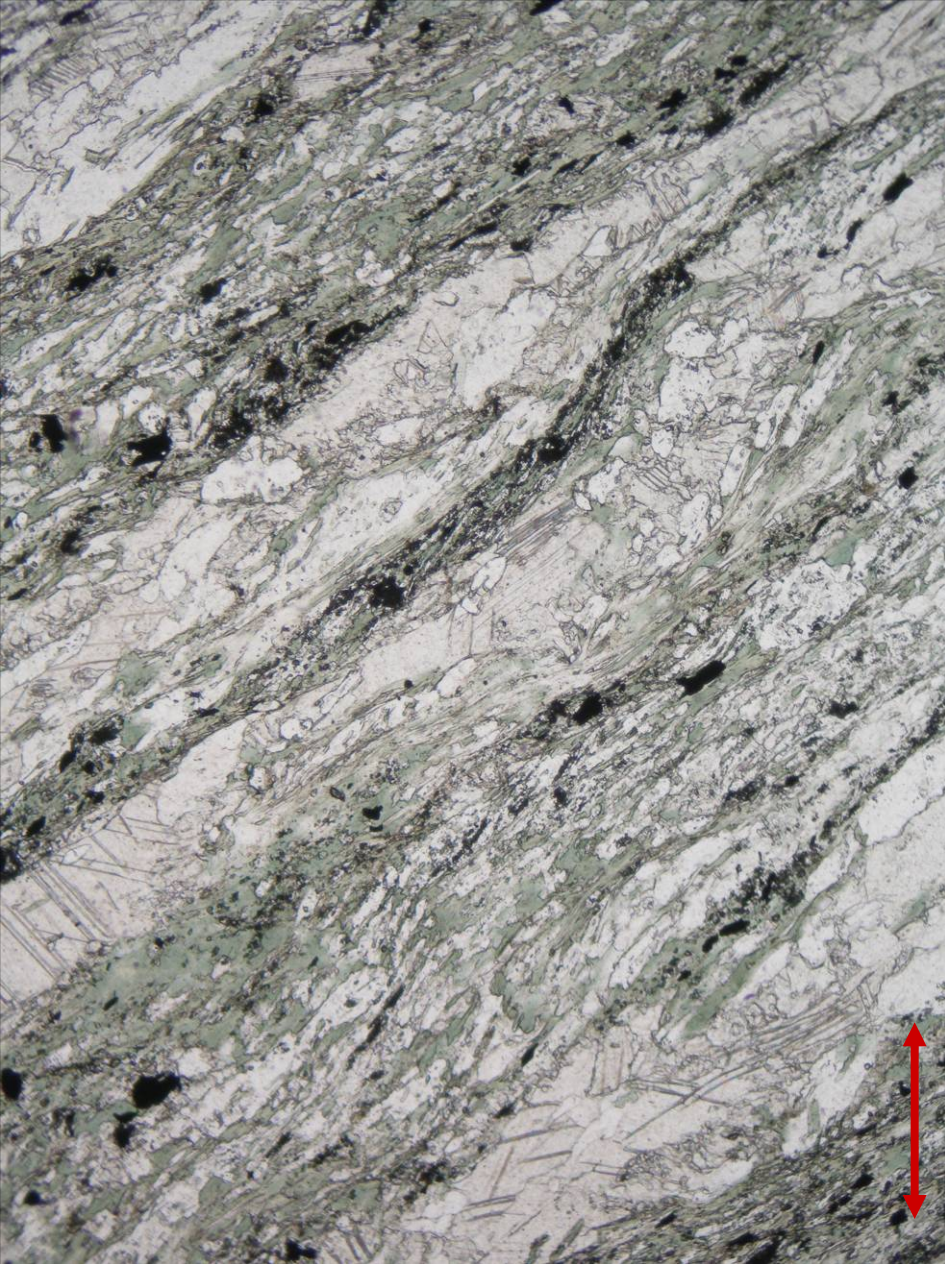
Calcite in the Alpine-type vein from Krásné near Hraběšice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 0.6 mm. Photo: JiZi.





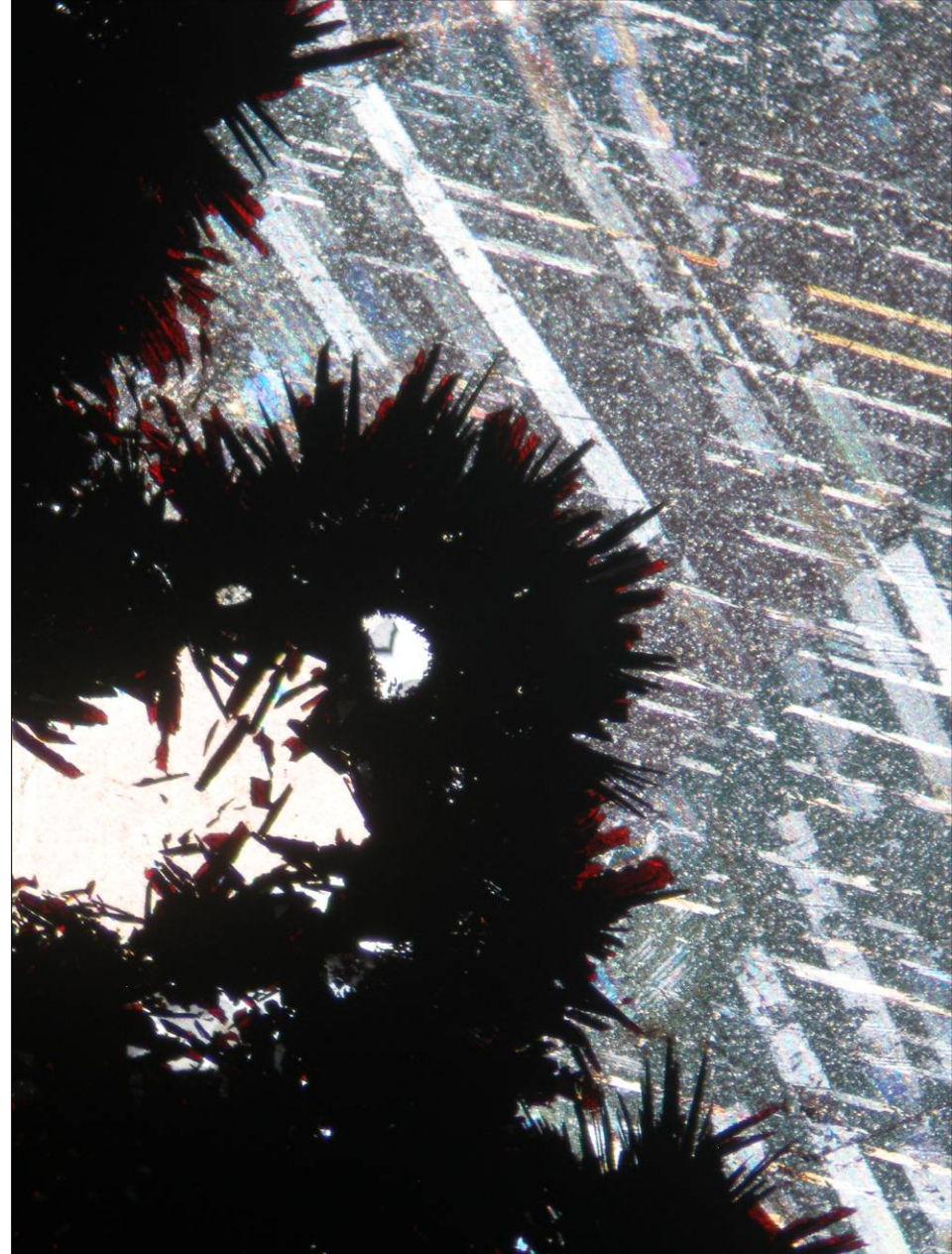
Calcite in metatuff from Oskava, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





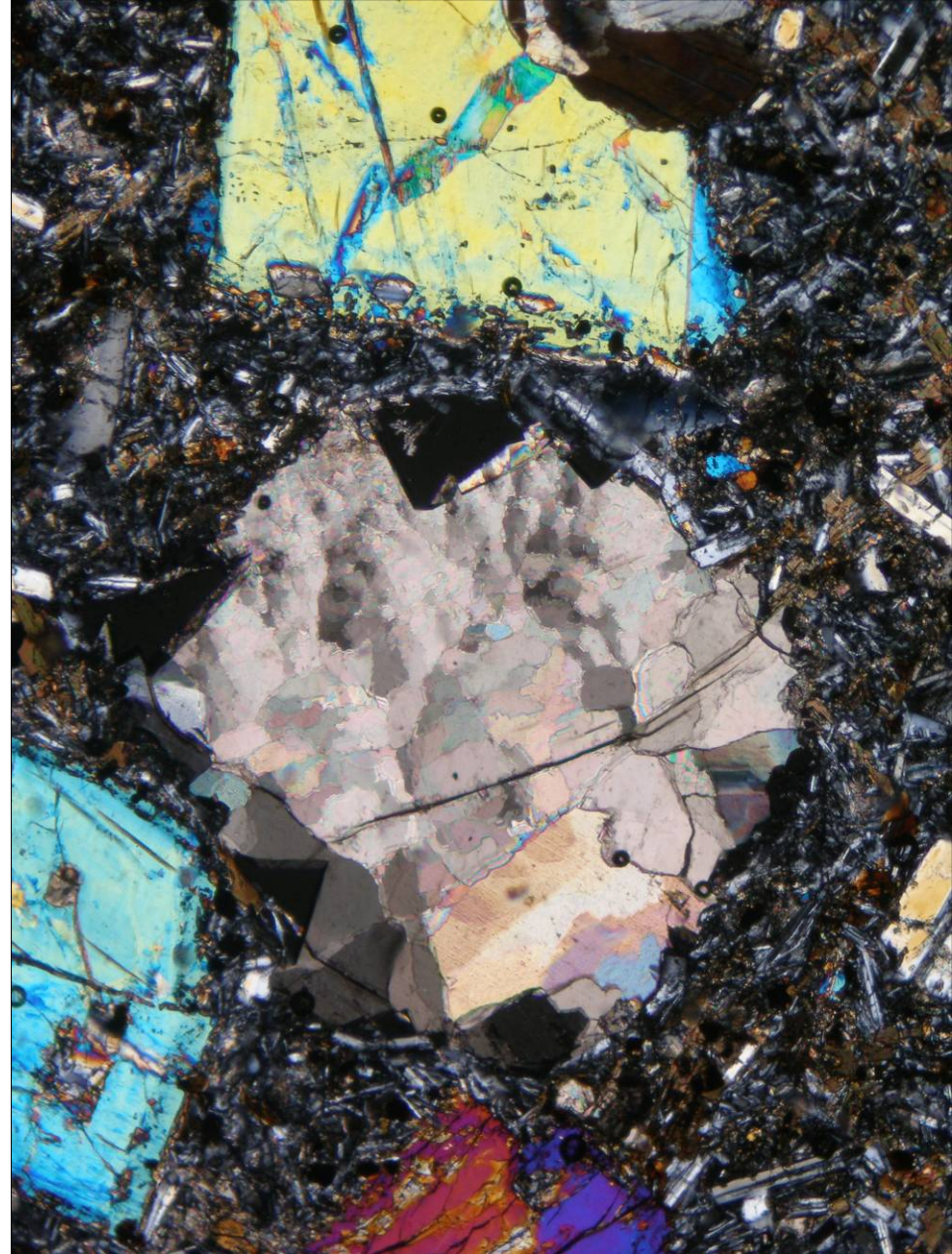
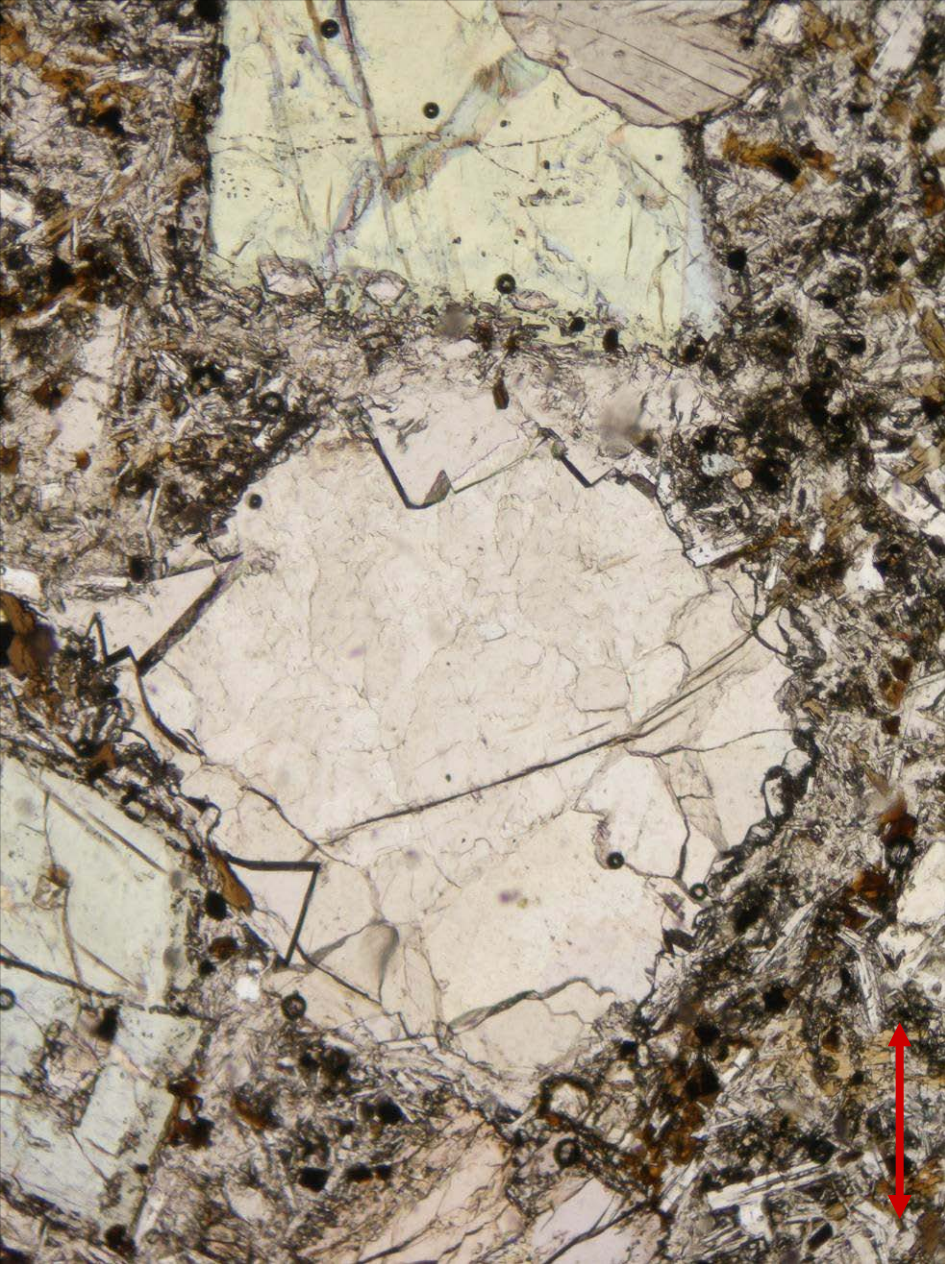
Calcite in metatuff from Oskava, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





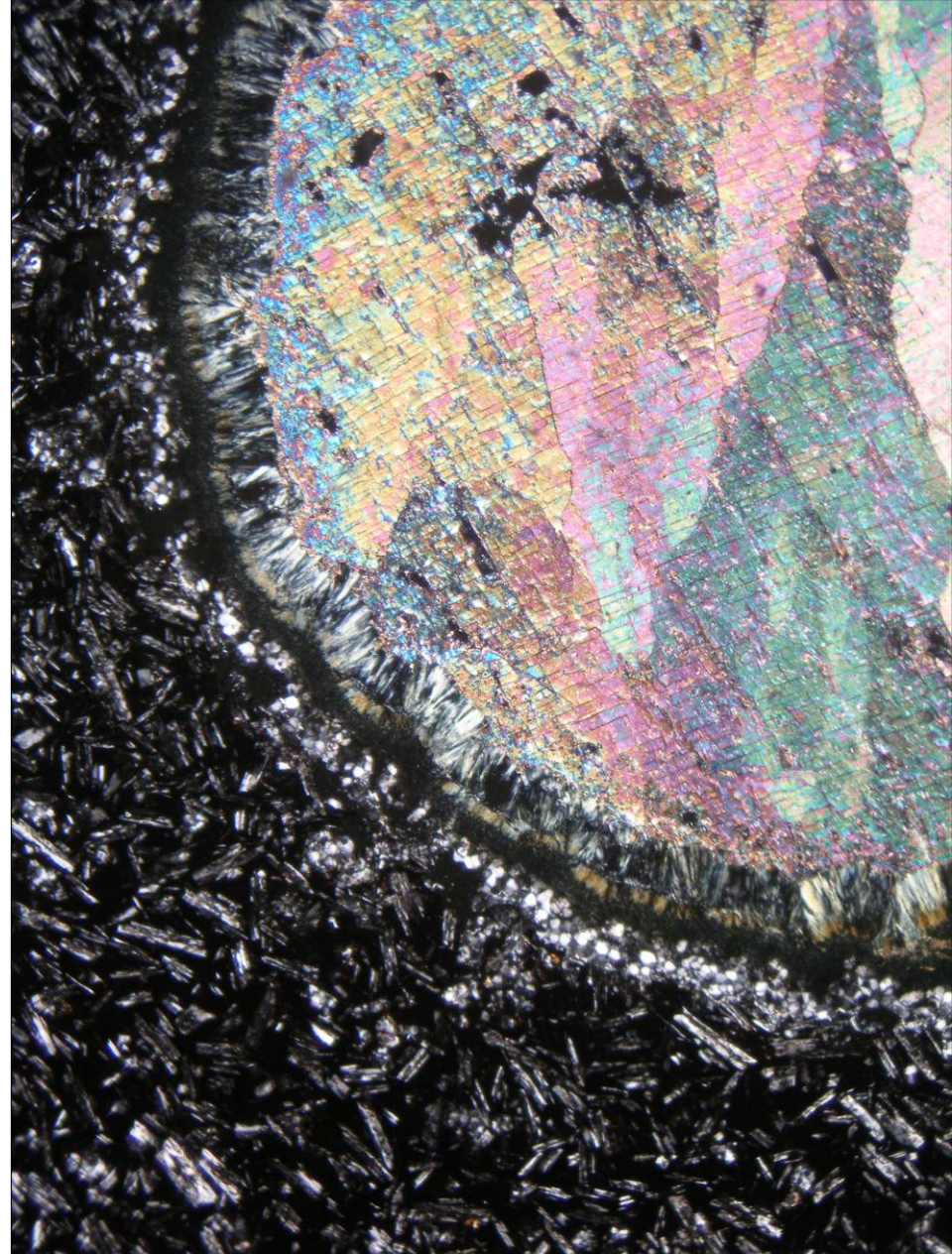
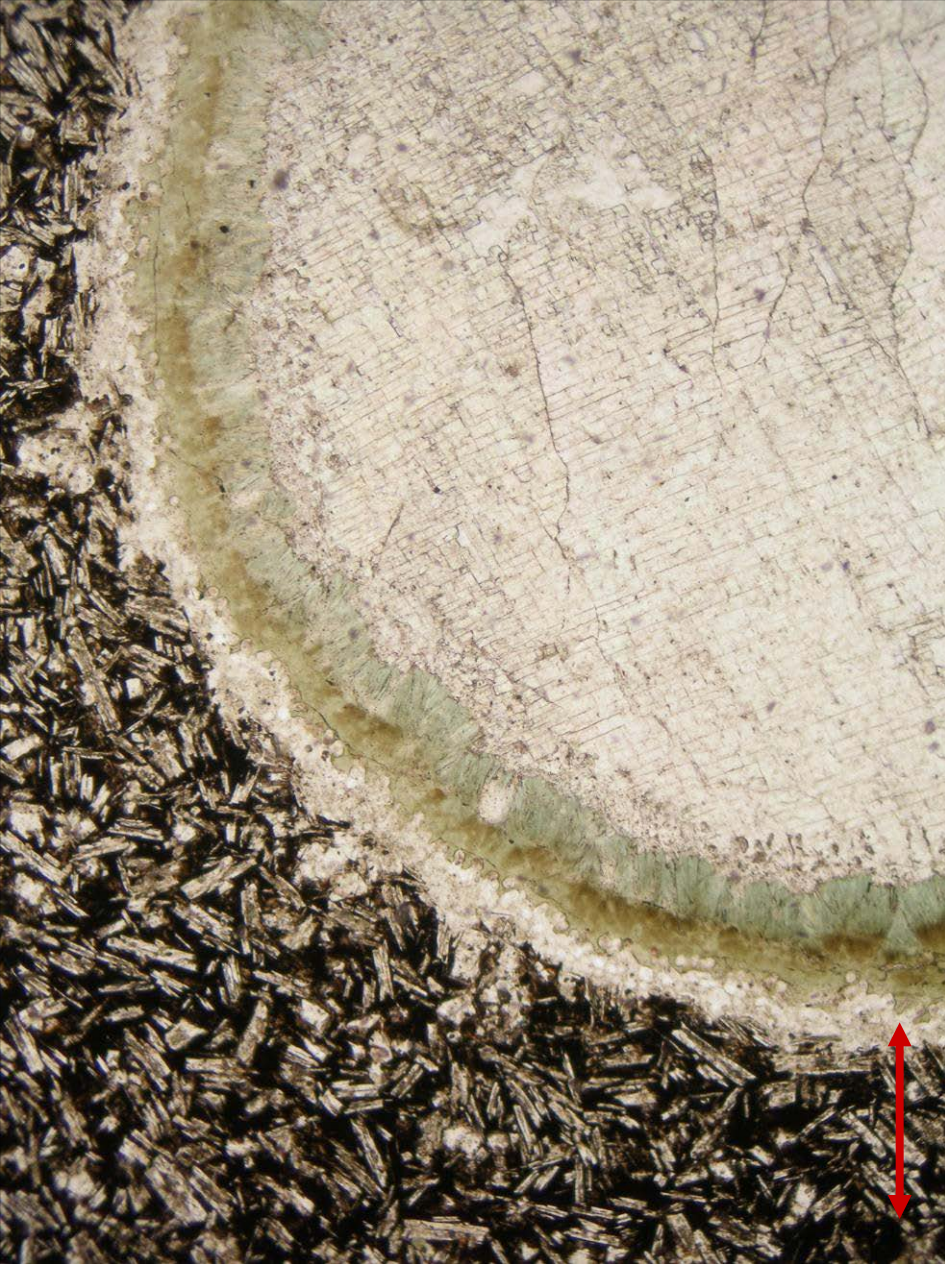
Calcite and hematite in a hydrothermal vein from Zálesí, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





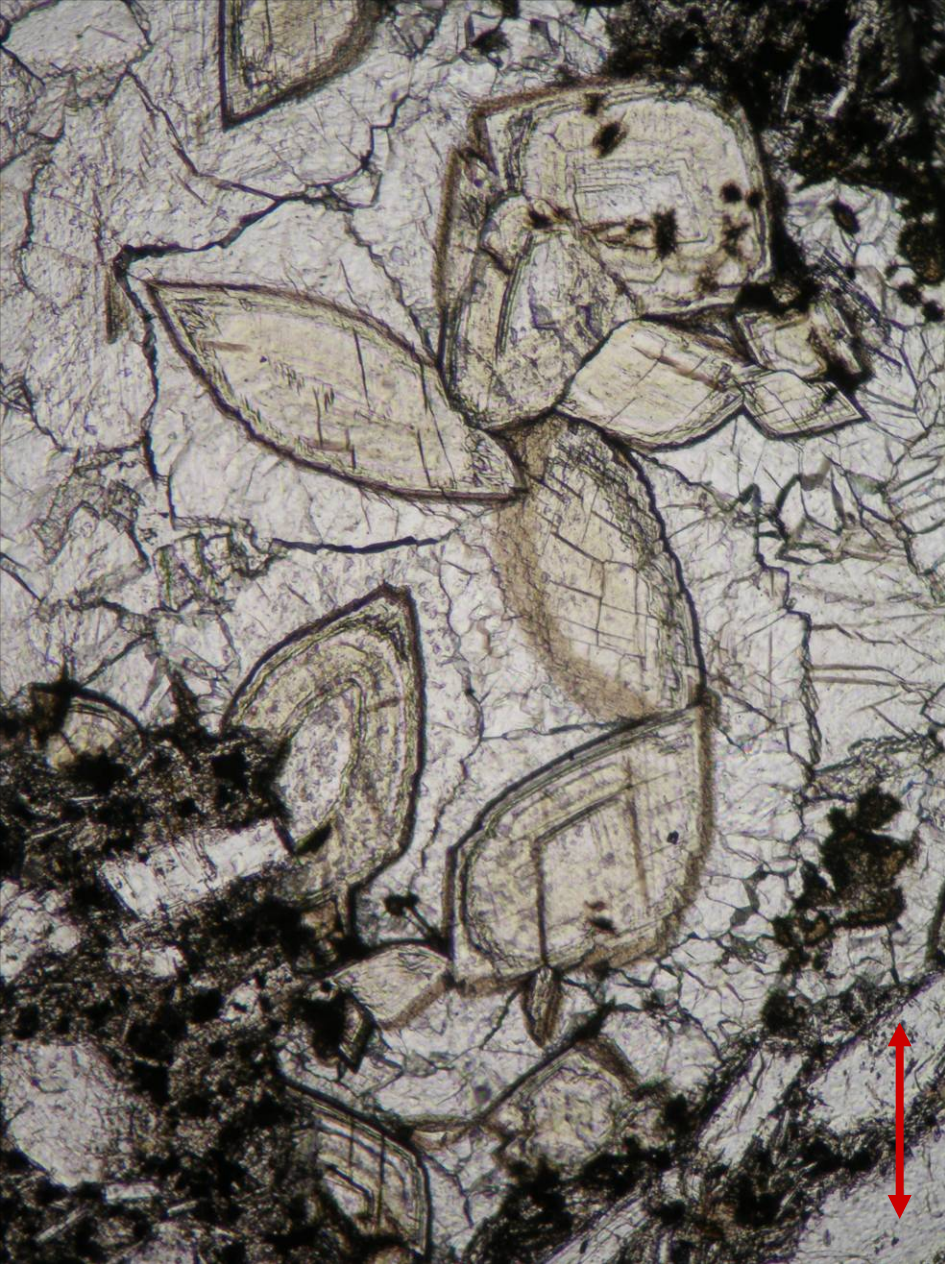
Calcite in a vesicle in basalt from Starý Hrozenkov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





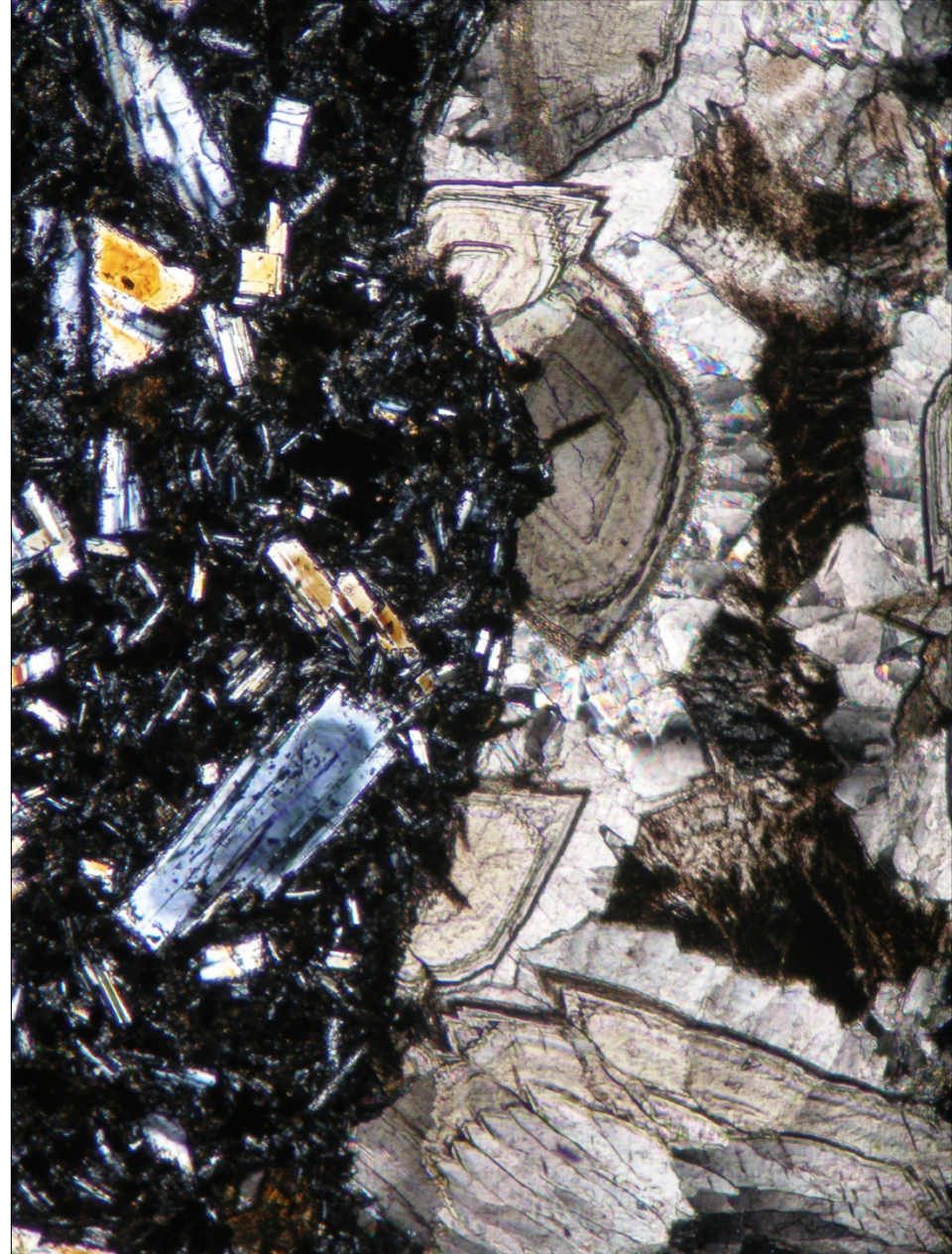
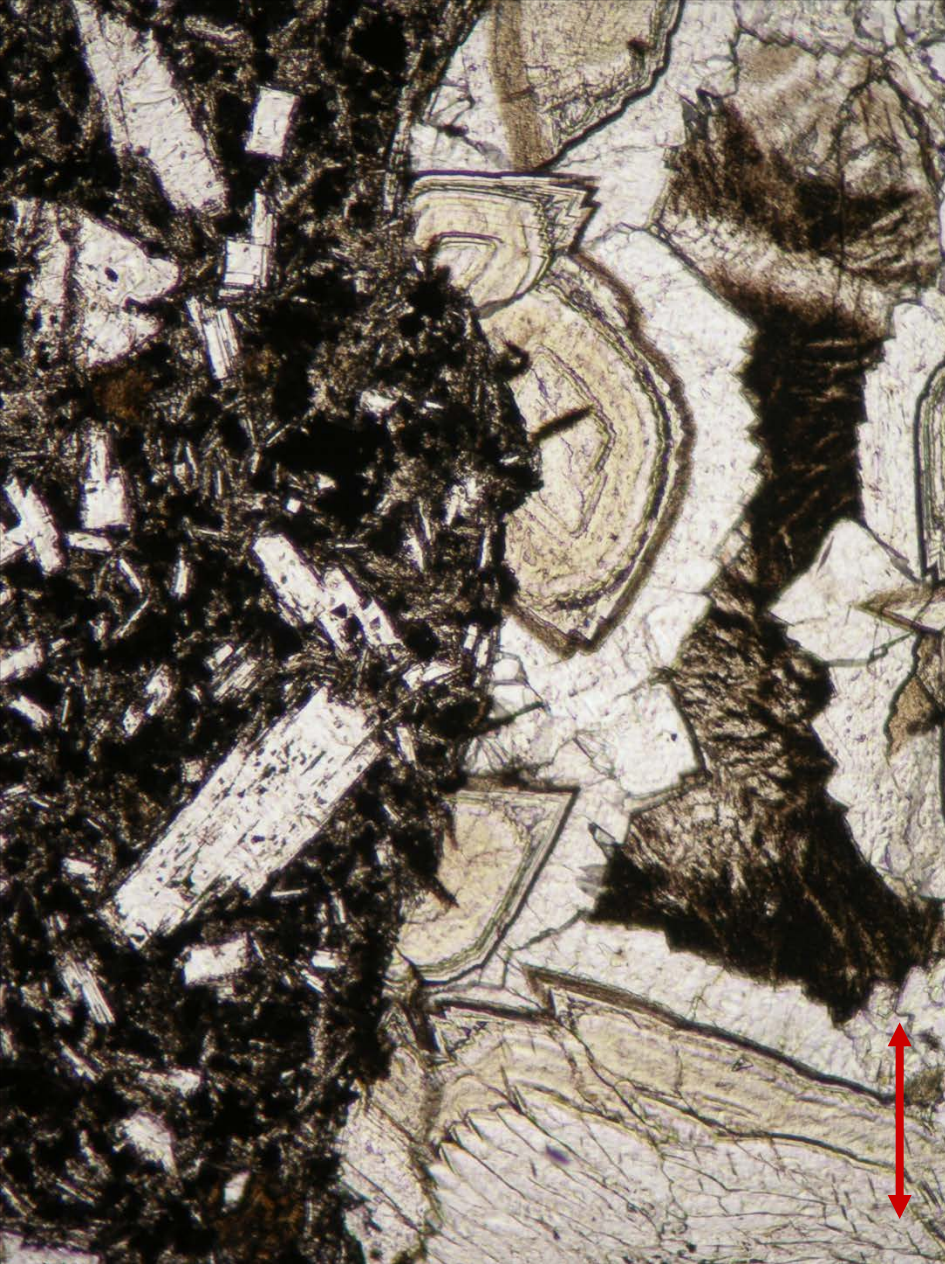
Calcite and chlorite in a vesicle in palaeobasalt from Bezděčín, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.5 mm. Photo: JiZi.





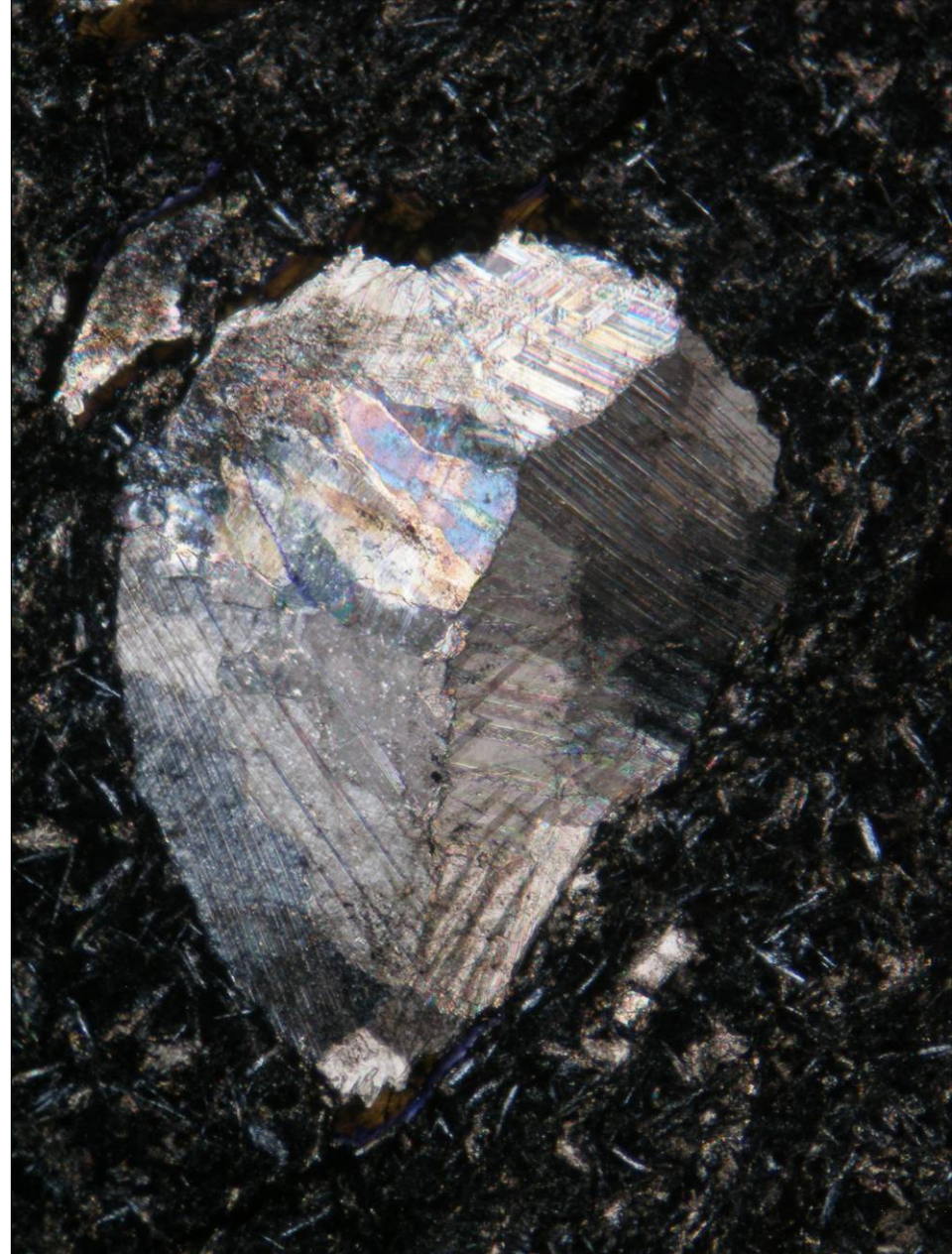
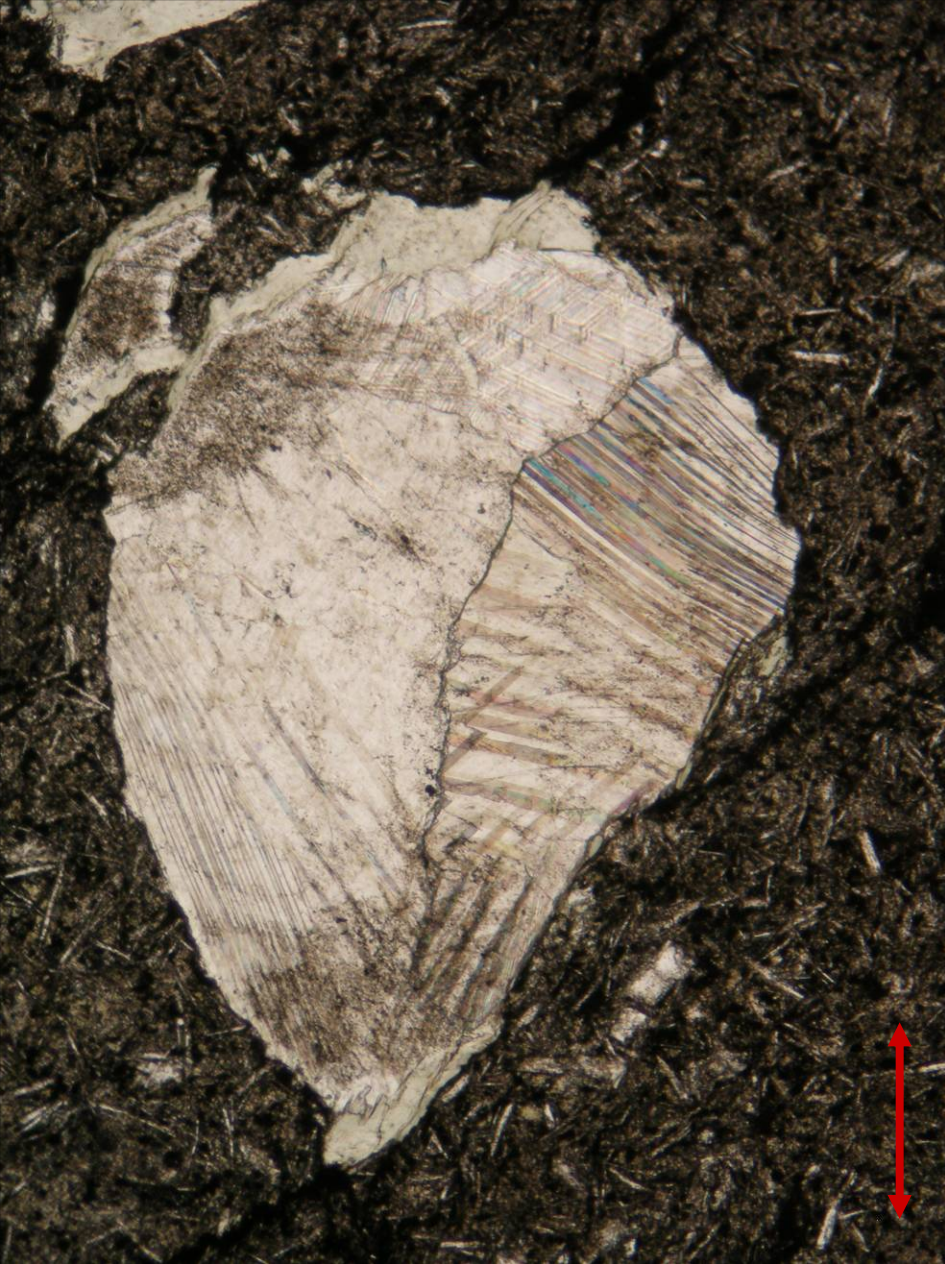
Calcite in a vesicle in andesite from Bánov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





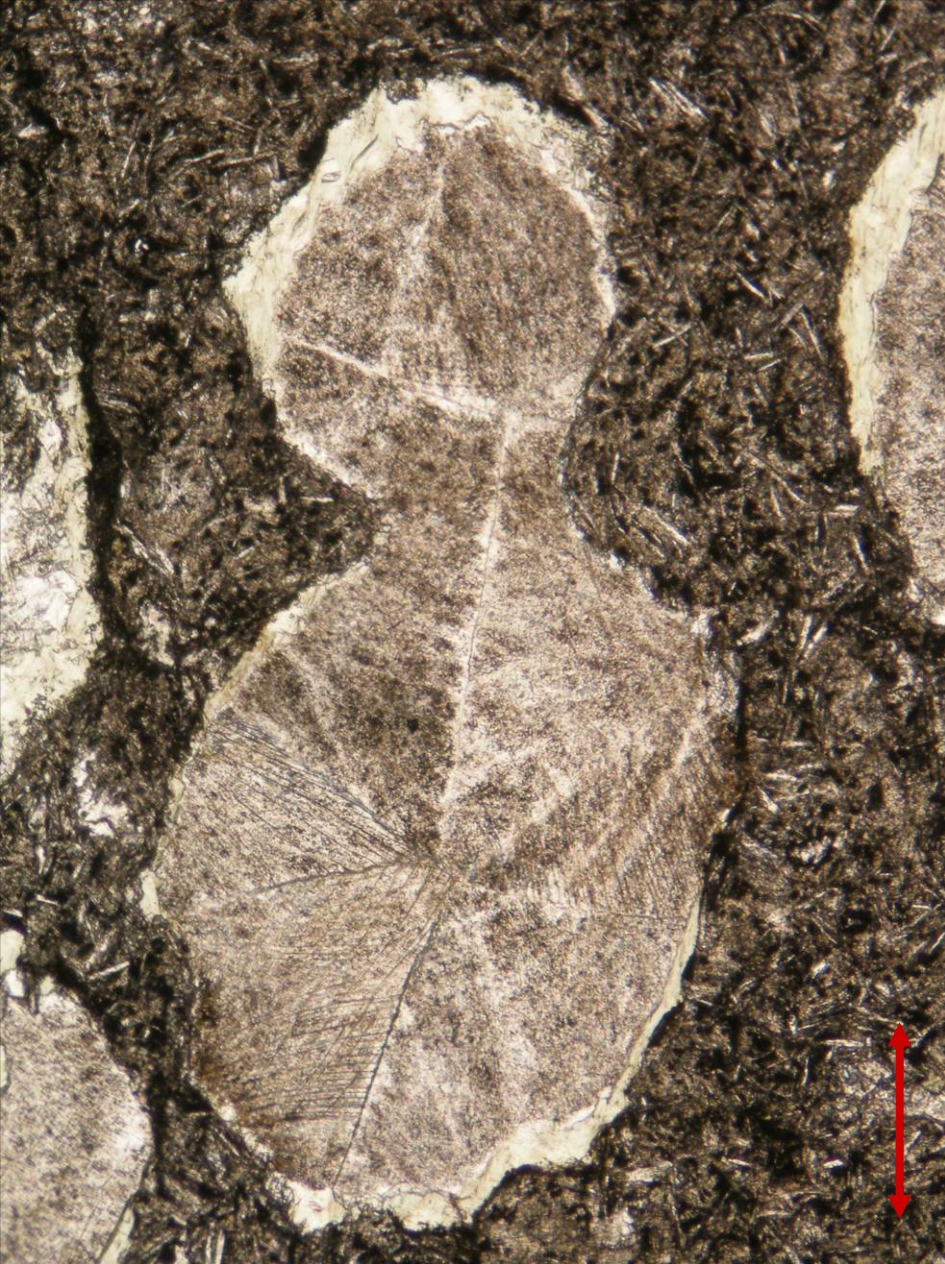
Calcite in a vesicle in andesite from Bánov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





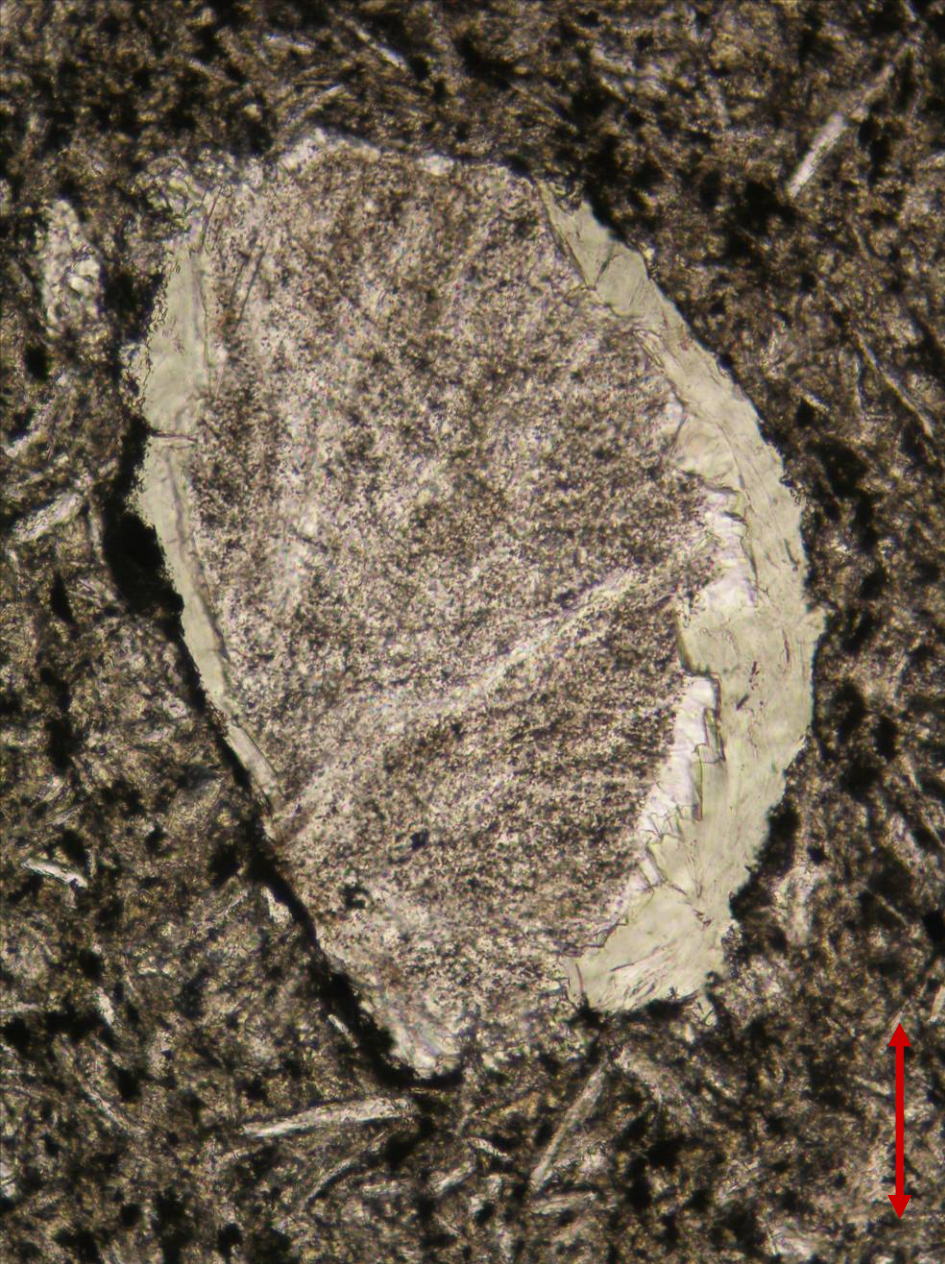
Calcite in a vesicle in spilite from Moravský Beroun, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.7 mm. Photo: JiZi.





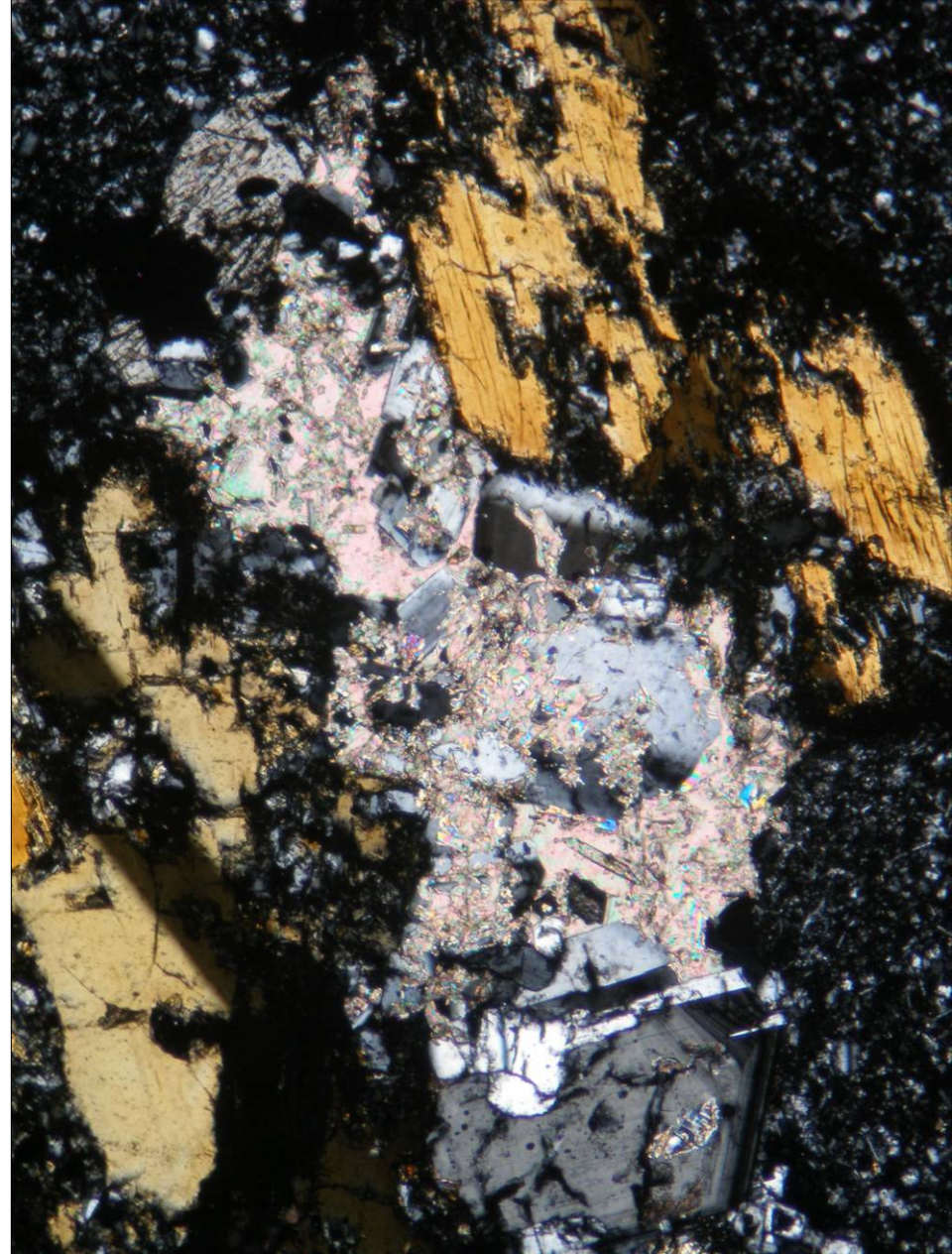
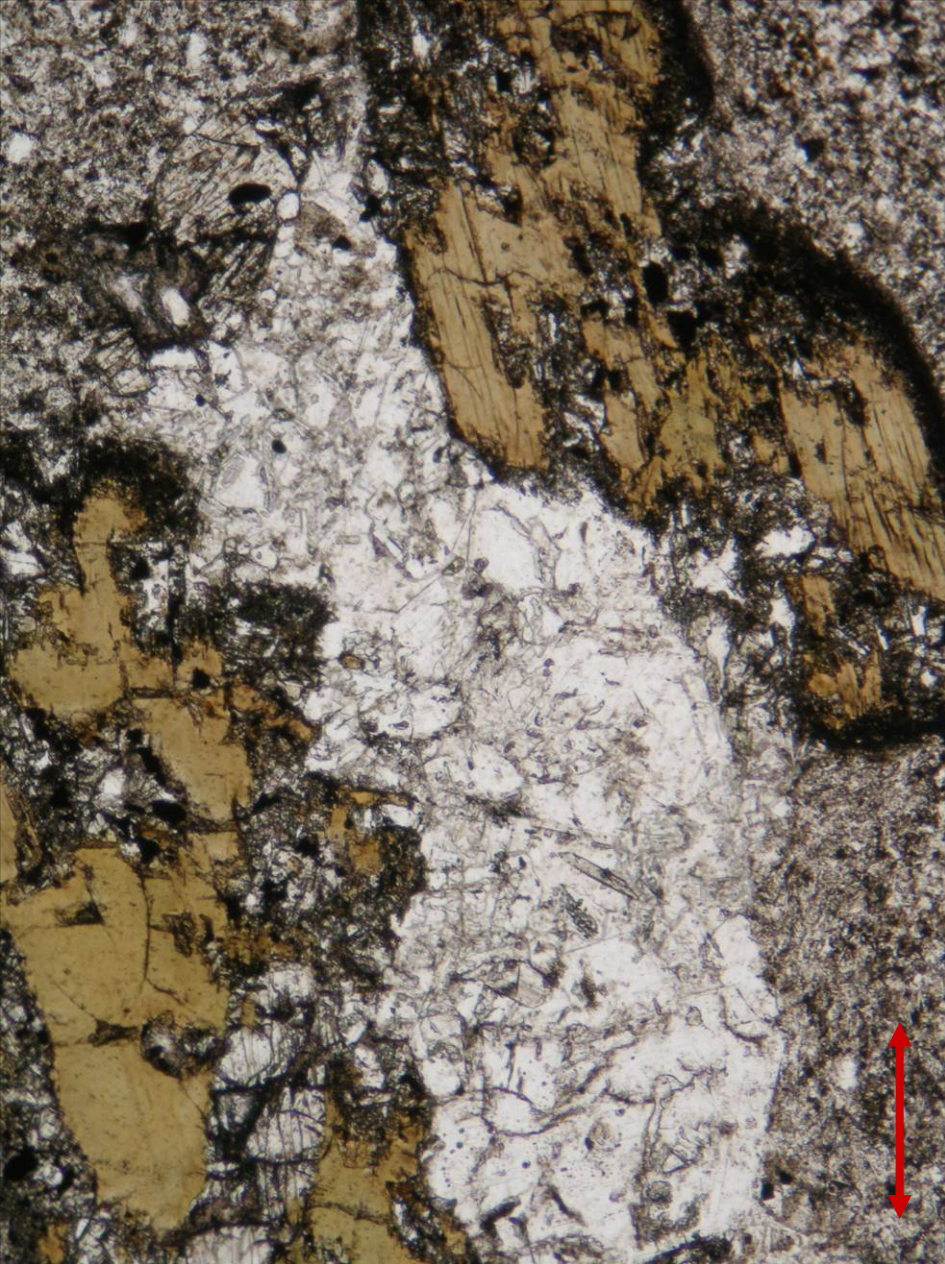
Calcite in cavities in spilitic from Moravský Beroun, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca.2.0 mm. Photo: JiZi.





Calcite and chlorite in a vesicle in spilite from Moravský Beroun, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 0.7 mm. Photo: JiZi.





Calcite in plagioclase phenocryst in andesite from Fintice, Slovakia; PPL (left) and XPL (right). Width of fields of view is ca. 1.7 mm. Photo: JiZi.