The New IMA List of Gem Materials – A Work in Progress – Updated: **July 2018**

In the following pages of this document a comprehensive list of gem materials is presented. The list is distributed (for terms and conditions see below) *via* the web site of the Commission on Gem Materials of the International Mineralogical Association. The list will be updated on a regular basis.

Mineral names and formulae are from the IMA List of Minerals: http://nrmima.nrm.se//IMA_Master_List_%282016-07%29.pdf. Where there is a discrepancy the IMA List of Minerals will take precedence.

Explanation of column headings:

IMA status: A = approved (it applies to minerals approved after the establishment of the IMA in 1958); G = grandfathered (it applies to minerals discovered before the birth of IMA, and generally considered as valid species); Rd = redefined (it applies to existing minerals which were redefined during the IMA era); Rn = renamed (it applies to existing minerals which were renamed during the IMA era); Q = questionable (it applies to poorly characterized minerals, whose validity could be doubtful).

Gem material name: minerals are normal text; non-minerals are bold; rocks are all caps; organics and glasses are italicized.

Caveat (IMPORTANT): inevitably there will be mistakes in a list of this type. We will be grateful to all those who will point out errors of any kind, including typos. Please email your corrections to groat@mail.ubc.ca.

Acknowledgments: The following persons, listed in alphabetic order, gave their contribution to the building and the update of the IMA List of Minerals: Vladimir Bermanec, Emmanuel Fritsch, Lee A. Groat, Vera Hammer, Donna Hawrelko, Corina Ionescu, Miha Jeršek, Ruslan Kostov, Donald J. Lake, Cigdem Lule, Julie Olivier, Jayshree Panjikar, Jordan Roberts, John Saul, Andy Shen, Margherita Superchi. The references were provided by Ruslan Kostov and James E. Shigley.

Mineral Materials

IMA status	Gem material name	Formula	Comments	References
	Achroite		Colorless or almost colorless variety of tourmaline	
Rd	Actinolite	$\square Ca_2(Mg_{4.5\text{-}2.5}Fe^{2+}{}_{0.5\text{-}2.5})Si_8O_{22}(OH)_2$	Amphibole	*Canadian Mineralogist* **17** (1996), 72 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **23** (1974), 42
	Adularia		Feldspar	*Journal of Gemmology* **34** (2014), 190
	Agate		Colour modifier and other descriptive terms after (banded, dendritic, fire, iris, moss)	*Australian Gemmologist* **25** (2014), 279 *Rock & Gem Magazine* **38** (2008), 74
A	Albite	$Na(AlSi_3O_8)$	Feldspar	*Canadian Gemmologist* **13** (1992), 99 *Lapidary Journal* **47** (1993), 35
	Alexandrite		Color-changing variety of chrysoberyl	*Australian Gemmologist* **24** (2011), 133 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **56** (2007), 29
A	Almandine	$Fe^{2+}{}_3Al_2(SiO_4)_3$	Garnet	*Revue de Gemmologie* (1999), 50 *Rock & Gem Magazine* **35** (2005), 12 *Lapidary Journal* **37** (1983), 606 *Gems & Gemology* **27** (1991), 168
	Almandite		Almandine	
	Amazonite		Microcline feldspar	*Revue de Gemmologie* (1991), 8
G	Amblygonite	$LiAl(PO_4)F$		*Gems & Gemology* **8** (1955), 208 *Gems & Gemology* **51** (2015), 98
	Amethyst		Violet variety of quartz	*Neues Jahrbuch für Mineralogie Monatshefte* **6** (1984), 272. *Gems & Gemology* **24** (1988), 214. *Mineralogical Record* **21** (1990), 203. *Journal of Egyptian Archaeology* **79** (1993), 81. Kostov, R. I. (1992), *Amethyst.* USB, Sofia, 249 p. Lieber, W. (1994), *Amethyst.* Ch. Weise, München, 188 S. *Lapis* **20** (1995), 35. *Mineralogical Record* **40** (2009), 121. *Gems & Gemology* **3** (2011), 196. *Journal of Gemmology* **33** (2012), 29.
	Ametrine		Violet-yellow variety of quartz	*Gems & Gemology* **30** (1994), 4
	Ammolite		Pseudomorph after the ammonite shell	
	Amphibole		Group	*Revue de Gemmologie* (2008) 4

				Zeitschrift für den Deutschen Gemmologischen Gesellschaft **45** (1996), 135
G	Andalusite	Al_2SiO_5		*Zeitschrift für den Deutschen Gemmologischen Gesellschaft* **30** (1981), 236 *Revue de Gemmologie* (1985), 21 *Gems & Gemology* **45** (2009), 120 *Journal of Gemmology* **18** (1983), 581
G	Andradite	$Ca_3Fe^{3+}{}_2(SiO_4)_3$	Garnet	*Mineralogical Record* **41** (2010), 209 *Gems & Gemology* **19** (1983), 202 *Canadian Gemologist* **20** (1999), 19 *Revue de Gemmologie* (2005), 18
G	Anorthite	$Ca(Al_2Si_2O_8)$	Feldspar	
	Anthophyllite-Gedrite		Individually anthophyllite, gedrite are IMA approved	*Gems & Gemology* **24** (1988), 161 *Mineralogical Magazine* **60** (1996), 937 *Zeitschrift für den Deutschen Gemmologischen Gesellschaft* **45** (1996), 135
Rd	Antigorite	$Mg_3Si_2O_5(OH)_4$	Kaolinite-serpentine	*Gems & Gemology* **52** (2016), 38 *Zeitschrift für den Deutschen Gemmologischen Gesellschaft* **24** (1975), 157
	Apatite		Group	*Journal of Gemmology* **35** (2016), 6 *Gems & Gemology* **51** (2015), 191 *Rocks & Minerals* **83** (2008), 148
	Aquamarine		Beryl	*Estudios Geológicos* **14** (2004), 54 *Gems & Gemology* **47** (2011), 42 *Zeitschrift für den Deutschen Gemmologischen Gesellschaft* **54** (2005), 47 *Gems & Gemology* **20** (1984), 78
G	Aragonite	$CaCO_3$		*Canadian Gemmologist* **17** (1996), 76
Rn (with -Fe, Mg, Mn suffix)	Axinite	$Ca_4(Fe^{2+},Mg,Mn^{2+})_2Al_4[B_2Si_8O_{30}](OH)_2$		*Journal of Gemmology* **35** (2016), 96 *Journal of Gemmology* **18** (1982), 20 *Journal of Gemmology* **34** (2014), 191 *Mineralogical Record* **13** (1982), 293
G	Azurite	$Cu_3(CO_3)_2(OH)_2$		*Australian Gemmologist* **15** (1983), 46
	Ballas		Variety of non-gem grade diamond	
G	Benitoite	$BaTiSi_3O_9$		*Rocks & Minerals* **69** (1994), 379 *Gems & Gemology* **33** (1997), 166 *Lapidary Journal* **10** (1957), 510
G	Beryl	$Be_3Al_2Si_6O_{18}$		*Mineralogical Record* **7** (1976), 211 *Rock & Gem* **35** (2005), 20

				Gems & Gemology **25** (1989), 25 *Rock & Gem* **36** (2006), 80 *Rocks & Minerals* **63** (1988), 10
G	Beryllonite	$NaBe(PO_4)$		*Gems & Gemology* **27** (1991), 47 *Canadian Gemmologist* **17** (1996), 46
	Bixbite		Alternative and generally unused name for red beryl	*Gems & Gemology* **20** (1984), 208 *Gems & Gemology* **39** (2003), 302 *Rock & Gem* **22** (1992), 32
	Bort		Variety of non-gem grade diamond	
	Bowenite			*Neues Jahrbuch für Mineralogie Monatshefte* (1998), 85
G	Brazilianite	$NaAl_3(PO_4)_2(OH)_4$		*Rocks & Minerals* **75** (2000), 40 *Australian Gemmologist* **25** (2015), 346
	Bytownite		Feldspar	*Lapidary Journal* **25** (1971), 170 *Journal of the Gemmological Association of Hong Kong* **29** (2008), 25 *Canadian Gemmologist* 13 (1992), 99
	Cairngorm			
G	Calcite	$Ca(CO_3)$		*Gems & Gemology* **20** (1984), 222 *Lapidary Journal* **24** (1970), 449
	Californite		Vesuvianite	*Gems & Gemology* **11** (1965), 336 *Rocks & Minerals* **85** (2010), 146 *Rocks & Minerals* **69** (1994), 396
	Carbonado		Mixture of diamond, graphite, and amorphous C	*Zeitschrift für den Deutschen Gemmologischen Gesellschaft* **53** (2004), 5
	Carnelian		Quartz	*Casopis pro Mineralogii a Geologii* **20** (1975), 202. *Cornaline et pierres précieuses (Ed. Tallon, F.).* (1999), Musée du Louvre, Paris, 127. *World Archaeology* **32** (2000), 84. *Bulletin de l'Ecole française d'Extrême-Orient* **88** (2001), 376. *Antiquity* **77**, 296 (2003), 285. *Journal of Archaeological Science* **31** (2004), 1161. *Geology and Archaeomineralogy, Proceedings* (2008), Sofia, 67. *Journal of Archaeological Science* **40** (2013), 2286. *Journal of Archaeological Science* **58** (2015), 77.
G	Cassiterite	SnO_2		*Gemmologie – Zeitschrift für den Deutschen Gemmologischen Gesellschaft* **51** (2002), 50

				Journal of Gemmology **26** (1998), 41
	Catseye		Chatoyancy	
	Celestite		Celestine	*Lapidary Journal* **43** (1989), 59
G	Cerussite	$Pb(CO_3)$		*Gems & Gemology* **52** (2016), 68
	Chalcedony		Quartz	*Journal of Gemmology* **26** (1999), 364 *Gems & Gemology* **21** (1985), 219
A	Charoite	$(K,Sr,Ba,Mn)_{15-16}(Ca,Na)_{32}[Si_{70}(O,OH)_{180}](OH,F)_4 \cdot nH2O$		*Lapidary Journal* **32** (1978), 1942 *Lapidary Journal* **42** (1988), 36 *Journal of Gemmology* **16** (1978), 1 *Journal of the Gemmological Association of Hong Kong* **29** (2008), 77
	Chessylite		Azurite	
	Chiastolite		Andalusite	*Australian Gemmologist* **20** (2000), 479
	Chloromelanite			
G	Chondrodite	$Mg_5(SiO_4)_2F_2$		*Journal of Gemmology* **34** (2015), 655 *Journal of Gemmology* **28** (2002), 162
	Chrome Enstatite			*Zeitschrift für den Deutschen Gemmologischen Gesellschaft* **23** (1974), 192
	Chrome Grossular			*Mineralogical Record* **46** (2015), 817 *Gems & Gemology* **18** (1982), 204 *Rocks & Minerals* **89** (2014), 424
	Chrome Pyrope			*Gems & Gemology* **12** (1967), 279 *Journal of Gemmology* **31** (2009), 235
	Chrome Spinel			*Gems & Gemology* **50** (2014), 46
Rd (Chromium-dravite)	Chrome Tourmaline	$NaMg_3Cr_6(Si_6O_{18})(BO_3)_3(OH)_3(OH)$		*Journal of Gemmology* **21** (1988), 102 *Gems & Gemology* **12** (1967), 242
G	Chrysoberyl	$BeAl_2O_4$		*Zeitschrift für den Deutschen Gemmologischen Gesellschaft* **46** (1997), 63 *Australian Gemmologist* **24** (2010), 68 *Gems & Gemology* **24** (1988), 16
A	Chrysocolla	$(Cu_{2-x}Al_x)H_{2-x}Si_2O_5(OH)_4 \cdot nH2O$		*Journal of Gemmology* **27** (2001), 328 *Lapidary Journal* **33** (1979), 6 *Australian Gemmologist* **14** (1981), 127 *Lapidary Journal* **39** (1985), 28
	Chrysolite		Olivine	*Lapis* **10** (1985), 31 *Lapidary Journal* **46** (1992), 36 *Gems & Gemology* **17** (1981), 205 *Zeitschrift für den Deutschen Gemmologischen Gesellschaft* **44** (1995), 33

	Chrysoprase		Quartz	*Rock & Gem* **24** (1994), 60 *Gems & Gemology* **45** (2009), 271
Rd	Chrysotile	$Mg_3Si_2O_5(OH)_4$		
	Citrine		Yellow variety of quartz	*Lapidary Journal* **48** (1994), 56 *Journal of Gemmology* **33** (2012), 29 *Neues Jahrbuch für Mineralogie Monatshefte* (1988), 71 *Journal of Gemmology* **21** (1989), 368
G	Clinohumite	$Mg_9(SiO_4)_4F_2$		*Lapidary Journal* 37 (1983), 984 *Journal of Gemmology* 30 (2007), 303 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* 37 (1988), 53
G	Cordierite	$Mg_2Al_4Si_5O_{18}$		*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **34** (1985), 79 *Canadian Gemmologist* **20** (1999), 15 *Journal of Gemmology* **35** (2016), 8
G	Corundum	Al_2O_3		*Australian Gemmologist* **24** (2012), 234 *Le Règne Minèral* (2004), 7 *Journal of Gemmology* **20** (1987), 278 *Australian Gemmologist* **20** (1999), 321 *Ore Geology Reviews* **34** (2008), 135
G	Crocoite	$Pb(CrO_4)$		*Australian Gemmologist* **22** (2004), 59 *Canadian Gemmologist* **16** (1995), 110
	Cymophane		Chrysoberyl	
G	Danburite	$CaB_2Si_2O_8$		*Lapis* **35** (2010), 25 *Lapidary Journal* **44** (1990), 16 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **47** (1998), 170
G	Datolite	$CaB(SiO_4)(OH)$		*Doklady Akademia Nauk SSSR – Earth Science Section* **349** (1996), 716 *Rocks & Minerals* **80** (2005), 154
	Demantoid		Andradite	*European Journal of Mineralogy* **23** (2011), 91 *Rocks & Minerals* **68** (1993), 176 *Rivista Gemmologica Italiana* **2** (2007) 43 *Gems & Gemology* **32** (1996), 100
G	Diamond	C		*Gems & Gemology* **30** (1994), 220 *Gems & Gemology* **39** (2003), 136 *Rocks & Minerals* **89** (2014), 66
G	Diaspore	AlO(OH)		*Journal of Gemmology* **35** (2016), 97 *Canadian Gemmologist* **30** (2009), 98 *Australian Gemmologist* **23** (2009), 559 *Canadian Gemmologist* **18** (1997), 14

A	Diopside	$CaMgSi_2O_6$	Chrome, violane, black star, star	*Gems & Gemology* **43** (2007), 146 *Rocks & Minerals* **88** (2013), 166 *Canadian Gemmologist* **11** (1990), 110
G	Dolomite	$CaMg(CO_3)_2$		*Mineralogical Record* **30** (1999), 269
G	Dravite	$NaMg_3Al_6(Si_6O_{18})(BO_3)_3(OH)_3(OH)$		*Journal of Gemmology* **27** (2000), 11 *Journal of Gemmology* **25** (1997), 325
G	Elbaite	$Na(Al_{1.5}Li_{1.5})Al_6(Si_6O_{18})(BO_3)_3(OH)_3(OH)$		*Journal of Gemmology* **25** (1996), 263 *Journal of Gemmology* **14** (1975), 357 *Gems & Gemology* **26** (1990), 189 *Australian Gemmologist* **21** (2001), 24
	Emerald		Beryl	Sinkankas, J. (1989), *Emerald and Other Beryls.* Geoscience, Prescott, 665 p. *Mineralium Deposita* **25** (1990), 57. *Mineralium Deposita* **31** (1996), 359. *Mineralium Deposita* **33** (1998), 513. *Journal of Gemmology* **26** (1999), 357. *Canadian Mineralogist* **42** (2004), 1523. *Geology of Gem Deposits (Ed. Groat, L. A.).* Mineralogical Association of Canada **37** (2007), 79. *Gems & Gemology* **44** (2008), 108. *Ore Geology Reviews* **34** (2008), 87. *Gems & Gemology* **46** (2010), 36.
A	Enstatite	$Mg_2Si_2O_6$		*Gems & Gemology* **15** (1975), 118 *Journal of Gemmology* **21** (1988), 92 *Journal of Gemmology* **18** (1982), 118 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **65** (2016), 23
	Enstatite-Hypersthene		Hypersthene is an IMA discredited name. Series contains enstatite and ferrosilite	
G	Epidote	$Ca_2(Al_2Fe^{3+})[Si_2O_7][SiO_4]O(OH)$		*Rocks & Minerals* **77** (2002), 328 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **40** (1991), 1
G	Euclase	$BeAlSiO_4(OH)$		*Australian Gemmologist* **24** (2010), 94 *Australian Gemmologist* **20** (1998), 80 *Gems & Gemology* **16** (1978), 104 *Revue de Gemmologie* (2000), 18 *Journal of Gemmology* **26** (1998), 209
A	Eudialyte	$Na_{15}Ca_6Fe_3Zr_3Si(Si_{25}O_{73})(O,OH,H_2O)_3(Cl,OH)_2$		*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **45** (1996), 25 *Rocks & Minerals* **89** (2014), 250 *Canadian Gemmologist* **15** (1994), 14

	Fassaite		Augite	
G	Fayalite	$Fe^{2+}_2(SiO_4)$		
	Feldspar		Group	
A	Ferrosilite	$Fe^{2+}_2Si_2O_6$		
	Fibrolite		Fibrous sillimanite	
Rn	Fluorapatite	$Ca_5(PO_4)_3F$		*Rocks & Minerals* **88** (2013), 179 *Rocks & Minerals* **90** (2015), 244 *Mineralogical Record* **42** (2011), 471
G	Fluorite	CaF_2		*Journal of Gemmology* **34** (2014), 194 *Lapidary Journal* **46** (1992), 91 *Journal of Gemmology* **34** (2015), 563 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **52** (2003), 115 *Lapis* **19** (1994), 13 *Mineralogical Record* **41** (2010), 9
G	Forsterite	$Mg_2(SiO_4)$		*Canadian Gemmologist* **21** (2000), 84 *Lapidary Journal* **46** (1992), 36 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **51** (2002), 29 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **61** (2012), 35 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **44** (1995), 33
G	Gahnite	$ZnAl_2O_4$		*Journal of Gemmology* 18 (1982), 265
	Gahnospinel			*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **32** (1983), 141 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **35** (1986), 39 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **34** (1985), 92
	Garnet		Group	
Rd	Glaucophane	$\square Na_2(Mg_3Al_2)Si_8O_{22}(OH)_2$		
	Golden Beryl		Beryl	
	Goshenite		Beryl	*Journal of Gemmology* **28** (2002), 231
G	Grandidierite	$MgAl_3O_2(BO_3)(SiO_4)$		*Journal of Gemmology* **9** (1964), 182 *Gems & Gemology* **39** (2003), 32 *Gems & Gemology* **51** (2015), 449
	Green Beryl		Beryl	*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **41** (1992), 156 *Gems & Gemology* **31** (1995), 275
A	Grossular	$Ca_3Al_2(SiO_4)_3$		*Gems & Gemology* **48** (2012), 178 *Mineralogical Record* **46** (2015), 817

				Mineralogical Record **44** (2013), 375 *Gems & Gemology* **31** (1995), 152 *Gems & Gemology* **18** (1982), 204 *Rocks & Minerals* **89** (2014), 424
G	Gypsum	$Ca(SO_4)\cdot 2H_2O$		
G	Hambergite	$Be_2(BO_3)(OH)$		*Lapidary Journal* **17** (1964), 1182
G	Haüyne	$Na_3Ca(Si_3Al_3)O_{12}(SO)_4$	Sodalite	*Mineralien Welt* **18** (2007), 21 *Gems & Gemology* **36** (2000), 246 *Gems & Gemology* **45** (2009), 200
	Heliodor		Beryl	*Lapis* **38** (2013), 32 *Gems & Gemology* **32** (1996), 53 *Revue de Gemmologie* (1988), 5
	Heliotrope			
A	Hematite	Fe_2O_3		*Gems & Gemology* **31** (1995), 61
	Hessonite		Variety of grossular	*Gems & Gemology* **10** (1960), 72 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **51** (2002), 41
G	Hibonite	$(Ca,Ce)(Al,Ti,Mg)_{12}O_{19}$		*Gems & Gemology* **46** (2010), 135 *Gems & Gemology* **51** (2015), 315 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **62** (2013), 25
	Hiddenite		Spodumene	*Mineralogical Record* **32** (2001), 129
G	Howlite	$Ca_2SiB_5O_9(OH)_5$		*Lapidary Journal* **19** (1965), 602
G	Humite	$Mg_7(SiO_4)_3(F,OH)_2$		
	Hypersthene		Moving to either En, or Fs	*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **59** (2010), 51
	Idocrase		Vesuvianite	*Canadian Gemmologist* **13** (1992), 6 *Mineralogical Record* **44** (2013), 375 *Rocks & Minerals* **85** (2010), 146 *Journal of Gemmology* **18** (1983), 738
	Indicolite		Tourmaline	*Gems & Gemology* **25** (1989), 241
	Iolite		Cordierite	*Australian Gemmologist* **17** (1990), 231 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **39** (1990), 99 *Canadian Gemmologist* **20** (1999), 15
A	Jadeite	$NaAlSi_2O_6$		*Gems & Gemology* **28** (1992), 176 *Journal of Gemmology* **24** (1995), 568 *Gems & Gemology* **36** (2000), 2 *Journal of Gemmology* **31** (2009), 185
G	Jeremejevite	$Al_6(BO_3)_5F_3$		*Mineralogical Record* **37** (2006), 361 *Gems & Gemology* **37** (2001), 206

				Journal of Gemmology **34** (2014), 138 *Mineralogical Record* **33** (2002), 289
Rd	Johachidolite	$CaAlB_3O_7$		*Journal of Gemmology* **26** (1999), 324 *Gems & Gemology* **44** (2008), 246
G	Kornerupine	$(Mg,Fe^{2+},Al,\square)10(Si,Al,B)_5O_{21}(OH,F)_2(?)$		*Canadian Gemmologist* **11** (1990), 14 *Revue de Gemmologie* (1992), 5 *Gems & Gemology* **16** (1978), 118 *Journal of Gemmology* **15** (1977), 225
	Kunzite		Spodumene	*Rocks & Minerals* **72** (1977), 340 *Rocks & Minerals* **86** (2011), 112 *Rock & Gem* **9** (1979), 60 *Gems & Gemology* **17** (1981), 220
A	Kyanite	Al_2OSiO_4		*Journal of Gemmology* **18** (1982), 205 *Australian Gemmologist* **24** (2011), 202 *Australian Gemmologist* **22** (2004), 35 *Journal of Gemmology* **35** (2016), 103 *Gems & Gemology* **34** (2014), 198
	Labradorite		Feldspar	*Gems & Gemology* **15** (1976), 162 *Lapidary Journal* **47** (1993), 28 *Gems & Gemology* **27** (1991), 220 *Journal of Gemmology* **29** (2004), 15 *Gems & Gemology* **47** (2011), 16
G	Lazurite	$Na_3Ca(Si_3Al_3)O_{12}S$		*Lapidary Journal* **38** (1985), 1416 *Mineralien Welt* **21** (2010), 14
(Rd-Fluor-liddicoatite)	Liddicoatite	$Ca(Li_2Al)Al_6(Si_6O_{18})(BO_3)_3(OH)_3F$	Redefined as fluor- liddicoatite	*Rocks & Minerals* **88** (2013), 346 *Gems & Gemology* **38** (2002), 28 *Lapis* **4** (1979), 24
G	Lizardite	$Mg_3Si_2O_5(OH)_4$		
A	Londonite	$CsBe_4Al_4(B_{11}Be)O_{28}$		*Gems & Gemology* **38** (2002), 326 *Le Regne Minerale* (2008), 57
	Magnesioaxinite			*Journal of Gemmology* **14** (1975), 368 *Mineralogical Record* **40** (2009), 346
G	Malachite	$Cu_2(CO_3)(OH)_2$		*Rocks & Minerals* **76** (2001), 326
	Malaya		Garnet	*Lapidary Journal* **33** (1980), 2348 *Journal of Gemmology* **17** (1981), 522 *Gems & Gemology* **37** (2001), 296
	Maxixe		Beryl in which the blue color is due to irradiation	*Gems & Gemology* **44** (2008), 214 *Journal of Gemmology* **16** (1979), 313 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **26** (1977), 135

				Lapidary Journal **28** (1975), 1540 *Lapidary Journal* **27** (1973), 1032
	Maw-sit-sit			
	Melanite		Ti-andradite	
	Mica		Group	
G	Microcline	$K(AlSi_3O_8)$		
G	Montebrasite	$LiAl(PO_4)(OH)$		*Gems & Gemology* **51** (2015), 98 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **59** (2010), 95
	Moonstone		Feldspar	*Australian Gemmologist* **20** (2008), 523 *Journal of Gemmology* **23** (1992), 27 *Journal of Gemmology* **24** (1994), 179 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **63** (2014), 81 *Lapidary Journal* **25** (1972), 1560
	Morganite		Beryl	*Rocks & Minerals* **86** (2011), 50 *Rocks & Minerals* **88** (2013), 378 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **51** (2002), 171 *Mineralogical Record* **20** (1989), 191
	Morion		Quartz	
	Odontolite		Fluorapatite alteration of fossilized material	*Australian Gemmologist* **23** (2008), 330 *American Mineralogist* **86** (2001), 1519
	Oligoclase		Feldspar	
	Olivine		Group	*Gems & Gemology* **45** (2009), 130 *Gems & Gemology* **28** (1992), 16 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **61** (2012), 35 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **44** (1995), 33 *Lapidary Journal* **46** (1992), 36 *Canadian Mineralogist* **50** (2012), 1291
	Onyx		Quartz	
G	Opal	$SiO_2 \cdot nH2O$	Boulder, cachalong, black, common, fire, matrix, moss, prase, water, white	*Australian Gemmologist* **25** (2015), 393 *Australian Gemmologist* **22** (2004), 50 *Australian Gemmologist* **21** (2002), 230 *Gems & Gemology* **46** (2010), 90 *Ore Geology Reviews* **34** (2008), 113 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **51** (2002), 97

A	Orthoclase	$K(AlSi_3O_8)$		*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **43** (1994), 5 *Australian Gemmologist* **22** (2003), 32 *Australian Gemmologist* **17** (1987), 239 *Lapis* **16** (1991), 13
	Padparadscha		Corundum	*Gems & Gemology* **19** (1983), 30 *Revue de Gemmologie* (1997), 32 *Gems & Gemology* **22** (198), 52
G	Painite	$CaZrAl_9O_{15}(BO_3)$		*Australian Gemmologist* **24** (2011), 176 *Gems & Gemology* **41** (2005), 356
G	Pectolite	$NaCa_2Si_3O_8(OH)$		*Journal of Gemmology* **6** (1978), 93 *Gems & Gemology* **25** (1989), 216 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **33** (1984), 63
	Peridot		Olivine	*Gems & Gemology* **45** (2009), 130 *Gems & Gemology* **28** (1992), 16 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **61** (2012), 35 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **44** (1995), 33 *Lapidary Journal* **46** (1992), 36 *Canadian Mineralogist* **50** (2012), 1291
G	Petalite	$LiAlSi_4O_{10}$		*Revue de Gemmologie* (197), 14 *Gems & Gemology* **22** (1986), 239 *Lapidary Journal* **52** (1998), 273 *Australian Gemmologist* **21** (2003), 409 *Canadian Gemmologist* **11** (1990), 78
A	Pezzottaite	$CsLiBe_2Al_2Si_6O_{18}$	Beryl	*Mineralogical Record* **35** (2004), 369 *Gems & Gemology* **51** (2015), 326 *Gems & Gemology* **39** (2003), 284 *Lapis* **30** (2005), 26
G	Phenakite	$Be_2(SiO_4)$	Phenacite	*Lapidary Journal* **25** (1972), 1427 *Mineralogical Record* **16** (1985), 107 *Australian Gemmologist* **20** (1998), 80 *Rocks & Minerals* **34** (2009), 338 *Gems & Gemology* **13** (1970), 178
	Plagioclase		Group	*Journal of Gemmology* **31** (2009), 283 *Gems & Gemology* **27** (1991), 220 *Journal of Gemmology* **18** (1983), 503 *Gems & Gemology* **47** (2011), 16 *Australian Gemmologist* **25** (2014), 231
	Pleonaste		Spinel, rejected IMA name so: intermediary of iron-rich spinel or	

			magnesium-rich hercynite	
A	Pollucite	$Cs(Si_2Al)O_6 \cdot nH_2O$		*Lapidary Journal* **52** (1998), 273 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **25** (1976), 217
	Prasiolite		Quartz	*Gems & Gemology* **50** (2014), 159 *Journal of Gemmology* **33** (2012), 29 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **41** (1992), 21 *Journal of Gemmology* **21** (1989), 368
G	Prehnite	$Ca_2Al(Si_3Al)O_{10}(OH)_2$		*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **24** (1975), 4 *Australian Gemmologist* **15** (1985), 258 *Lapidary Journal* **51** (1907), 15 *Australian Gemmologist* **14** (1981), 93
G	Purpurite	$(Mn^{3+},Fe^{3+})(PO_4)$		
G	Pyrite	FeS_2		*Journal of Gemmology* **25** (1997), 517
G	Pyrope	$Mg_3Al_2(SiO_4)_3$		*Gems & Gemology* **19** (1983), 37 *Gems & Gemology* **17** (1981), 191 *Gems & Gemology* **20** (1984), 200 *Gems & Gemology* **29** (1991), 168 *Lapidary Journal* **39** (1985), 18
G	Pyrophyllite	$Al_2Si_4O_{10}(OH)_2$		
A	Quartz	SiO_2	Amethyst milky, blue, green, iris, crystal, dumortierite, rose, smoky, yellow, cat's eye, tiger's eye (microcystalline quartz, asbestiform pseudomorph)	*Lapidary Journal* **36** (1983), 1758 *Lapidary Journal* **20** (1966), 804 *Journal of Gemmology* **33** (2012), 29 *Journal of Gemmology* **28** (2003), 321
	Rhodizite		Londonite-rhodizite series	
A	Rhodochrosite	$Mn(CO_3)$		*Journal of Gemmology* **34** (2015), 473 *Mineralogical Record* **9** (1978), 137 *Mineralogical Record* **29** (1998), 1 *Gems & Gemology* **33** (1997), 122
	Rhodolite		Pyrope	*Journal of Gemmology* **13** (1972), 53 *Journal of Gemmology* **12** (1970), 29 *Gems & Gemology* **19** (1983), 37 *Gems & Gemology* **17** (1981), 191 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **18** (1969), 69
A	Rhodonite	$Mn^{2+}SiO_3$		*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **23** (1974), 180 *Australian Gemmologist* **24** (2011), 116 *Rocks & Minerals* **80** (2005), 264 *Lapidary Journal* **20** (1966), 870

	Rock Crystal		Quartz	*Lapidary Journal* **36** (1983), 1758 *Lapidary Journal* **20** (1966), 804 *Journal of Gemmology* **33** (2012), 29 *Journal of Gemmology* **28** (2003), 321
	Rose Quartz		Quartz	*Rocks & Minerals* **87** (2012), 530 *Journal of Gemmology* **31** (2008), 40 *Mineralogical Record* **30** (1999), 361
	Rubellite		Tourmaline	*Lapis* **5** (1980), 28 *Lapis* **39** (2014), 12 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **50** (2001), 225 *Mineralogical Record* **43** (2012), 289
	Ruby		Corundum	*Gems & Gemology* **51** (2015), 44 *Le Regne Minerale* (2004), 7 *Ore Geology Reviews* **34** (2008), 135 *Gems & Gemology* **44** (2008), 322 *Minerals* **5** (2015), 61
G	Rutile	TiO_2		*Gems & Jewellery* **24** (2015), 8 *Gems & Gemology* **51** (2015), 335
	Sapphire		Corundum	*Le Regne Minerale* (2004), 7 *Rocks & Minerals* **82** (2007), 116 *Journal of Gemmology* **30** (2006), 23 *Australian Gemmologist* **24** (2012), 234 *Gems & Gemology* **19** (1983), 64 *Gems & Gemology* **39** (2003), 84 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **40** (1991), 149
	Sard		Chalcedony	
	Sardonyx		Chalcedony	
	Satin Spar		Fibrous gypsum	
	Scapolite		A series between marialite and meionite	
G	Scheelite	$Ca(WO_4)$		*Gems & Gemology* **22** (1986) 166 *Australian Gemmologist* **17** (1987), 239 *Journal of Gemmology* **34** (2014), 202
Rn	Schorl	$NaFe^{2+}{}_3Al_6(Si6O_{18})(BO_3)_3(OH)_3(OH)$		
	Selenite		Transparent gypsum	
G	Sepiolite	$Mg_4Si_6O_{15}(OH)_2 \cdot 6H_2O$		
G	Serendibite	$Ca_4[Mg_6Al_6]O_4[Si_6B_3Al_3O_{36}]$		*Journal of Gemmology* **9** (1964), 182 *Gems & Gemology* **33** (1997), 140 *Gems & Gemology* **38** (2002), 73

G	Sillimanite	Al_2SiO_5		*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **23** (1974), 281 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **48** (1999), 105 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **55** (2006), 59 *Lapidary Journal* **10** (1956), 294
G	Sinhalite	$MgAl(BO_4)$		*Journal of Gemmology* **3** (1952), 315 *Mineralogical Magazine* **37** (1969), 145 *Mineralogical Record* **26** (1995), 91 *Canadian Gemmologist* **21** (2000), 91
G	Smithsonite	$Zn(CO_3)$		*Gems & Gemology* **13** (1969), 59 *Lapidary Journal* **16** (1962), 224 *Lapis* (1989), 29
	Smoky Quartz			
	Soapstone		Talc	
G	Sodalite	$Na_4(Si_3Al_3)O_{12}Cl$		*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **23** (1974), 279 *Lapidary Journal* **50** (1997), 318 *Gems & Gemology* **26** (1990), 156 *Canadian Gemmologist* **20** (1999), 54 *Gems & Gemology* **45** (2009), 38
	Spectrolite		Labradorite	
G	Spessartine	$Mn^{2+}{}_3Al_2(SiO_4)_3$		*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **19** (1970), 123 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **45** (1996), 93 *Rocks & Minerals* **85** (2010), 50 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **59** (2010), 3 *Gems & Gemology* **37** (2001), 278
	Spessartite		Spessartine	
A	Sphalerite	ZnS		*Lapis* (1977), 28 *Journal of Gemmology* **19** (1985), 416 *Journal of Gemmology* **19** (1984), 8 *Rocks & Minerals* **73** (1998), 404 *Canadian Gemmologist* **12** (1991), 78
	Sphene		Titanite	*Journal of Gemmology* **17** (1981), 381 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **31** (1982), 65 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **44** (1995), 29 *Mineralien Welt* **9** (1998), 15

G	Spinel	$MgAl_2O_4$		*Gems & Gemology* **51** (2015), 2 *Lapis* (2011), 6 *Journal of Gemmology* **33** (2012), 19 *Gems & Gemology* **50** (2014), 46
A	Spodumene	$LiAlSi_2O_6$		*Journal of Gemmology* **14** (1974), 170 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **22** (1973), 24 *Rocks & Minerals* **86** (2011), 14 *Rock & Gem* **9** (1979), 60 *Lapis* **40** (2015), 36
A	Sugilite	$KNa_2Fe^{3+}{}_2(Li_3Si_{12})O_{30}$		*Mineralogical Magazine* **58** (1994), 681 *Gems & Gemology* **23** (1987), 78
	Sunstone		Aventurine feldspar	*Australian Gemmologist* **15** (1985), 263 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **59** (2010), 52 *Rock & Gem* **41** (2011), 20
	Taaffeite		Magnesiotaaffeite-2*N*'2*S*	*Gems & Gemology* **7** (1952), 171 *Gems & Gemology* **36** (2000), 50 *Mineralogical Magazine* **29** (1952), 765 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **38** (1989), 89 *Journal of Gemmology* **30** (2007), 367
G	Talc	$Mg_3Si_4O_{10}(OH)_2$		
Rn	Tantalite-(Mn)	$Mn^{2+}Ta_2O_6$		*Journal of Gemmology* **16** (1979), 363 *Journal of Gemmology* **35** (2016), 111 *Mineralogical Record* **33** (2002), 505
	Tanzanite		Zoisite	*Lapidary Journal* **22** (1968), 734 *Revue de Gemmologie* (2001), 34 *Australian Gemmologist* **23** (2009), 482 *Mineralogical Record* **40** (2009), 346
	Thulite		Epidote	*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **29** (1980), 188
A	Titanite	$CaTiSiO_5$		
G	Topaz	$Al_2SiO_4F_2$		*Rocks & Minerals* **71** (1996), 320 *Lapidary Journal* **18** (1964), 918 *Lapidary Journal* **44** (1990), 66 *Mineralogical Record* **20** (1989), 221 *Gems & Gemology* **22** (1986), 140 *Rock & Gem* **36** (2006), 12
	Topazolite		Andradite	
	Tourmaline		Group	
	Copper Tourmaline (copper-			*Gems & Gemology* **42** (2006), 4

	bearing elbaite, EXCLUDING Paraiba tourmaline)			*Gems & Gemology* **44** (2008), 4 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **50** (2001), 217 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **55** (2006), 5
	Tourmaline (Paraiba)		Only for blue elbaite from Paraíba, Brazil	*Gems & Gemology* **26** (1990), 189 *Gems & Gemology* **37** (2001), 260 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **54** (2005), 73 *Mineralogical Magazine* **54** (1990), 553 *Mineralogical Record* **33** (2002), 127
Rd	Tremolite	$\square Ca_2(Mg_{5.0\text{-}4.5}Fe^{2+}_{0.0\text{-}0.5})Si_8O_{22}(OH)_2$		*Zeitschrift der Deutschen Gemmologischen Gesellschaft* **23** (1974), 42 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **24** (1975), 248 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **23** (1974), 40 *Canadian Gemmologist* **17** (1996), 72 *Lapidary Journal* **36** (1983), 1864
	Tsavorite		Green variety of grossular garnet	*Gems & Gemology* **48** (2012), 178 *Gems & Gemology* **14** (1974), 290 *Gems & Gemology* **26** (1990), 142 *Journal of Gemmology* **34** (2014), 230 *Revue de Gemmologie* (2005), 8
A	Tugtupite	$Na_4BeAlSi_4O_{12}Cl$		*Journal of Gemmology* **12** (1970), 10 *Journal of Gemmology* **34** (2015), 395 *Gems & Gemology* **18** (1982), 90
A	Turquoise	$CuAl_6(PO_4)_4(OH)_8 \cdot 4H_2O$	Group	*Australian Gemmologist* **17** (1991), 369 *Gems & Gemology* **48** (2012), 198 *Zeitschrift der Deutschen Gemmologischen Gesellschaft* **54** (2005), 97 *Lapidary Journal* **28** (1974), 1472 *Rock & Gem* **35** (2005), 12
A	Uvarovite	$Ca_3Cr_2(SiO_4)_3$		*Rocks & Minerals* **73** (1998), 126 *Australian Gemmologist* **18** (1993), 142
A	Variscite	$Al(PO_4) \cdot 2H_2O$		*Mineralogical Record* **41** (2010), 321 *Journal of Gemmology* **31** (2008), 111
	Verdelite		Tourmaline	
A	Vesuvianite	$(Ca,Na)_{19}(Al,Mg,Fe)_{13}(SiO_4)_{10}(Si_2O_7)_4(OH,F,O)_{10}$		*Canadian Gemmologist* **13** (1992), 6 *Mineralogical Record* **44** (2013), 375 *Rocks & Minerals* **85** (2010), 146 *Journal of Gemmology* **18** (1983), 738
	Violan/Violane		Either Omp-V or Di-V, if known. Vio if unknown composition	

	Williamsite		Antigorite	*Gems & Gemology* **10** (1961), 183
G	Zircon	$Zr(SiO_4)$		*Gems & Gemology* **47** (2011), 36 *Rocks & Minerals* **82** (2007), 310 *Journal of Gemmology* **34** (2015), 397 *Lapis* **34** (2009), 13 *Australian Gemmologist* **24** (2011), 1148
G	Zoisite/tanzanite	$Ca_2Al_3[Si_2O_7][SiO_4]O(OH)$		*Gems & Gemology* **16** (1978), 121 *Gems & Gemology* **28** (1992), 4
	Zultanite		Prehnite	

Rocks

Gem material name	Comments	
ALABASTER	Micro-crystalline transparent gypsum	
AVENTURINE FELDSPAR	Sunstone	
AVENTURINE QUARTZ	Fine-grained mica included quartzite	
AZURITE-MALACHITE		
CHERT		
ECLOGITE		
FLINT		
JADEITITE	Jadeite Jade, Kosmochlor Jade, Omphacite Jade; based on Franz et al. (2014) and jadeitite nomenclature suggestions within	
JASPER		
LAPIS LAZULI		
MARBLE		
MAW-SIT-SIT		
NEPHRITE	Nephrite jade	Laufer, B. (1912), *Jade*. Field Museum 154, Chicago, 370 p. (repr. 1974, 1989). *Gems & Gemology* **18** (1982), 20. Suturin, N.A. & Zamaletdinov, P.S. (1984), *Nephrites*. Nauka, Novosibirsk, 150 p. *Jade (Ed. Keverne, L.)* (1991), Van Nostrand Reinhold, New York, 376 p. *Geology of Gem Deposits (Ed. Groat, L. A.).* Mineralogical Association of Canada **37** (2007), 207. *Proceedings of the National Academy of Sciences USA* **104** (2007), 19745. *Archaeometry* **53** (2011), 674. *Geological Quarterly*, **57** (2013), 395. *Haemus* **2** (2013), 11.
METEORITE		

NUUMMITE		
OPHICALCITE	Calcite plus serpentine	
QUARTZITE		
SERPENTINITE		
TIGER'S EYE		

Organics and Glasses

Gem material name	Comments
Amber	Fossil resin
Ammonite	Fossil
Bone	Mainly hydroxyl-fluor-apatite
Copal	Resin
Coral	Black, red, etc.
Glass	Natural
Horn	
Ivory	
Jet	
Moldavite	
Mother of Pearl	
Nacre	
Obsidian	Mahogany, rainbow, sheen, snowflake, n-crystalline
Pearl	
Silicified Wood	
Tektite	
Tooth	
Tortoiseshell	
Wood Opal	Petrified