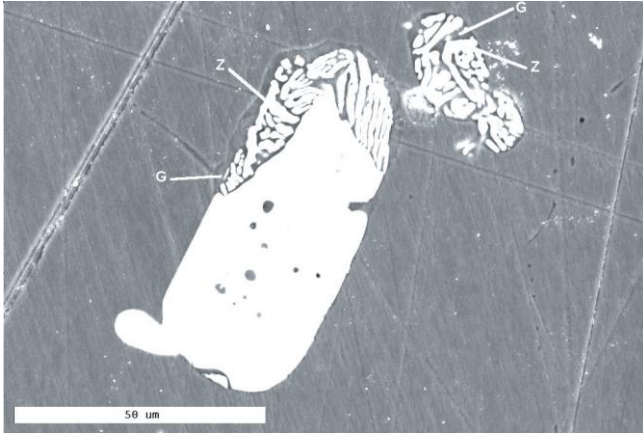


Scanning Electron Microscope / Electron Probe Micro-analysis

Gemmological applications

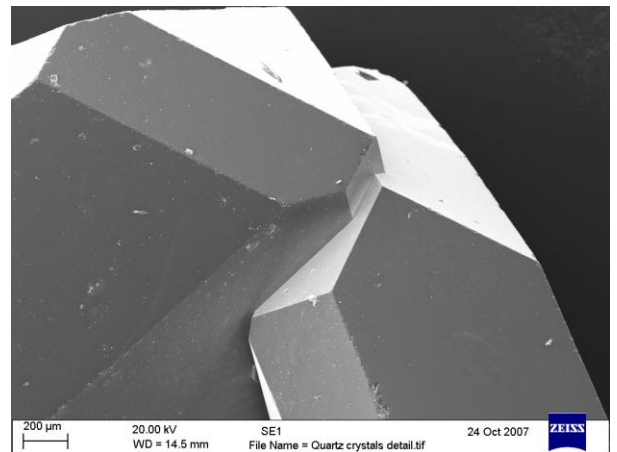


	A	A	A	B	B
Na ₂ O	-	2.52	1.97	3.02	-
Al ₂ O ₃	62.61	13.67	12.36	13.16	73.65
SiO ₂	28.84	48.10	41.46	56.18	23.52
K ₂ O	-	-	0.39	0.48	-
FeO	-	-	0.58	0.61	-
ZrO ₂	5.01	31.06	39.36	24.17	0.78
Total	96.47	96.48	96.22	97.62	97.95

A = Between Zircon and ZrO₂-phase
B = Between Zircon and Corundum
 (Rankin & Edwards, 2003)

SEM back-scattered image of thermally decomposed zircon showing glass (G) and baddelyite (Z). Zircon inclusion in heat-treated corundum from Chimwadzulu, Malawi

Representative microprobe analyses of glass phase co-existing with baddelyite



SEM image of stepped fractures on broken surface of rough ruby from Longido, Tanzania

SEM image of quartz crystals

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