$(Li_{0.325}Mg_{0.675})_4Ba_3Mg_6Ge_6O_{0.32}$	*hP*40	(176) $P6_3/m$ – h^6cb

$Li_{2.6}Ba_6Mg_{17.4}Ge_{12}O_{0.64}$ [1]
Structural features: Infinite columns of base-linked $Ge(Ba_2Mg_4)Mg_3$ and $Ge(Ba_4Mg_2)Mg_3$ tricapped trigonal prisms (partial substitution of Li for Mg ignored) share atoms to form a 3D-framework with AlB_2-type columns (7 prisms in the dented triangular cross-section); O in channels of hexagonal cross-section parallel to [001] (partial disorder).

Zürcher F., Nesper R. (2002) [1]
$Ba_3Ge_6Li_{1.30}Mg_{8.70}O_{0.32}$
a = 1.5378, c = 0.4546 nm, c/a = 0.296, V = 0.9310 nm^3, Z = 2

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Ge1	6*h*	*m*..	0.04565	0.27467	$^1/_4$		monocapped trigonal prism Mg_7
Ge2	6*h*	*m*..	0.13858	0.61439	$^1/_4$		square pyramid Mg_5
M3	6*h*	*m*..	0.181	0.0999	$^1/_4$		6-vertex polyhedron O_2Ge_3Mg
Mg4	6*h*	*m*..	0.2466	0.3209	$^1/_4$		cuboctahedron $Ge_4Mg_5Ba_3$
Mg5	6*h*	*m*..	0.4418	0.0253	$^1/_4$		cuboctahedron $Ge_4Mg_4Ba_4$
Ba6	6*h*	*m*..	0.46674	0.28104	$^1/_4$		22-vertex polyhedron $Ge_8Mg_{10}Ba_4$
M7	2*c*	-6..	$^1/_3$	$^2/_3$	$^1/_4$		tricapped trigonal prism Ge_3Ba_6
O8	2*b*	-3..	0	0	0	0.32	square prism (cube) O_2Mg_6

M3 = 0.65Mg + 0.35Li; M7 = 0.75Mg + 0.25Li
Transformation from published data: *y*,*x*,-*z*
Experimental: single crystal, diffractometer, X-rays, R = 0.028, T = 298 K

References: [1] Zürcher F., Nesper R. (2002), Z. Anorg. Allg. Chem. 628, 1581-1589.