

Supplement to Kohn (“A simple method to create mineral mounts in thin section for teaching optical mineralogy”): Mineral specimen sources

Color and Pleochroism:

Biotite	Megacrysts are available online (etsy, ebay, etc.) and from mineral dealers (e.g., Ward’s Science), and can be ground, albeit with difficulty. Otherwise, biotite can be separated from biotite-rich rocks
Tourmaline	Online mineral sales provide megacrysts. Slab perpendicular to c-axis to 2-3 mm thick, then slice into strips 1 mm thick
Hornblende	Gore Mountain hornblende is excellent but normally requires magnetic separation from orthopyroxene. Ward’s also sells this hornblende and other varieties.
Gedrite	Rare and/or expensive. Ours was separated from a gedrite-rich rock.
Acmite	Online mineral sales. Malawi acmite (marketed as aegirine) is common.
Actinolite	Online mineral sales. Actinolite-talc rocks are excellent, but this actinolite rarely has much color or is noticeably pleochroic
Clinopyroxene	Online mineral sales, but be careful to avoid actinolite. Also Ward’s.
Chlorite	Difficult to find online and difficult to separate from other minerals, but can be obtained from chlorite-rich rocks that lack biotite
Bronzite	Polished cabochons or beads from online mineral sales. Most enstatite or orthopyroxene purchased online lacks pleochroism.
Andalusite	Brown beads from online mineral sales. Will contain a subset of grains with pink pleochroism.
Rosalite	Tumbled pebbles from online mineral sales.
Piemontite	Online mineral sales. Uncommon and can be expensive. Rosalite is a cheap alternative.
Staurolite	Difficult to find without quartz inclusions. Otherwise, twinned crystals from Kola Peninsula are often available online. Also search on andalusite (sometimes mis-identified).
Epidote	Online mineral sales. Also Ward’s.
Dumortierite	Tumbled pebbles available online. Substitute for glaucophane.
Glaucophane	Difficult to find and/or separate. Arfvedsonite beads might be an alternative, but will be much darker.

Relief:

Cryolite	Online mineral sales. From Greenland.
Fluorite	Numerous online and local in-store sources.
K-feldspar	Difficult because it is often turbid. Adularia is ideal, but can be hard to find and/or expensive. Search on “Sanidine” or “Sanadine” [sic]. Avoid “moonstone” which is commonly labradorite, not adularia. Ward’s Science sells K-feldspar, but cannot guarantee non-turbid crystals.
Quartz	Numerous sources and any online or in-store crystal will do. Quartz points can be sized to cut perpendicular to c-axis.
Muscovite	Best to separate from a rock, but it’s possible to grind large crystals. Widely available online and in-store.

Apatite	Single crystals (e.g., Durango, Ontario) or blue apatite commonly available from online mineral sales. Also Ward's, but handpick first.
Enstatite	Online sales of orthopyroxene. Also Ward's.
Sillimanite	Beads available online. Will be obvious whether it is sillimanite rather than quartz because sillimanite cleaves easily. Also can be separated from sillimanite-magnetite ore, although this is relatively rare.
Olivine	Polished pebbles are available online. Also Ward's, but handpick first
Garnet	Gore Mountain is a good source, otherwise grossular, YAG or other synthetic REE garnets are commonly available through on-line mineral sales.
Scheelite	Online mineral sales. Sources include Switzerland and China.
Cassiterite	Online mineral sales. Bolivian cassiterite is relatively transparent.
Rutile	Megacrysts are sometimes available online. Also Ward's. Natural crystals, e.g., from Graves Mountain, are often quite dark. Synthetic rutile is excellent but relatively expensive.
Calcite	Numerous sources. Common in rock and mineral stores.

Birefringence:

Fluorite	Numerous sources. Common in online sources and from rock and mineral stores.
Apatite	Single crystals (e.g., Durango, Ontario) or blue apatite commonly available from online mineral sales. Also Ward's, but handpick first.
Quartz	Numerous sources and any online or in-store crystal will do. Quartz points can be sized to cut perpendicular to c-axis.
Kyanite	Online mineral sales.
Spodumene	Online mineral sales. Also marketed as kunzite. A good alternative to kyanite
Sillimanite	Beads available online. Will be obvious whether it is sillimanite rather than quartz because sillimanite cleaves easily. Also can be separated from sillimanite-magnetite ore, although this is relatively rare.
Lepidolite	Online mineral sales.
Olivine	Polished pebbles are available online. Also Ward's, but handpick first
Muscovite	Best to separate from a rock, but it's possible to grind large crystals. Widely available online and in-store.
Talc	Online mineral sales. Also Ward's.
Zircon	Single crystals from Seiland, Skardu, or Mud Tank. Other megacrysts are often altered. Also blue beads or tumbled stones.
Datolite	Online mineral sales. Sources include Russia and Mexico.
Cassiterite	Online mineral sales. Bolivian cassiterite is relatively pale.
Calcite	Numerous sources. Common in rock and mineral stores.
Sulfur	Available synthetically online, also natural mineral specimens are widely available.