

# MUSCOVITE

*Chemical formula:*  $\text{KAl}_2[(\text{OH},\text{F})_2|\text{AlSi}_3\text{O}_{10}]$

*Crystal system:* monoclinic

*Color in thin section:* colorless, sometimes slightly pleochroic (very pale pink or green colors)

*Form:* micaceous flakes or tablets with irregular outlines, rarely tabular crystals with hexagonal outline

*Cleavage:* perfect on {001}

*Indices of refraction:*  $n_\alpha = 1.552 - 1.580$     $n_\beta = 1.582 - 1.620$     $n_\gamma = 1.587 - 1.623$

*Birefringence:* 0.036 – 0.049

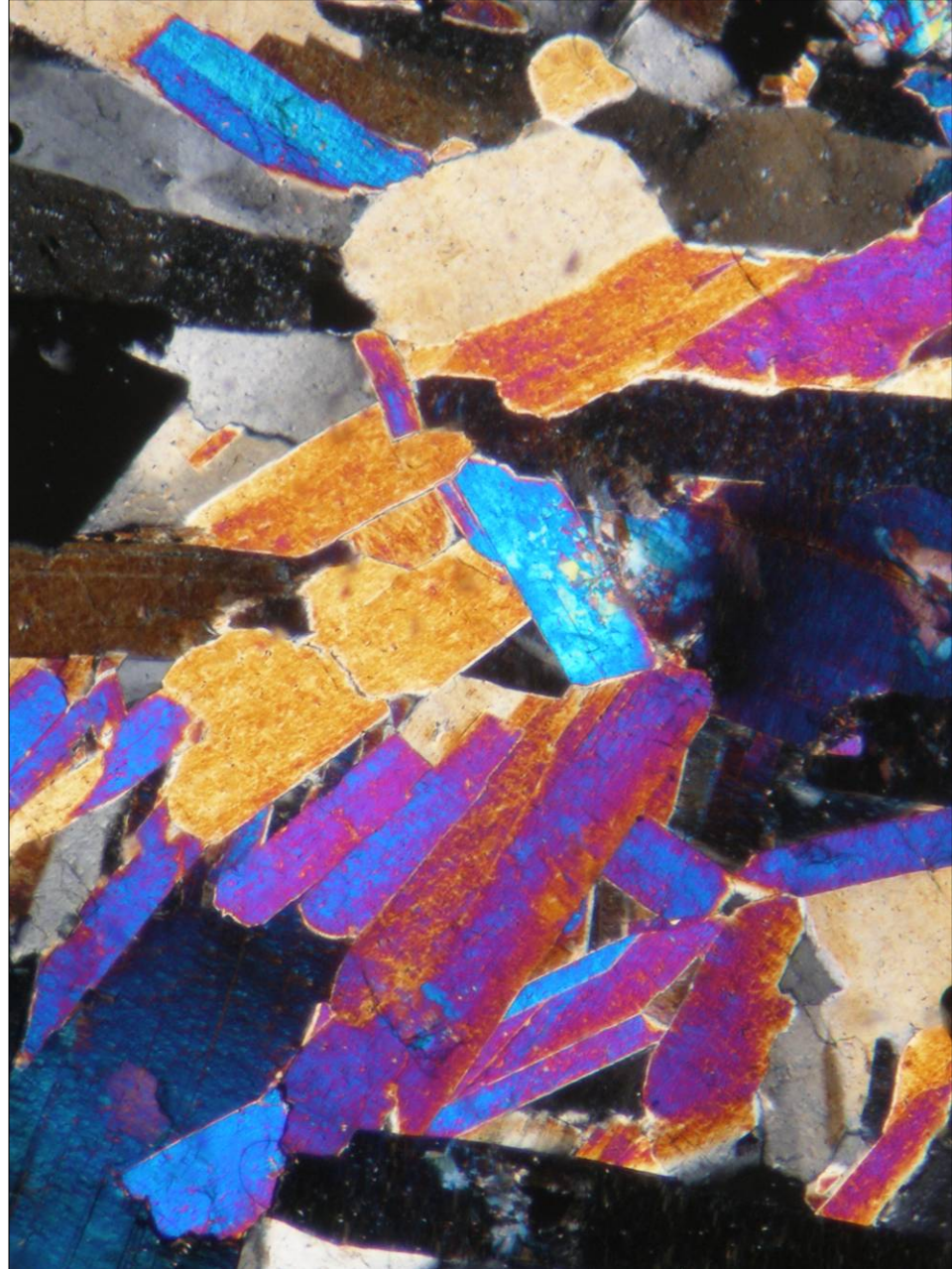
*Optic sign:* biaxial negative

*Sign of elongation:* positive

*Occurrence:* granite, aplite, granitic pegmatite, phyllite, mica schist, gneiss

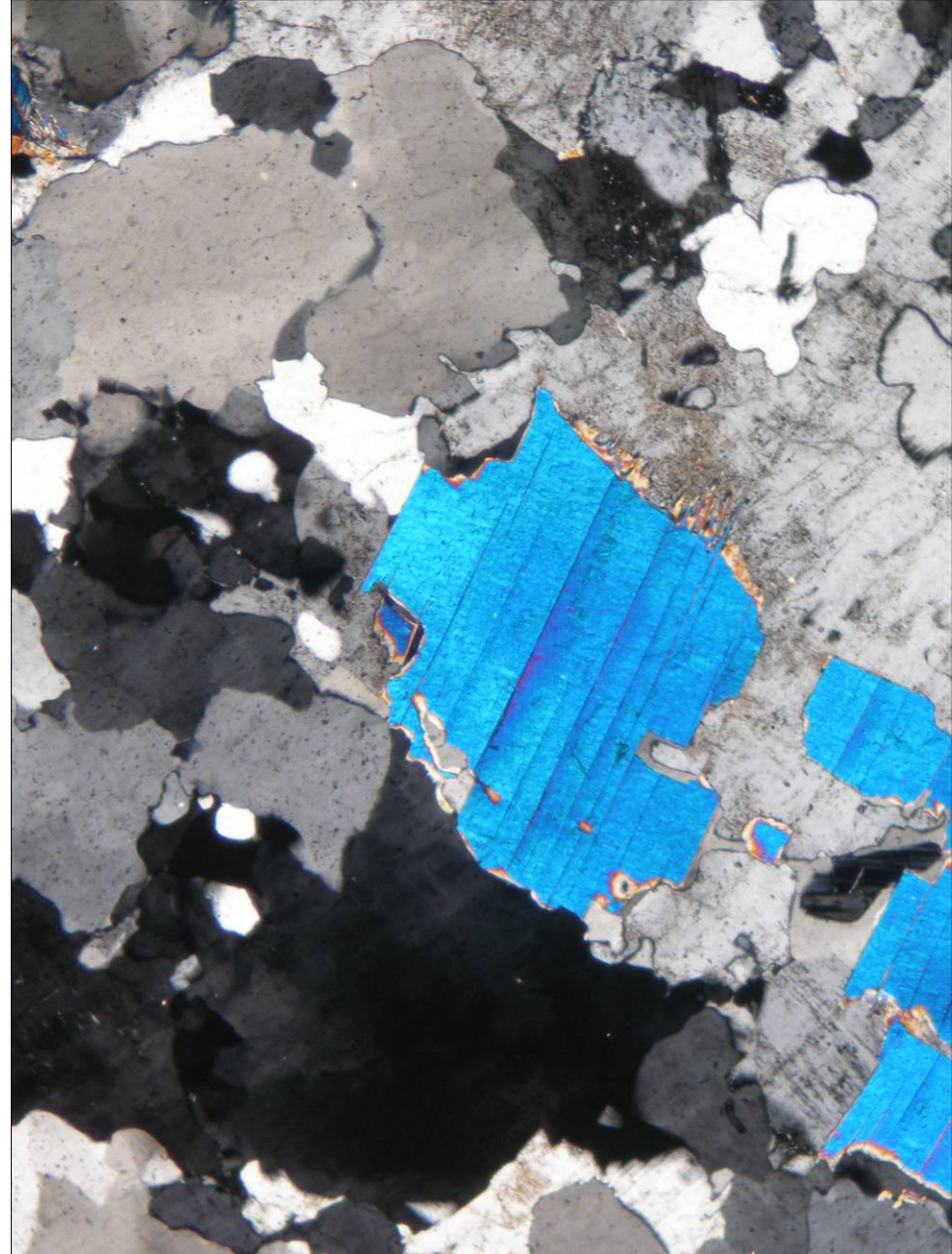
*Similar minerals in thin sections:* pale-colored chlorite (lower birefringence), pyrophyllite (higher birefringence), paragonite, phlogopite, lepidolite, talc

*Note:* fine-grained muscovite is called sericite



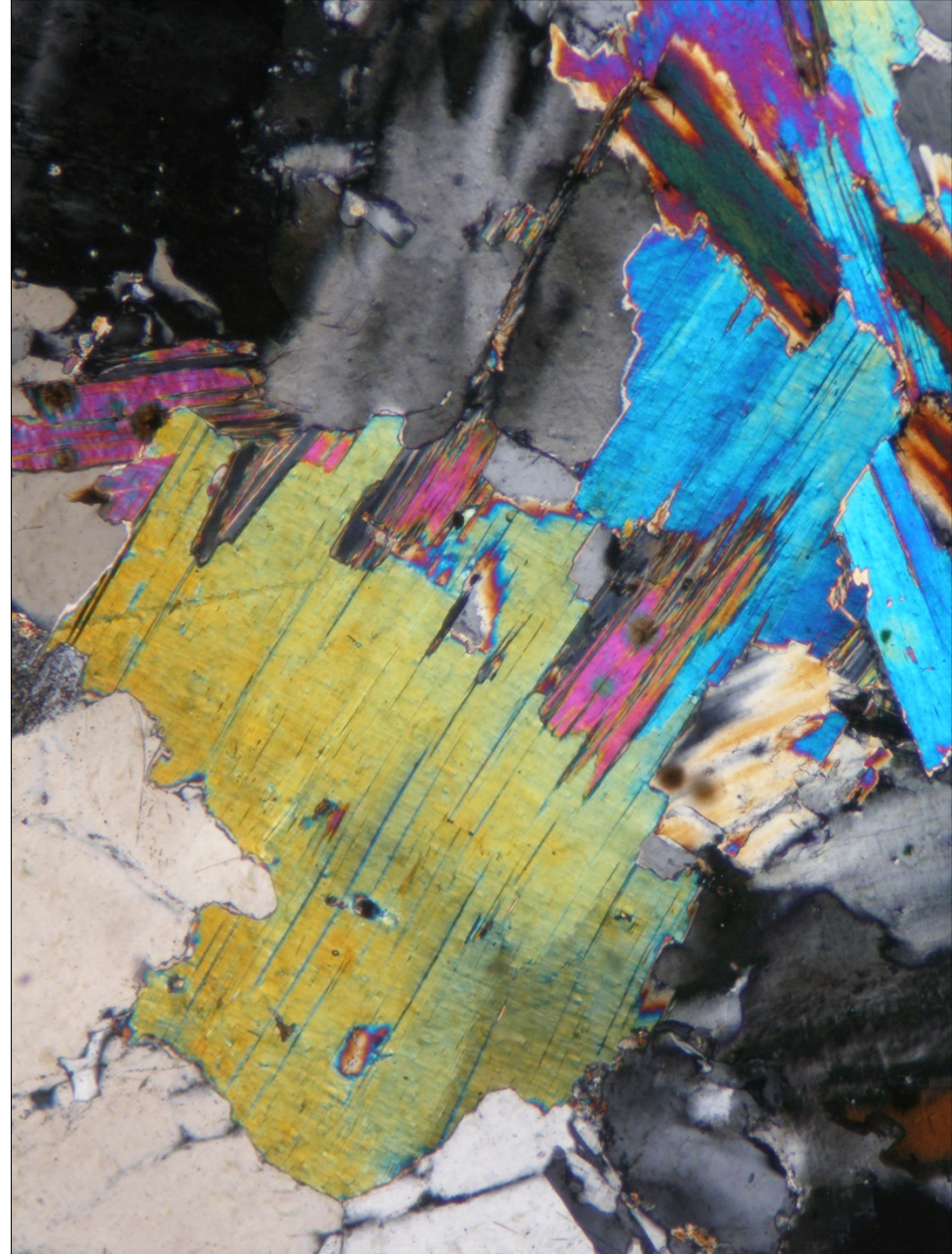
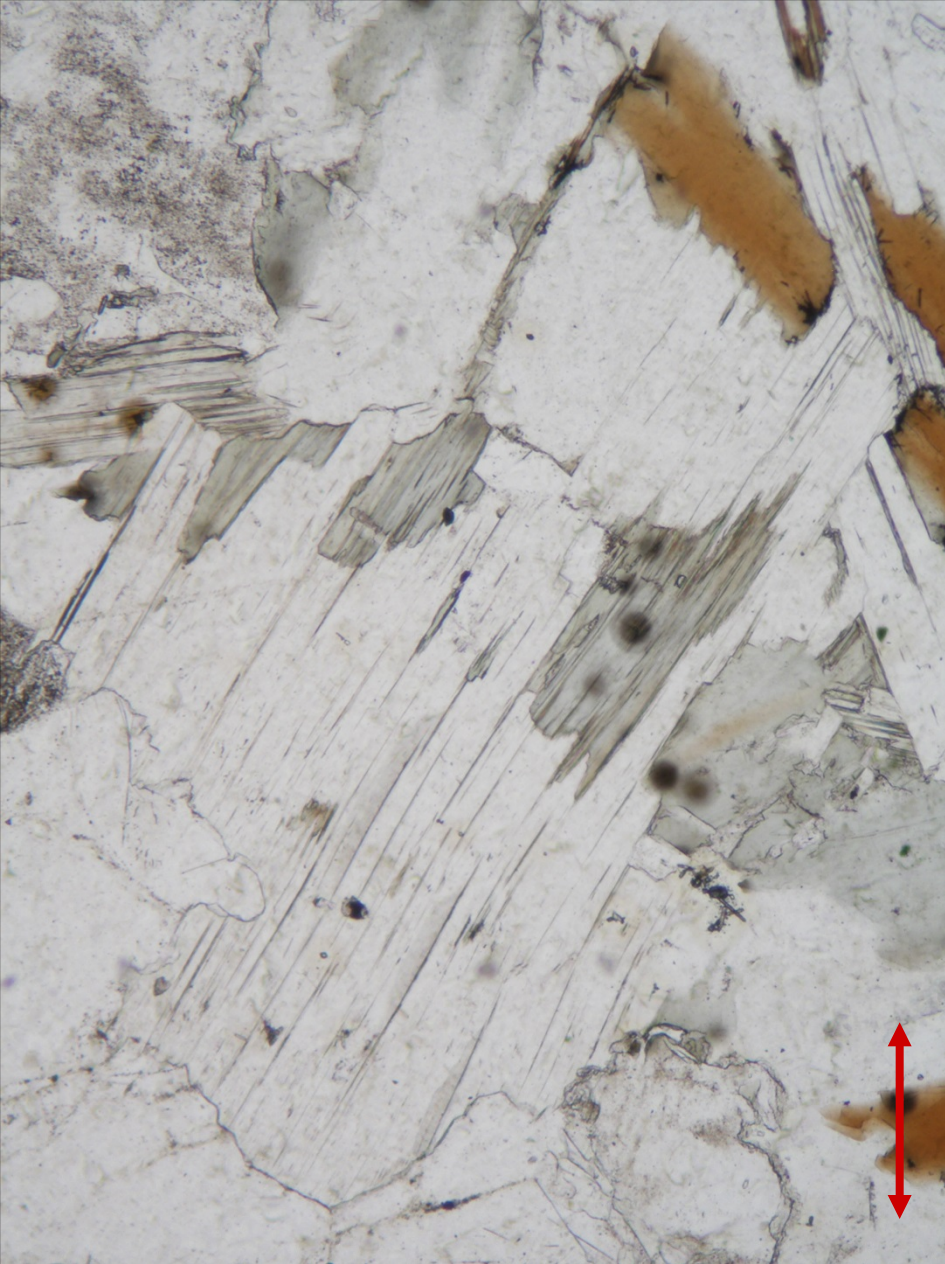
Muscovite in migmatite from Kaňk near Kutná Hora, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





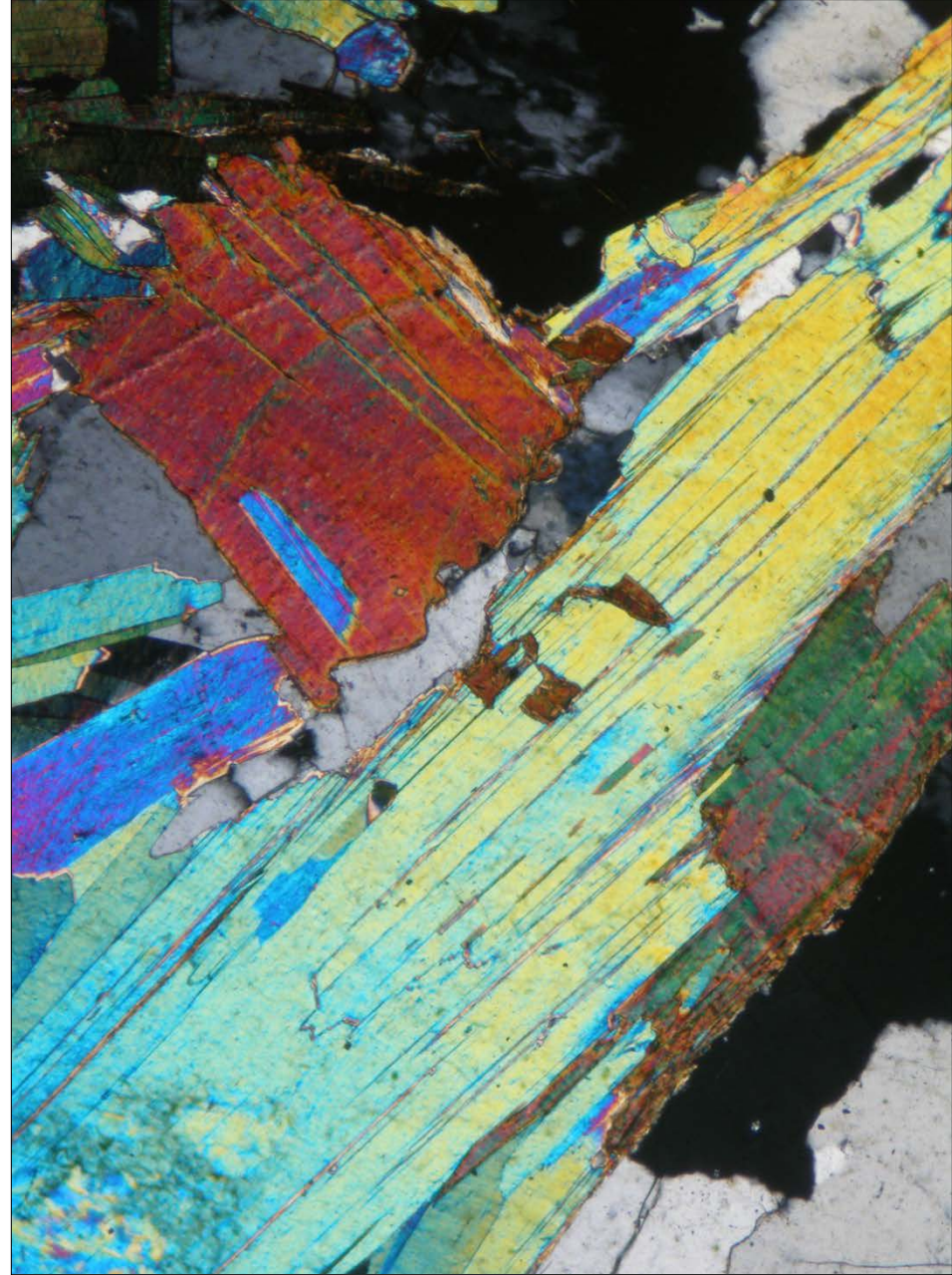
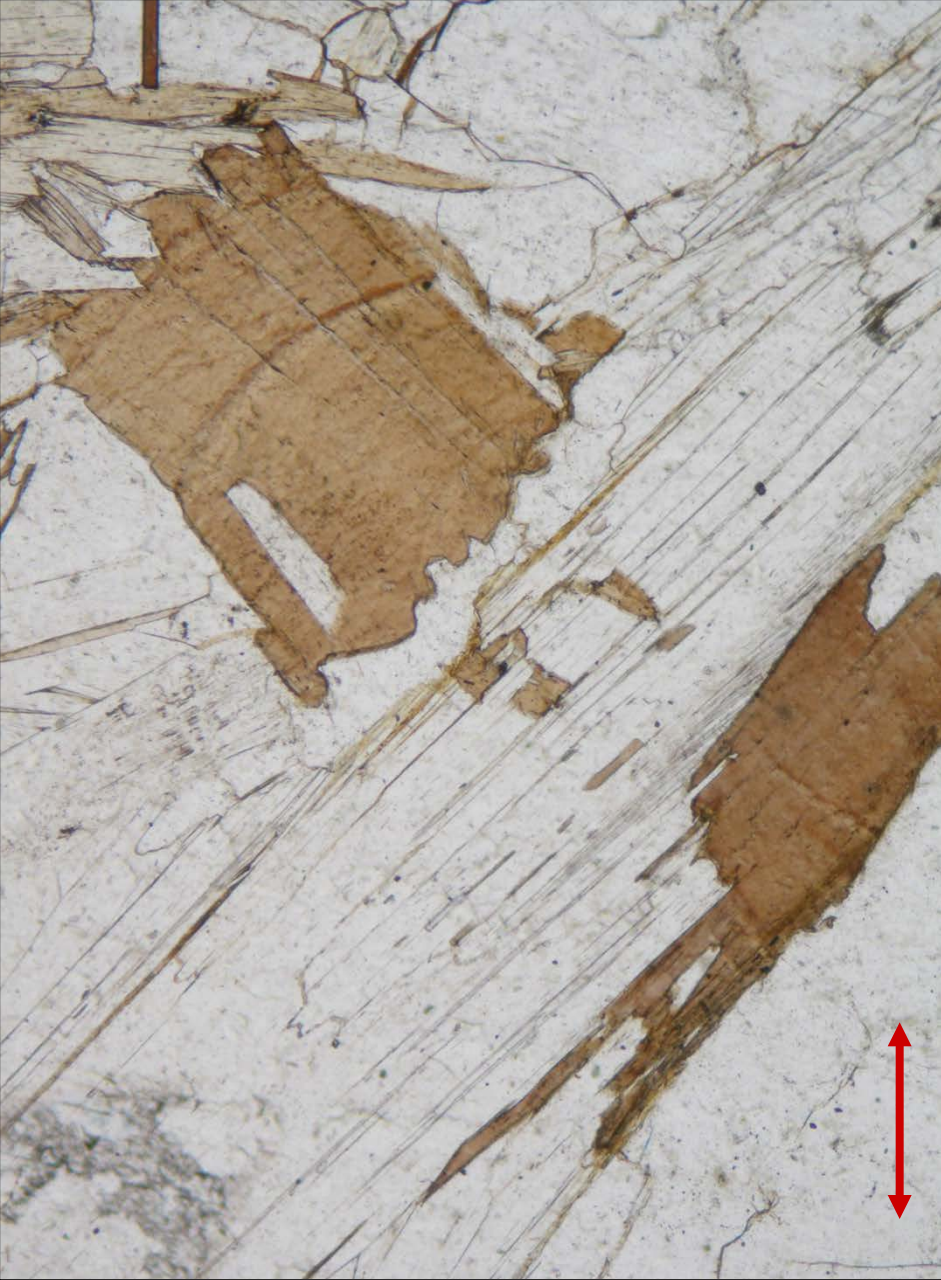
Muscovite in granite from Přebyslavice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.5 mm. Photo: JiZi.





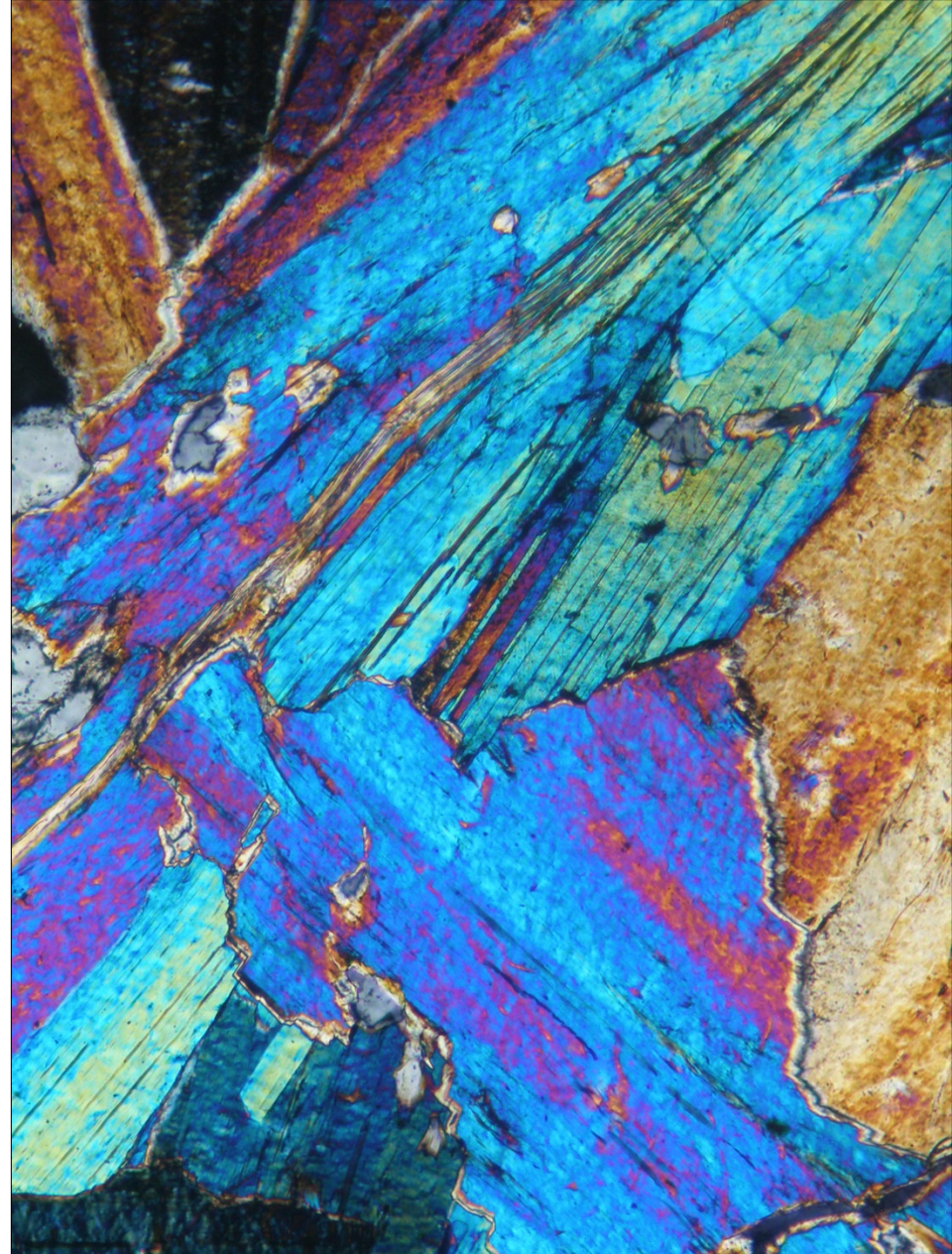
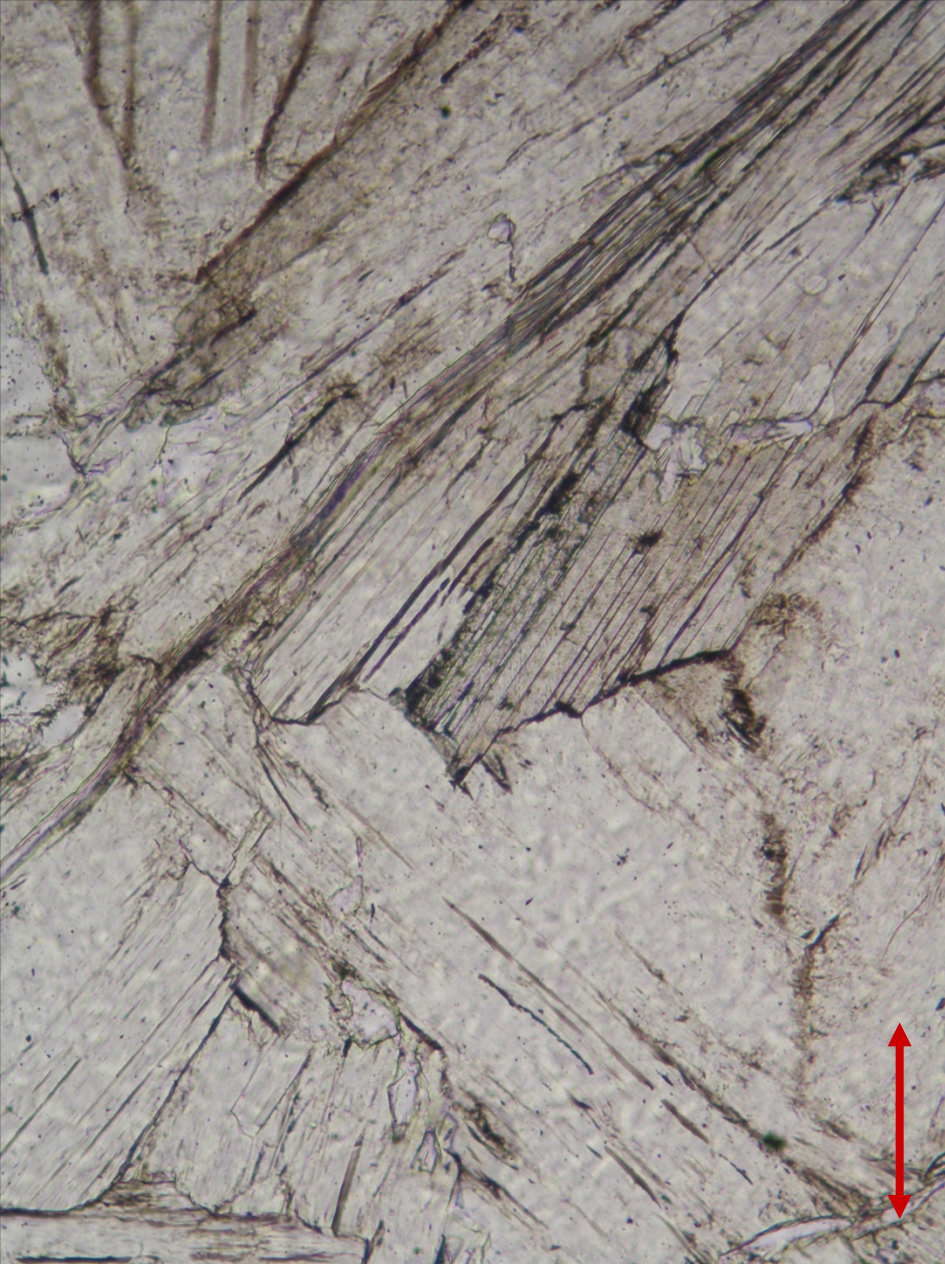
Muscovite and biotite in granite from Mrákořín, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.5 mm. Photo: JiZi.





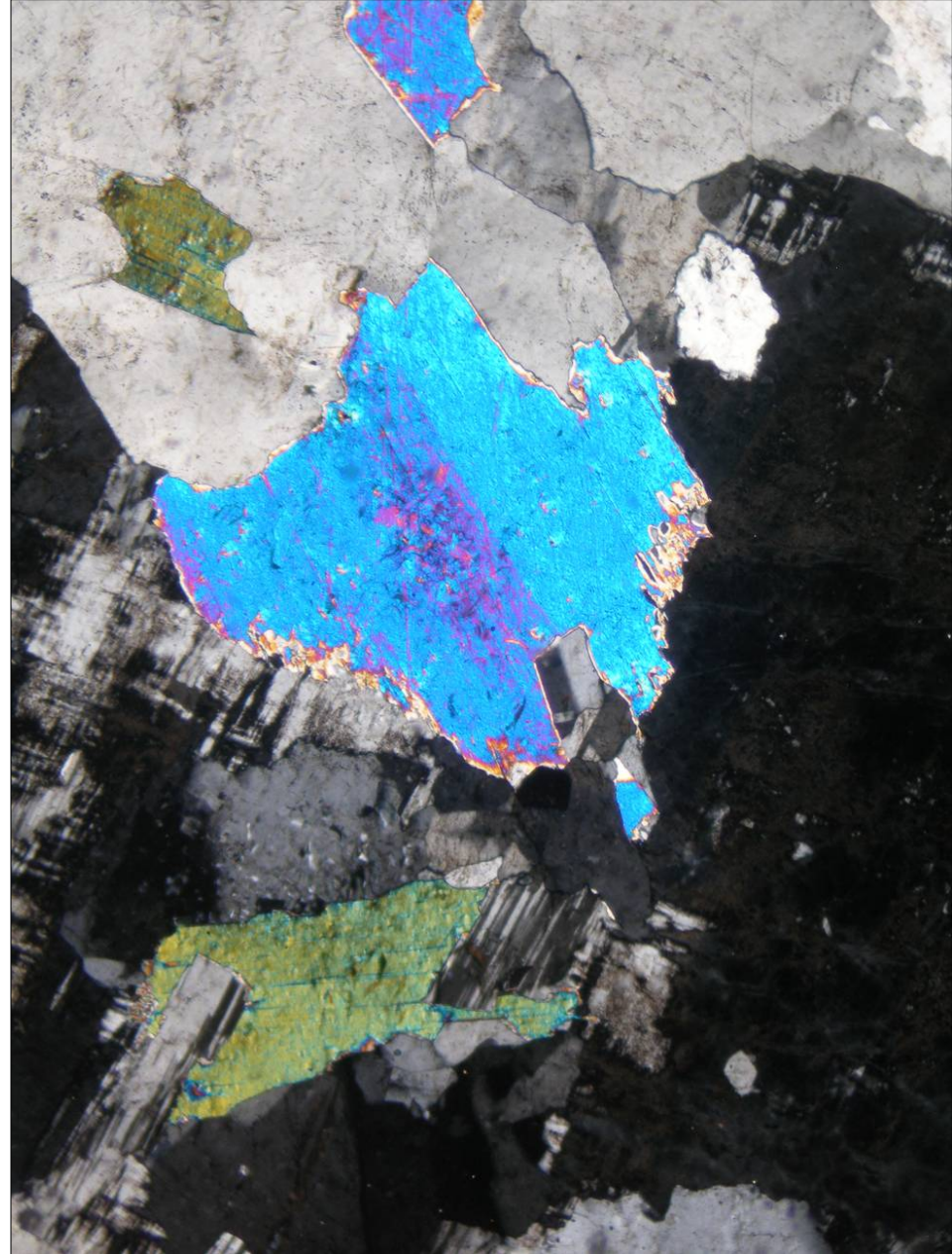
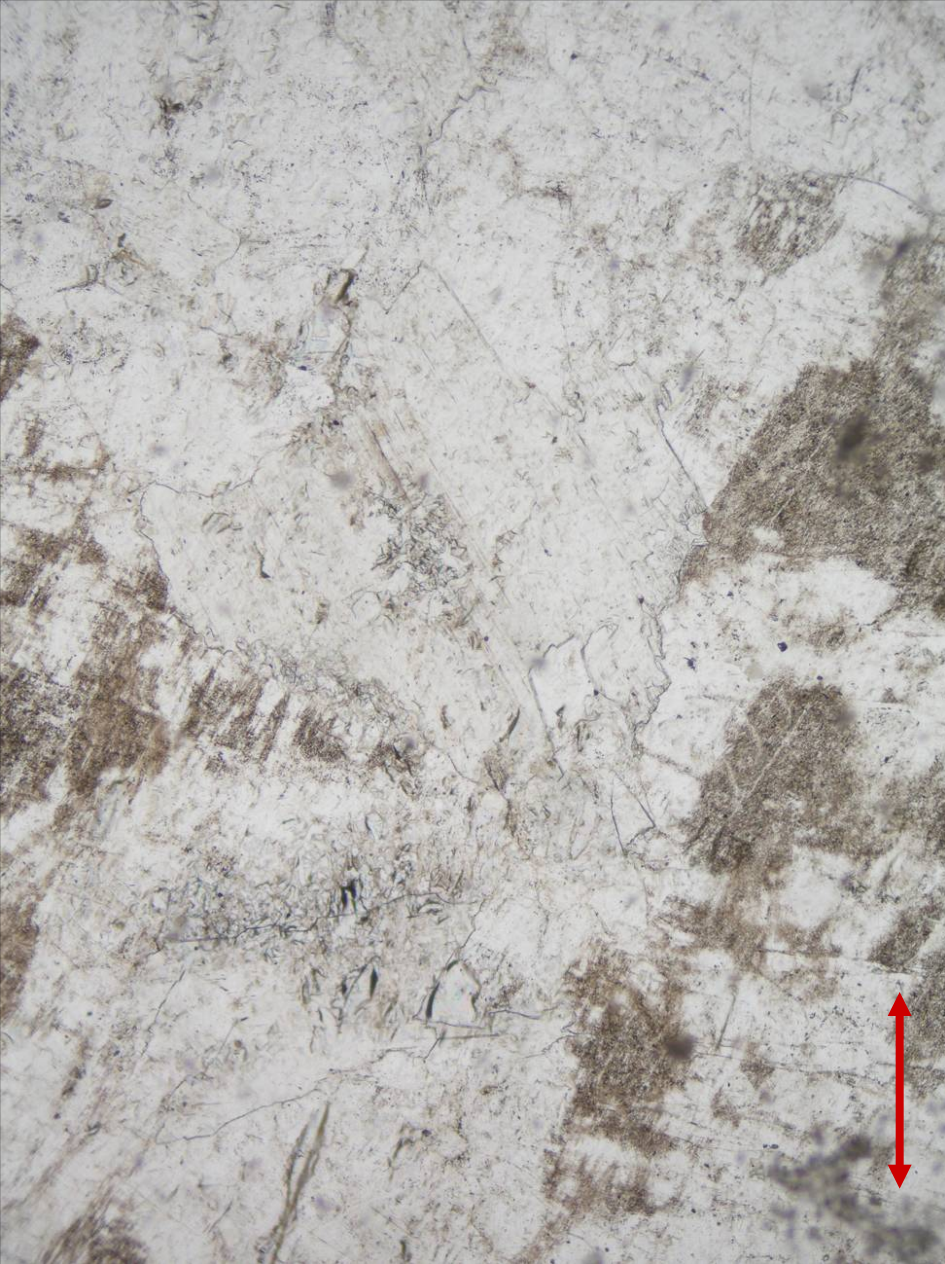
Muscovite and biotite in mica schist from Kovářová, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.7 mm. Photo: JiZi.





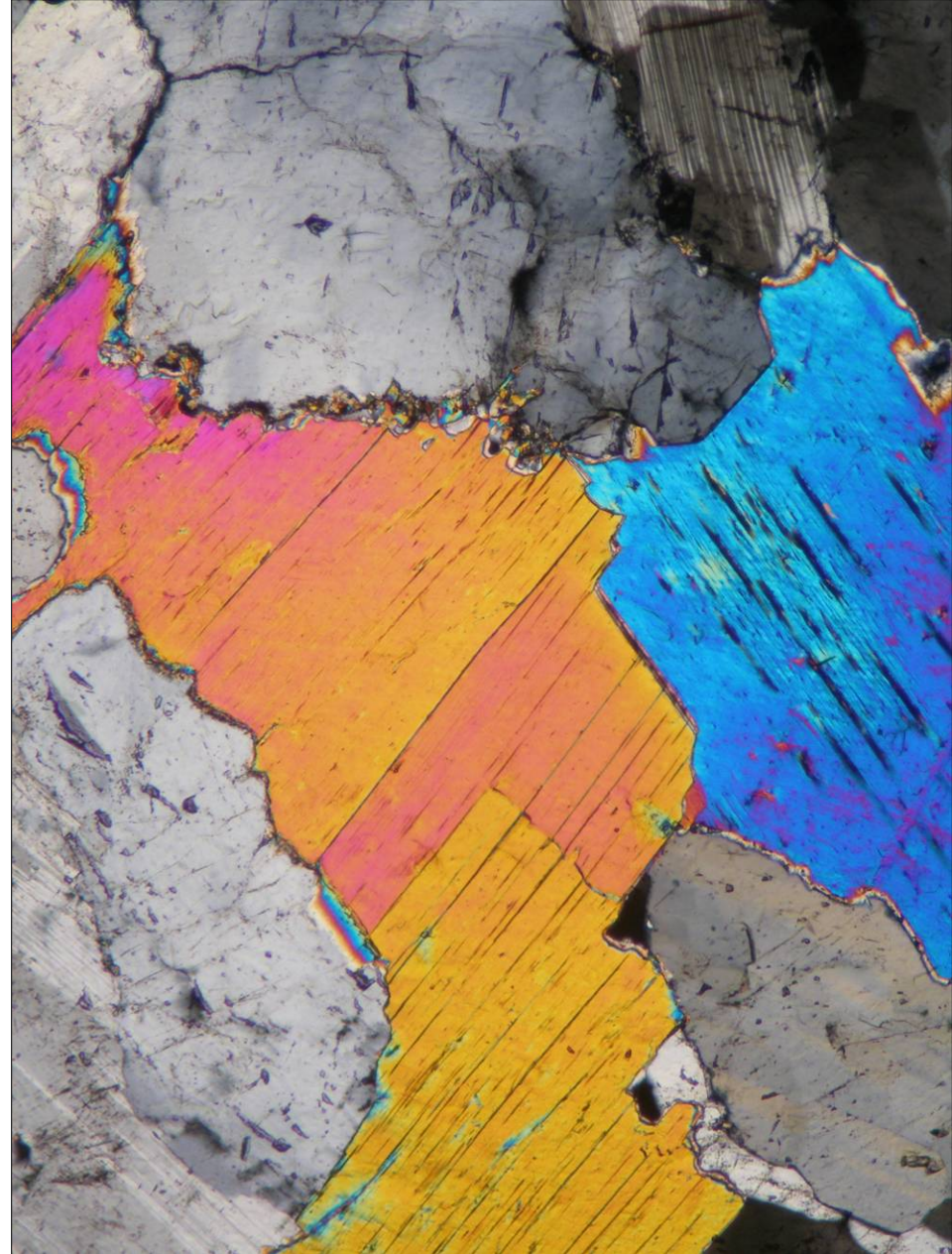
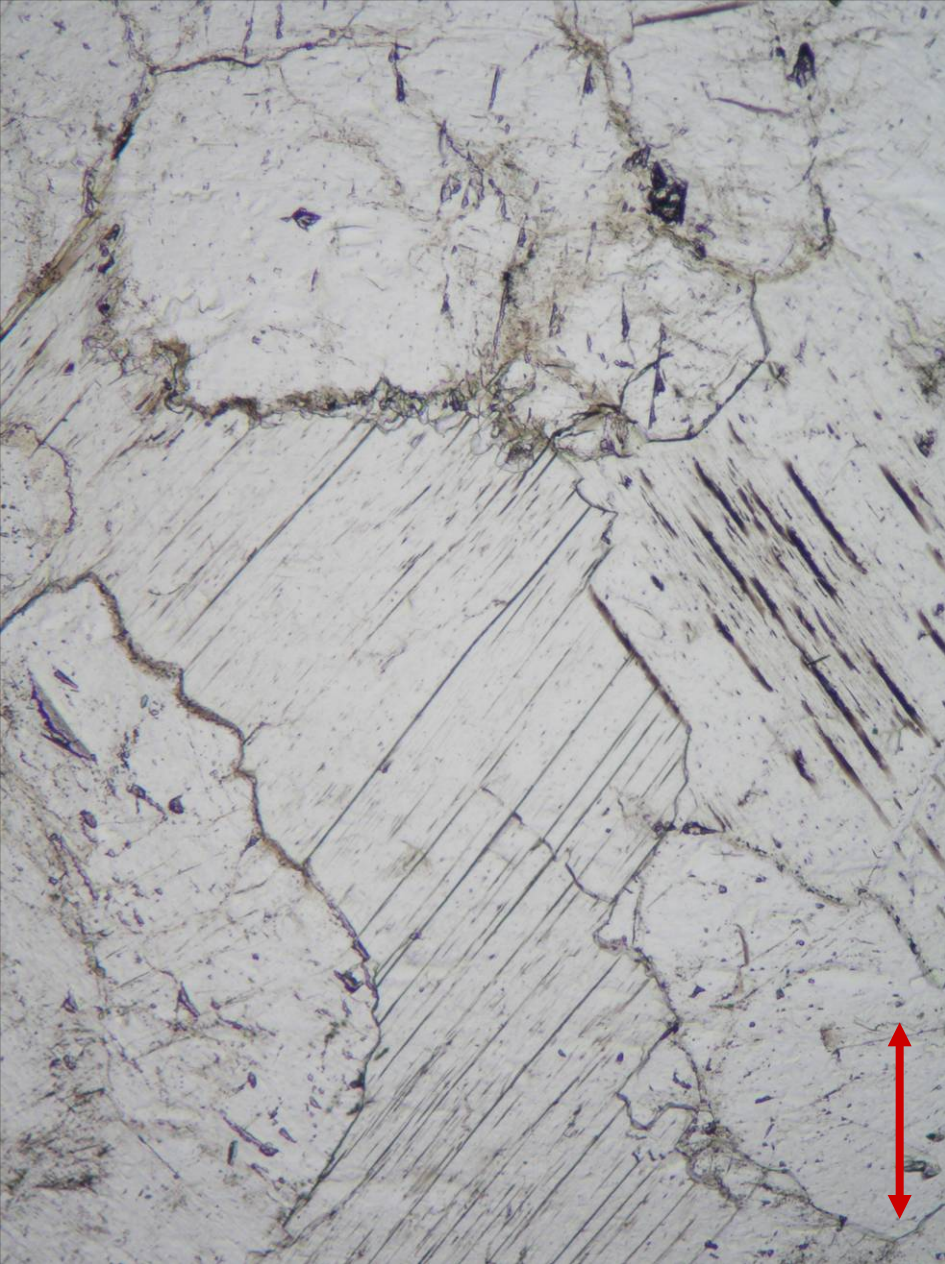
Muscovite in aplopematite from Černá Voda, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.0 mm. Photo: JiZi.





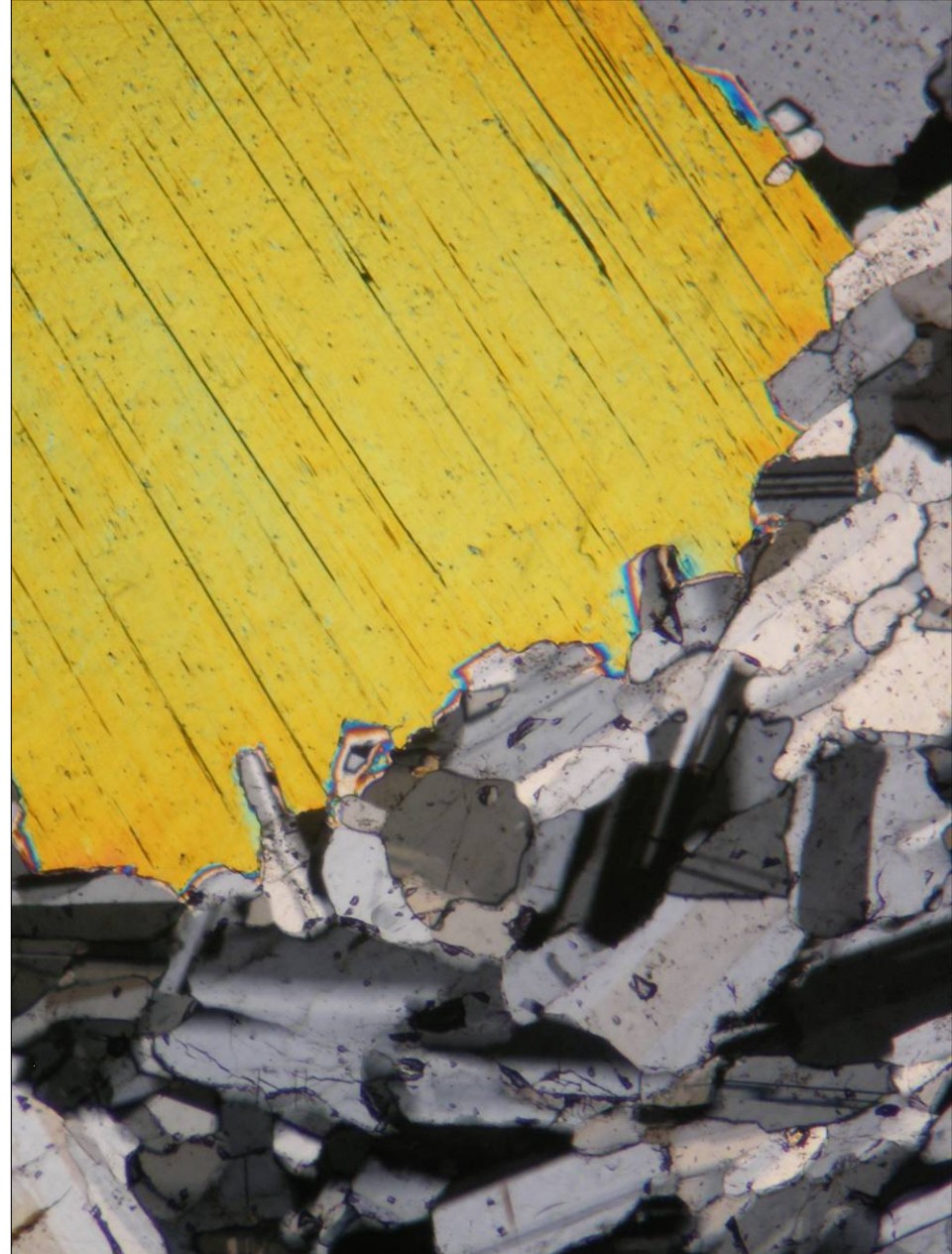
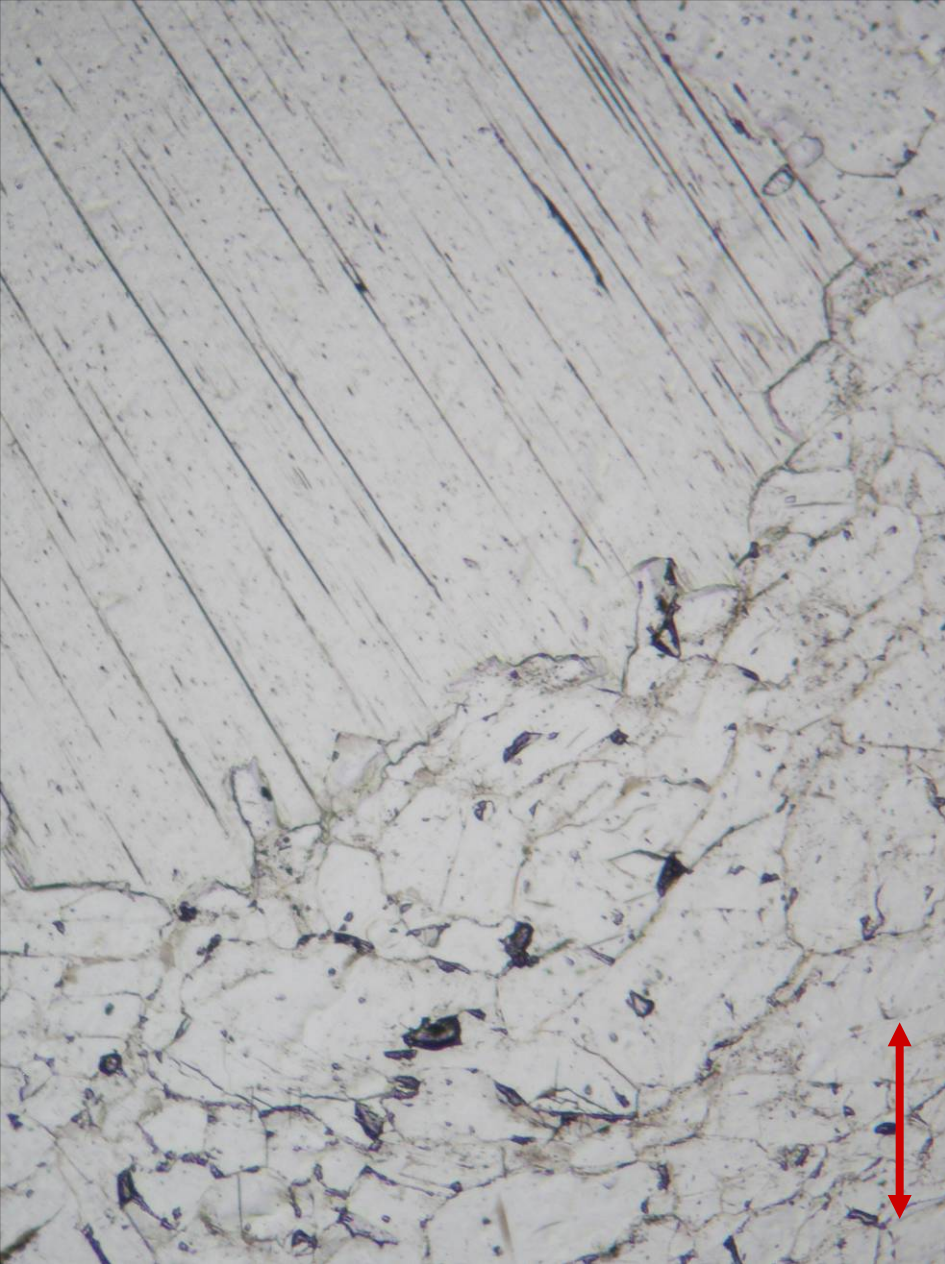
Muscovite in pegmatite from Maršíkov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.5 mm. Photo: JiZi.





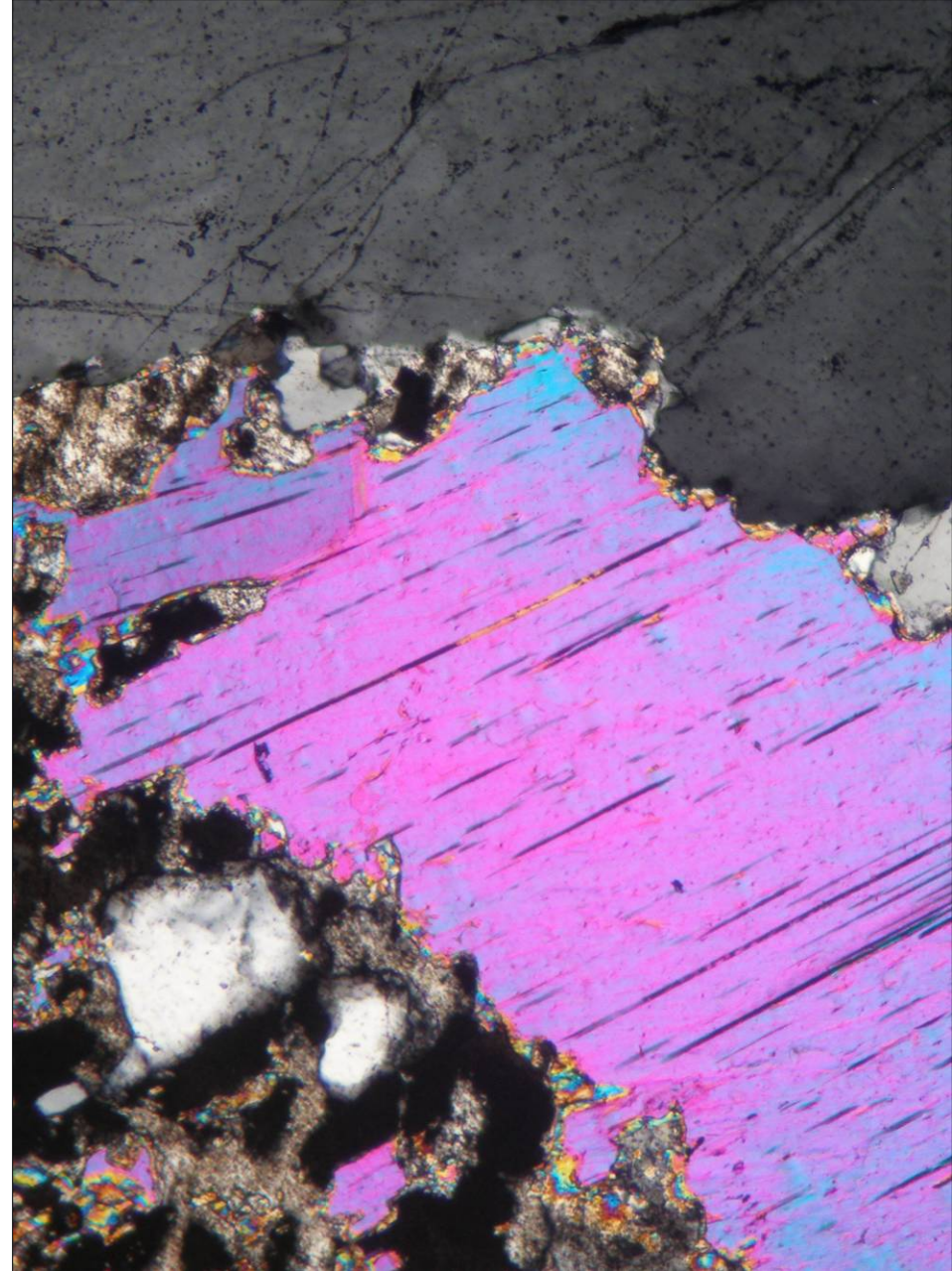
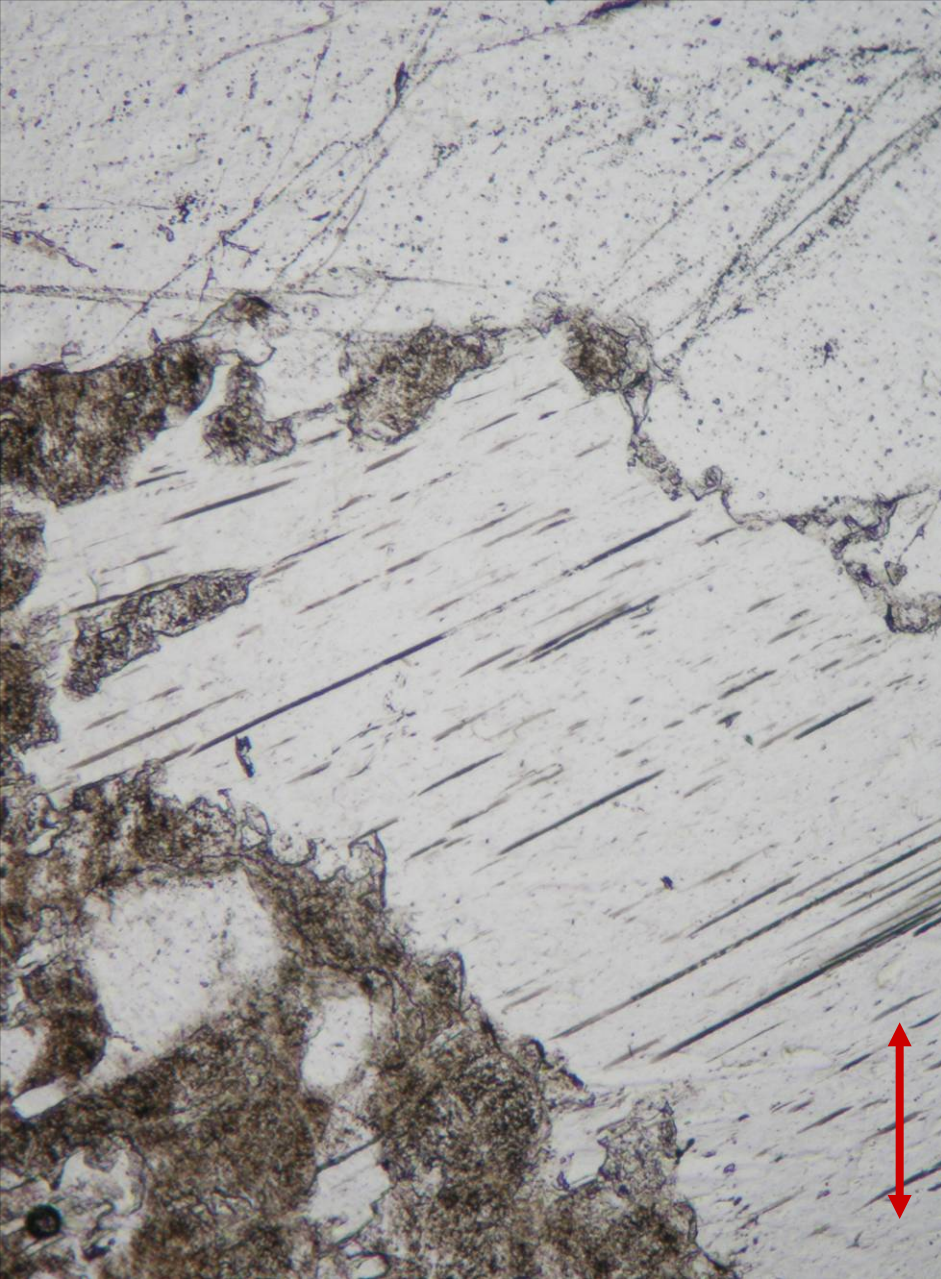
Muscovite in pegmatite from Maršíkov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





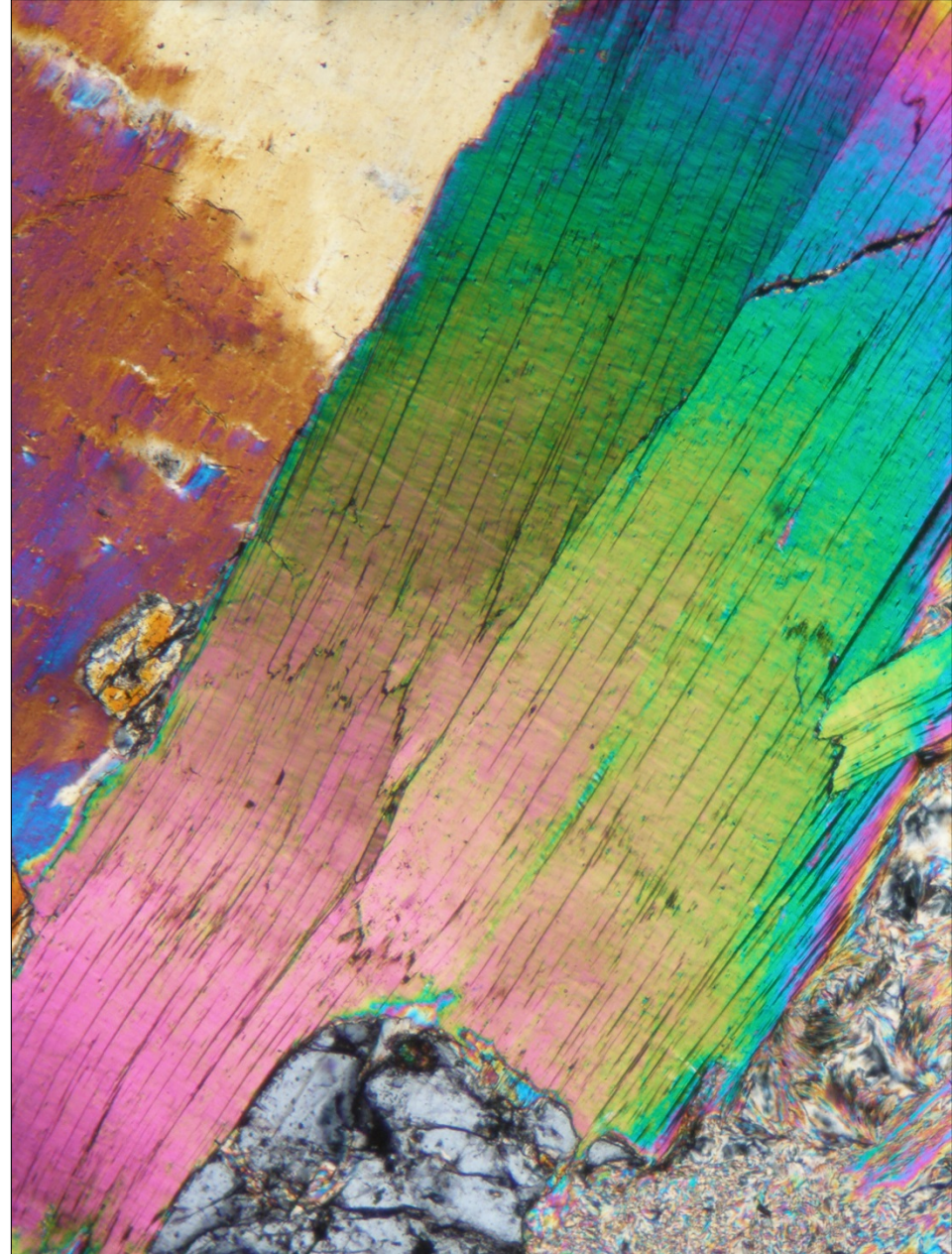
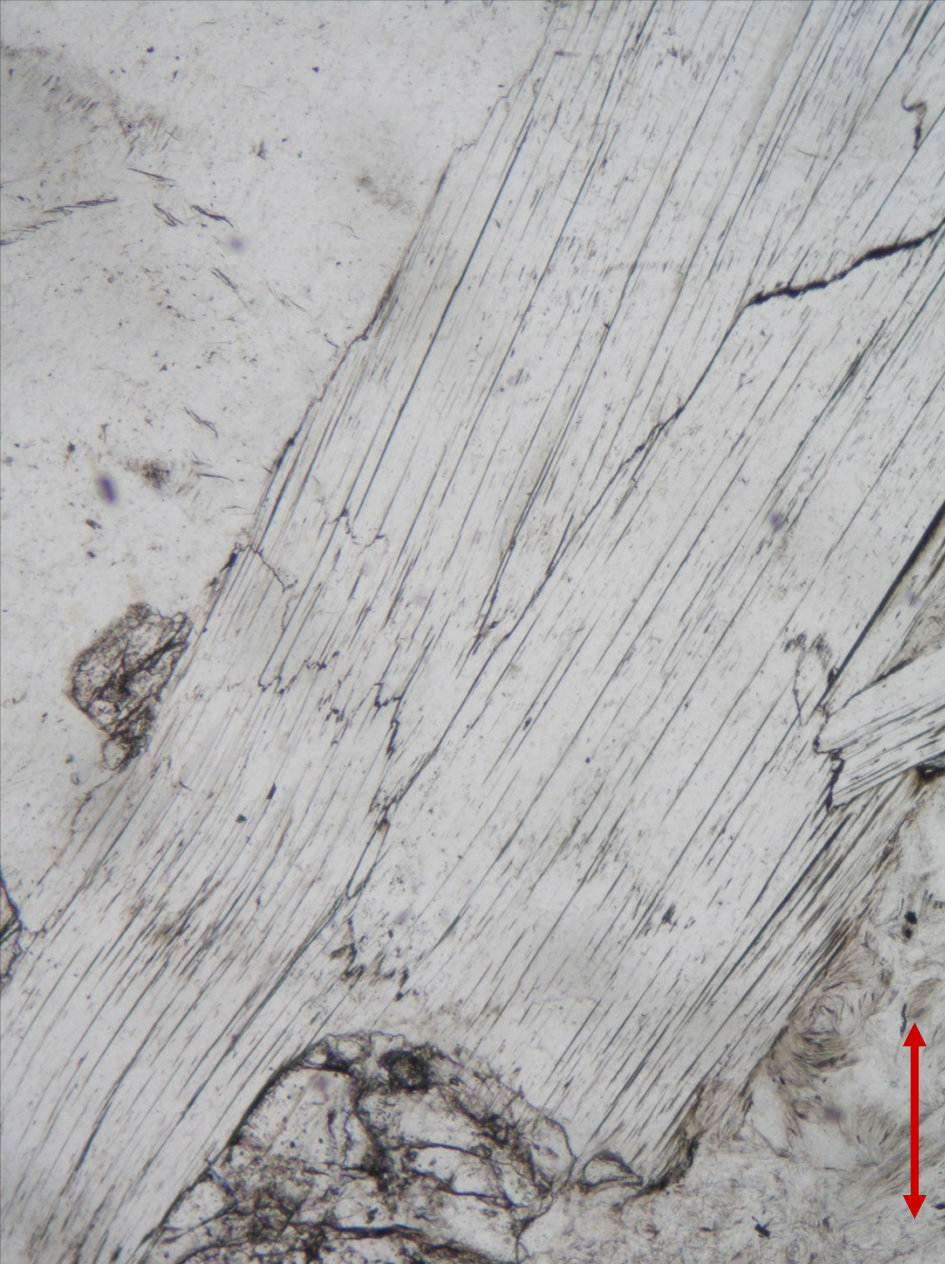
Muscovite in pegmatite from Maršíkov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.3 mm. Photo: JiZi.





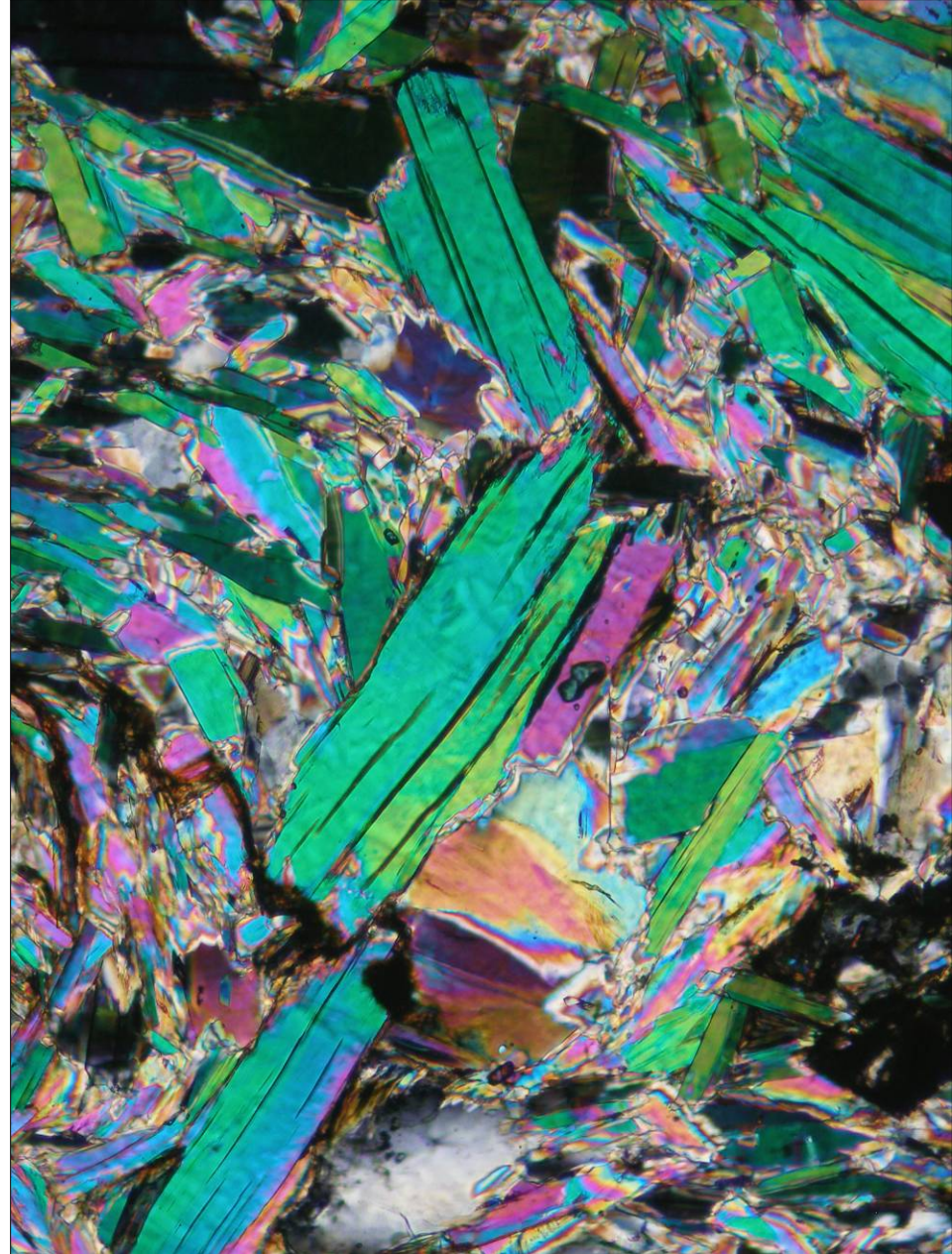
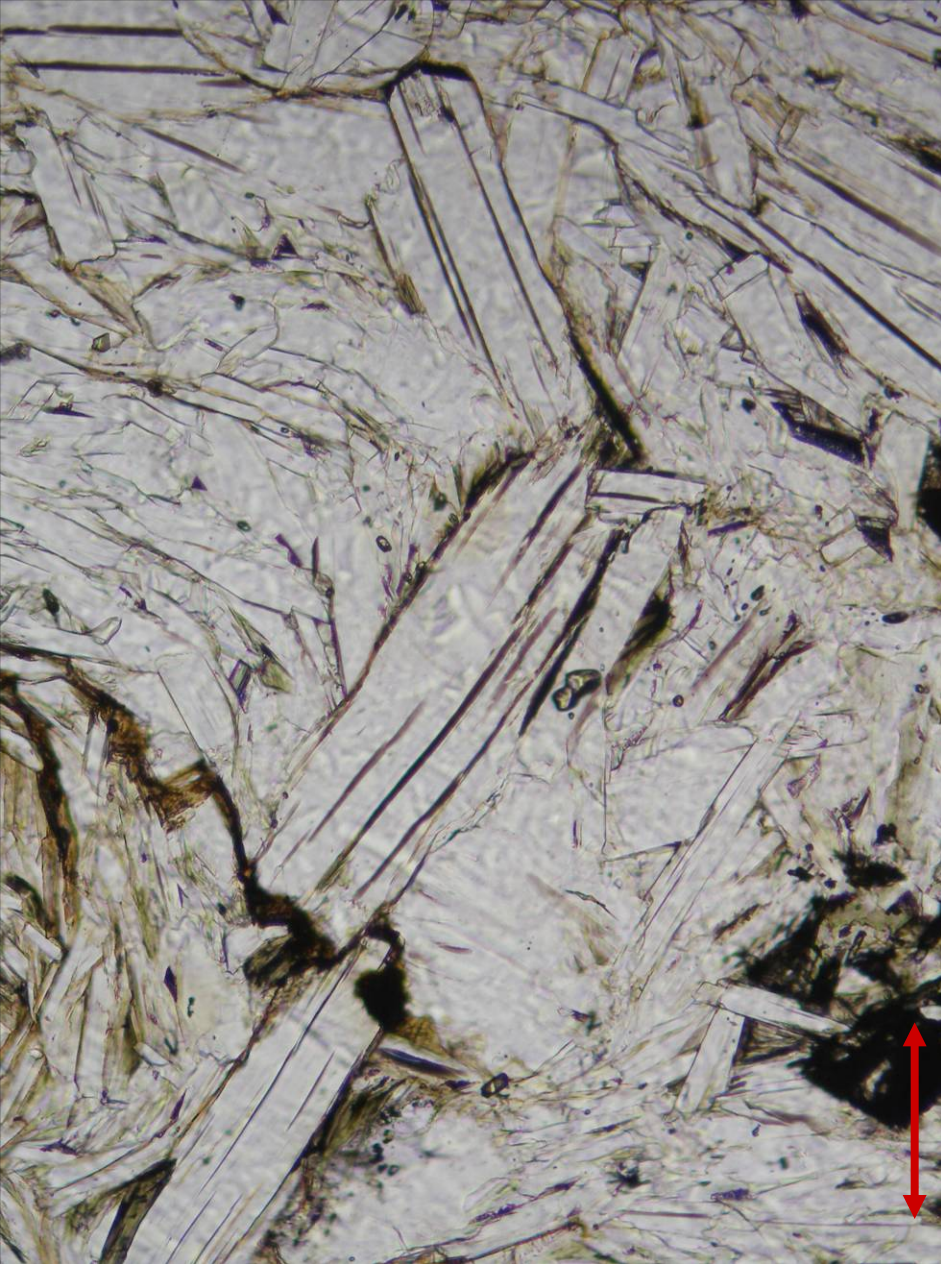
Muscovite, quartz and altered K-feldspar in pegmatite from Maršíkov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.4 mm. Photo: JiZi.





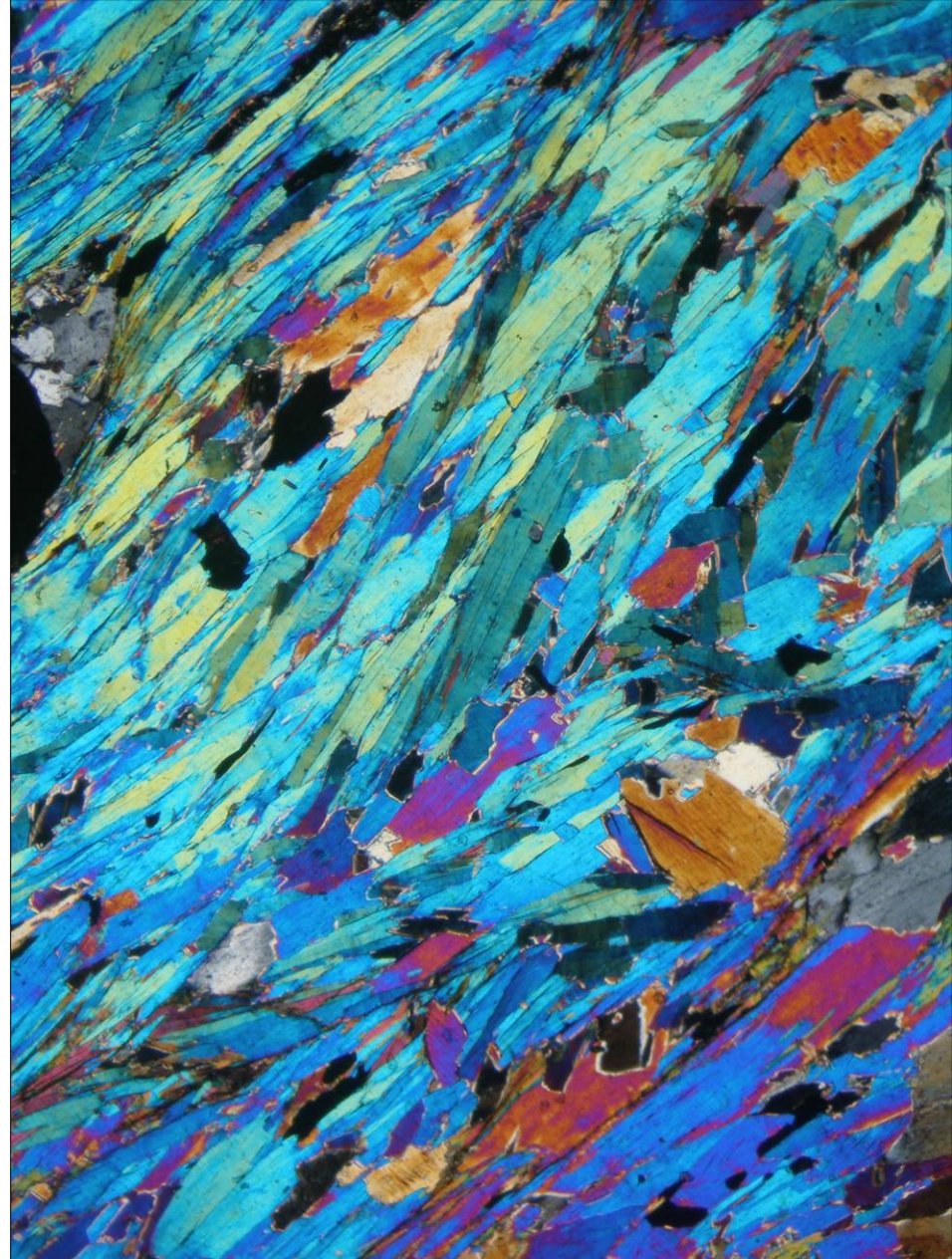
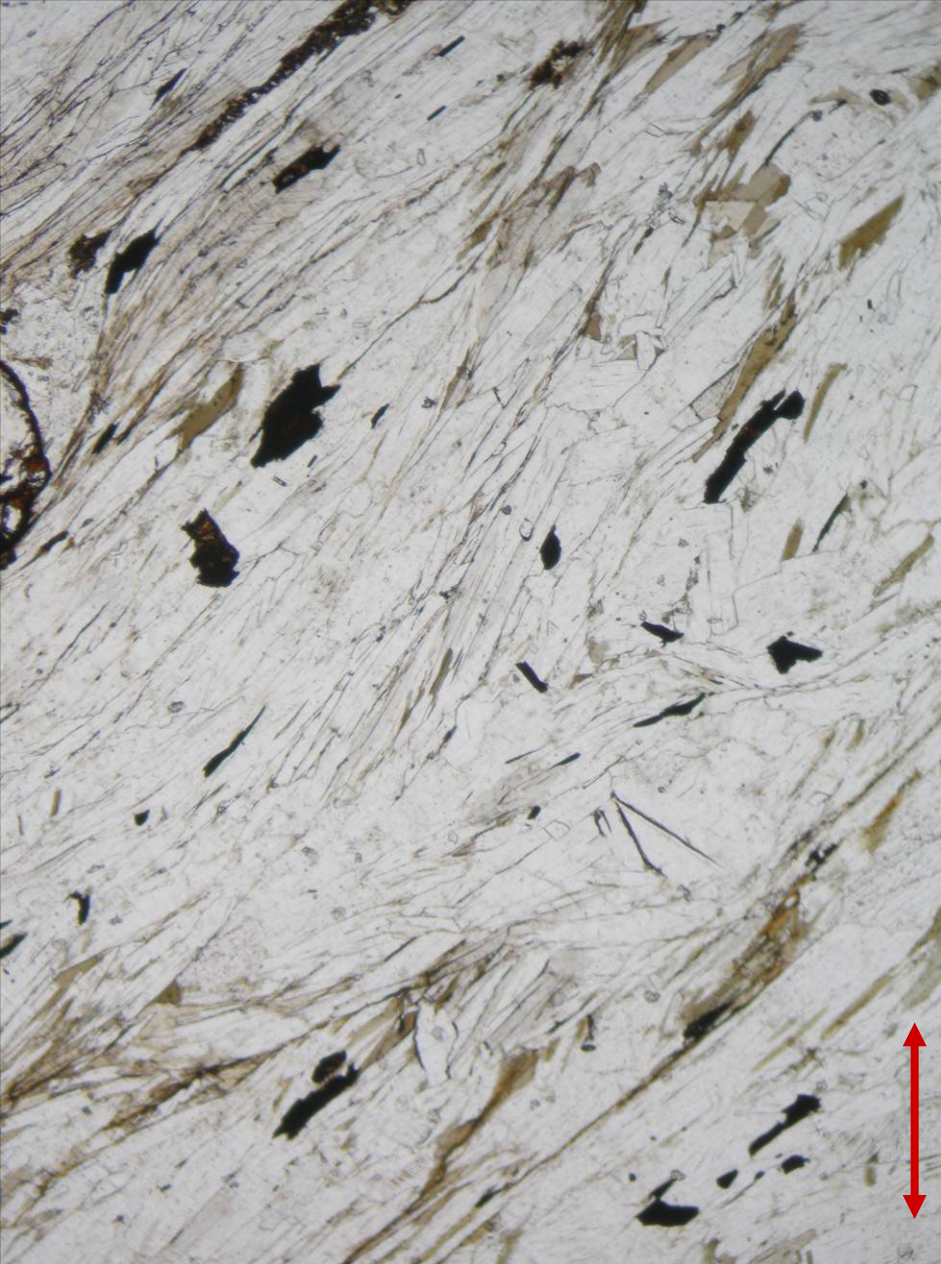
Muscovite in pegmatite from Dolní Bory, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.2 mm. Photo: JiZi.





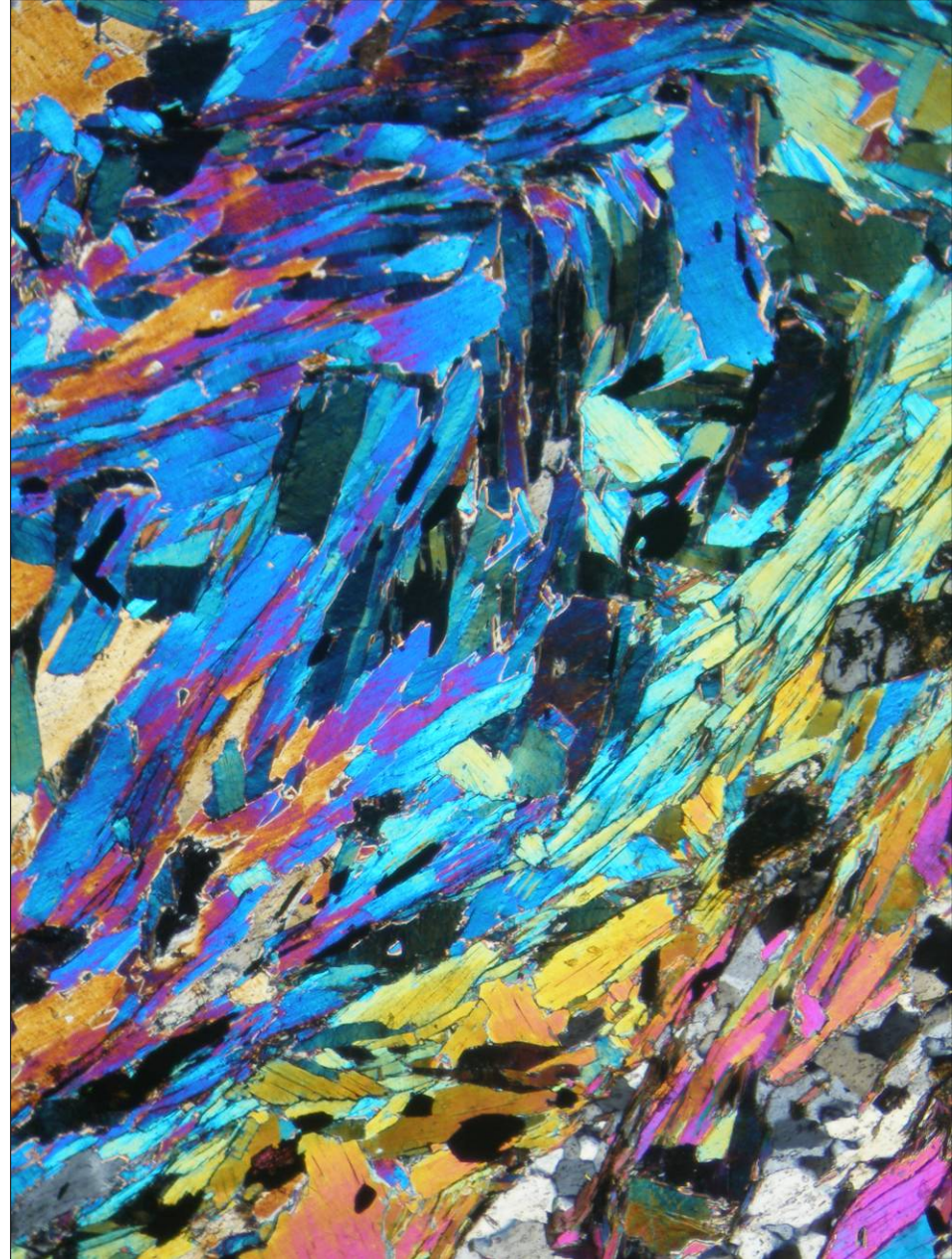
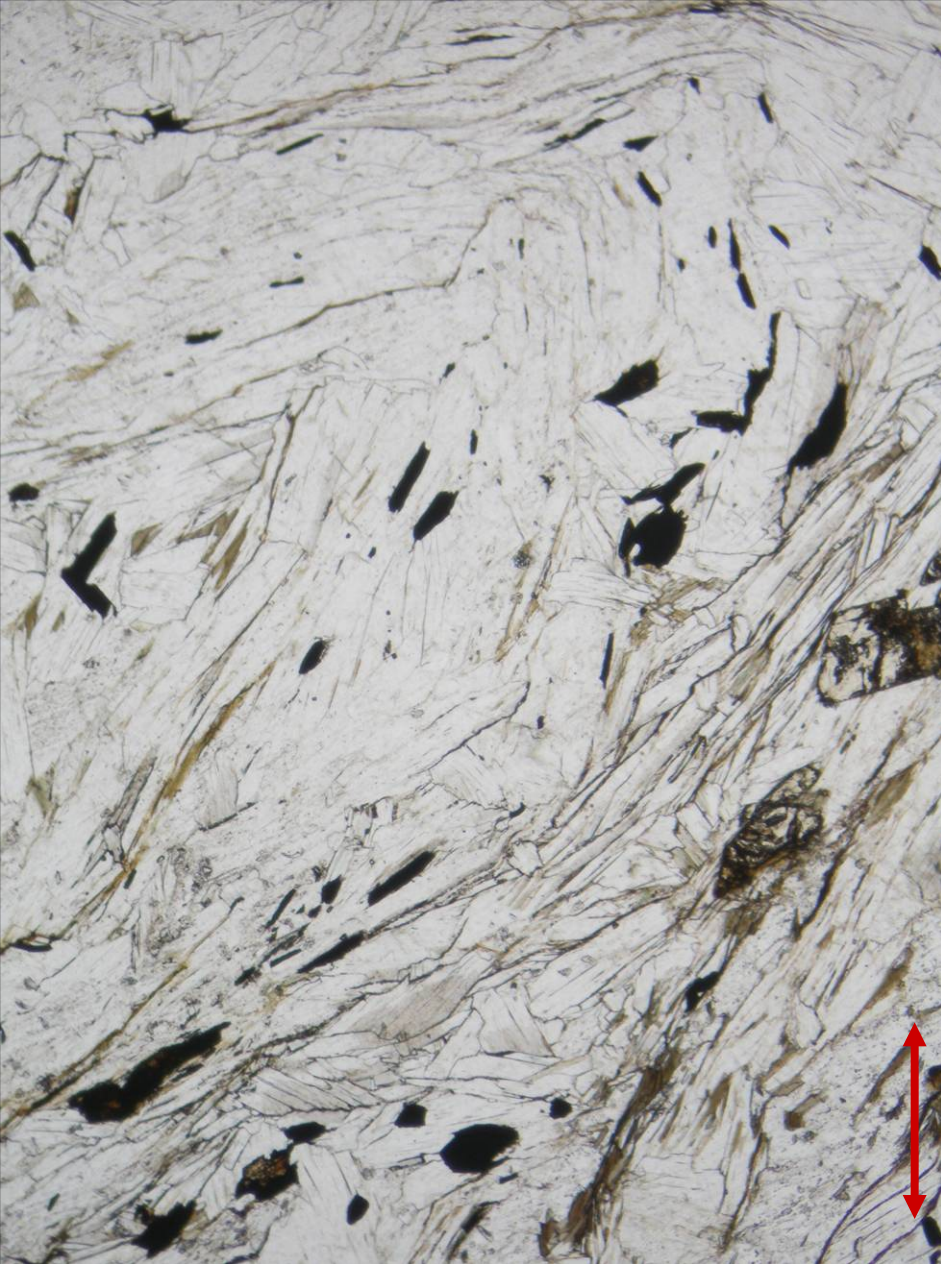
Muscovite in orthogneiss from Vidly, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 0.7 mm. Photo: JiZi.





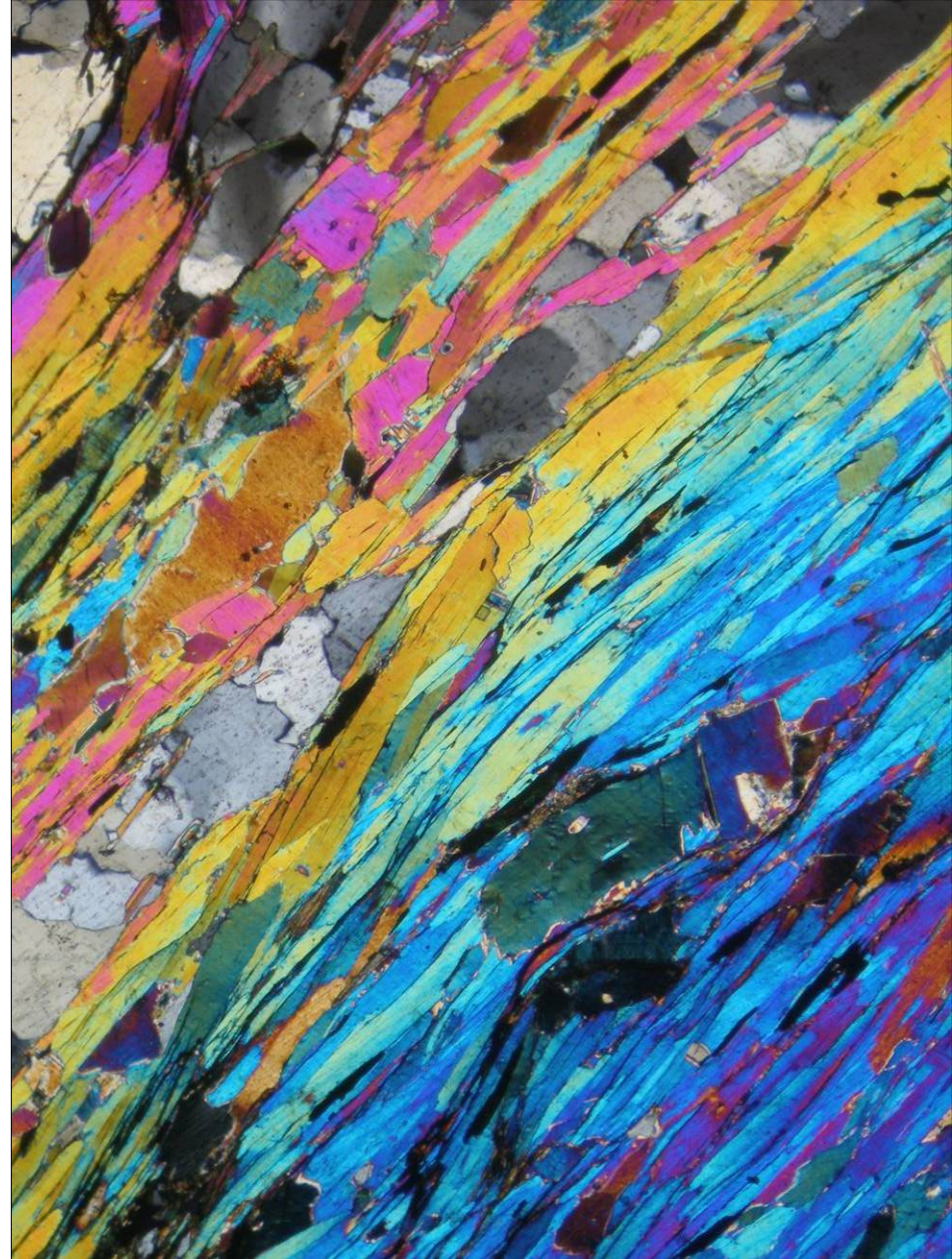
Muscovite in mica schist from Svojanov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





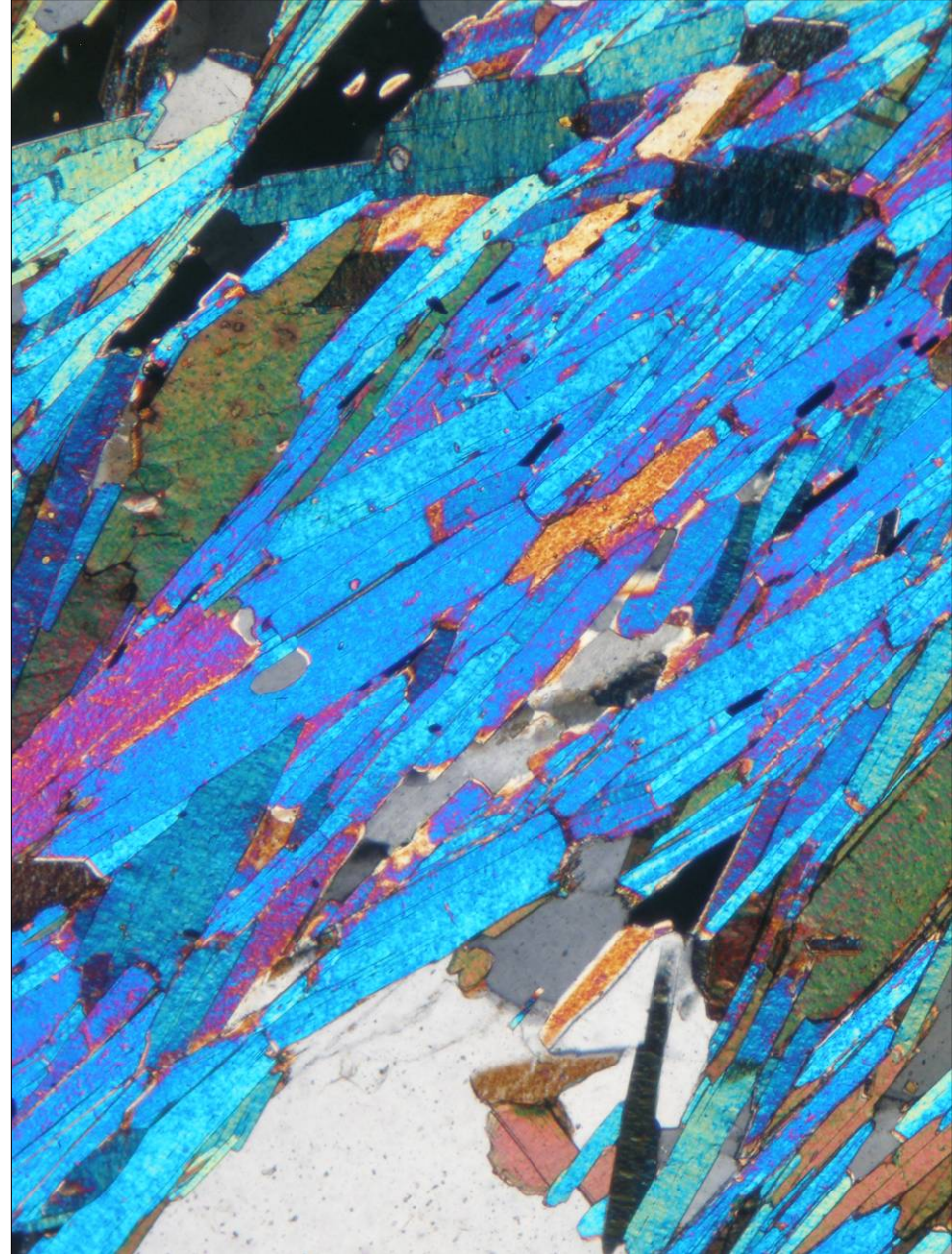
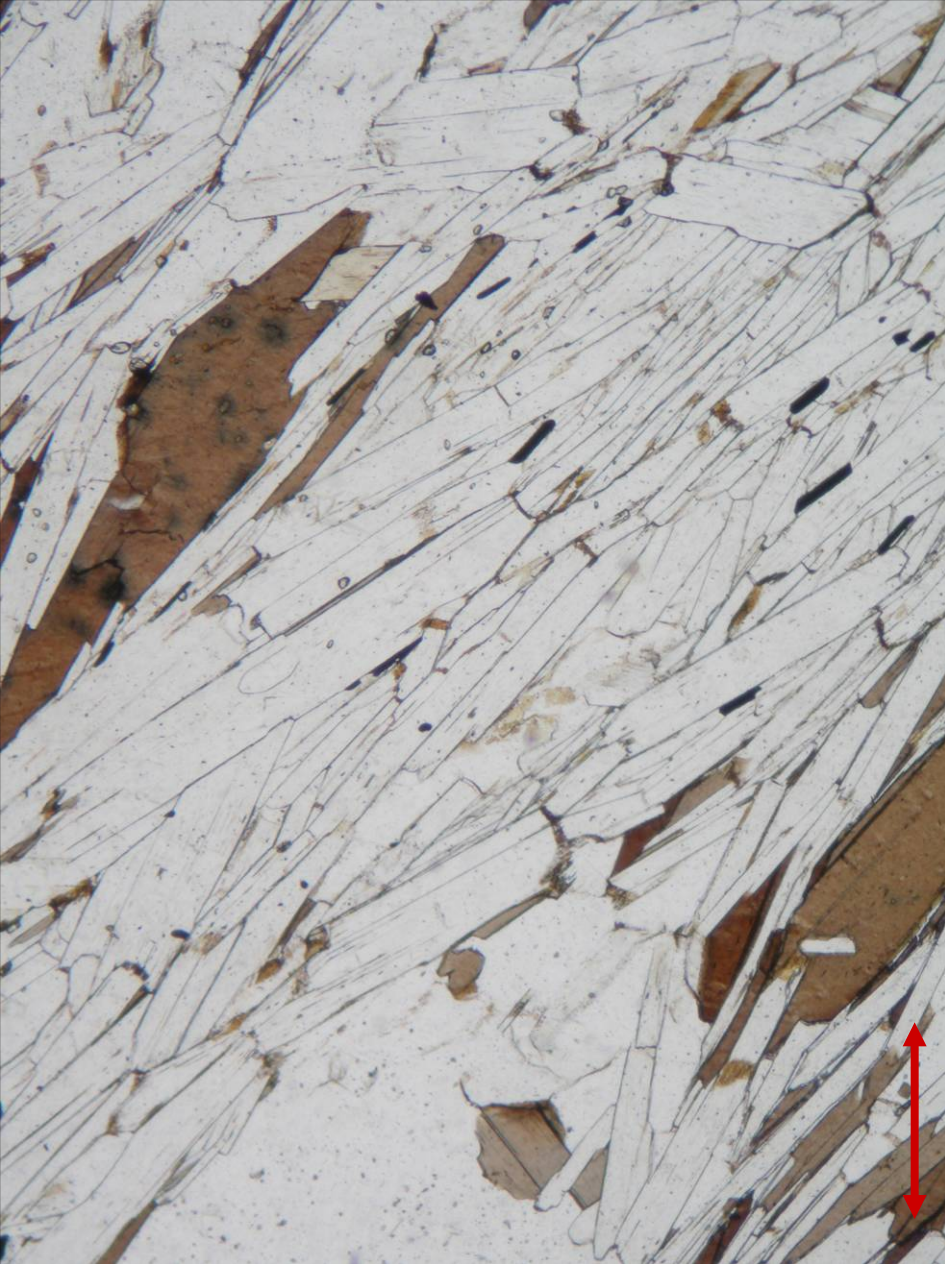
Muscovite in mica schist from Svojanov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





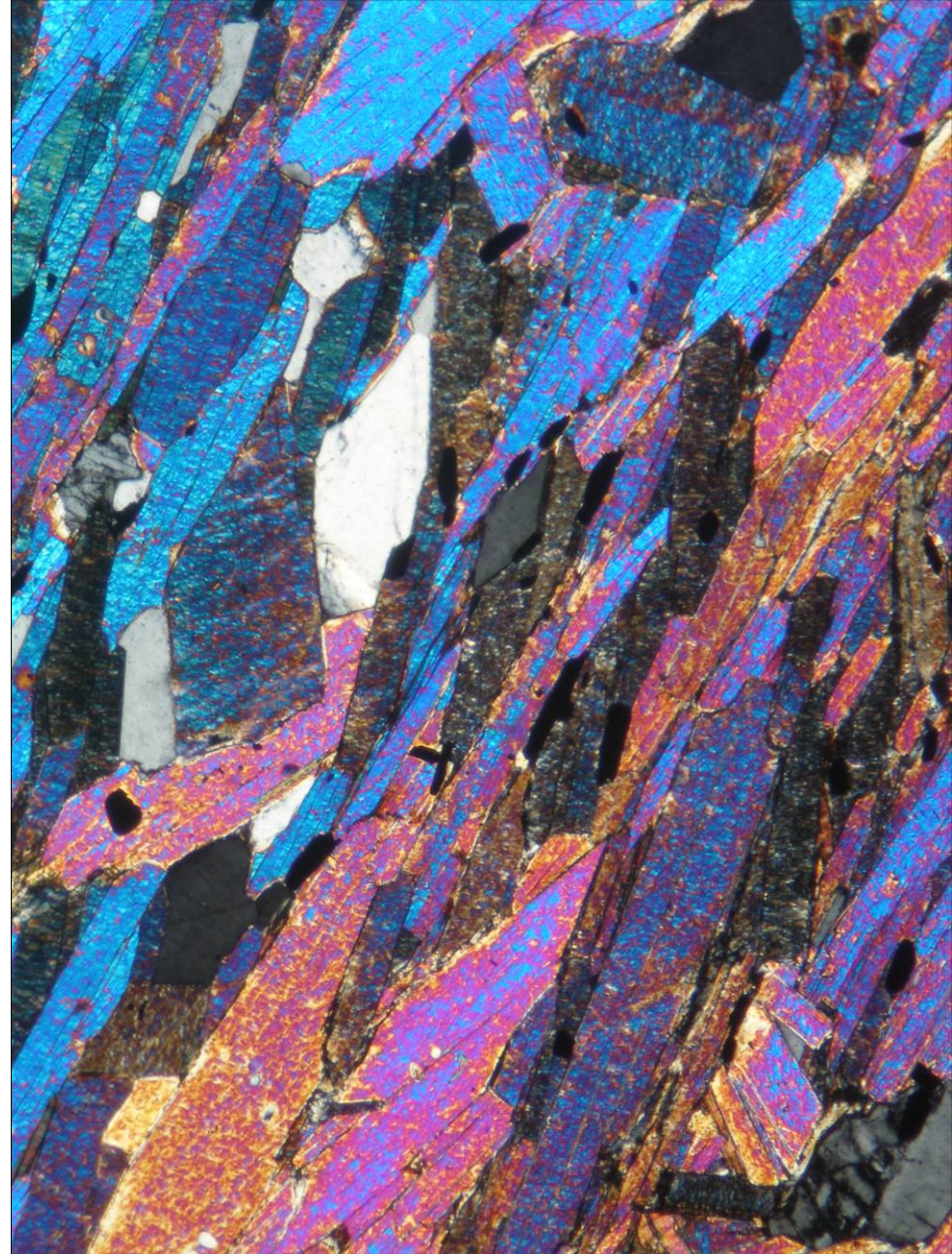
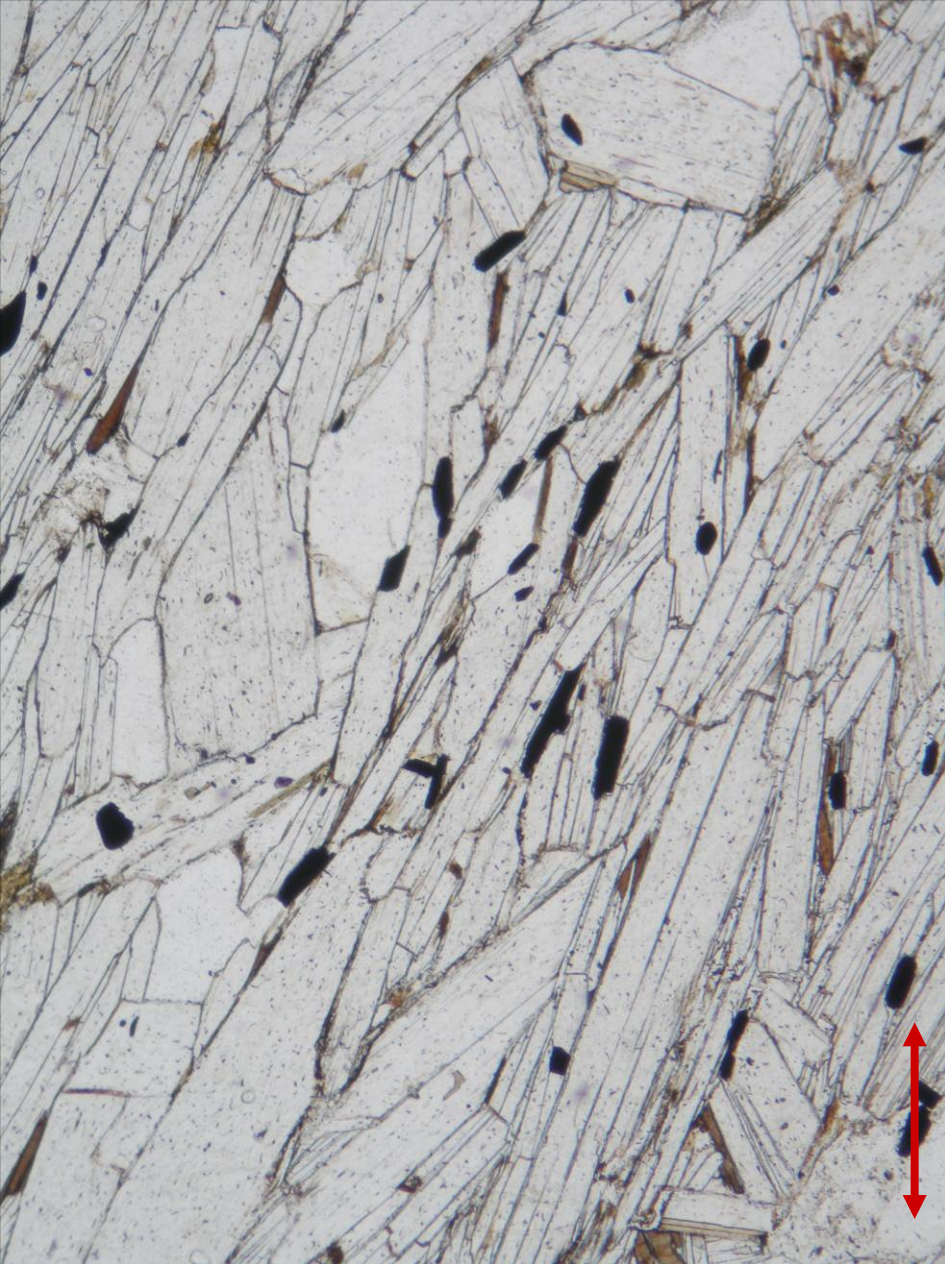
Muscovite in mica schist from Svojanov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





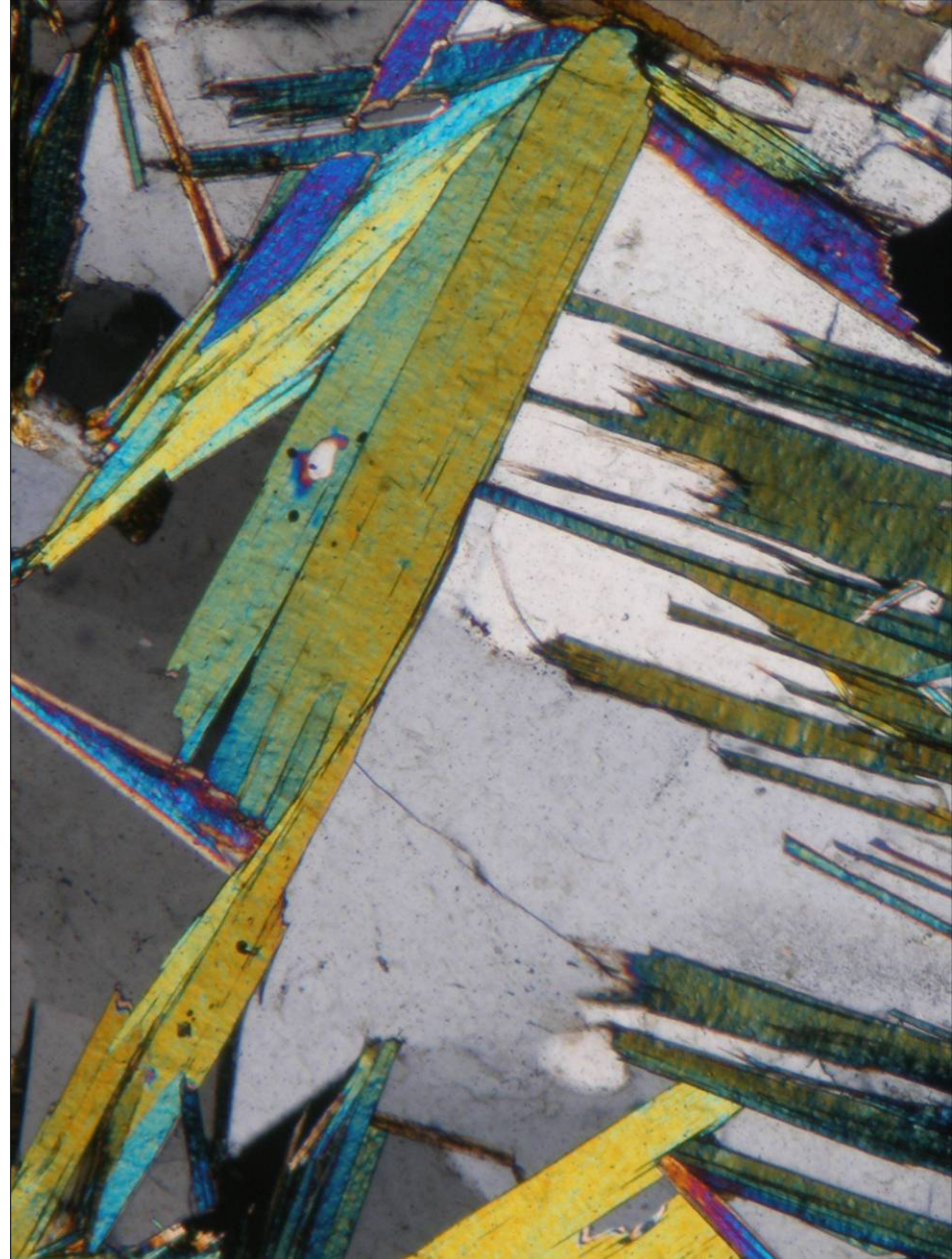
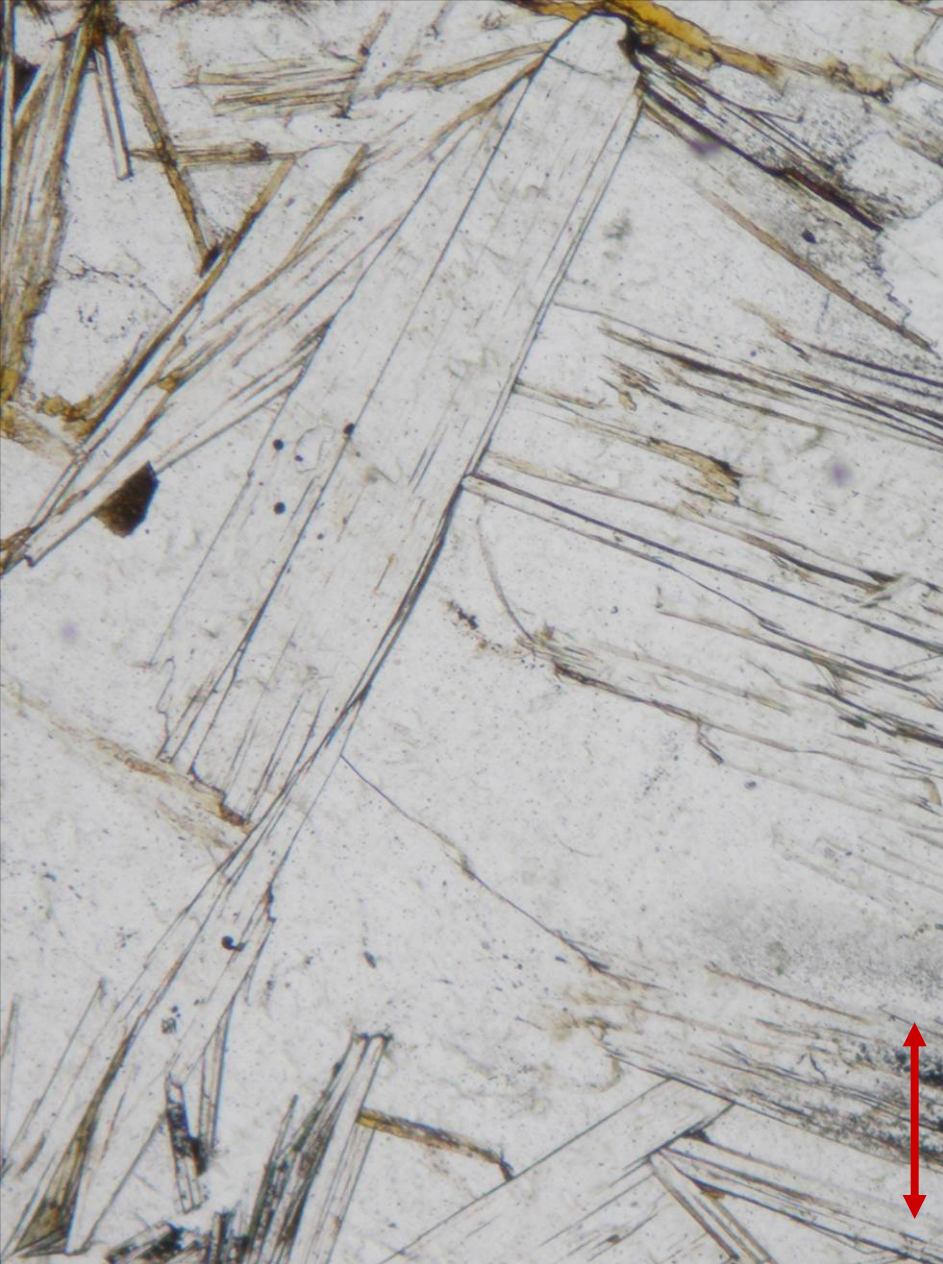
Muscovite and biotite in mica schist from Česká Ves, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





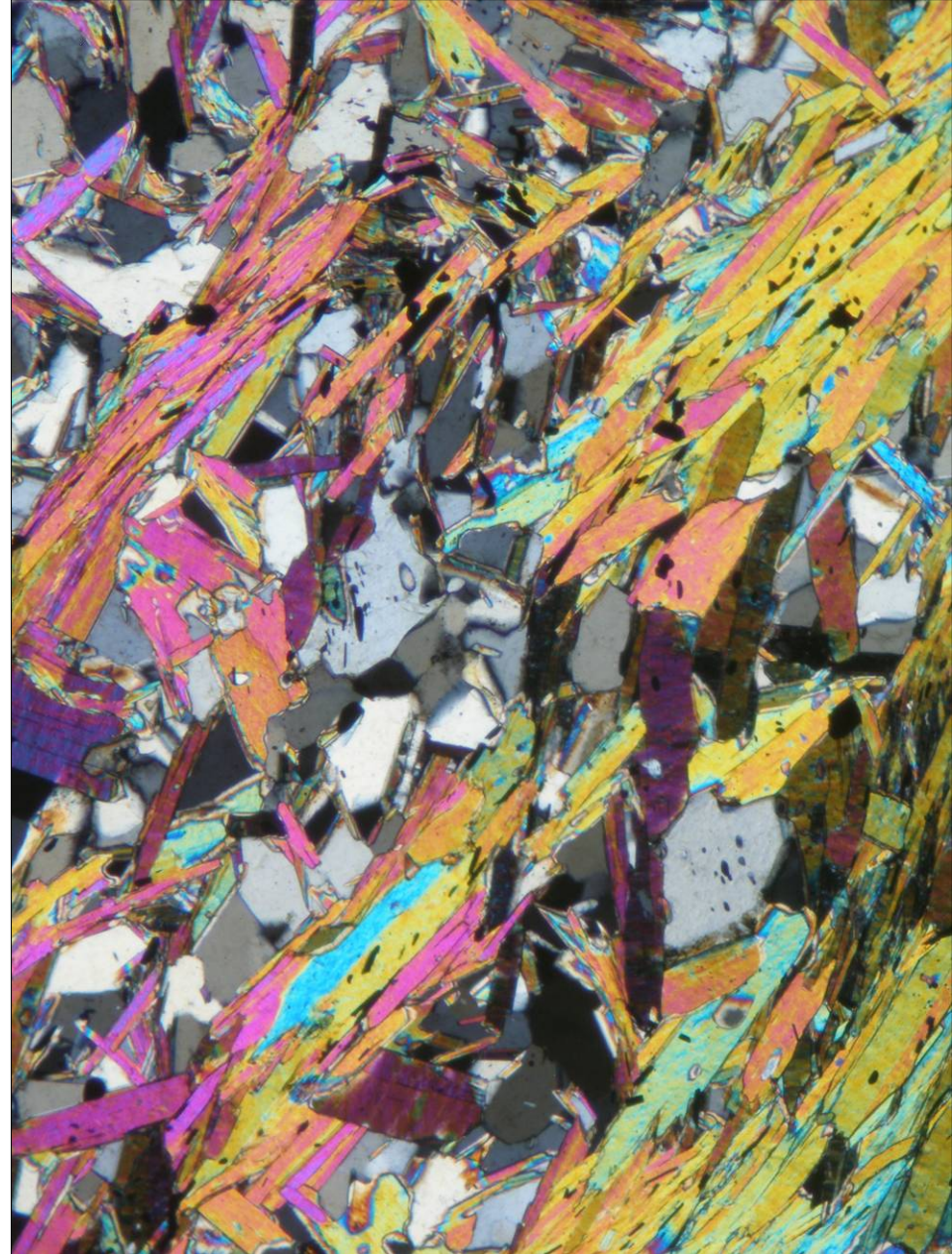
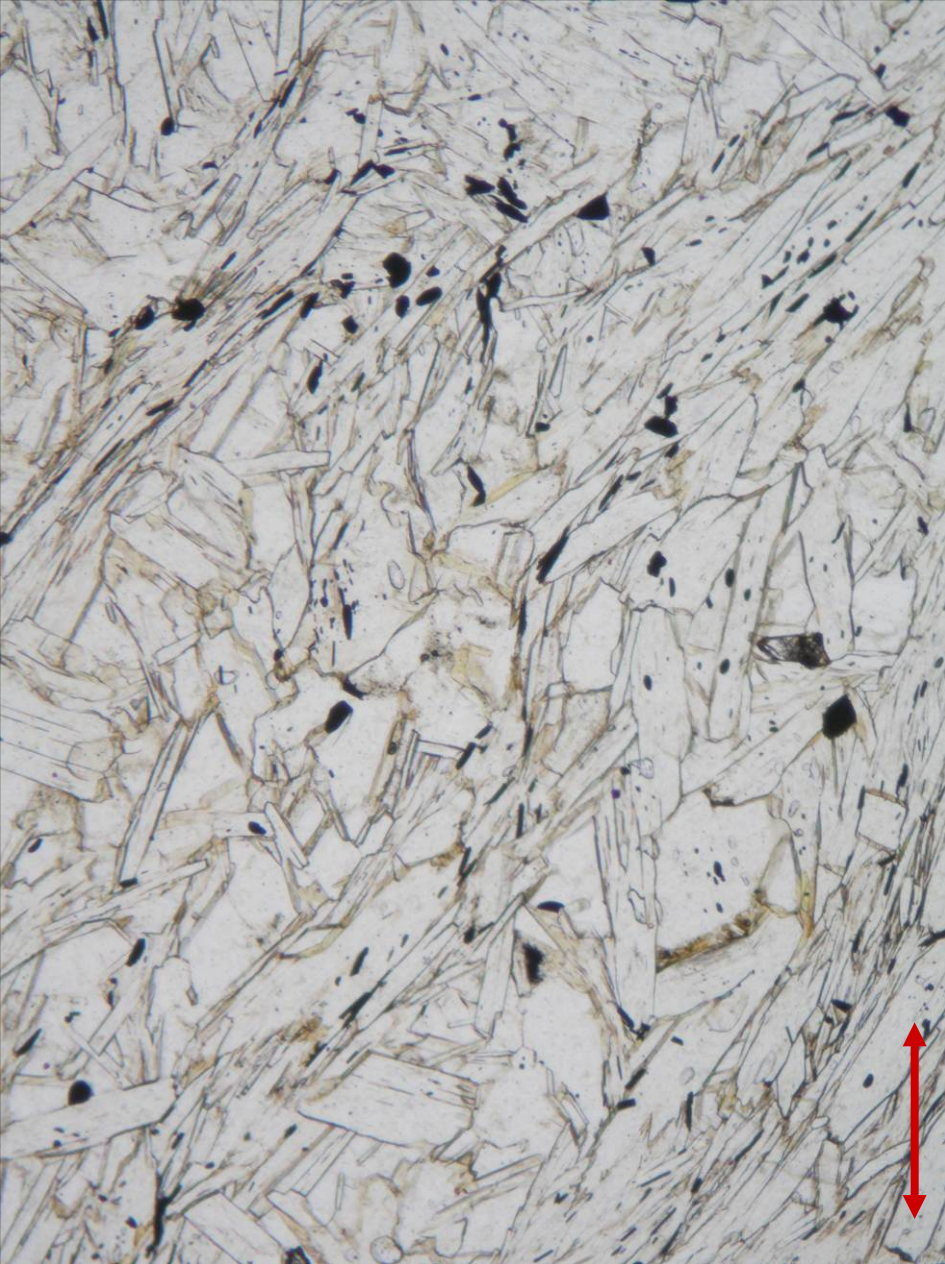
Muscovite in mica schist from Česká Ves, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





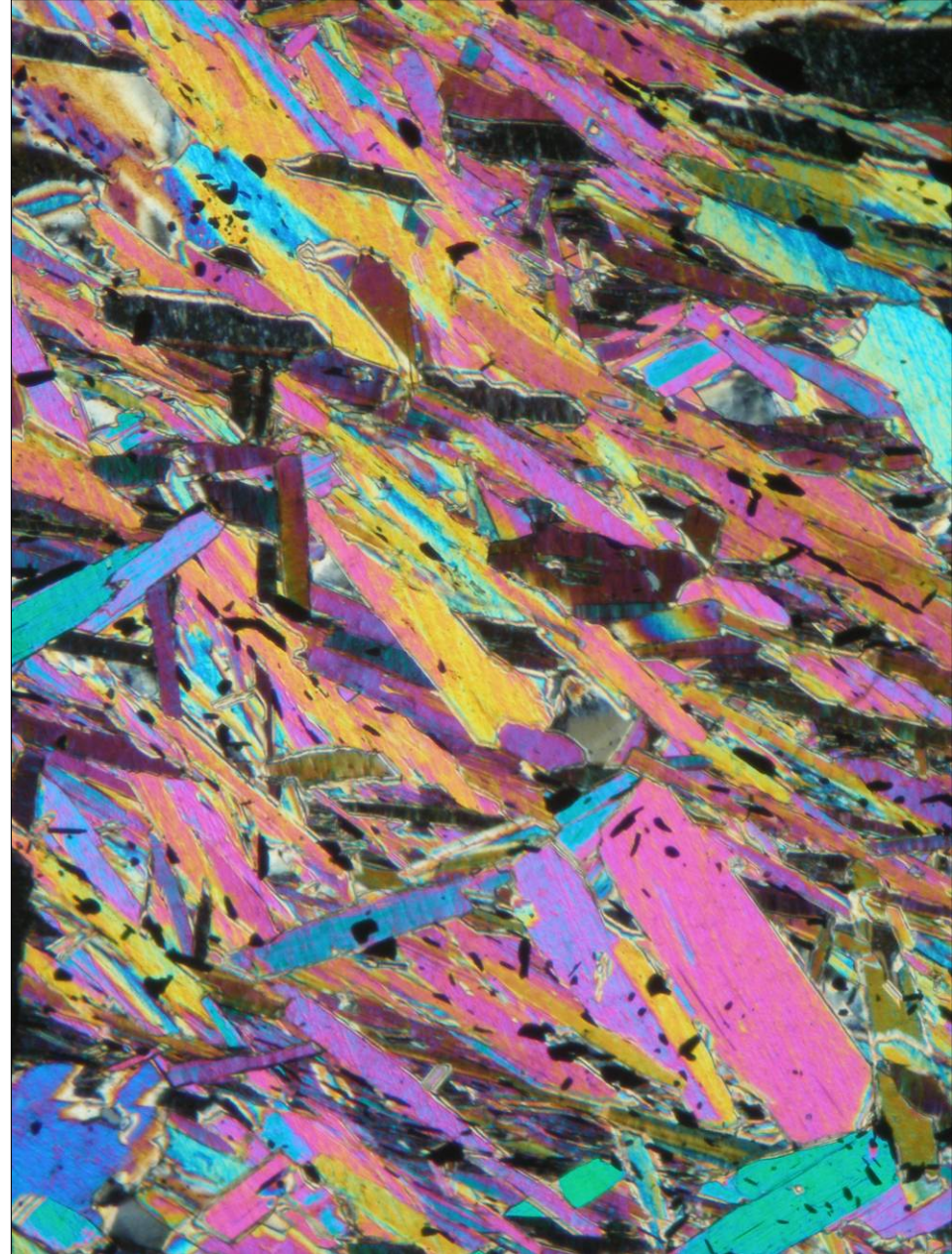
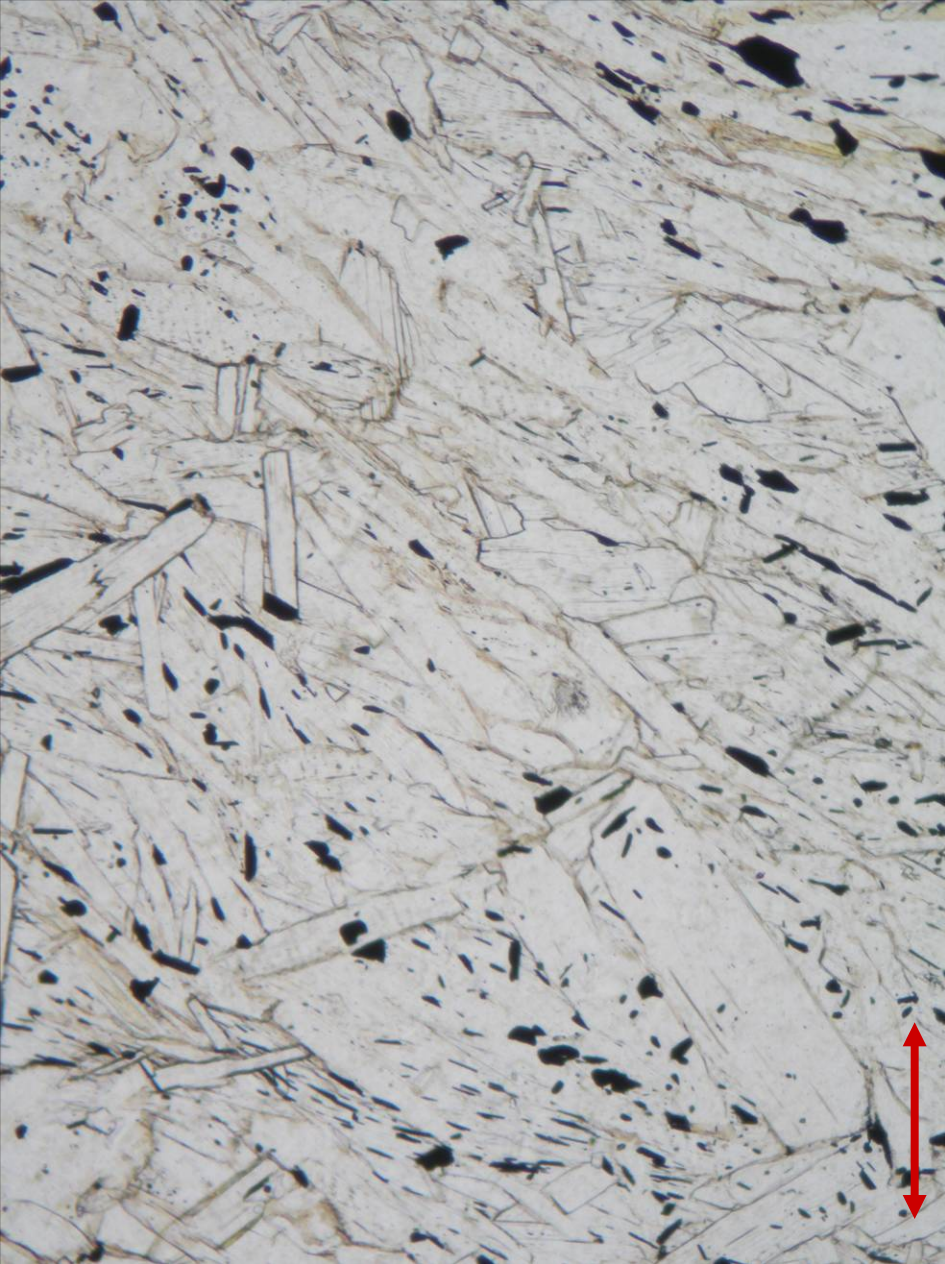
Muscovite in mica schist from Petrov nad Desnou, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 0.9 mm. Photo: JiZi.





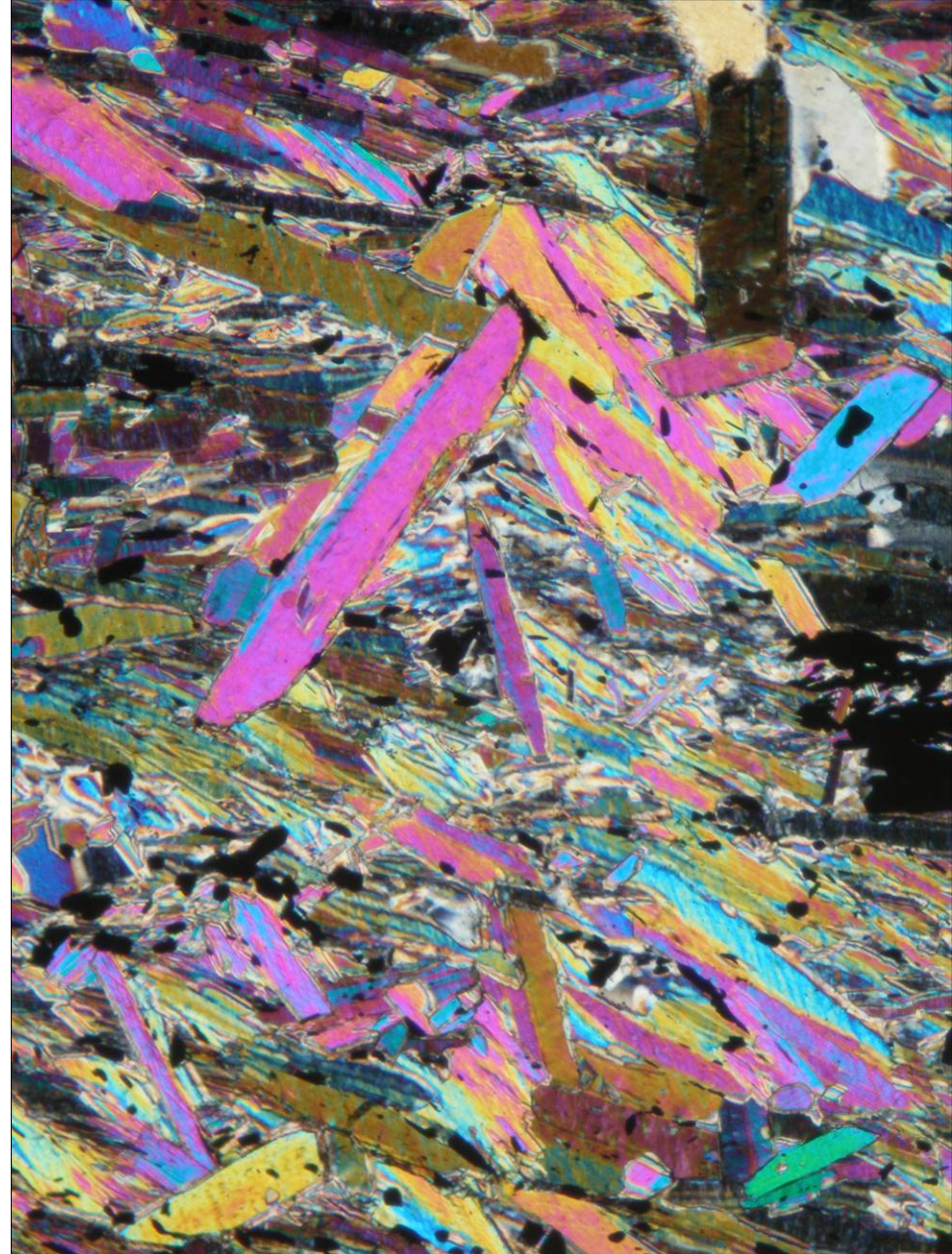
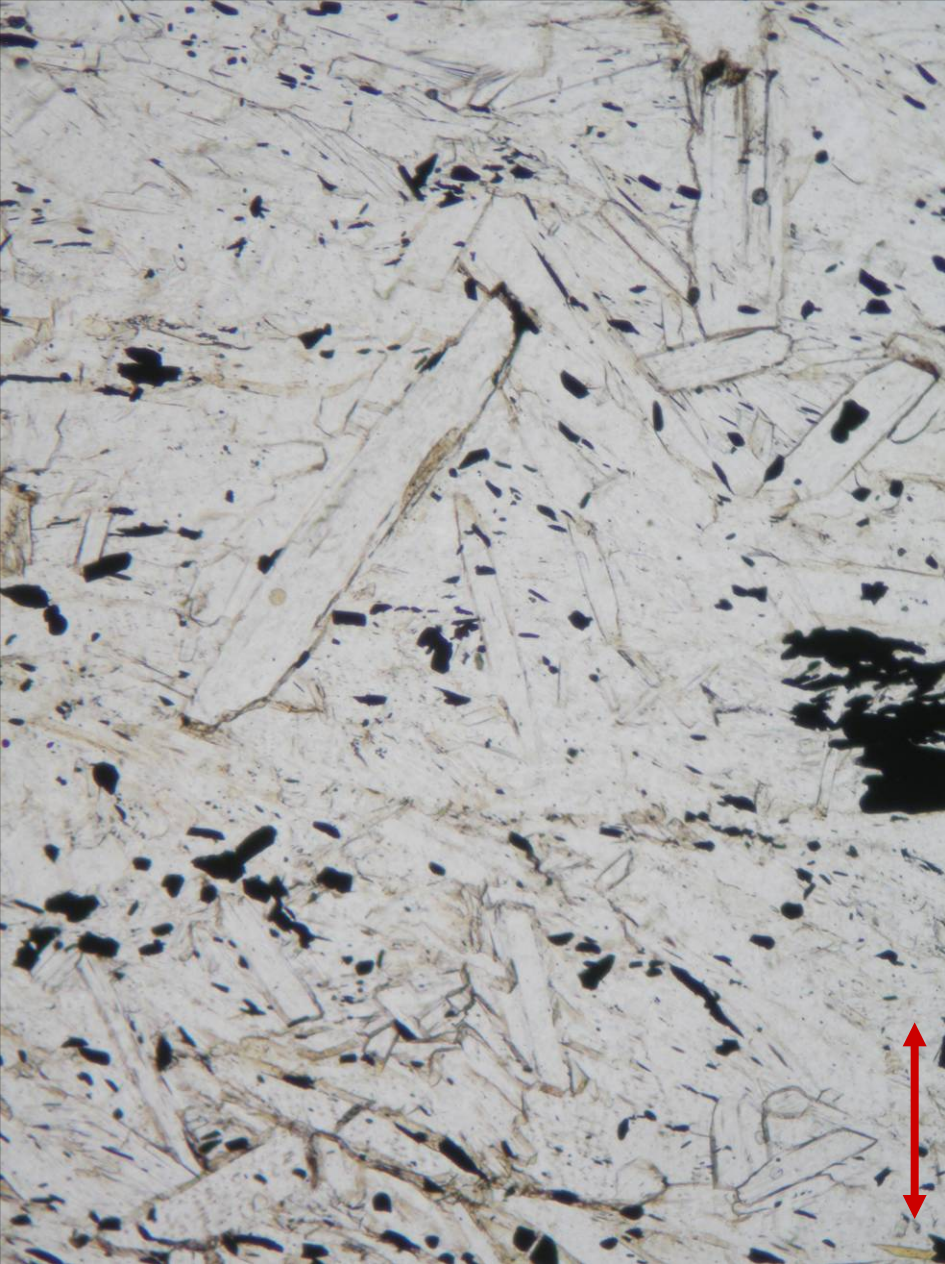
Muscovite in mica schist from Petrov nad Desnou, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.0 mm. Photo: JiZi.





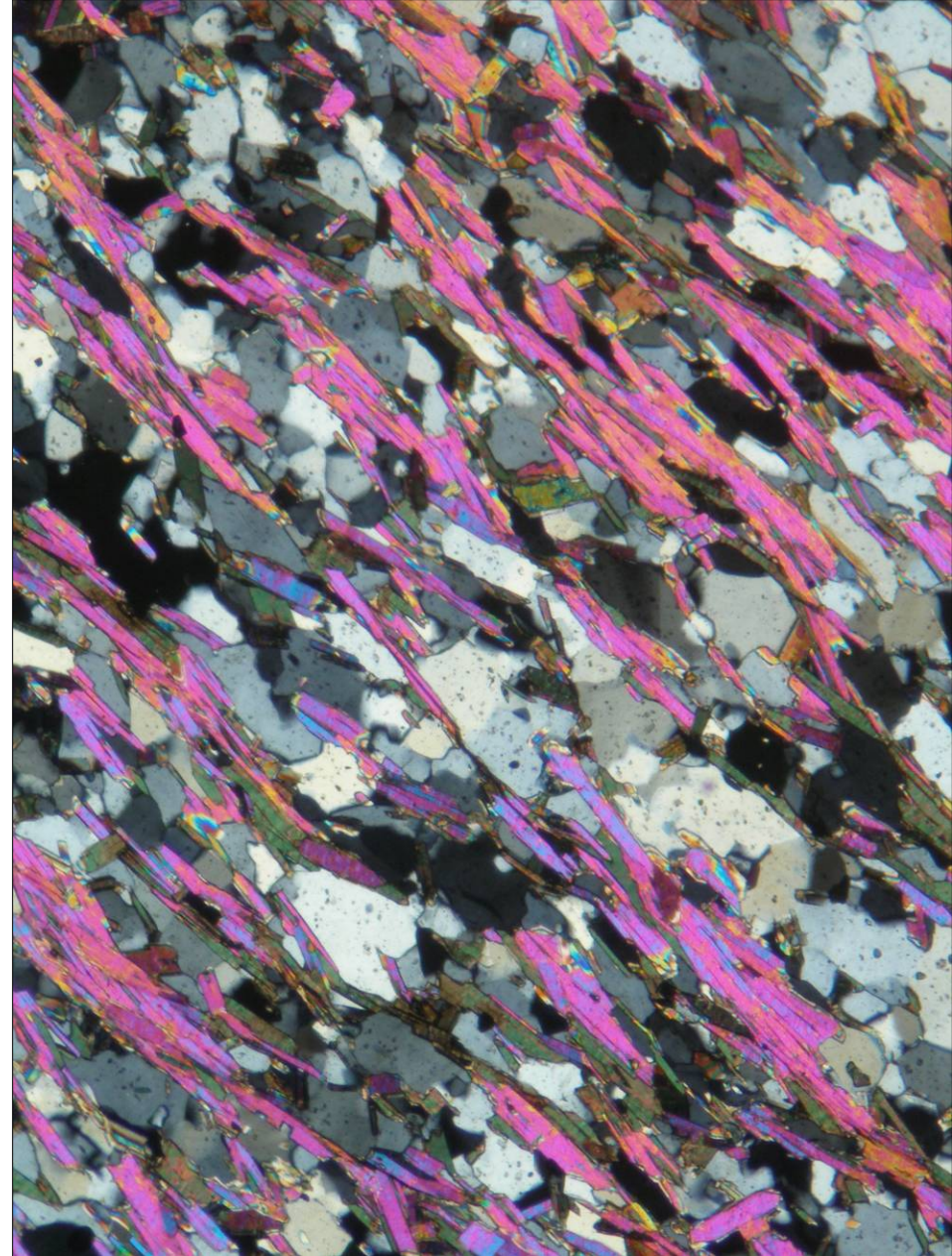
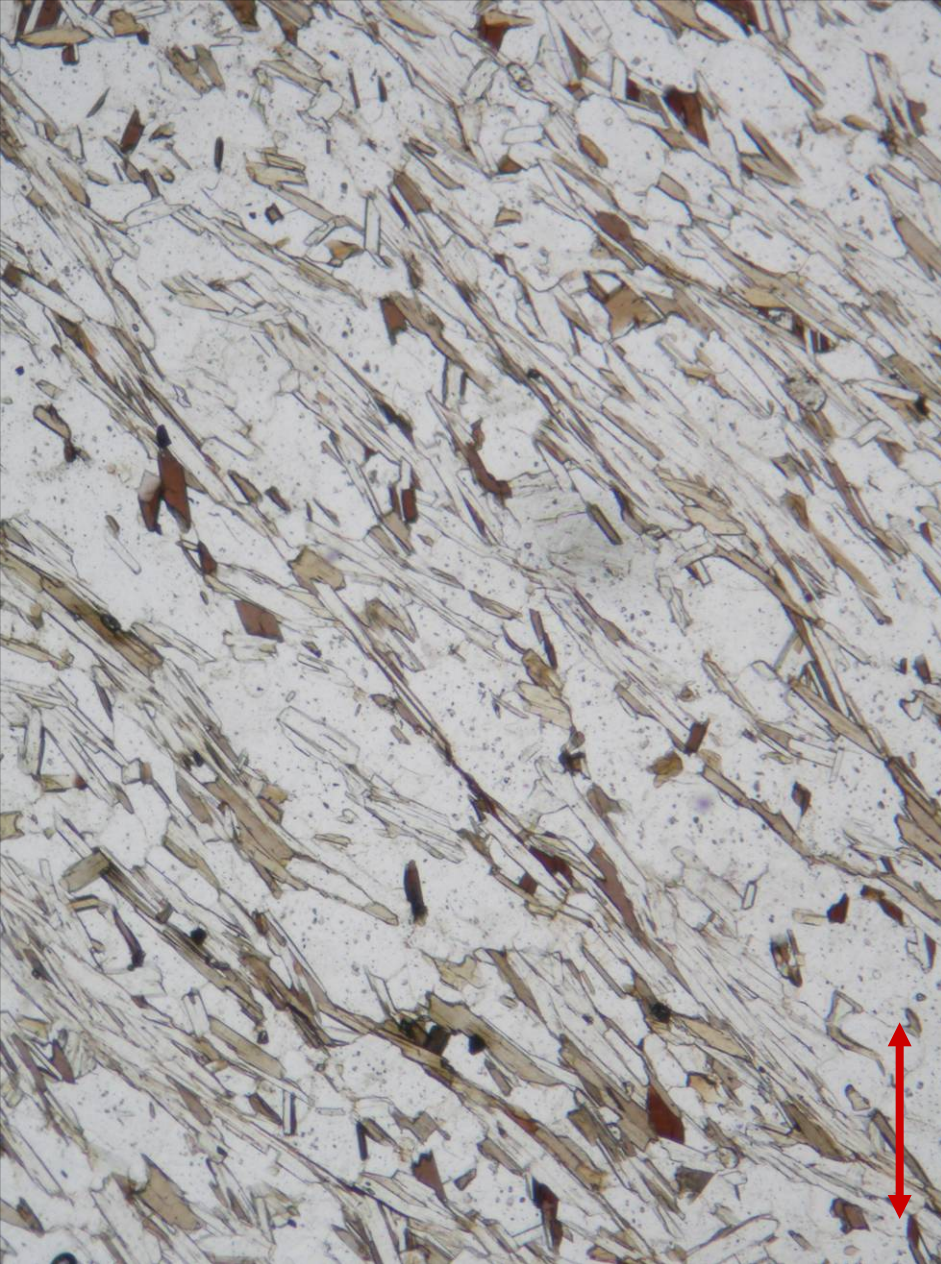
Muscovite in mica schist from Petrov nad Desnou, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





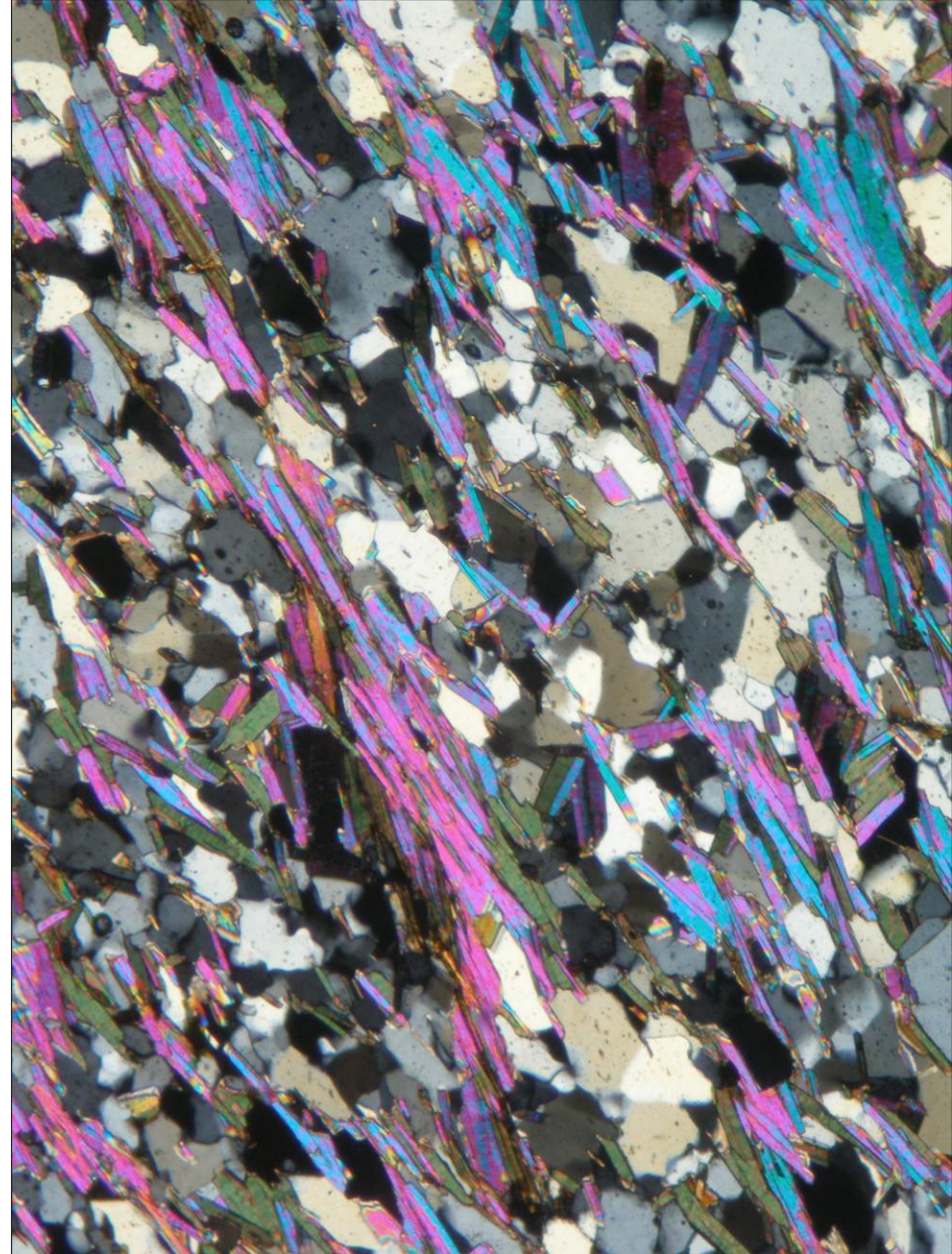
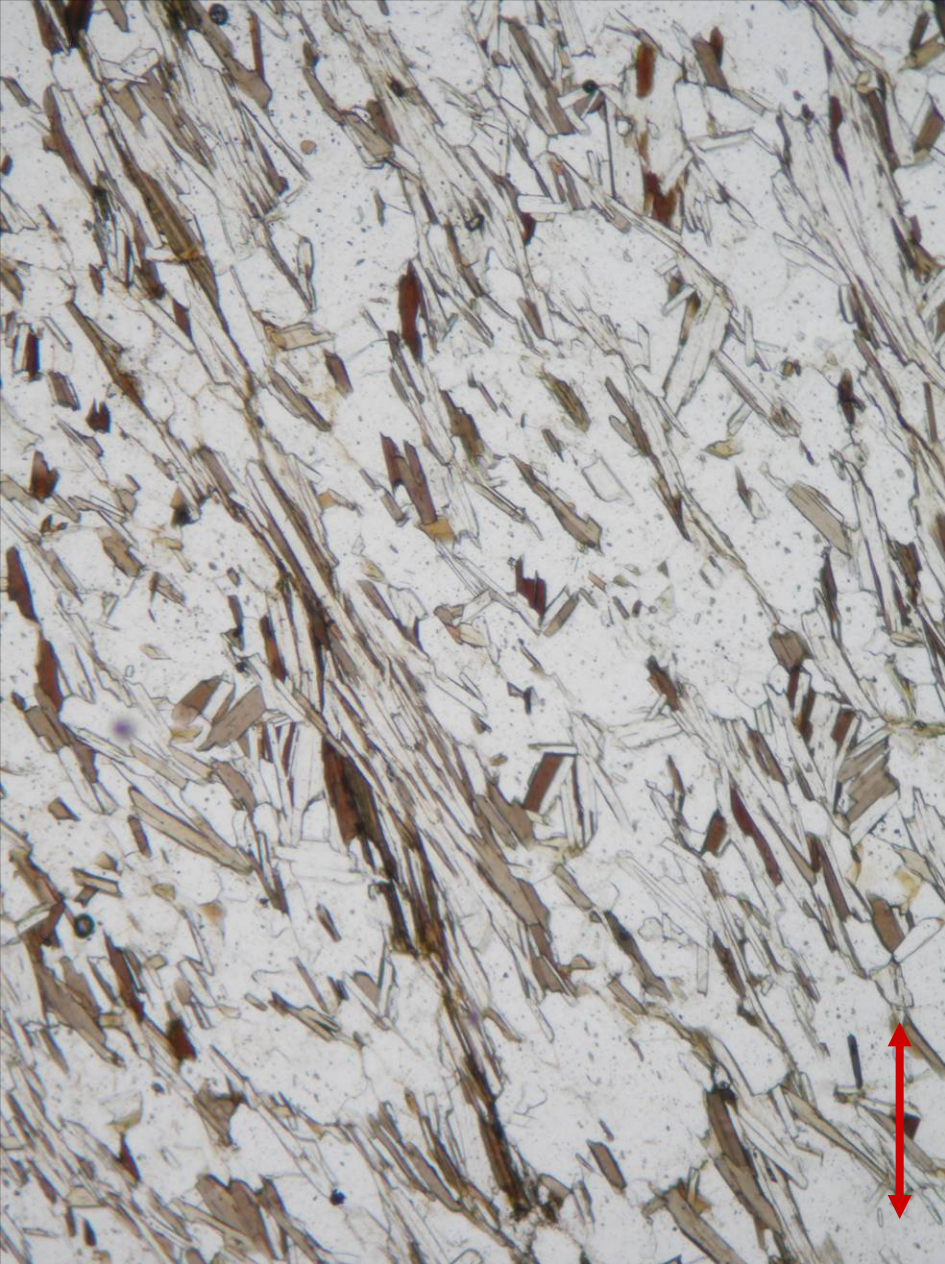
Muscovite in mica schist from Petrov nad Desnou, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.0 mm. Photo: JiZi.





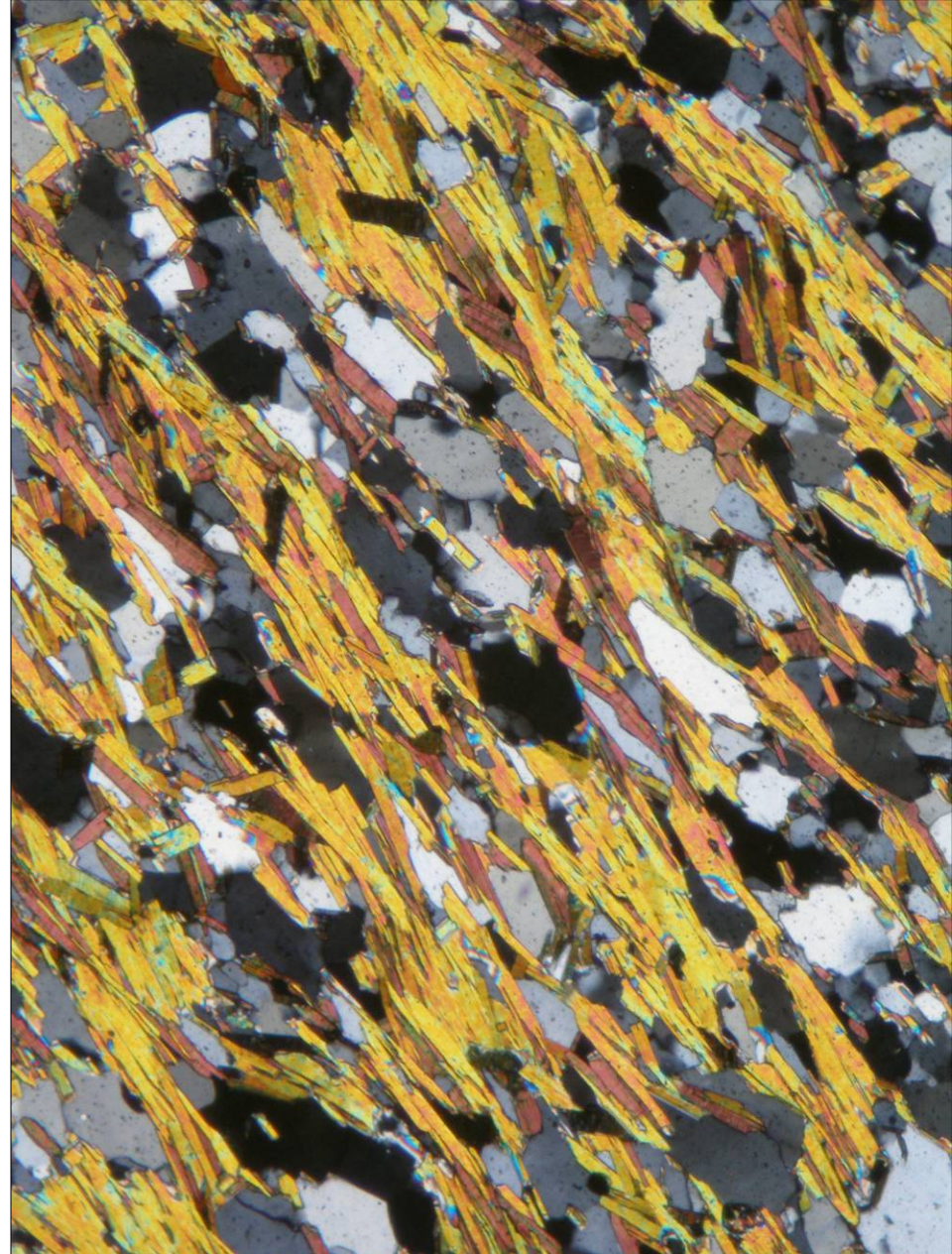
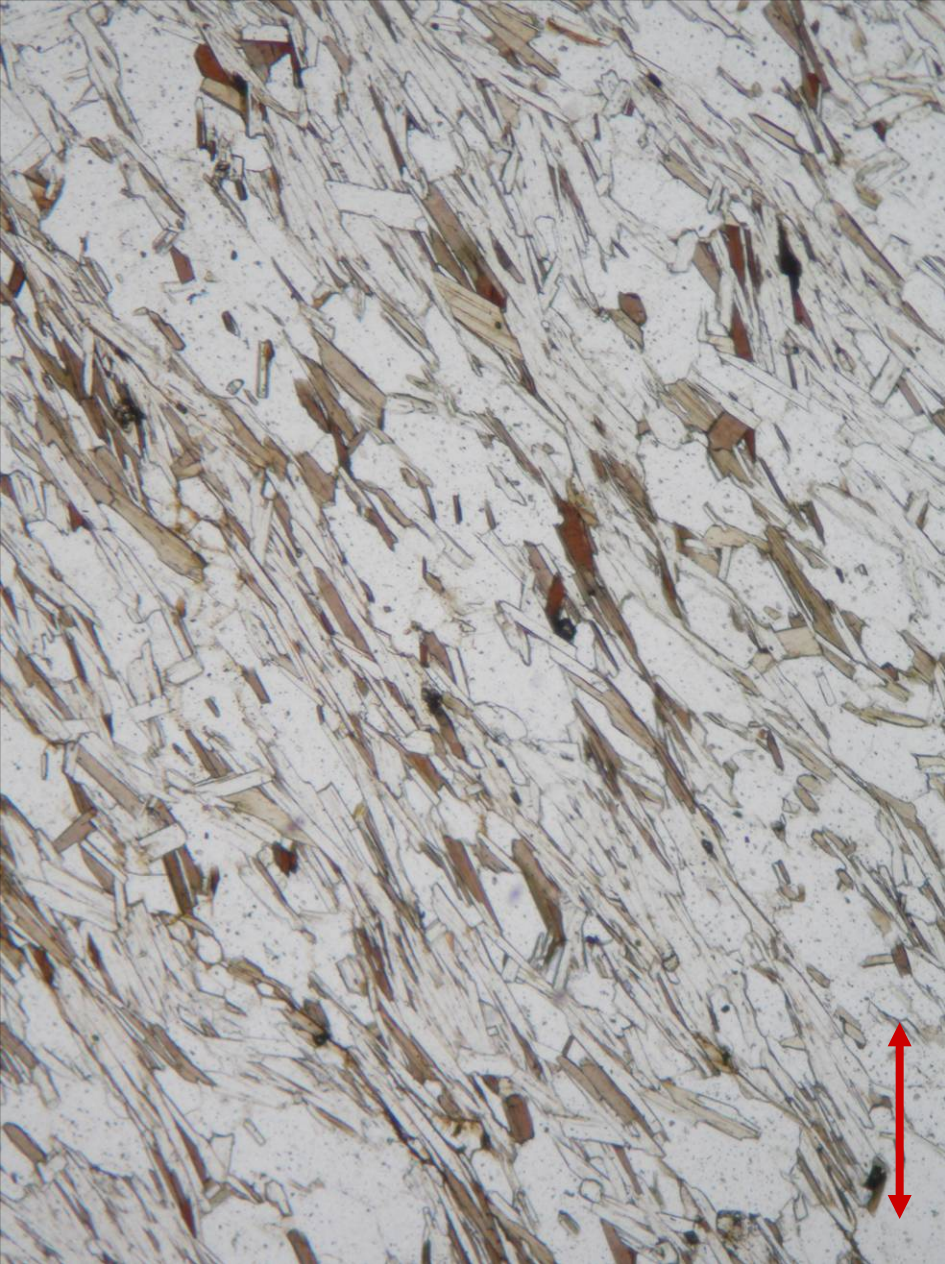
Muscovite and biotite in mica schist from Lukov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.6 mm. Photo: JiZi.





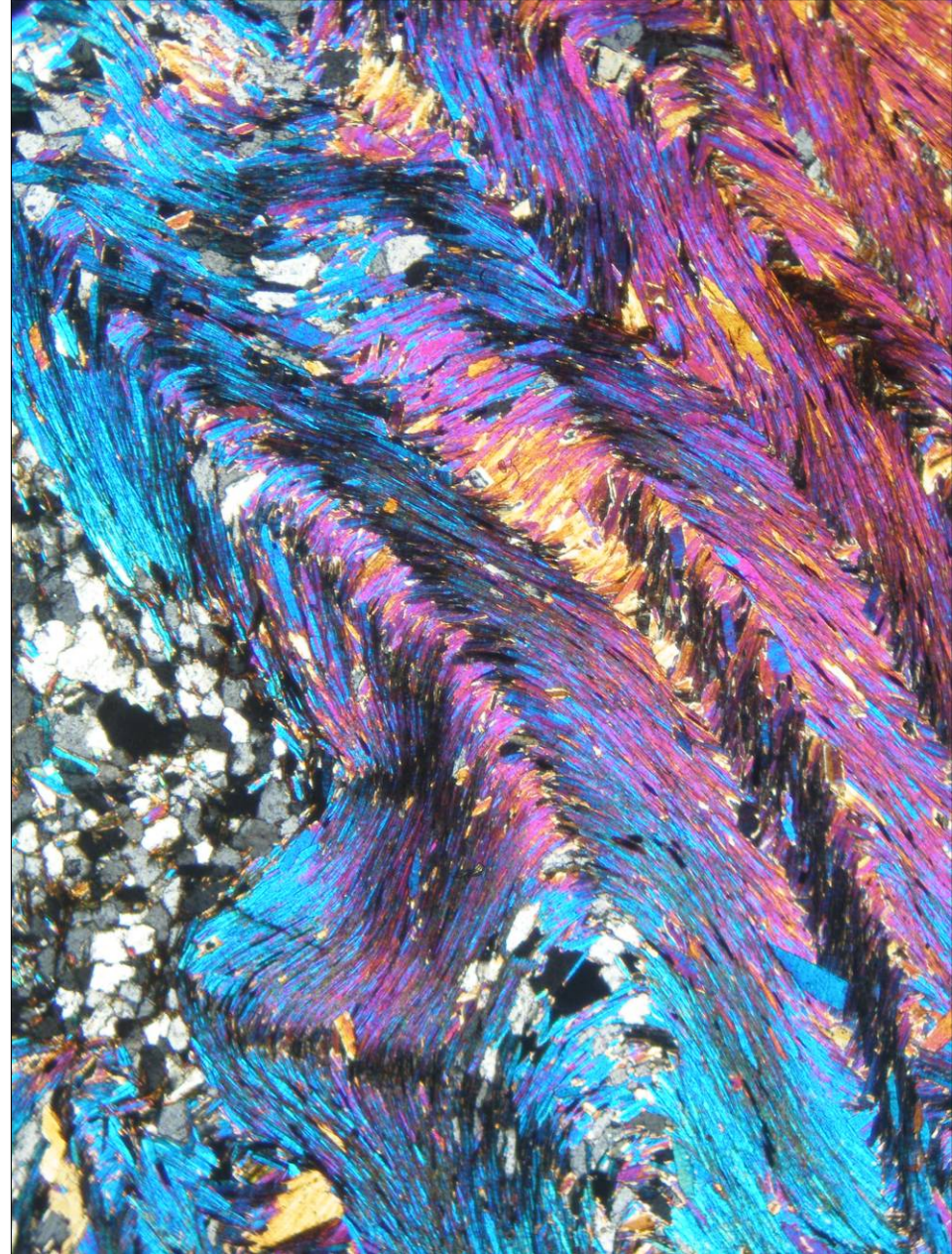
Muscovite and biotite in mica schist from Lukov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





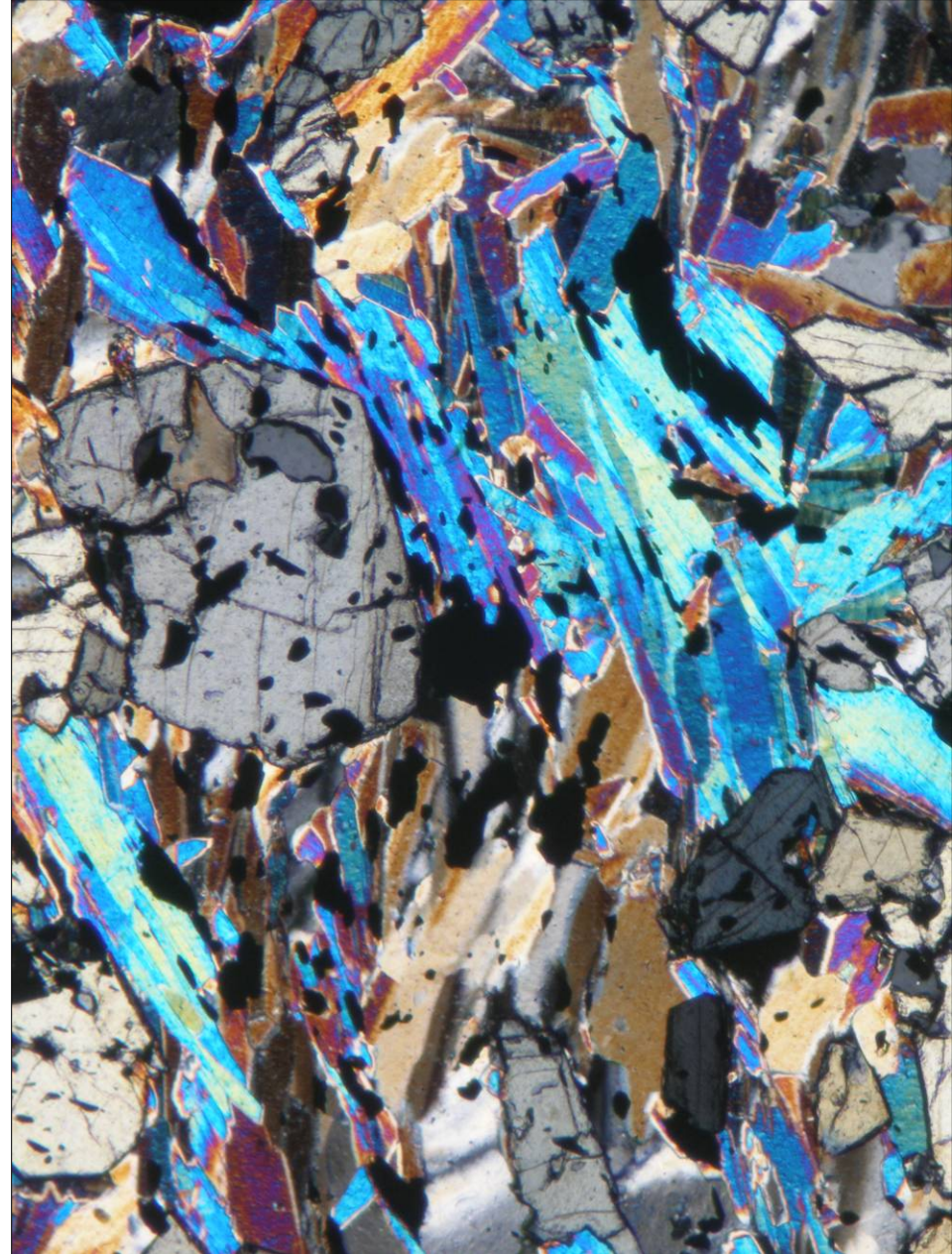
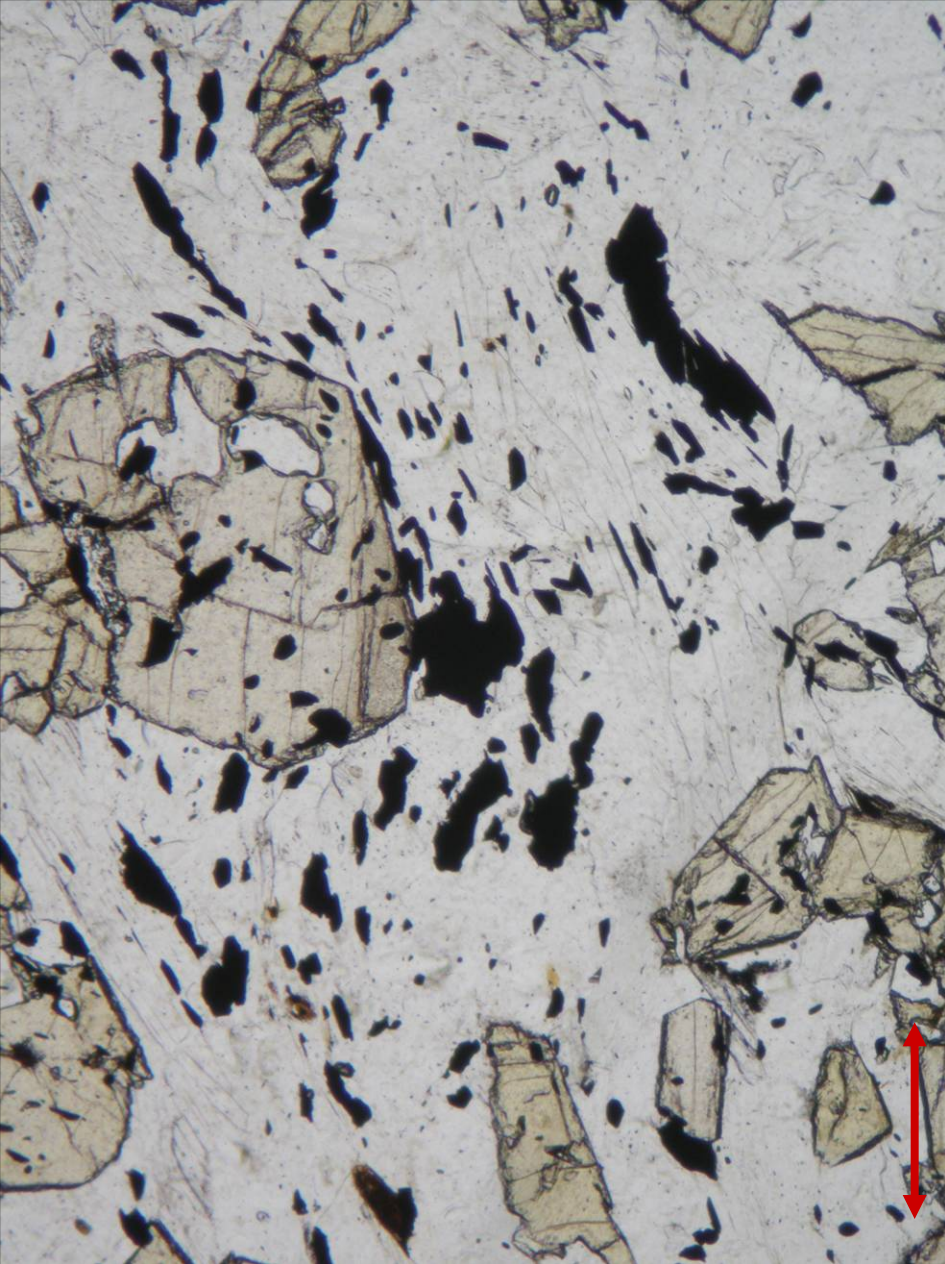
Muscovite and biotite in mica schist from Lukov, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





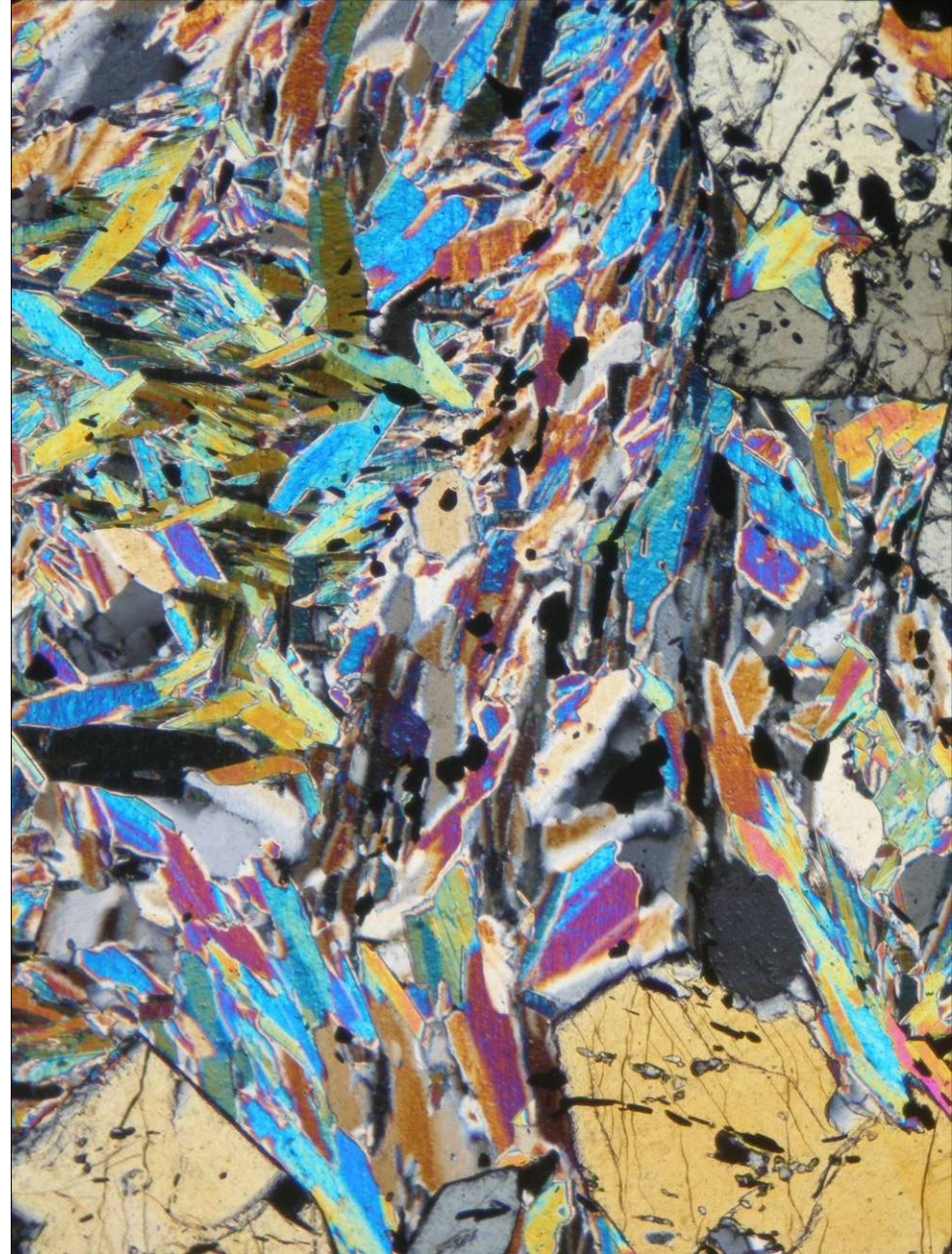
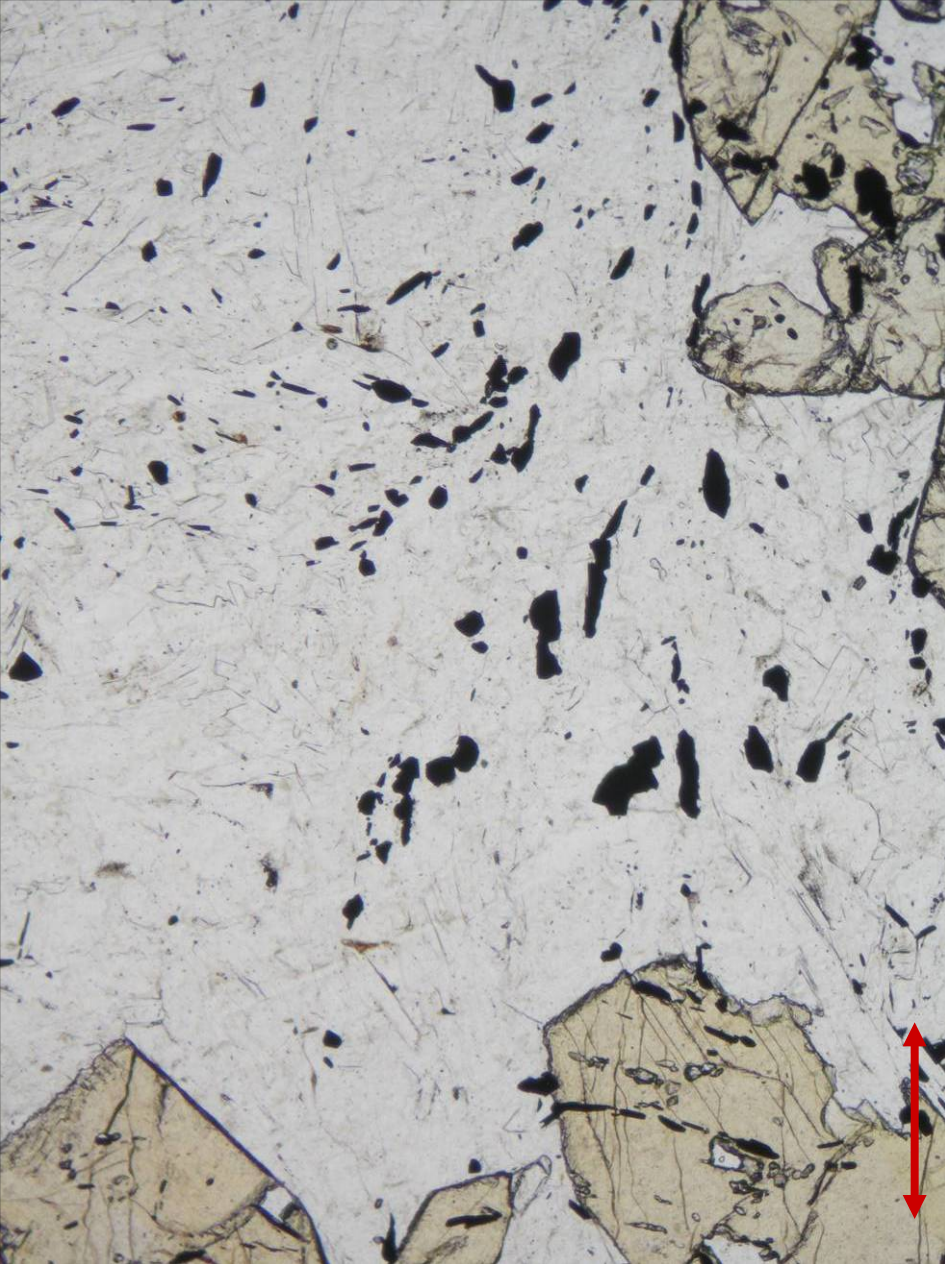
Muscovite in mica schist from Králec, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





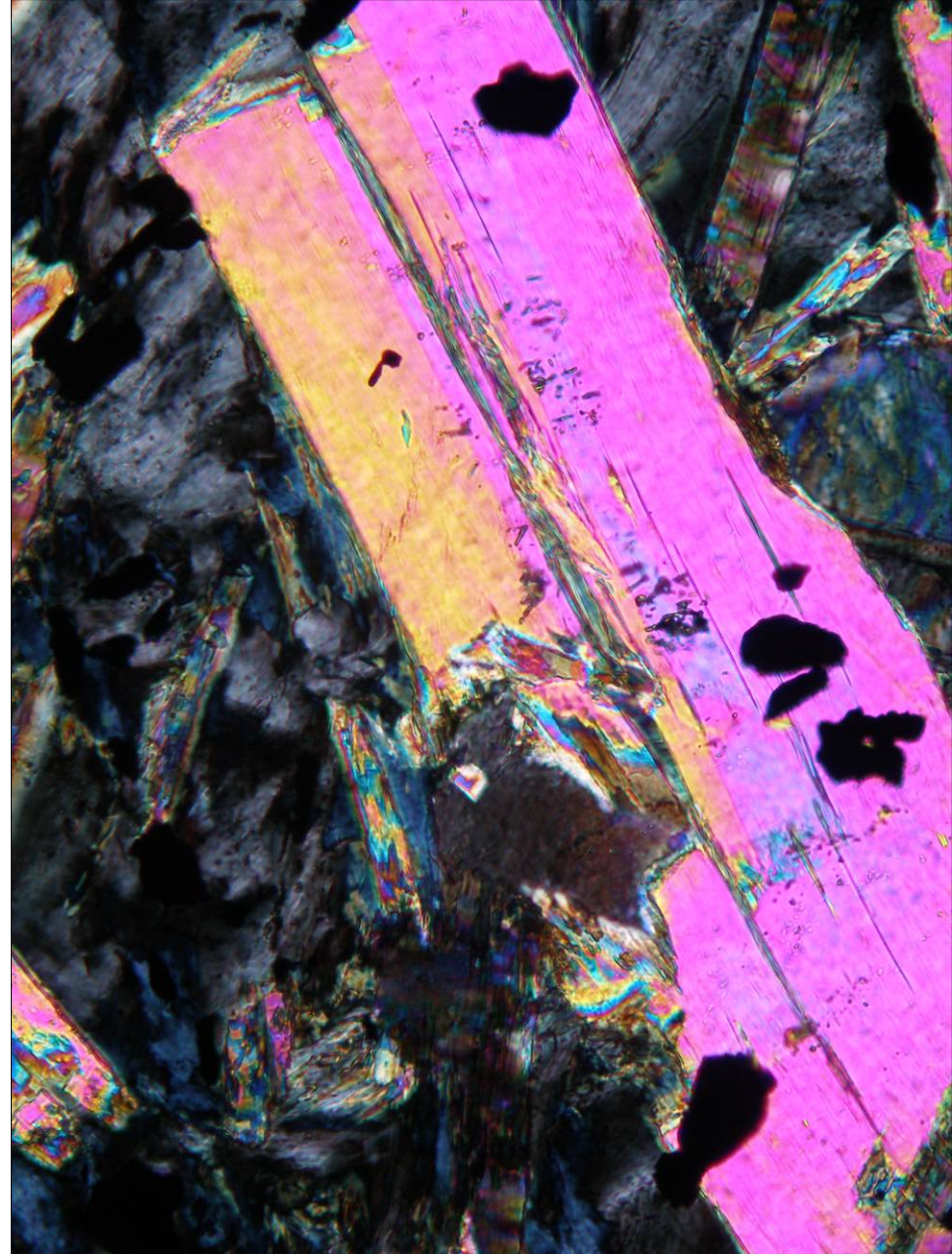
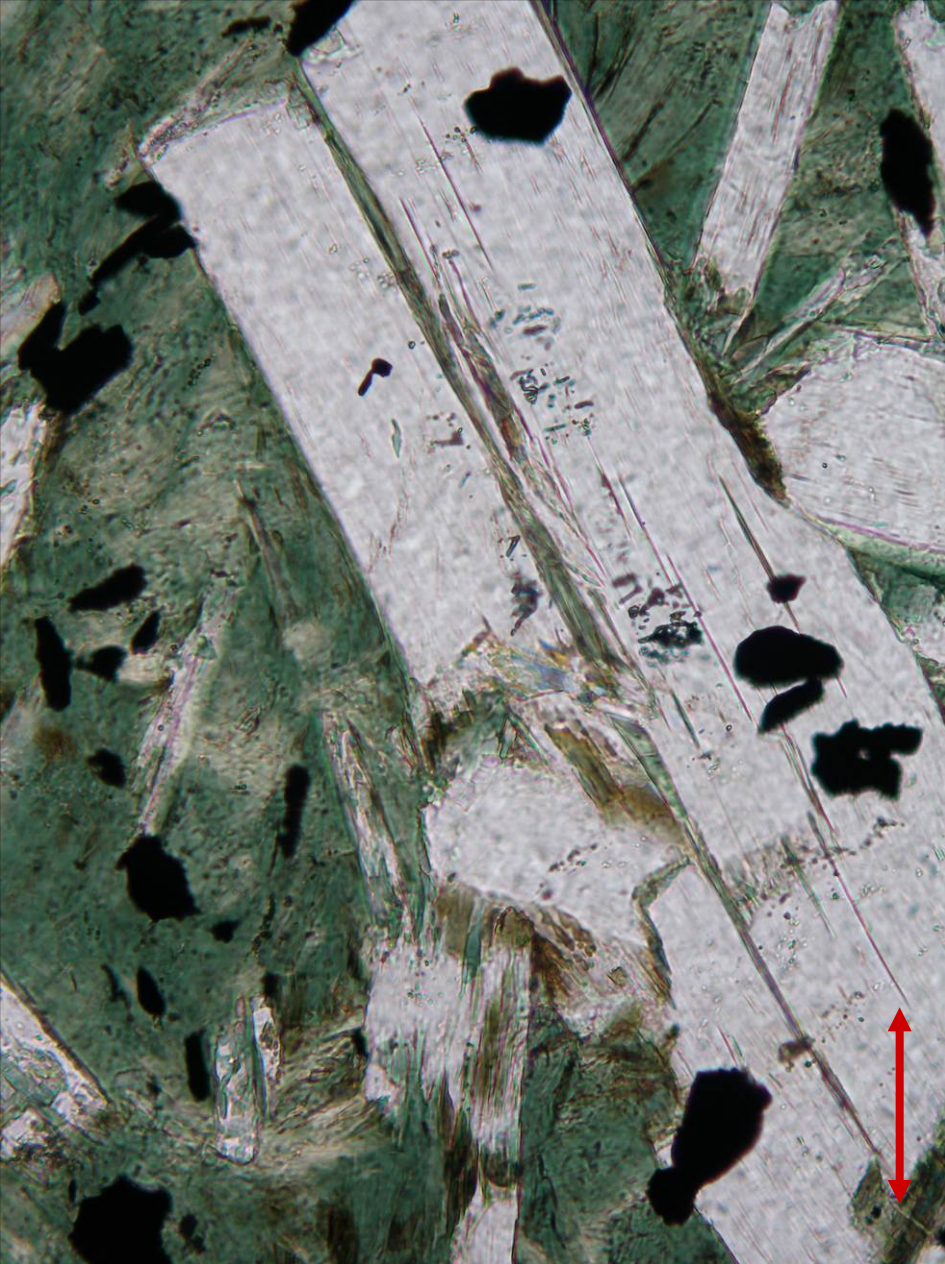
Muscovite, staurolite and ilmenite in mica schist from Petrov nad Desnou, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.7 mm. Photo: JiZi.





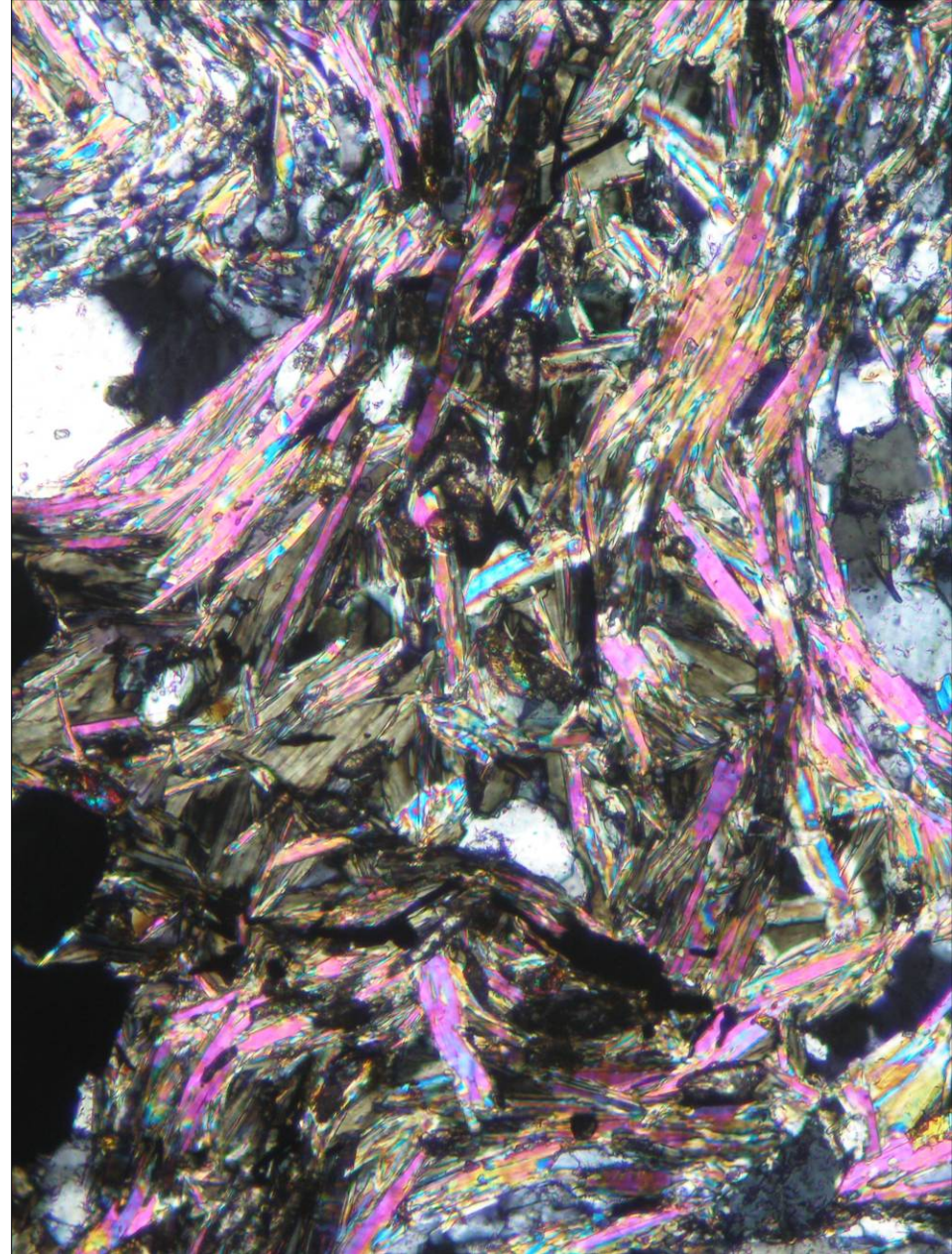
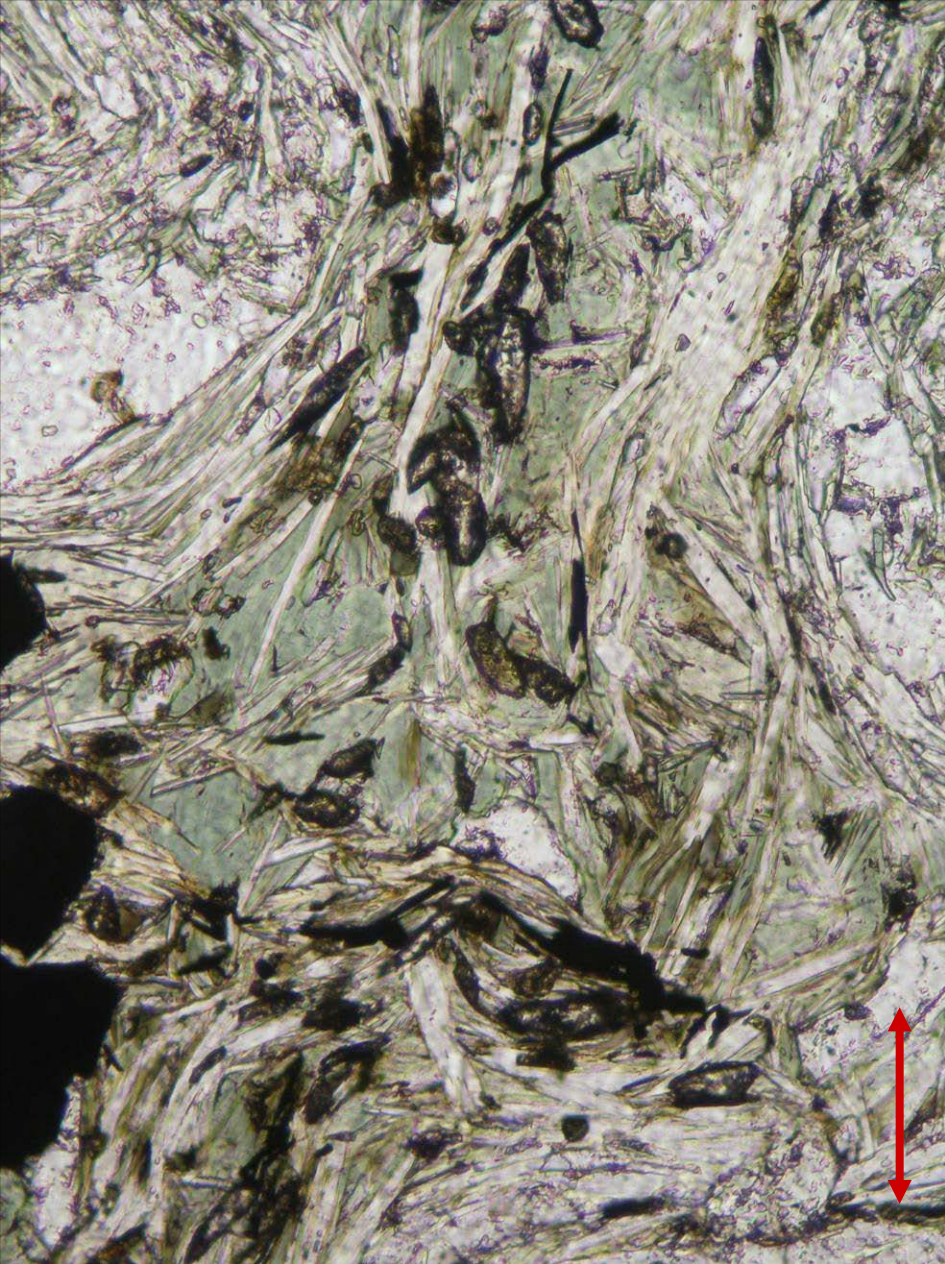
Muscovite with staurolite and ilmenite in mica schist from Petrov nad Desnou, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.0 mm. Photo: JiZi.





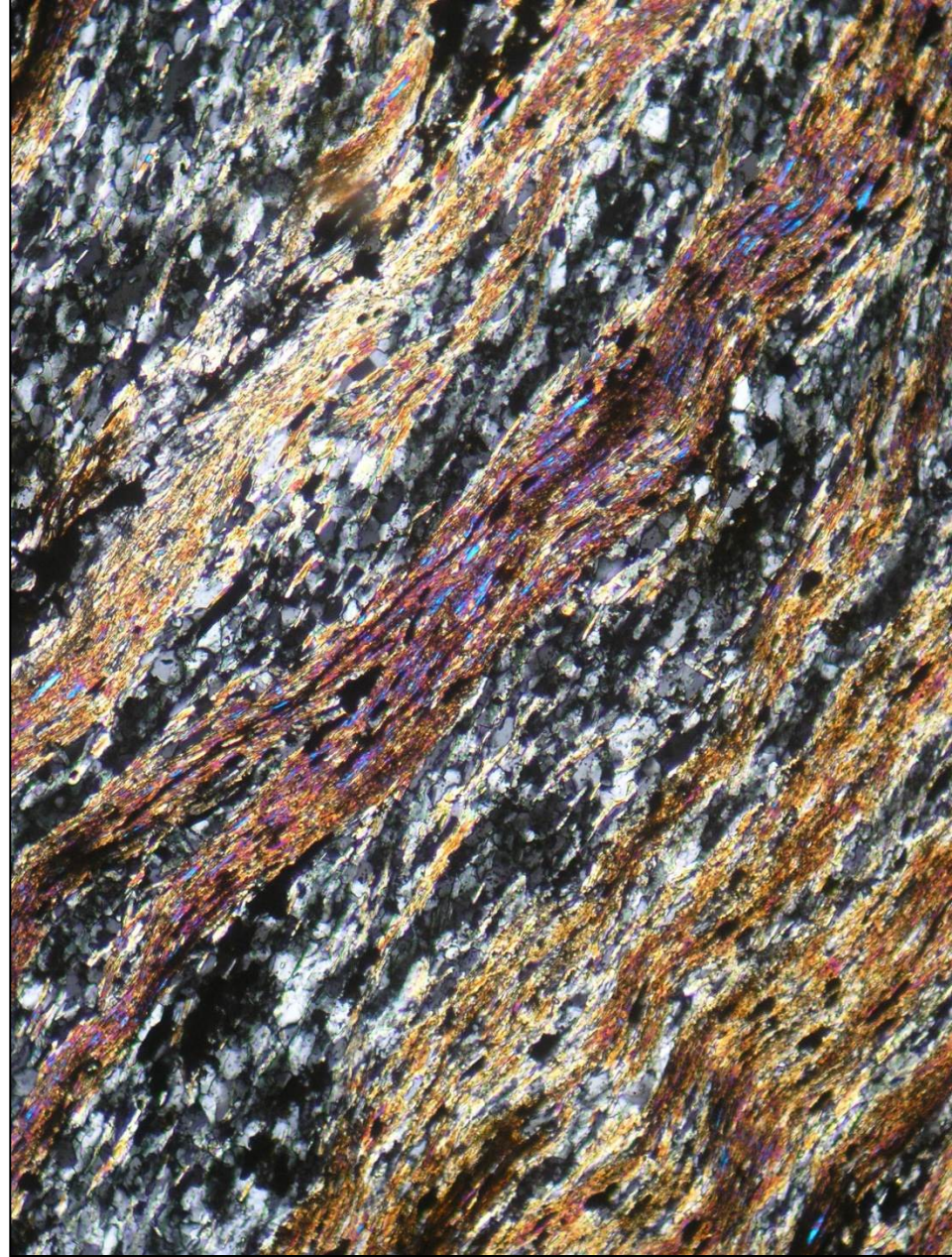
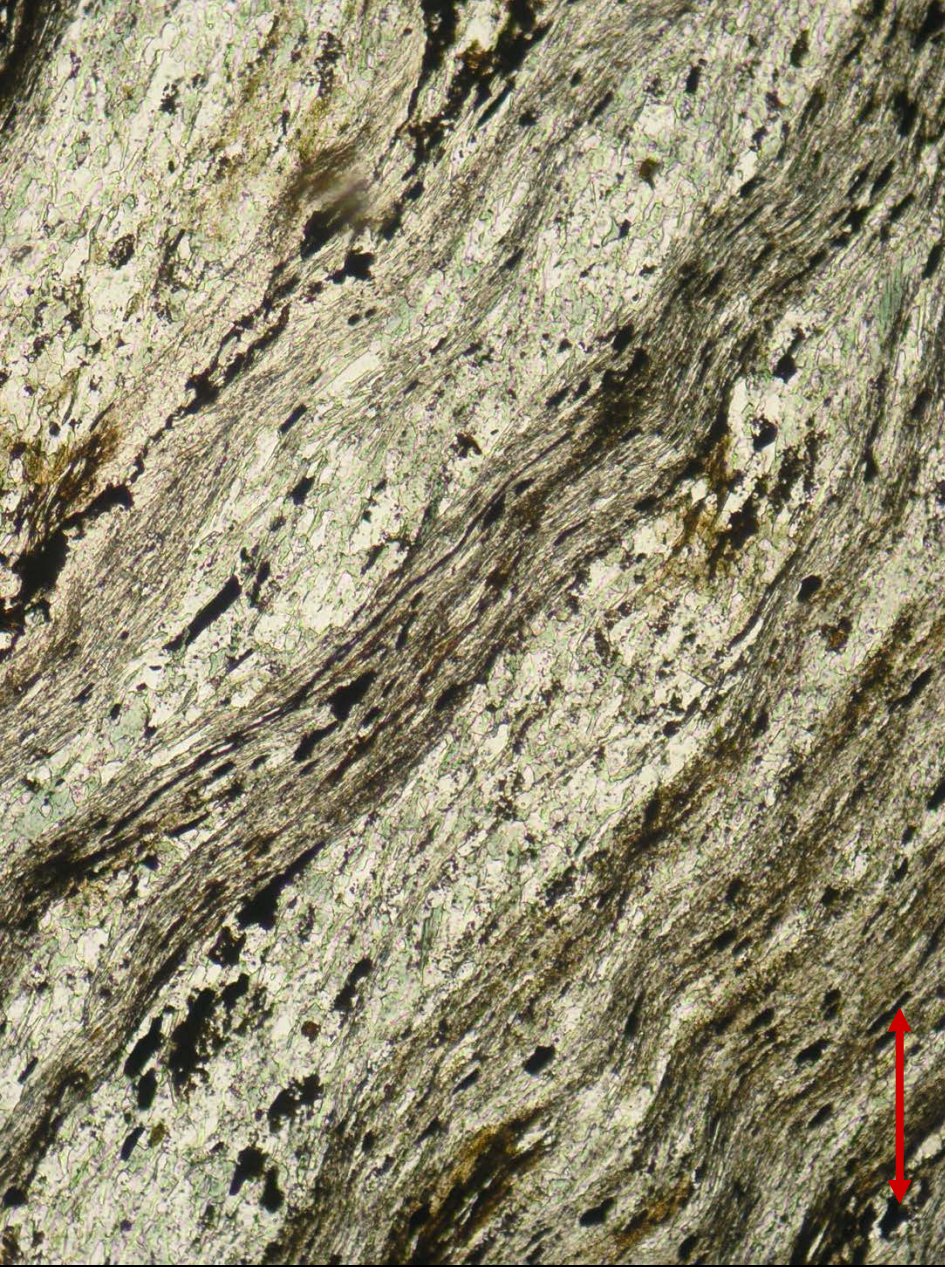
Muscovite porphyroblast in chlorite-muscovite schist from Malá Morávka, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 0.5 mm. Photo: JiZi.





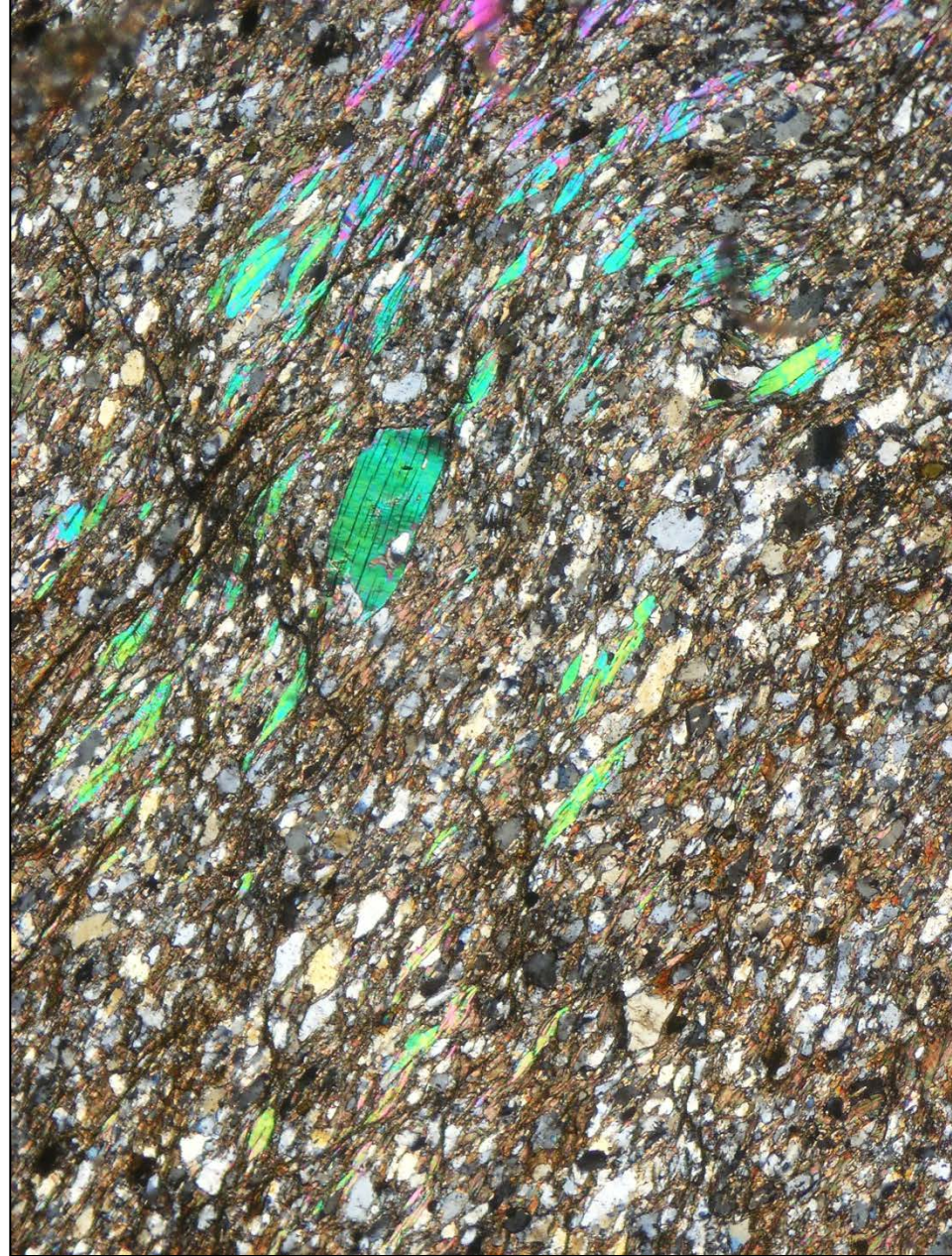
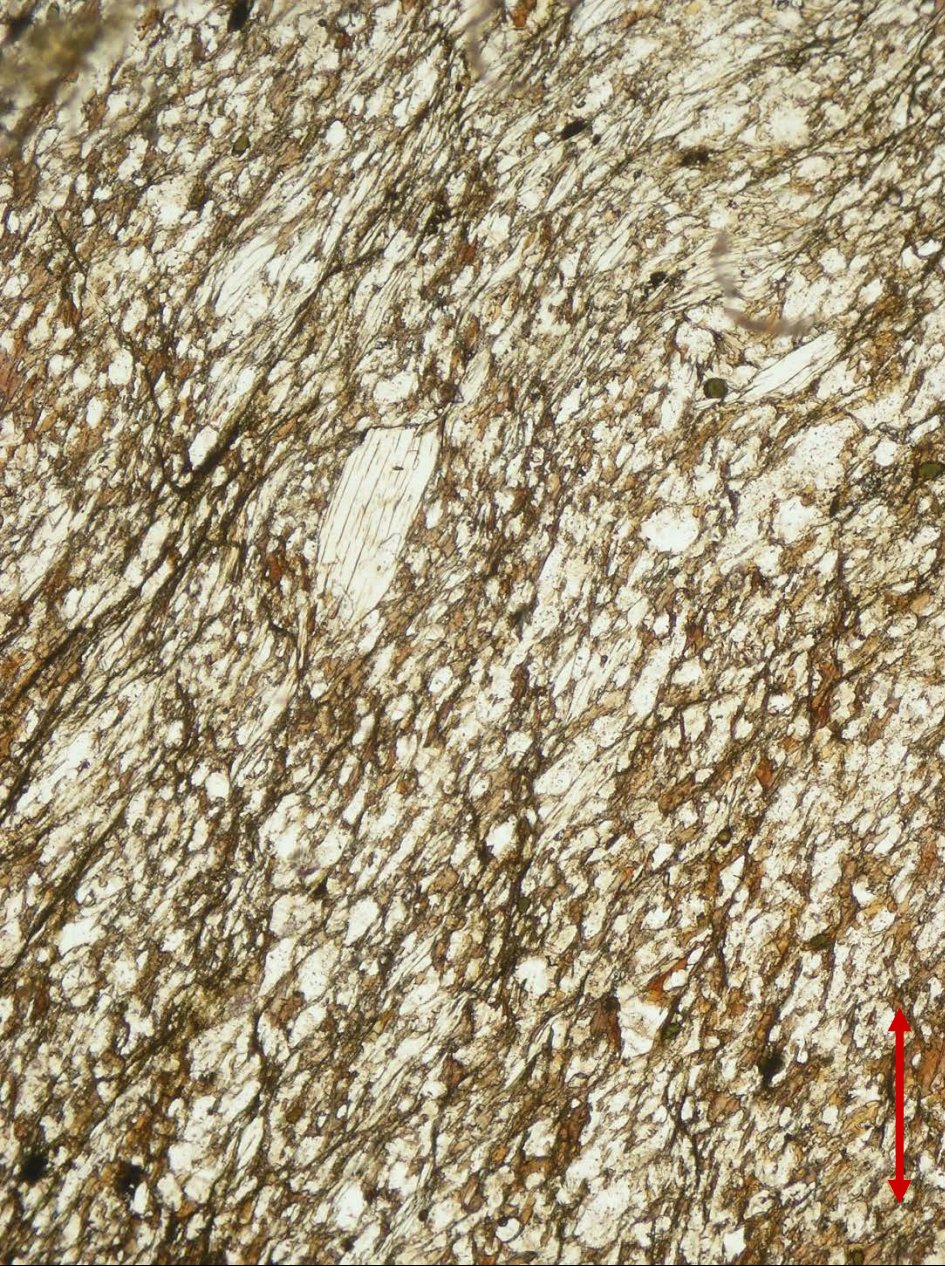
Muscovite, chlorite, biotite, quartz, rutile and magnetite in phyllite from Malá Morávka, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 0.7 mm. Photo: JiZi.





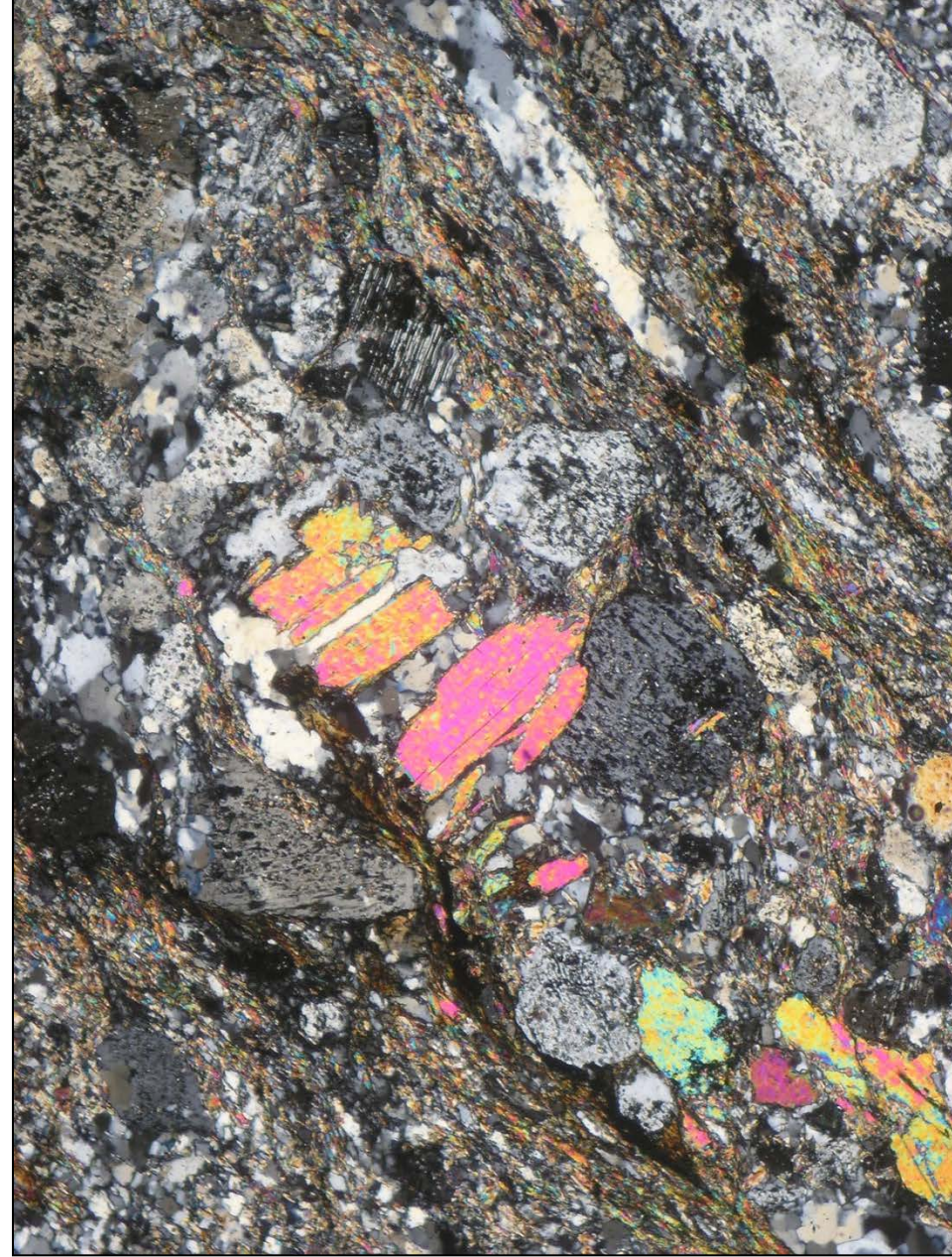
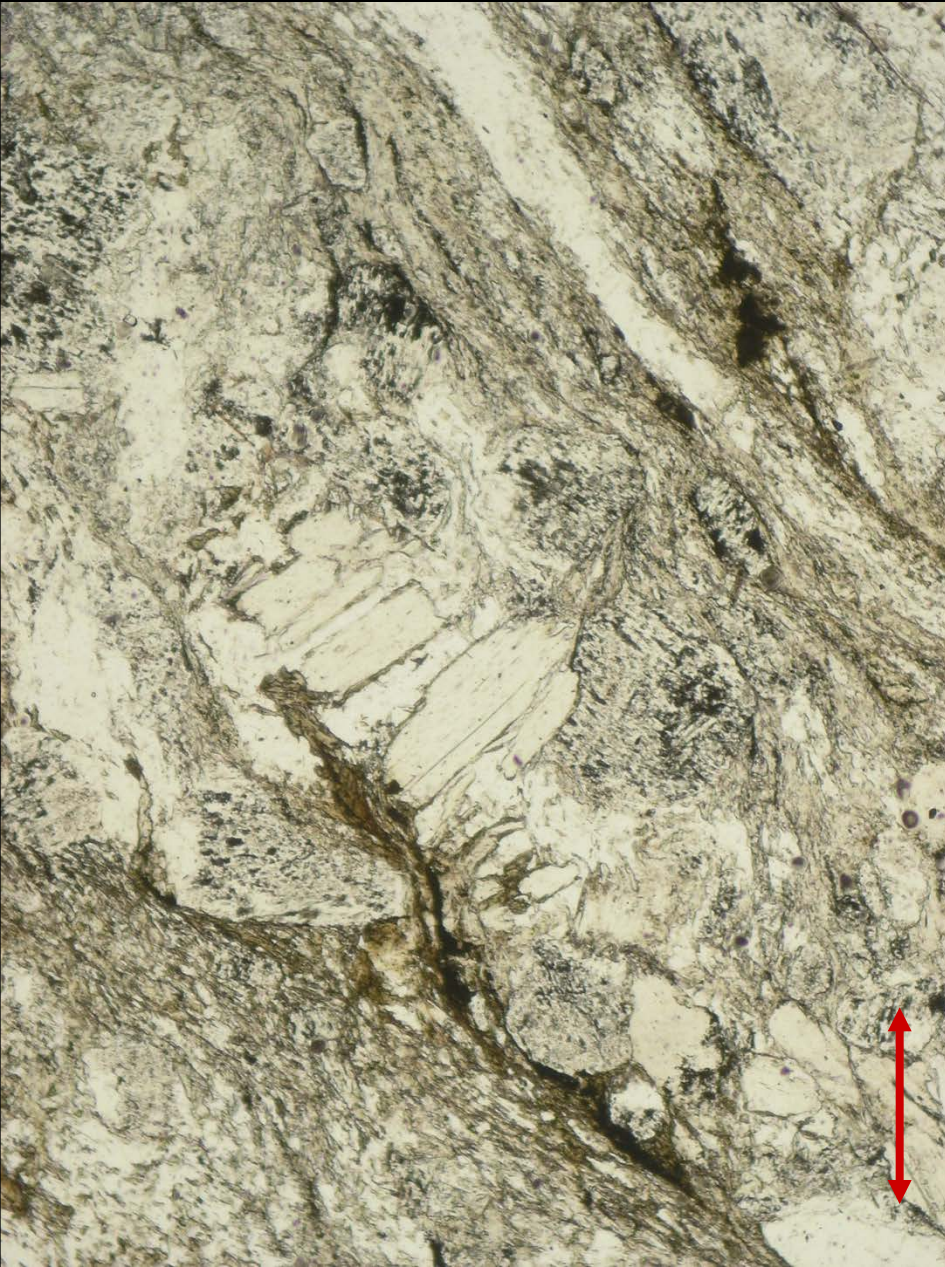
Muscovite in phyllite from Prachovice, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.0 mm. Photo: JiZi.





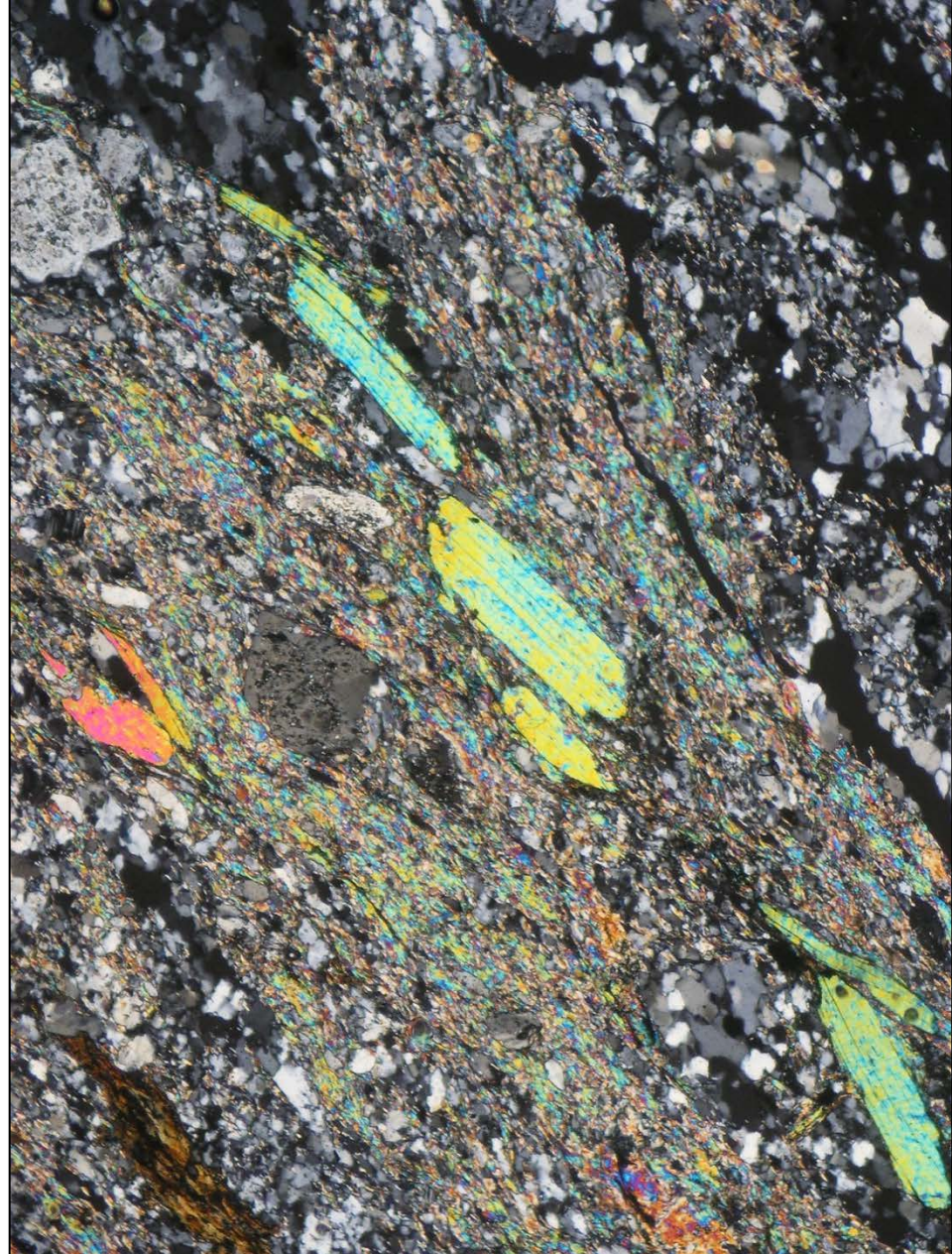
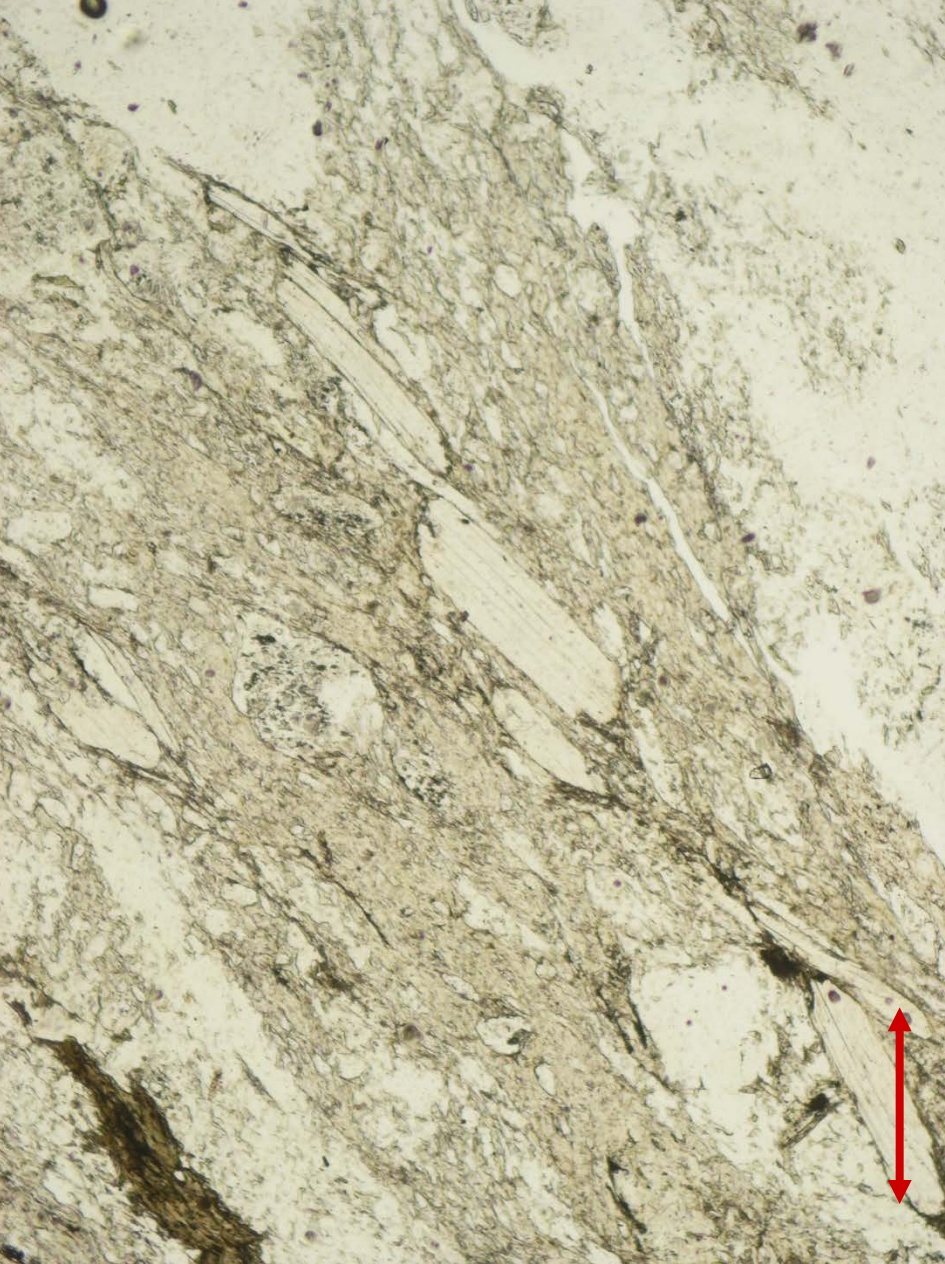
Muscovite in two-mica gneiss from Černín, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.4 mm. Photo: JiZi.





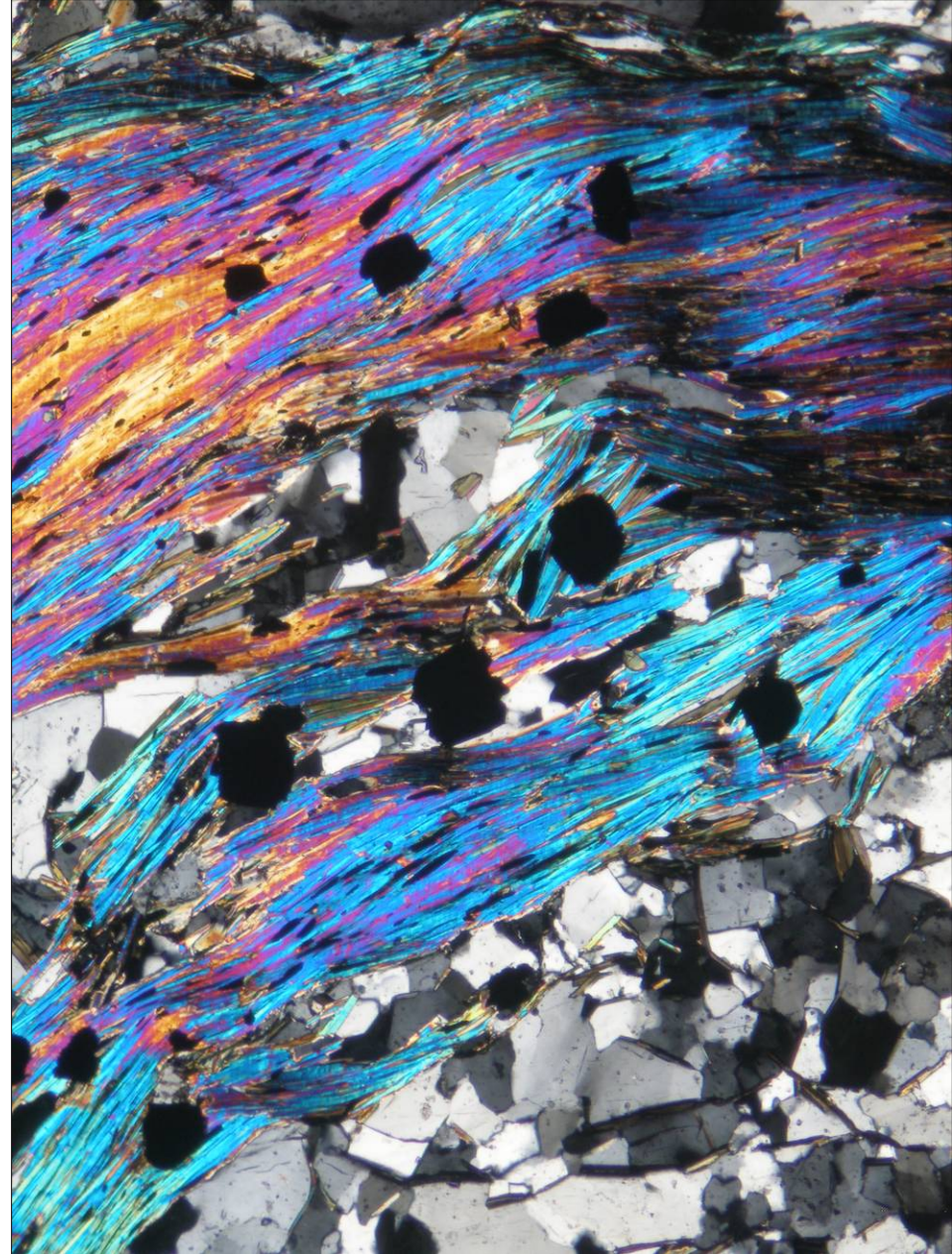
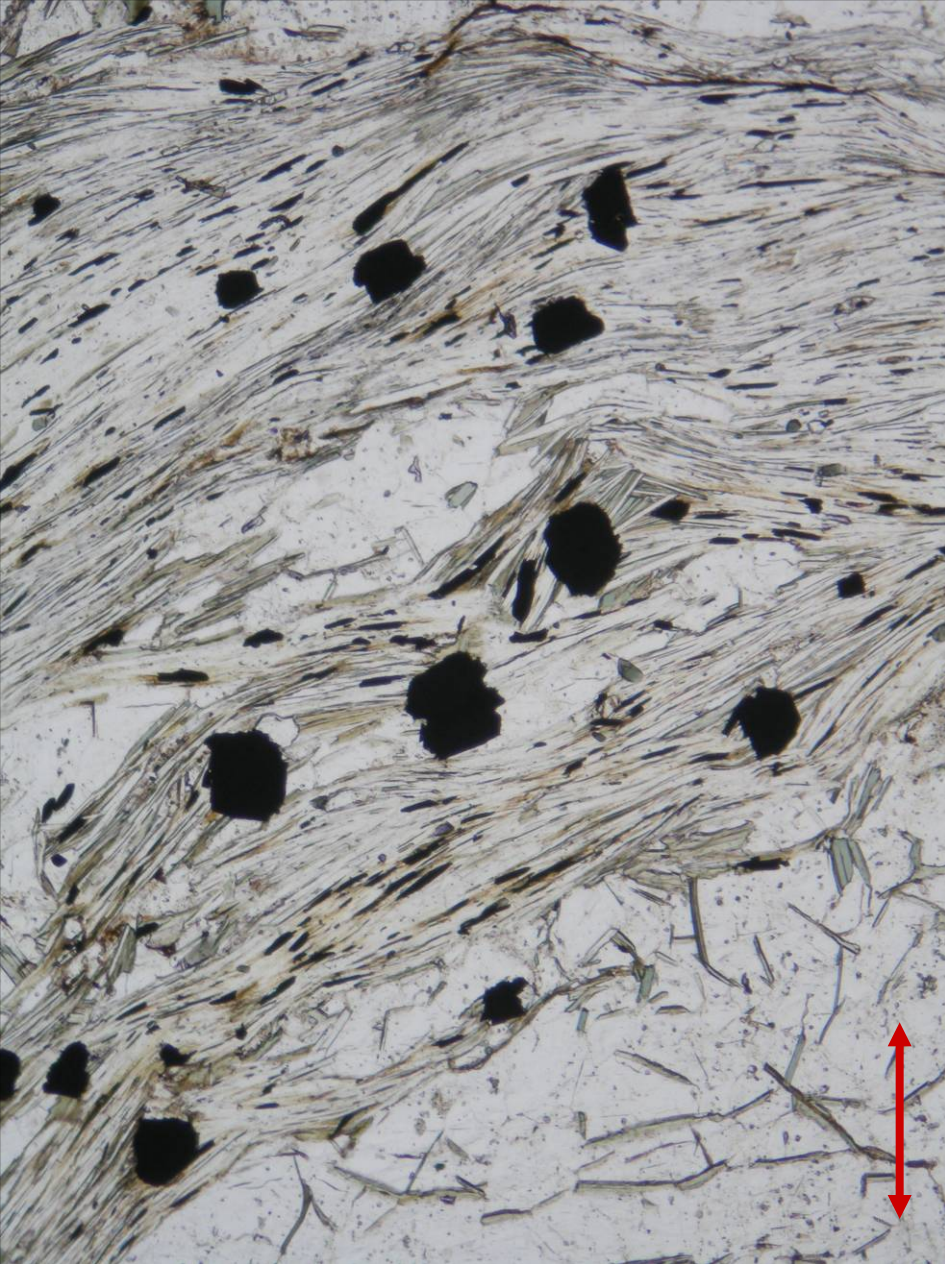
Muscovite in gneiss from Nectava, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.4 mm. Photo: JiZi.





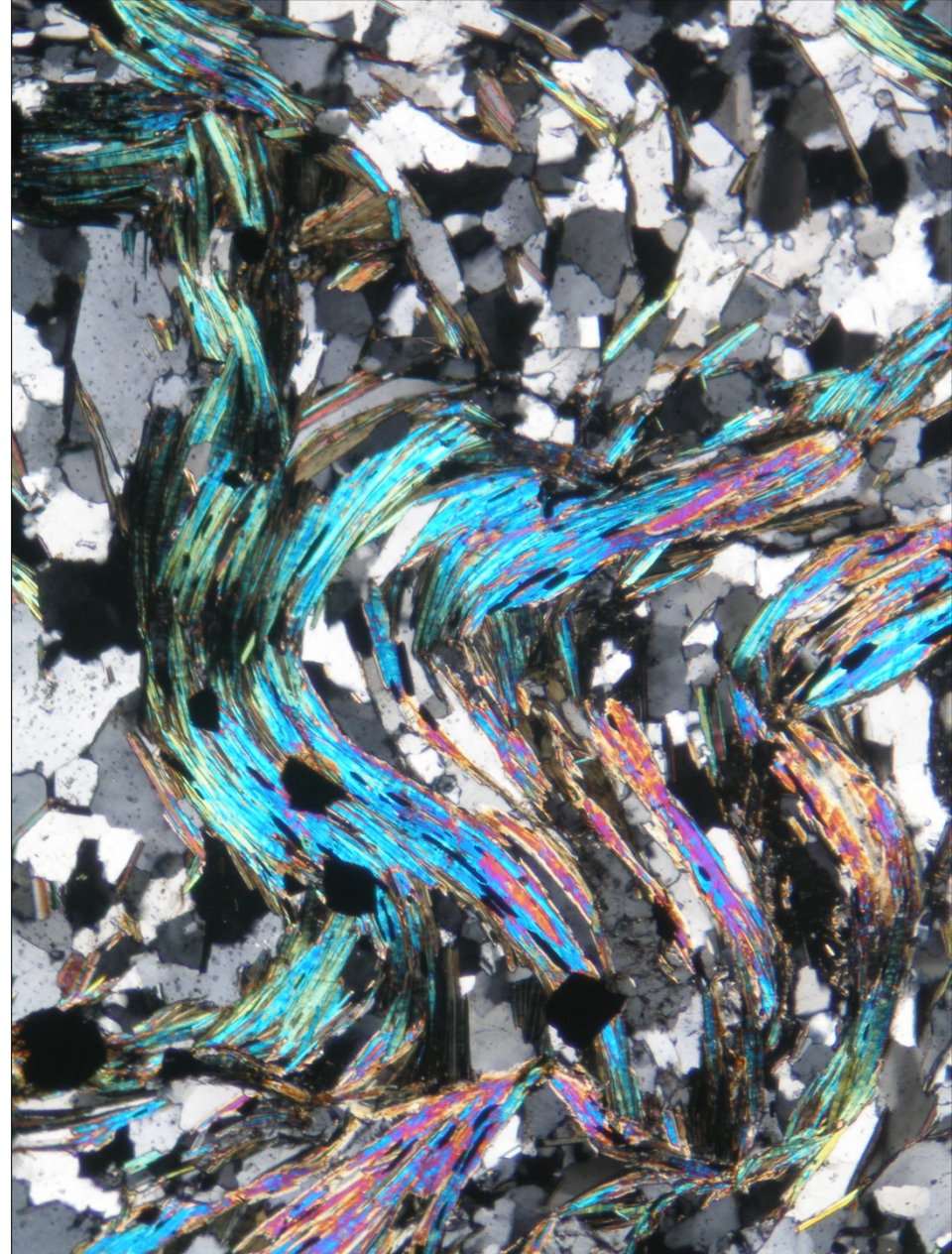
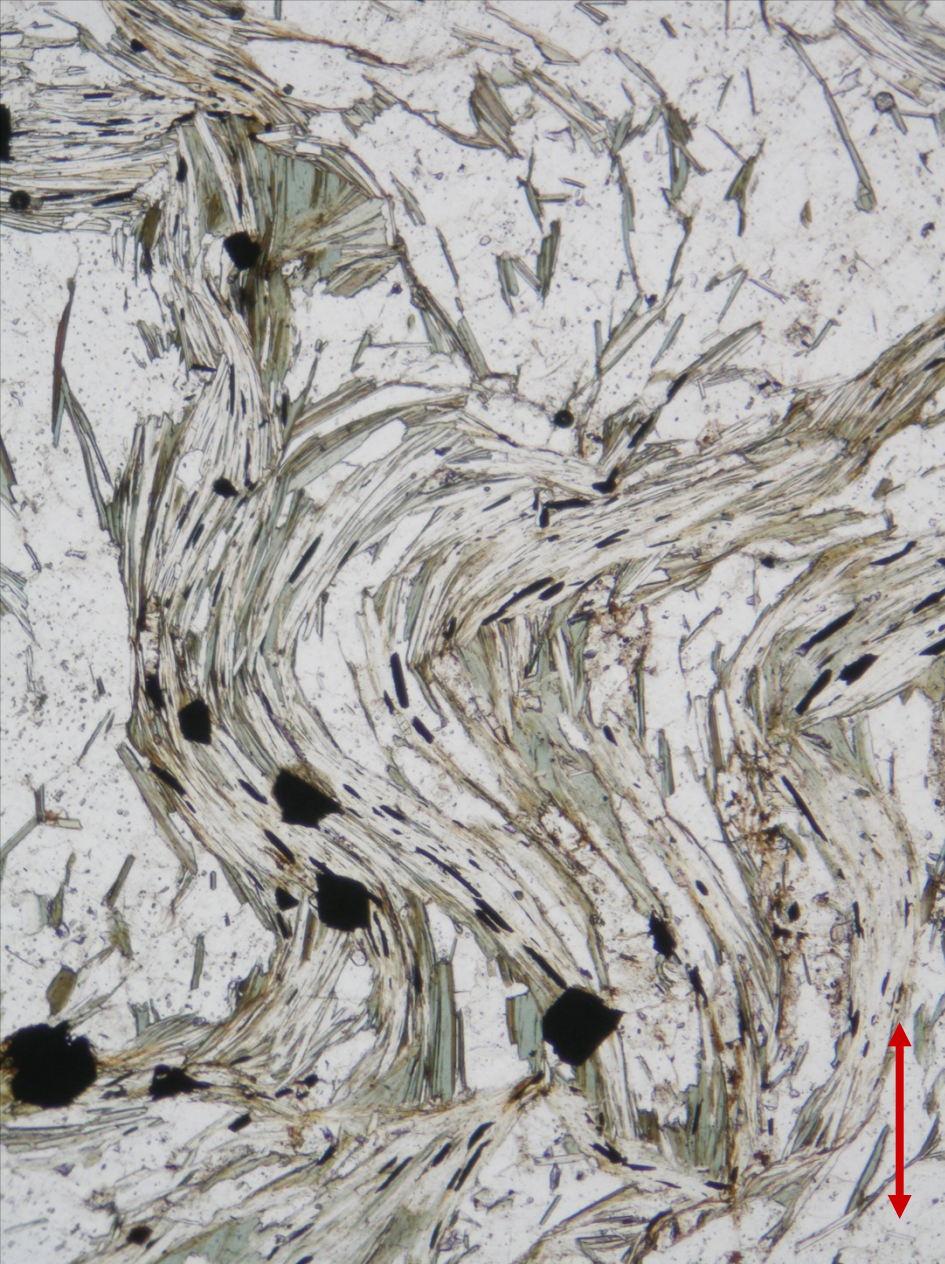
Muscovite in gneiss from Nectava, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.4 mm. Photo: JiZi.





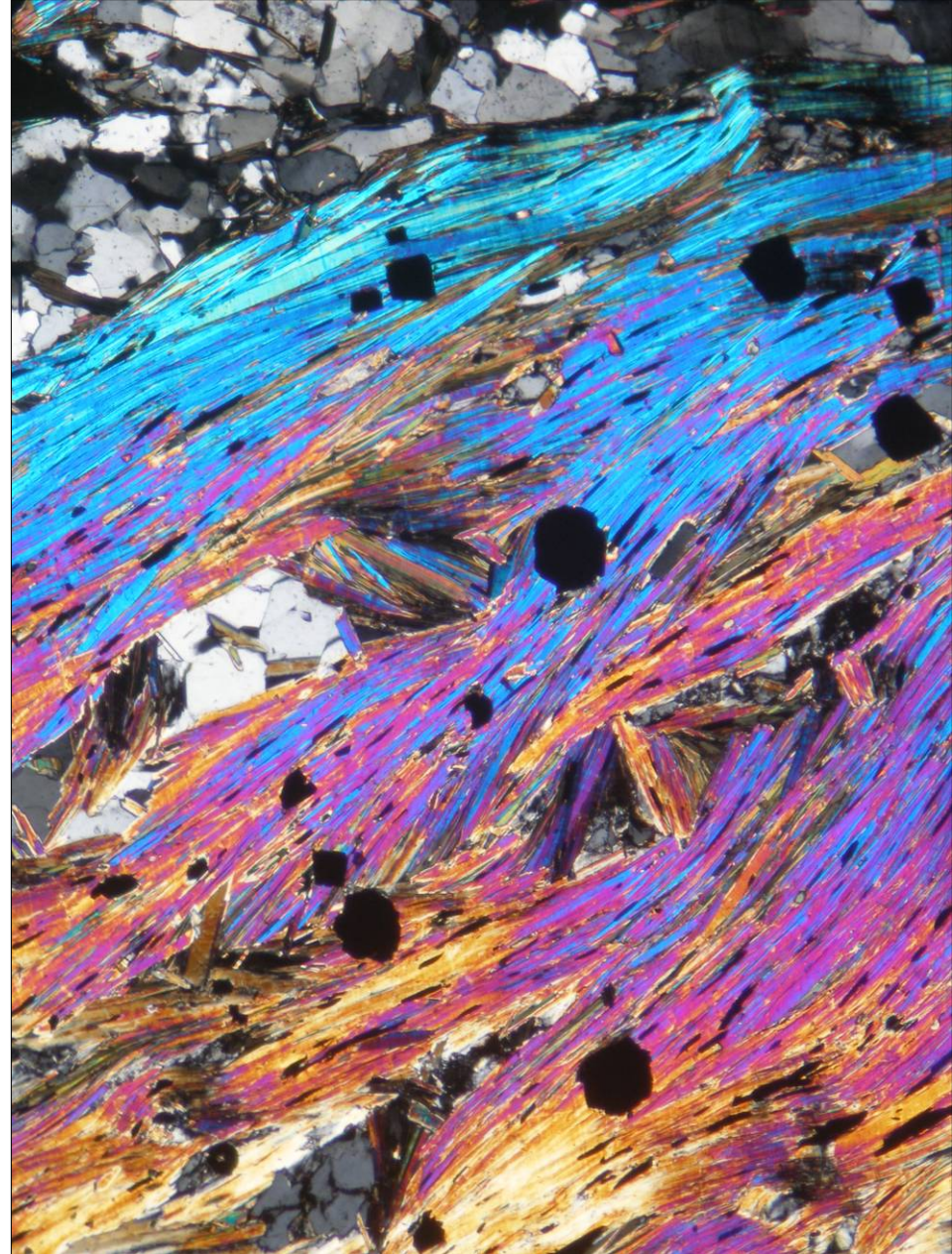
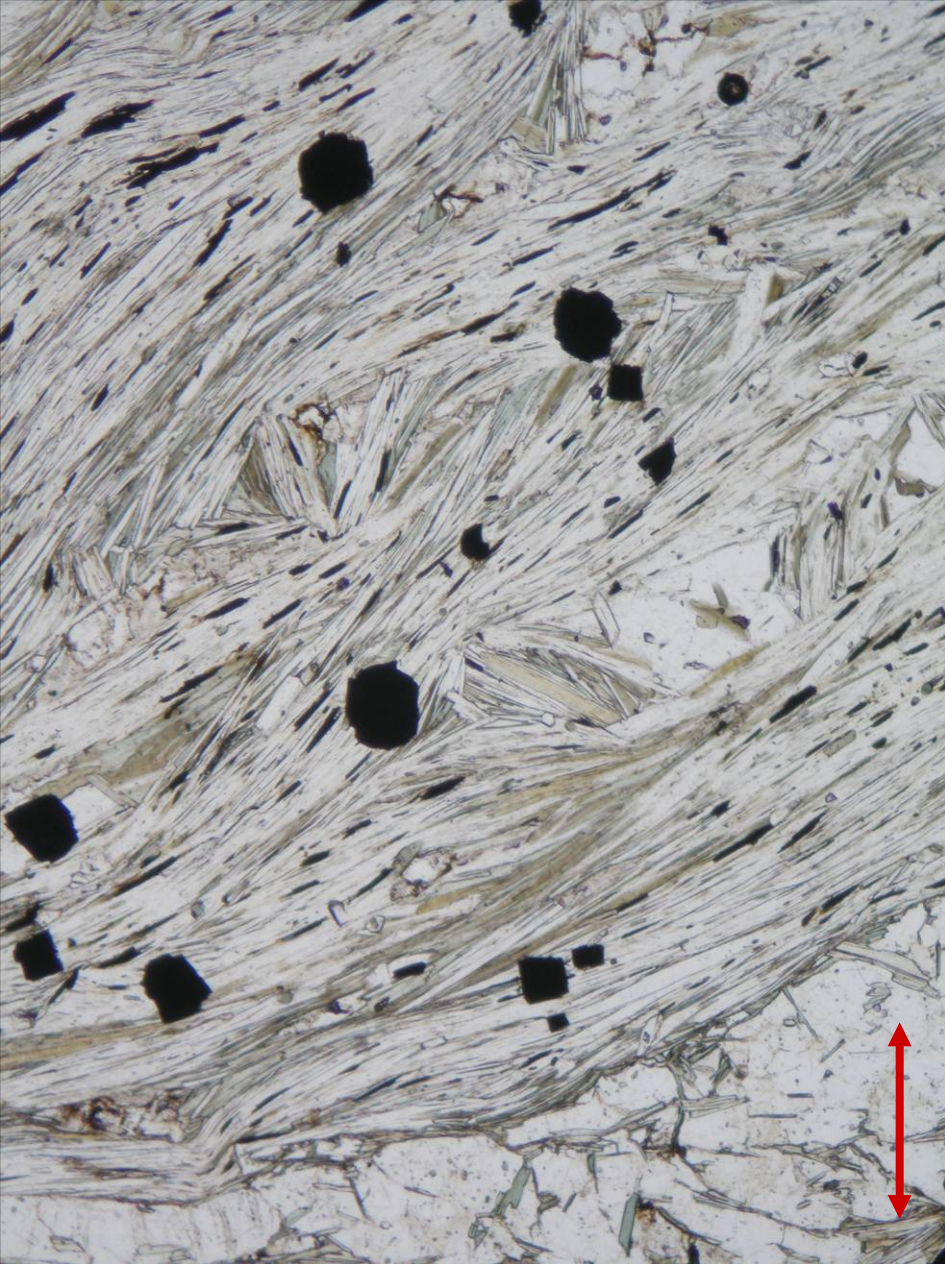
Magnetite and ilmenite in mica schist from Markersdorf, Austria; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





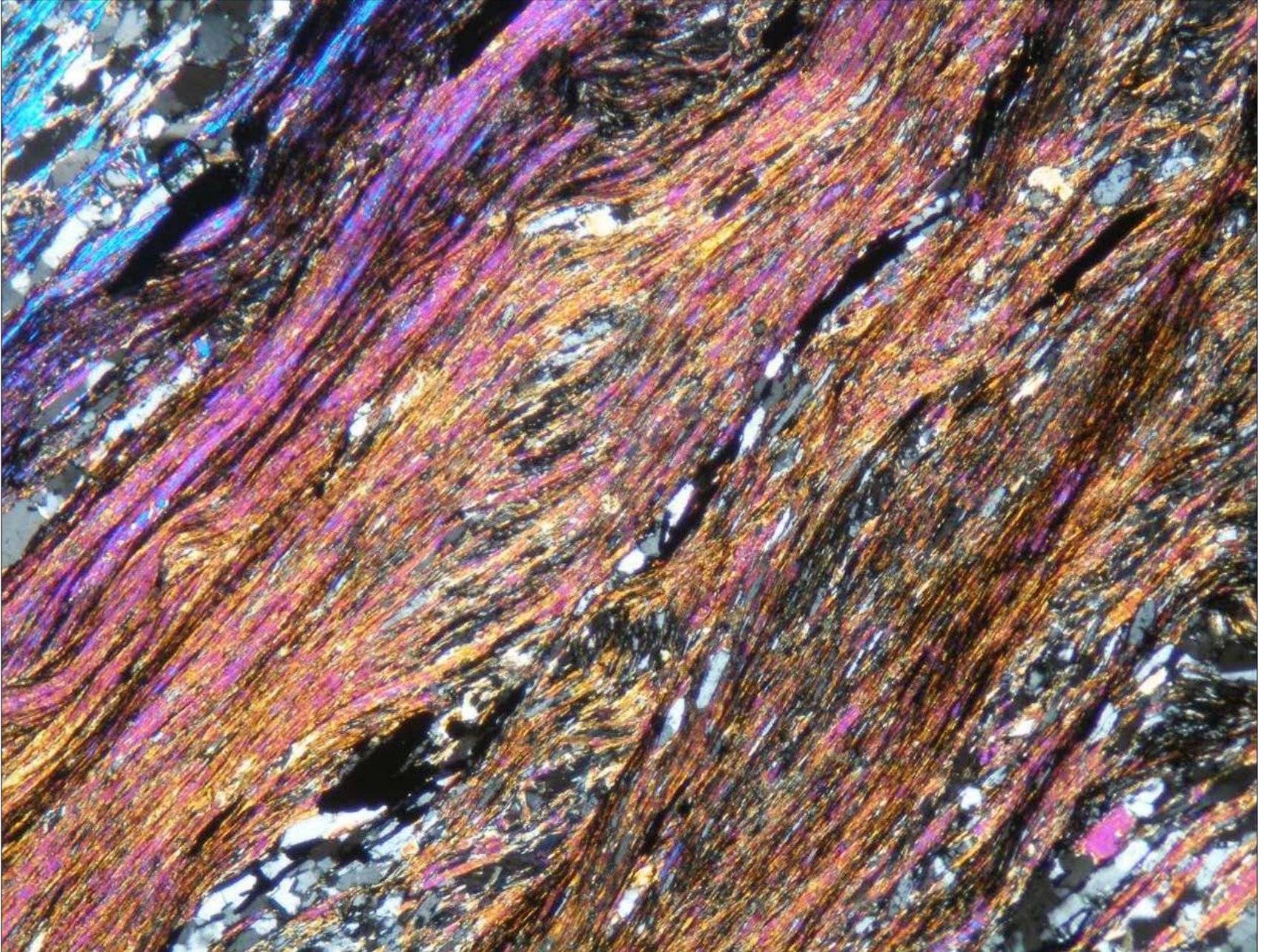
Muscovite in mica schist from Markersdorf, Austria; PPL (left) and XPL (right). Width of fields of view is ca. 1.8 mm. Photo: JiZi.





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





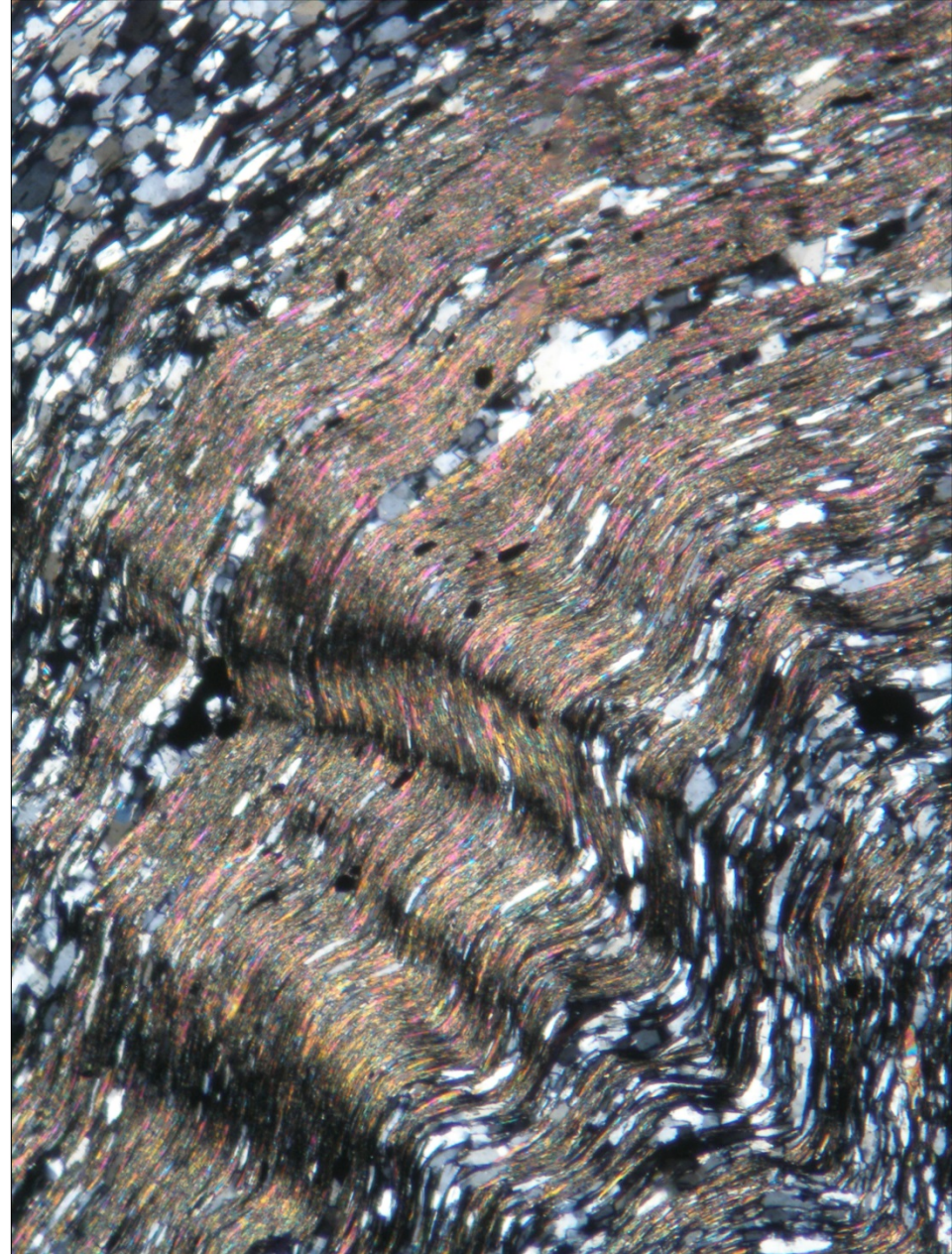
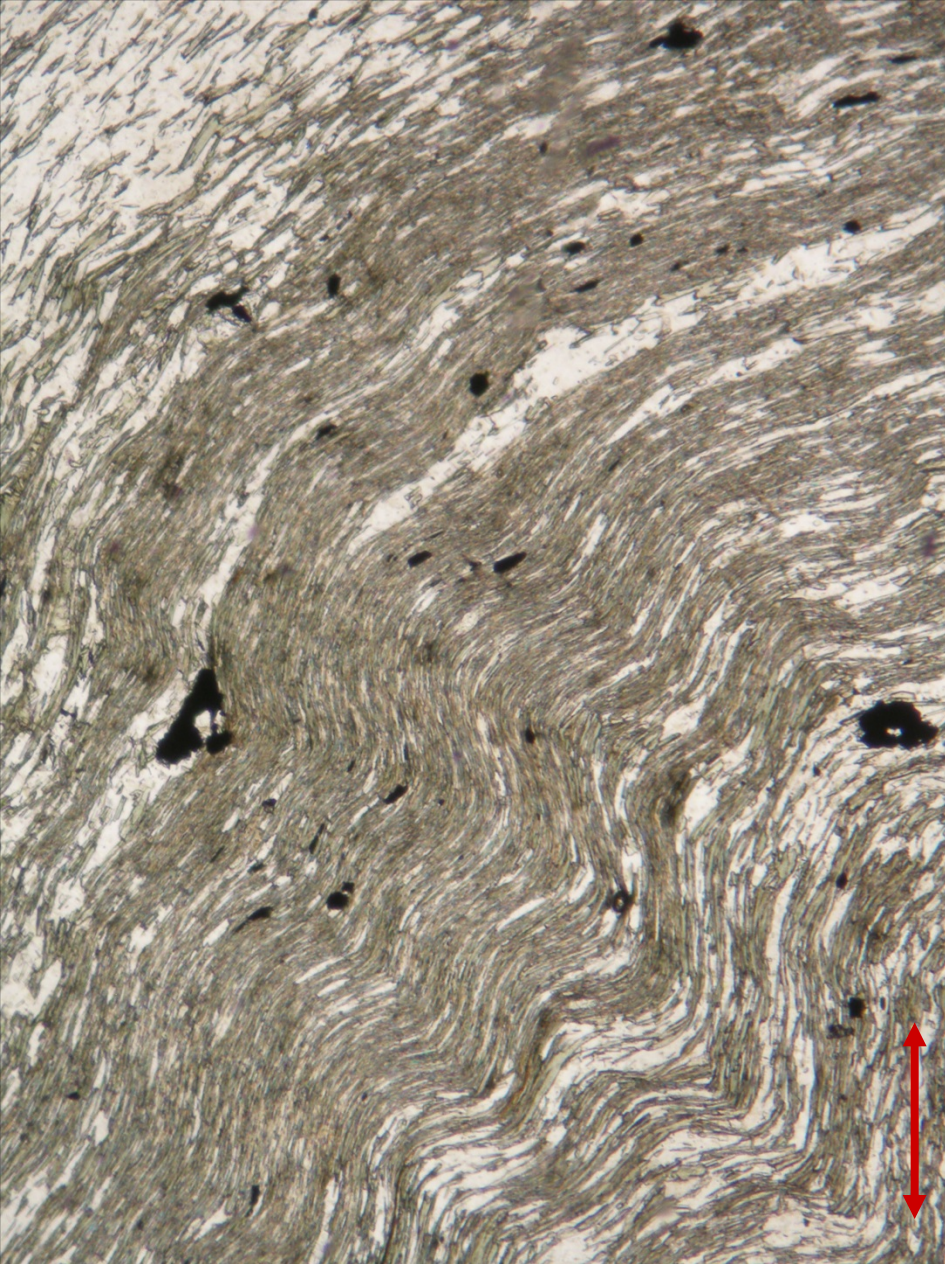
Sericite-rich domain in phyllite from Nový Malín, the Czech Republic; XPL. Field of view is ca. 2.0 mm wide. Photo: JiZi.





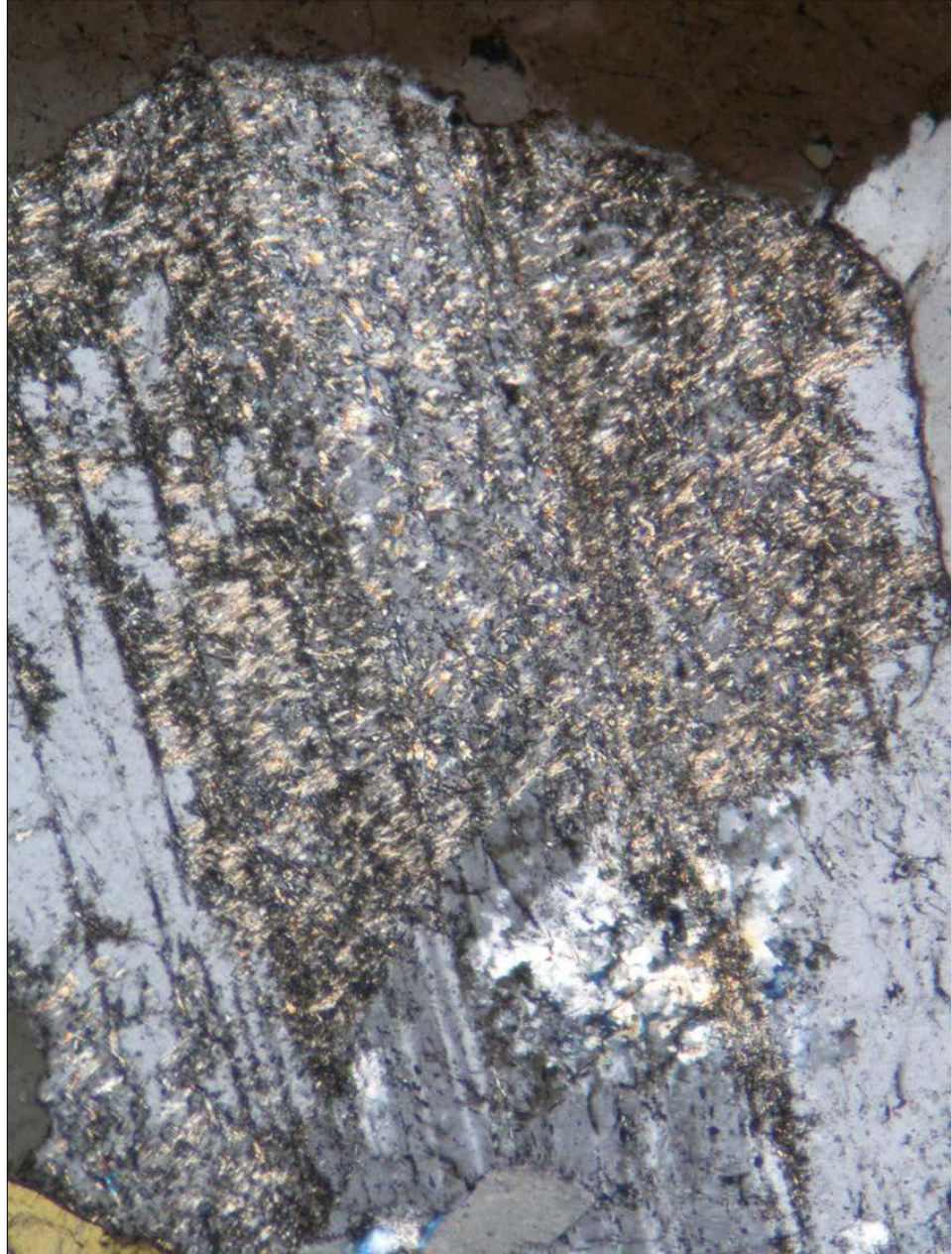
Sericite and quartz in phyllite from Nový Malín, the Czech Republic; XPL. Field of view is ca. 2.2 mm wide. Photo: JiZi.





Fine-grained muscovite (sericite) and quartz in phyllite from Zlaté Hory, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.7 mm. Photo: JiZi.





Sericitized plagioclase in a quartz vein in mica schist from Horní Lipová, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 1.5 mm. Photo: JiZi.