$\{Y_{3-x}Ca_x\}Ti_xGa_{5-x}O_{12}$ [66]
$\{Y_{3-x-y}Ca_{x+y}\}Zr_yTi_xFe_{5-x-y}O_{12}$ [66]
$\{Y_{3-x-y}Ca_{x+y}\}Zr_yTi_xGa_{5-x-y}O_{12}$ [66]

See also 4, 23, 24.

17. Zr^{4+}: *a* and *c* sites

$\{Ca_3\}[ZrMg](Ge_3)O_{12}$ [43]	$a = 12.514$ Å
$\{Ca_3\}[Zr_2](V_{0.5}Ga_{2.5})O_{12}$ [83]	12.676
$\{Ca_3\}[Zr_2](V_{0.5}Fe_{2.5})O_{12}$ [83]	12.704
$\{Ca_{2.5}Zr_{0.5}\}[Zr_2](Ga_3)O_{12}$	12.600 [84], 12.599 [15] Å

(In this case, our powder photograph had some faint extra lines, indicating that the formula of the garnet is not precisely as written.)

$\{Y_{3-x}Ca_x\}[Zr_xFe_{2-x}](Fe_3)O_{12}$ [7,84]
$\{Gd_{3-x}Ca_x\}[Zr_xFe_{2-x}](Fe_3)O_{12}$ [75]

See also 4, 23, 24, 33a, 35.

18. Hf^{4+}: *a* and *c* sites

$\{YCa_2\}[Hf_2](Fe_3)O_{12}$ [84]	$a = 12.670$ Å
$\{Ca_3\}[Hf_2](V_{0.5}Ga_{2.5})O_{12}$ [83]	12.652
$\{Ca_3\}[Hf_2](V_{0.5}Fe_{2.5})O_{12}$ [83]	12.681
$\{Ca_{2.5}Hf_{0.5}\}[Hf_2](Ga_3)O_{12}$ [83]	12.570

See also 23 and 24.

Group IV*A*

19. Si^{4+}: *d* sites only

Many examples are given in Table 3 and elsewhere in this survey. Comments under Si^{4+} in the earlier survey [8] have been corrected [7].

20. Ge^{4+}: prefers *d* sites but will enter *a* sites

Many examples are given in Table 4 and elsewhere in this survey. Comments under Ge^{4+} in the earlier survey [8] have been corrected [7].

See also Refs. [7] and [97].

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21. Sn^{4+}: prefers *a* sites but enters *d* sites

In the earlier survey [8], we gave as an example the distribution of Sn^{4+} ion in $Ca_3Fe_2Sn_3O_{12}$. In our first paper on the tin-substituted yttrium iron garnets, we indicated that we did not obtain a single-phase garnet with this composition. In later work [85], we were still unable to do so and we believe tentatively that defect structures are indicated. In addition to our studies [77,85] of the system, $\{Y_{3-x}Ca_x\}Fe_{5-x}Sn_xO_{12}$, some studies [86] have been made on the analogous Gd system; lattice constants are not reported, however. Other Sn-containing garnets reported are:

$\{Ca_3\}Sn_2V_{0.5}Ga_{2.5}O_{12}$ [83]	$a = 12.589$ Å
$\{Ca_3\}Sn_3Ga_2O_{12}$	12.69 [49], 12.685 [45]

(In this case, our powder photographs contained some faint unidentifiable extra lines, indicating that the formula of this garnet is not precisely as written.)

See also 6, 23, 24.

Group V*B*

22a. V^{3+}: *a* sites only (probably)

See Tables 3 and 4.

b. V^{5+}: *d* sites

$\{Ca_3\}[Fe_2](Fe_{1.5}V_{1.5})O_{12}$ [87]	$a = 12.465$ Å
$\{Ca_3\}Fe_{3.3}Ge_{0.4}V_{1.3}O_{12}$ [88]	12.447
$\{Ca_3\}Fe_{3.3}Ga_{0.2}V_{1.5}O_{12}$ [88]	12.461
$\{Ca_3\}Fe_3GeVO_{12}$ [88]	12.418
$\{Ca_3\}Fe_3Ga_{0.45}Ge_{0.10}V_{1.45}O_{12}$ [88]	12.454

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