

Deposit I.

Microprobe analyses of glasses used as starting materials for garnet syntheses. The reported data refer to an average of 15 to 20 spot analysis. The number in parantheses give the standard deviations (1s). The formulas are based on 12 O atoms and 8 cations.

	Py85Gr15		Py85Gr15		Py85Gr15		Py75Gr25		Py75Gr25		Py75Gr25	
	G1*		G2		G3		G1		G2		G3	
Weight percent												
SiO ₂	44.04	(20)	43.54	(7)	44.19	(15)	43.94	(25)	43.72	(17)	43.74	(23)
Al ₂ O ₃	24.87	(19)	25.42	(10)	24.86	(11)	24.34	(20)	24.65	(16)	24.51	(12)
FeO	0.03	(3)	0.01	(1)	0.01	(1)	0.09	(2)	0.01	(1)	0.0	(1)
CaO	6.34	(5)	6.30	(8)	6.38	(7)	10.48	(1)	10.37	(11)	10.4	(8)
MgO	25.2	(18)	25.14	(4)	25.15	(8)	22.01	(20)	22.07	(10)	21.99	(12)
Total	100.49		100.40		100.59		100.87		100.82		100.67	
Cations												
Si	2.994	(6)	2.962	(4)	3.001	(6)	3.014	(8)	2.996	(8)	3.003	(6)
Al	1.993	(6)	2.038	(7)	1.990	(6)	1.968	(8)	1.991	(8)	1.983	(8)
Fe	0.002	(2)	0.001	(1)	0.001		0.001	(1)	0.001	(1)	0.001	(1)
Ca	0.462	(3)	0.460	(6)	0.464	(5)	0.770	(2)	0.762	(9)	0.766	(6)
Mg	2.554	(5)	2.549	(5)	2.546	(7)	2.250	(10)	2.254	(6)	2.25	(6)
Total	8.005		8.009		8.002		8.001		8.004		8.003	
mol% Py	84.686	(17)	84.73	(16)	84.58	(23)	74.50	(32)	74.74	(18)	74.60	(21)
mol% Gr	15.314	(10)	15.27	(19)	15.42	(15)	25.50	(8)	25.25	(31)	25.40	(15)

*The numbers refer to the amount of meltings. G1 refers to a glass which was molten once, G2 was molten twice and G3 molten three times.

Deposit II

Microprobe analyses of synthetic pyrope-grossular garnets. The reported data refer to an average of 15 to 20 spot analyses. The number in parantheses give the standard deviations (1s). The formulas are based on 12 O atoms and 8 cations.

Sample label	B001#		B003		B004		B005		B006	
Weight percent										
SiO ₂	43.79	(40)	44.02	(75)	43.92	(34)	44.64	(33)	43.94	(28)
Al ₂ O ₃	24.44	(29)	25.01	(106)	24.87	(27)	25.18	(42)	25.19	(29)
FeO	0.02	(3)	0.03	(3)	0.01	(2)	0.01	(2)	0.02	(2)
CaO	10.82	(31)	6.64	(37)	6.47	(22)	6.80	(70)	10.49	(35)
MgO	22.20	(23)	25.40	(33)	25.26	(21)	25.58	(59)	22.57	(24)

Total	101.27		101.09		100.54		102.21		102.21	
Cations										
Si	2.995	(16)	2.980	(46)	2.988	(16)	2.989	(20)	2.974	(13)
Al	1.970	(24)	2.000	(85)	1.994	(23)	1.987	(29)	2.009	(19)
Fe	0.001	(2)	0.000	(2)	0.001	(1)	0.001	(1)	0.001	(1)
Ca	0.792	(21)	0.480	(24)	0.472	(16)	0.477	(27)	0.761	(25)
Mg	2.263	(19)	2.560	(26)	2.561	(16)	2.571	(25)	2.276	(24)
Total	8.021		8.020		8.015		8.025		8.021	
mol% Py	74.06	(61)	84.18	(87)	84.45	(52)	84.35	(81)	74.95	(79)
mol% Gr	25.94	(67)	15.82	(79)	15.55	(53)	15.65	(87)	25.05	(83)
# The sample labels are identical to that in Table 1.										

Continued: Microprobe analyses of synthetic pyrope-grossular garnets. The reported data refer to an average of 15 to 20 spot analysis. The number in parantheses give the standard deviations (1s). The formulas are based on 12 O atoms and 8 cations.

Sample label	B007		B008		B009		B010		B012	
Weight percent										
SiO ₂	42.86	(25)	43.87	(25)	44.67	(26)	43.11	(20)	43.01	(53)
Al ₂ O ₃	24.44	(24)	25.25	(32)	25.18	(17)	24.78	(20)	24.11	(44)
FeO	0.01	(1)	0.02	(2)	0.02	(2)	0.01	(1)	0.02	(2)
CaO	10.18	(24)	6.32	(25)	6.44	(14)	6.22	(20)	10.22	(23)
MgO	21.60	(18)	25.56	(24)	25.59	(18)	24.40	(33)	21.17	(36)
Total	99.09		101.01		101.89		98.51		98.53	
Cations										
Si	2.990	(13)	2.970	(13)	2.996	(10)	2.989	(14)	3.016	(13)
Al	2.009	(17)	2.014	(16)	1.990	(13)	2.025	(14)	1.992	(20)
Fe	0.001	(1)	0.001	(1)	0.001	(1)	0.001	(1)	0.001	(1)
Ca	0.761	(18)	0.458	(19)	0.463	(10)	0.462	(15)	0.768	(27)
Mg	2.245	(17)	2.579	(16)	2.558	(11)	2.522	(28)	2.211	(25)
Total	8.006		8.023		8.009		7.998		7.988	
mol% Py	74.69	(56)	84.91	(54)	84.67	(37)	84.52	(94)	74.22	(84)
mol% Gr	25.31	(58)	15.09	(62)	15.33	(34)	15.48	(51)	25.78	(91)

Continued: Microprobe analyses of synthetic pyrope-grossular garnets. The reported data refer to an average of 15 to

20 spot analysis. The number in parantheses give the standard deviations (1s). The formulas are based on 12 O atoms and 8 cations.

Sample label	B015		B016		B018		B019		B020	
Weight percent										
SiO ₂	42.72	(22)	43.33	(40)	43.25	(47)	43.03	(76)	42.93	(62)
Al ₂ O ₃	24.48	(25)	24.29	(19)	24.27	(43)	24.27	(27)	24.5	(64)
FeO	0.02	(2)	0.01	(2)	0.01	(2)	0.02	(2)	0.02	(2)
CaO	10.19	(7)	5.98	(32)	5.77	(36)	6.15	(68)	6.00	(44)
MgO	21.25	(10)	24.92	(35)	25.20	(33)	24.69	(57)	24.9	(52)
Total	98.66		98.54		98.50		98.16		98.34	
Cations										
Si	2.992	(13)	3.003	(12)	2.997	(33)	2.996	(18)	2.983	(41)
Al	2.020	(18)	1.984	(20)	1.982	(36)	1.991	(23)	2.006	(58)
Fe	0.001	(1)	0.001	(1)	0.001	(1)	0.001	(1)	0.001	(1)
Ca	0.765	(5)	0.444	(29)	0.429	(28)	0.459	(30)	0.447	(27)
Mg	2.219	(13)	2.574	(24)	2.603	(29)	2.562	(31)	2.578	(29)
Total	7.997		8.005		8.011		8.009		8.014	
mol% Py	74.36	(44)	85.29	(81)	85.86	(96)	84.81	(103)	85.23	(95)
mol% Gr	25.64	(16)	14.71	(96)	14.14	(92)	15.19	(99)	14.77	(90)