Crystal Data: Monoclinic. *Point Group*: 2/*m*. As prismatic crystals elongated along [010] to 150 μm; as tabular crystals to 0.5 mm with {001}, {101}, {011}, {110}, {111}, and {201} (Eifel).

Physical Properties: *Cleavage*: Imperfect on {001}. *Fracture*: n.d. *Tenacity*: Brittle. Hardness = ~6.5 VHN = 794-861, 847 average (100 g load). D(meas.) = n.d. D(calc.) = 4.22

Optical Properties: Translucent. *Color*: Dark brown to black, gray in reflected light.
Streak: Brown. *Luster*: Vitreous.
Optical Class: Weakly anisotropic.
R_1-R_2: (470) 7.73-8.02, (546) 7.61-7.91, (589) 7.57-7.87, (650) 7.60-7.91

Cell Data: *Space Group*: $P2_1/m$. a = 8.8733(2) b = 5.7415(1) c = 10.0805(3) β = 113.845(2)° Z = 2

X-ray Powder Pattern: Calculated pattern.
2.899 (100), 2.614 (53), 3.509 (47), 2.871 (40), 2.710 (35), 2.706 (35), 9.22 (26)

Chemistry:

	(1)	(2)	(3)		(1)	(2)	(3)
SiO_2	29.15	29.55	29.80	K_2O	0.03		
TiO_2	0.75		1.32	P_2O_5	0.03		
Al_2O_3	9.35	8.36	11.47	Y_2O_3	0.03		
Cr_2O_3	0.06			La_2O_3	12.73	26.71	13.35
V_2O_3	4.11			Ce_2O_3	5.25		10.58
Fe_2O_3	[5.96]	13.09	[7.39]	Pr_2O_3	1.93		0.42
FeO	[5.05]		[4.04]	Nd_2O_3	4.97		0.49
UO_2			0.10	Sm_2O_3			0.34
ThO_2			0.43	Gd_2O_3	0.51		0.20
MnO	10.90	11.63	9.98	Er_2O_3	0.09		0.18
NiO	0.03			F	0.05		
MgO	0.46		0.89	$-O = F_2$	0.02		
CaO	5.38	9.19	6.74	H_2O	[3.17]	1.48	[1.49]
SrO	0.01			Total	100.00	100.00	100.00
BaO	0.02						

(1) Shobu area, Ise City, Mie Prefecture, Japan; average of 3 electron microprobe analyses, FeO and Fe_2O_3 calculated for charge balance, H_2O by difference; corresponding to $^{A1}(Ca_{0.54}Mn^{2+}_{0.46})$ $^{A2}[(La_{0.48}Ce_{0.20}Pr_{0.07}Nd_{0.18}Gd_{0.02})_{\Sigma=0.95}Ca_{0.05}]^{M1}(Fe^{3+}_{0.42}V^{3+}_{0.34}Al_{0.18}Ti^{4+}_{0.06})^{M2}(Al_{0.96}Fe^{3+}_{0.04})$ $^{M3}(Mn^{2+}_{0.50}Fe^{2+}_{0.43}Mg_{0.07})(SiO_4)(Si_2O_7)O(OH)$. (2) $CaLa^{3+}Fe^{3+}AlMn^{2+}(Si_2O_7)(SiO_4)O(OH)$.
(3) In den Dellen pumice quarry, Niedermendig, Eifel, Rhineland-Palatinate, Germany; average electron microprobe analysis supplemented by IR spectroscopy, H_2O calculated and Fe^{2+}/Fe^{3+} apportioned from structure; corresponds to $(Ca_{0.68}Mn^{2+}_{0.32})_{\Sigma=1.00}(La_{0.49}Ce_{0.39}Pr_{0.02}Nd_{0.02}Sm_{0.01}Eu_{0.01}Gd_{0.01}Th_{0.01}Ca_{0.04})_{\Sigma=1.00}(Fe^{3+}_{0.52}Fe^{2+}_{0.04}Al_{0.34}Ti^{4+}_{0.10})_{\Sigma=1.00}Al_{1.00}(Mn^{2+}_{0.53}Fe^{2+}_{0.34}Mg_{0.13})_{\Sigma=1.00}(Si_{2.98}Al_{0.02})_{\Sigma=3.00}O_{12}(OH)$.

Mineral Group: Epidote supergroup, allanite group.

Occurrence: In tephroite-calcite veinlets in a stratiform Fe-Mn deposit. In volcanic ejecta (Eifel).

Association: Ferriandrosite-(La), rhodochrosite, bementite, allanite-group minerals (Japan). Nosean +/- haüyne, Mn-bearing biotite, magnetite, ilmenite-pyrophanite series members, Mn-bearing zirconolite, jarosite (Eifel).

Distribution: From the Shobu area, Ise City, Mie Prefecture, Japan [TL] and In den Dellen pumice quarry, Niedermendig, Mendig, Laach Lake complex, Eifel, Rhineland-Palatinate, Germany.

Name: Honors Professor Masahide *Akasaka* (b. 1950) for his study of minerals occurring in Mn-Fe ore deposits, particularly the natural and synthetic epidote-supergroup minerals. The prefix indicates Fe^{3+} dominant in the *M*1 site.The suffix indicates the dominant rare earth element.

* continues on next page *

Type Material: National Museum of Nature and Science, Tokyo, Japan (NSM M-43919, M-43920).

References: (1) Nagashima, M., D. Nishio-Hamane, N. Tomita, T. Minakawa, and S. Inaba (2015) Ferriakasakaite-(La) and ferriandrosite-(La): New epidote supergroup minerals from Ise, Mie Prefecture, Japan. Mineral. Mag., 79, 735-753. (2) (2016) Amer. Mineral., 101, 1712 (abs. ref. 1). (3) Chukanov, N.V., N.V. Zubkova, C. Schäfer, D.A. Varlamov, E.N. Ermolaeva, Y.S. Polekhovsky, S. Jančev, I.V. Pekov, and D.Y. Pushcharovsky (2018) New data on ferriakasakaite-(La) and related minerals extending the compositional field of the epidote supergroup. Eur. J. Mineral., 30, 323-332.