

Table of contents

Ferroelectrics and related substances

Subvolume A2: Oxides

Oxides other than Perovskite-type and LiNbO_3 family

I Introduction [T. Mitsui, E. Nakamura]

IA	General remarks	1
IB	Definition of ferroelectrics and antiferroelectrics	1
IC	Remarks on some fundamental concepts and quantities	3
ID	Survey of history of ferroelectrics research	3
IE	Symbols and units	4
IF	Survey of contained data	13
IG	Outline of subvolumes A1 and B	36

II Data

3	YMnO_3 family [T. Ikeda]	39
4	SrTeO_3 family [T. Hikita]	49
5	Stibiotantalite family [M. Adachi]	53
6	Tungsten-bronze-type oxides [T. Tsukamoto, T. Ikeda]	65
7	Pyrochlore-type oxides [Y. Akishige]	206
8	$\text{Sr}_2\text{Nb}_2\text{O}_7$ family [Y. Akishige]	228
9	Layer-structure oxides [Y. Akishige]	245
10	BaAl_2O_4 -type oxides [Y. Akishige]	281
11	LaBGeO_5 [Y. Iwata]	285
12	$\text{LiNaGe}_4\text{O}_9$ -type oxides [Y. Iwata]	287
13	$\text{Li}_2\text{Ge}_7\text{O}_{15}$ family [Y. Iwata]	292
14	$\text{Pb}_5\text{Ge}_3\text{O}_{11}$ family [Y. Iwata]	302
15	$5\text{PbO} \cdot 2\text{P}_2\text{O}_5$ [Y. Iwata]	331
16	$\text{Ca}_3(\text{VO}_4)_2$ family [K. Nakatani]	332
17	$\text{Gd}_2(\text{MoO}_4)_3$ (GMO) family [K. Nakatani]	340

18	Boracite-type family [T. Hikita]	370
19	Rb ₃ MoO ₃ F ₃ family [M. Adachi]	428
M	Miscellaneous crystals	
M1	TiO ₂ [E. Nakamura].	432
M2	WO ₃ [M. Adachi]	433
M3	NaVO ₃ group [E. Nakamura]	437
M4	Fe ₃ O ₄ [Y. Akishige].	445
M5	RVO ₄ (R = Sc, Nd, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu) [T. Asahi].	448
M6	RAsO ₄ (R = Pr, Nd, Eu, Gd, Tb, Dy, Er, Yb) [T. Asahi].	451
M7	Cr ₂ BeO ₄ [K. Deguchi]	452
M8	RMn ₂ O ₅ (R = Y, Eu, Gd, Tb, Dy, Bi) [K. Deguchi]	453
M9	Pb ₃ TeO ₆ [M. Adachi].	458
M10	Li ₂ B ₄ O ₇ [M. Adachi]	459
M11	Ag ₂₆ I ₁₈ W ₄ O ₁₆ [M. Adachi].	461
M12	Sr ₈ [Al ₁₂ O ₂₄](CrO ₄) ₂ [M. Adachi].	462
M13	Pb ₅ Mo ₃ O ₉ F ₁₀ group [K. Deguchi].	463
M14	Pb ₅ Cr ₃ F ₁₉ group [K. Deguchi].	465
III	Alphabetical index of substances	
IIIA	Pure compounds	472
IIIB	Solid solutions	492

IF Survey of contained data

Each chapter of this volume corresponds to one family consisting of similar substances. This Subvolume A contains nineteen oxide families and thus nineteen chapters, as listed in table of contents. Each section in a chapter is devoted to describing properties of one substance (pure compound or solid solution). Table IF-1 shows how the data are presented in each section: The section is divided into 16 subsections and each subsection gives the data on special properties (e.g., dielectric properties). The information given in each section is surveyed by a table at the beginning of the section according to the order of subsections 1...16 of Table IF-1.

A detailed two-dimensional survey of contained data is made in Table IF-2 which gives all the substances appearing in this Subvolume along the ordinate and properties along the abscissa.

Table IF-1. Arrangement of data for each substance

Subsection	Information
1	History and fundamental quantities.
a	History (discoverer, year of discovery).
b	Fundamental quantities (phases, state (F, A, P), crystal system, space group of each phase, transition temperatures, direction of spontaneous polarization, melting point, density, transparency and color, cleavage plane, deliquescence and efflorescence, phase diagram for solid solution).
2	Material preparation and crystal growth.
a	Method, solubility in fluxes or solvents.
b	Crystal forms, <i>a</i> , <i>b</i> , <i>c</i> axes, <i>X</i> , <i>Y</i> , <i>Z</i> axes.
3	Crystal structure.
a	Unit cell parameters.
b	Crystal structure (<i>Z</i> , table of positional and temperature parameters, interatomic distances and bond angles, figure of crystal structures, structural change associated with phase transitions).
4	Lattice distortions (thermal expansion, lattice deformation associated with spontaneous polarization).
5	Dielectric properties.
a	Dielectric constants (κ vs. <i>T</i> , Curie-Weiss law constants, κ vs. <i>p</i> , κ vs. two- or one-dimensional pressure, κ vs. frequency, phase diagram in regard to <i>p</i> and E_{bias}).
b	Nonlinear dielectric properties (effect of E_{bias} on κ ; values of ξ and ζ).
c	Spontaneous polarization and coercive field (or critical field for antiferroelectrics).
d	Pyroelectric and electrocaloric effect.
6	Thermal properties.
a	Heat capacity, transition heat, transition entropy.
b	Thermal conductivity.
7	Electromechanical properties.
a	Piezoelectricity.
b	Electrostriction.
c	Nonlinear electromechanical properties.

(continued)

Table IF-1 (continued)

Subsection	Information
8	Elastic properties.
a	Elastic compliances and stiffnesses (including data on acoustic surface wave).
b	Nonlinear elastic properties.
9	Optical properties.
a	Refractive indices, birefringence, reflection, absorption (infrared region, visible region, ultraviolet region).
b	Electrooptic effect.
c	Piezooptic effect (photoelastic effect).
d	Optical activity (rotatory power), Faraday effect.
e	Nonlinear optical properties.
10	Properties studied by light scattering.
a	Raman scattering.
b	Brillouin scattering and Rayleigh scattering (Elastic constants are given in 8a).
11	Electrical conduction (conductivity, breakdown strength, thermoelectric effect, photoconductivity and photoemission, superconductivity, band structure).
12	Magnetic properties (magnetic susceptibility, spontaneous magnetization, magnetic structure, magnetoelectric effect).
13	Properties studied by magnetic resonance and Mössbauer effect.
a	NMR.
b	ESR and ENDOR.
c	Mössbauer effect.
14	Diffraction phenomena related with secondary structures and local structures.
a	Bragg reflections due to structural modulations.
b	Diffuse or inelastic scattering.
c	EXAFS.
15	Domains.
a	Domain structure.
b	Effects of electric field and mechanical stress.
16	Miscellanea (thin layer, surface layer, radiation damage, plasticity, dislocation, etchant, point defects, twin structure, stripe pattern, paraelectric resonance).

Table IF-2. Two-dimensional survey of contained data

This table indicates the pages where the required data for special properties and individual substances can be found. All the substances appearing in subvolume III/36A2 are given along the ordinate and properties along the abscissa. Detailed items of the property columns 1...16 on the abscissa can be found in Table IF-1. Abbreviations in this table: [F]: ferroelectric. [(F)]: possibility of ferroelectricity. [A]: antiferroelectric. [(A)]: possibility of antiferroelectricity.

See pages 26...61 in subvolume III/36A1 for a detailed survey of substances appearing in subvolume III/36A1. See also the substance index at the end of this volume and the complete two-dimensional survey on CD-ROM.

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
3 YMnO ₃ family																		
3A Pure compounds																		
1	YMnO ₃ [F]	3A-1	•	•	•	•	•					•		•			•	•
2	ErMnO ₃ [F]	3A-2	•	•	•		•							•			•	
3	HoMnO ₃ [F]	3A-3	•	•	•		•							•			•	
4	TmMnO ₃ [F]	3A-4	•	•	•		•							•			•	
5	YbMnO ₃ [F]	3A-5	•	•	•	•	•							•			•	
6	LuMnO ₃ [F]	3A-6	•	•	•		•							•			•	
3B Solid solutions																		
1	YMnO ₃ –YAlO ₃	3B-1	•		•													
2	YMnO ₃ –YCrO ₃	3B-2	•															
3	YMnO ₃ –YFeO ₃	3B-3	•										•					
4	YMnO ₃ –BiMnO ₃	3B-4	•															
4 SrTeO ₃ family																		
4A Pure compounds																		
1	SrTeO ₃ [F]	4A-1	•	•	•	•	•	•	•	•	•		•					
4B Solid solutions																		
1	SrTeO ₃ –CaTeO ₃	4B-1	•		•													
2	SrTeO ₃ –BaTeO ₃	4B-2	•		•		•											
3	SrTeO ₃ –PbTeO ₃	4B-3	•		•													
5 Stibiotantalite family																		
5A Pure compounds																		
1	ScTaO ₄ [F]	5A-1	•	•	•		•											
2	SbNbO ₄ [F, (A)]	5A-2	•	•	•	•	•		•		•		•					
3	SbTaO ₄ [F, (A)]	5A-3	•	•	•	•	•				•							
4	SbSbO ₄ [(A)]	5A-4	•		•		•	•										

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
5	BiNbO ₄ [(A), (F)]	5A-5	•	•	•	•	•					•						
6	BiTaO ₄	5A-6	•		•	•												
7	BiSbO ₄ [(A), (F)]	5A-7				•												
5B Solid solutions																		
1	Sb(Ta,Nb)O ₄	5B-1	•		•		•		•	•	•						•	
2	Sb(Nb,Sb)O ₄	5B-2	•				•											
3	Bi(Ta,Nb)O ₄	5B-3			•													
4	Bi(M _n M' _m)O ₄ (M = Li, Mg, Fe, Ti, Ge, Zr, Sn; M' = Mo, W, Te)	5B-4				•	•											
5	(Bi,Sb)NbO ₄	5B-5				•	•											
6 Tungsten-bronze-type oxides																		
6A Simple compounds (A₅B₁₀O₃₀-type)																		
1	PbNb ₂ O ₆ [F]	6A-1	•	•	•	•	•		•				•				•	•
2	PbTa ₂ O ₆ [F]	6A-2	•	•	•	•	•				•							
6B Complex compounds																		
6B-a A₆M₁₀O₃₀-type																		
a1	Sr ₂ NaNb ₅ O ₁₅	6B-a1	•		•		•						•					
a2	Sr ₂ KNb ₅ O ₁₅ [F]	6B-a2	•	•	•		•		•		•	•	•			•		
a3	Sr ₂ RbNb ₅ O ₁₅ [F]	6B-a3	•		•													
a4	Sr ₂ AgNb ₅ O ₁₅	6B-a4	•		•													
a5	Sr ₂ TiNb ₅ O ₁₅	6B-a5	•		•		•											
a6	Ba ₂ LiNb ₅ O ₁₅ (BLN) [F]	6B-a6	•	•	•	•	•				•							
a7	Ba ₂ NaNb ₅ O ₁₅ (BNN) [F]	6B-a7	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•
a8	Ba ₂ KNb ₅ O ₁₅	6B-a8	•	•	•		•						•					
a9	Ba ₂ RbNb ₅ O ₁₅	6B-a9	•		•													
a10	Ba ₂ AgNb ₅ O ₁₅ [F]	6B-a10	•	•	•	•	•											•
a11	Pb ₂ NaNb ₅ O ₁₅	6B-a11	•		•	•												
a12	Pb ₂ KNb ₅ O ₁₅ [F]	6B-a12	•	•	•	•	•		•	•	•						•	•

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
a13	Pb ₂ RbNb ₅ O ₁₅ [F]	6B-a13	•			•	•		•									
a14	Pb ₂ AgNb ₅ O ₁₅ [F]	6B-a14	•		•	•	•		•									
a15	AEuMNb ₅ O ₁₅ (A = Sr, Ba; M = Na, K)	6B-a15											•		•			
a16	Sr ₄ LiNaNb ₁₀ O ₃₀	6B-a16			•		•				•							•
a17	Sr ₄ LiKNb ₁₀ O ₃₀	6B-a17	•		•		•		•	•	•							
a18	Ba ₃ NaNb ₁₀ O ₃₀ (R = Y, La, Gd)	6B-a18	•		•													
a19	Ba ₂ Na ₃ RNb ₁₀ O ₃₀ (R = Y, La, Eu, Gd, Dy)	6B-a19	•		•		•				•							
a20	BaNa ₂ La ₂ Nb ₁₀ O ₃₀	6B-a20			•													
a21	Na ₂ RNb ₅ O ₁₅ (R = Y, Tb, Ho)	6B-a21	•		•													
a22	K ₂ RNb ₅ O ₁₅ (R = Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho)	6B-a22	•		•													
a23	K ₂ BiNb ₅ O ₁₅	6B-a23	•	•	•		•		•		•							
a24	Rb ₂ RNb ₅ O ₁₅ (R = Pr, Sm)	6B-a24	•		•													
a25	Ca ₂ KTa ₅ O ₁₅	6B-a25			•													
a26	Sr ₂ NaTa ₅ O ₁₅	6B-a26	•		•		•											
a27	Sr ₂ KTa ₅ O ₁₅	6B-a27	•		•													
a28	Sr ₂ AgTa ₅ O ₁₅	6B-a28	•		•													
a29	Ba ₂ LiTa ₅ O ₁₅	6B-a29	•		•													
a30	Ba ₂ NaTa ₅ O ₁₅	6B-a30			•		•											
a31	Ba ₂ KTa ₅ O ₁₅	6B-a31			•													
a32	Ba ₂ AgTa ₅ O ₁₅	6B-a32	•		•													
a33	AEuMTa ₅ O ₁₅ (A = Sr, Ba; M = Na, K)	6B-a33											•		•			
a34	Pb ₂ NaTa ₅ O ₁₅	6B-a34	•		•		•											
a35	Pb ₂ KTa ₅ O ₁₅	6B-a35	•		•													
a36	Pb ₂ RbTa ₅ O ₁₅	6B-a36	•		•													
a37	Na ₂ RTa ₅ O ₁₅ (R = La, Ce, Pr, Nd, Gd, Ho)	6B-a37			•													
a38	K ₂ RTa ₅ O ₁₅ (R = Y, La, Ce, Pr, Nd, Sm, Gd, Tb, Ho)	6B-a38			•													
a39	K ₂ BiTa ₅ O ₁₅	6B-a39	•		•													

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
a40	$A_6BNb_9O_{30}$ (A = Sr, Ba; B = Sc, Cr, Mn)	6B-a40			•													
a41	$Sr_6FeNb_9O_{30}$	6B-a41	•		•		•								•			
a42	$Ba_6FeNb_9O_{30}$	6B-a42	•		•		•											
a43	$Ba_6GaNb_9O_{30}$	6B-a43	•		•													
a44	$Ba_6InNb_9O_{30}$	6B-a44	•		•		•											
a45	$Sr_5NaTiNb_9O_{30}$	6B-a45	•		•		•											
a46	$Sr_5KTiNb_9O_{30}$	6B-a46	•		•		•											
a47	$Ba_5LiTiNb_9O_{30}$	6B-a47	•		•													
a48	$Ba_5NaTiNb_9O_{30}$	6B-a48	•		•		•											
a49	$Ba_5KTiNb_9O_{30}$	6B-a49	•		•		•											
a50	$Ba_3Na_3MoNb_9O_{30}$	6B-a50	•		•													
a51	$Ca_3Na_3W Nb_9O_{30}$	6B-a51	•		•		•											
a52	$Ca_3K_3W Nb_9O_{30}$	6B-a52	•		•													
a53	$Sr_3Na_3W Nb_9O_{30}$	6B-a53	•		•		•											
a54	$Sr_3K_3W Nb_9O_{30}$	6B-a54	•		•		•											
a55	$Ba_3Na_3W Nb_9O_{30}$	6B-a55	•		•		•											
a56	$Ba_3K_3W Nb_9O_{30}$	6B-a56	•		•		•											
a57	$Pb_3K_3W Nb_9O_{30}$	6B-a57	•		•		•											
a58	$A_6BTa_9O_{30}$ (A = Sr, Ba, Pb; B = Sc, Cr, Mn, Fe, Ga)	6B-a58			•													
a59	$A_{3A}^{II}A_3^IWTa_9O_{30}$ (A^I = Na, K; A^{II} = Ca, Sr, Ba, Pb)	6B-a59			•													
a60	$Sr_6Ti_2Nb_8O_{30}$	6B-a60	•		•		•											
a61	$Ba_6Ti_2Nb_8O_{30}$ [F]	6B-a61	•	•	•		•				•							•
a62	$Ba_4Bi_2Cr_2Nb_8O_{30}$	6B-a62	•				•											
a63	$La_4A_2Cr_2Nb_8O_{30}$ (A = Li, Na, K)	6B-a63	•															
a64	$Pb_4R_2Fe_2Nb_8O_{30}$ (R = La, Nd)	6B-a64	•															
a65	$Sr_4Yb_2Fe_2Nb_8O_{30}$	6B-a65	•															
a66	$Ba_4R_2Fe_2Nb_8O_{30}$ (R = Nd, Sm, Gd)	6B-a66	•		•													
a67	$Ba_4Bi_2Fe_2Nb_8O_{30}$	6B-a67	•		•													
a68	$Ba_4Ce_2Ni_2Nb_8O_{30}$	6B-a68	•		•													

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
a69	Ba ₂ R ₄ Ni ₂ Nb ₈ O ₃₀ (R = Nd, Sm)	6B-a69	•	•														
a70	Sr ₆ Zr ₂ Nb ₈ O ₃₀	6B-a70	•	•														
a71	Ba ₆ Zr ₂ Nb ₈ O ₃₀ [F]	6B-a71	•	•		•					•							
a72	Ba ₆ Sn ₂ Nb ₈ O ₃₀	6B-a72	•	•		•												
a73	Ba ₆ Hf ₂ Nb ₈ O ₃₀	6B-a73	•	•														
a74	Sr ₂ K ₄ Mo ₂ Nb ₈ O ₃₀	6B-a74	•	•														
a75	K ₅ YW ₂ Nb ₈ O ₃₀	6B-a75	•	•		•												
a76	K ₅ LaW ₂ Nb ₈ O ₃₀	6B-a76	•	•		•												
a77	K ₅ BiW ₂ Nb ₈ O ₃₀	6B-a77		•														
a78	Ca ₂ K ₄ W ₂ Nb ₈ O ₃₀	6B-a78	•	•														
a79	Sr ₂ Na ₄ W ₂ Nb ₈ O ₃₀	6B-a79	•	•		•												
a80	Sr ₂ K ₄ W ₂ Nb ₈ O ₃₀	6B-a80	•	•		•												
a81	Ba ₂ Na ₄ W ₂ Nb ₈ O ₃₀	6B-a81	•	•		•												
a82	Ba ₂ K ₄ W ₂ Nb ₈ O ₃₀	6B-a82	•	•		•												
a83	Pb ₂ Na ₄ W ₂ Nb ₈ O ₃₀	6B-a83	•	•		•												
a84	Pb ₂ K ₄ W ₂ Nb ₈ O ₃₀	6B-a84	•	•		•												
a85	Sr ₆ Ti ₂ Ta ₈ O ₃₀	6B-a85	•	•														
a86	Ba ₆ Ti ₂ Ta ₈ O ₃₀	6B-a86		•		•												
a87	Sr ₆ Sn ₂ Ta ₈ O ₃₀	6B-a87	•	•														
a88	Ba ₆ Sn ₂ Ta ₈ O ₃₀	6B-a88	•	•														
a89	Ba ₆ Hf ₂ Ta ₈ O ₃₀	6B-a89	•	•														
a90	A ^{II} ₂ A ^I ₄ W ₂ Ta ₈ O ₃₀ (A ^{II} = Ca, Sr, Ba, Pb; A ^I = Na, K)	6B-a90		•														
a91	Ba ₂ R ₄ Fe ₃ Nb ₇ O ₃₀ (R = Nd, Sm)	6B-a91	•	•		•												
a92	Pb ₂ Nd ₄ Fe ₃ Nb ₇ O ₃₀	6B-a92		•		•												
a93	Sr ₅ LaTi ₃ Nb ₇ O ₃₀	6B-a93	•	•		•												
a94	Sr ₅ BiTi ₃ Nb ₇ O ₃₀	6B-a94	•	•		•												
a95	Ba ₅ LaTi ₃ Nb ₇ O ₃₀	6B-a95	•	•		•												
a96	Ba ₅ BiTi ₃ Nb ₇ O ₃₀	6B-a96	•	•		•												
a97	BaK ₅ W ₃ Nb ₇ O ₃₀	6B-a97		•														
a98	Nd ₆ Fe ₄ Nb ₆ O ₃₀	6B-a98		•		•												

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
a99	Nd ₄ Bi ₂ Fe ₄ Nb ₆ O ₃₀	6B-a99			•		•											
a100	Sr ₄ La ₂ Ti ₄ Nb ₆ O ₃₀	6B-a100	•		•		•											
a101	Ba ₄ La ₂ Ti ₄ Nb ₆ O ₃₀	6B-a101	•		•		•											
a102	Ba ₄ Bi ₄ Ti ₄ Nb ₆ O ₃₀	6B-a102	•		•		•											
a103	Ag ₆ W ₄ Nb ₆ O ₃₀	6B-a103	•		•													
a104	K ₆ W ₄ Ta ₆ O ₃₀	6B-a104	•		•													
a105	Ba ₃ La ₃ Ti ₅ Nb ₅ O ₃₀	6B-a105	•		•		•											
a106	CaSrKNb ₅ O ₁₅	6B-a106	•		•													
a107	CaBaNaNb ₅ O ₁₅	6B-a107	•		•													
a108	CaBaKNb ₅ O ₁₅	6B-a108	•		•													
a109	CaBaTiNb ₅ O ₁₅	6B-a109	•		•		•											
a110	SrBaTiNb ₅ O ₁₅	6B-a110	•		•		•											
a111	NaCsEuNb ₅ O ₁₅ [F]	6B-a111	•	•	•		•											
a112	Ca ₂ Sr ₄ Ti ₂ Nb ₈ O ₃₀	6B-a112	•		•		•											
a113	Ca ₂ Ba ₄ Ti ₂ Nb ₈ O ₃₀	6B-a113	•		•		•											
a114	Sr ₂ Ba ₄ Ti ₂ Nb ₈ O ₃₀	6B-a114	•		•													
a115	Ba ₄ Pb ₂ Ti ₂ Nb ₈ O ₃₀	6B-a115			•													
6B-b A₆(B_pB'_q)₁₀O₃₀-type (p + q = 1)																		
b1	A ₅ NaB _{1/3} Nb _{29/3} O ₃₀ (A = Sr, Ba; B = Mg, Co, Ni, Zn)	6B-b1			•													
b2	A ^{II} ₅ A ^I B _{1/2} Nb _{19/2} O ₃₀ (A ^{II} = Ca, Sr, Ba, Pb; A ^I = Na, K; B = Cr, Fe, Ga)	6B-b2			•													
b3	A ₆ B _{2/3} Nb _{28/3} O ₃₀ (A = Sr, Ba; B = Co, Ni, Cu)	6B-b3	•		•		•											
b4	A ₆ B _{2/3} Ta _{28/3} O ₃₀ (A = Sr, Ba; B = Mg, Fe, Co, Ni, Zn)	6B-b4			•													
6B-c A₆M₄M'₁₀O₃₀-type																		
c1	Na ₃ Li ₂ Nb ₅ O ₁₅	6B-c1	•				•		•									
c2	K ₃ Li ₂ Nb ₅ O ₁₅ (KLN) [F]	6B-c2	•	•	•	•	•		•	•	•	•			•			•
c3	K ₃ Li ₂ Ta ₅ O ₁₅ (KLT) [F]	6B-c3	•		•		•								•			

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
c4	Ba ₄ Na ₂ Li ₄ Ti ₄ Nb ₆ O ₃₀	6B-c4			•													
c5	La ₄ Li ₆ Ti ₈ Nb ₂ O ₃₀	6B-c5	•		•		•											
c6	LaLiTi ₂ O ₆	6B-c6	•		•		•											
6B-d Others																		
d1	Ba ₃ Nb ₁₀ O ₂₈	6B-d1	•		•													
d2	PbNb ₄ O ₁₁ (PbO·xNb ₂ O ₅) [F]	6B-d2	•	•	•		•				•							
d3	Bi ₃ Nb ₁₇ O ₄₇	6B-d3	•	•	•													
d4	Ba ₂ Bi _{1/3} Nb ₅ O ₁₅ [F]	6B-d4	•	•	•		•											
d5	KW ₂ NbO ₉ [(F)]	6B-d5	•	•	•		•				•						•	
d6	RbW ₂ NbO ₉ [(F)]	6B-d6	•	•	•		•				•		•					
d7	CaK ₂ Nb ₅ O ₁₄ F	6B-d7	•		•													
d8	SrK ₂ Nb ₅ O ₁₄ F	6B-d8	•		•		•											
d9	BaNa ₂ Nb ₅ O ₁₄ F [F]	6B-d9	•		•		•											
d10	BaK ₂ Nb ₅ O ₁₄ F	6B-d10	•		•													
d11	SrNaKNb ₅ O ₁₄ F	6B-d11	•		•													
d12	BaNaKNb ₅ O ₁₄ F	6B-d12	•		•													
d13	Sr ₂ KTiNb ₄ O ₁₄ F	6B-d13	•		•													
d14	K ₃ Fe ₅ F ₁₅ [F]	6B-d14	•		•		•	•										
6C Solid solutions																		
6C-a Systems with A₅B₁₀O₃₀-type components																		
a1	PbNb ₂ O ₆ –LiNbO ₃	6C-a1	•		•													
a2	PbNb ₂ O ₆ –NaNbO ₃	6C-a2	•		•													
a3	PbNb ₂ O ₆ –KNbO ₃	6C-a3	•	•	•		•											
a4	PbNb ₂ O ₆ –RbNbO ₃	6C-a4			•													
a5	PbNb ₂ O ₆ –CaNb ₂ O ₆	6C-a5	•				•											
a6	PbNb ₂ O ₆ –SrNb ₂ O ₆	6C-a6	•				•		•									
a7	PbNb ₂ O ₆ –CdNb ₂ O ₆	6C-a7	•		•													
a8	PbNb ₂ O ₆ –BaNb ₂ O ₆	6C-a8	•	•	•	•	•	•	•								•	•
a9	PbNb ₂ O ₆ –Sr ₂ NaNb ₅ O ₁₅	6C-a9	•				•											
a10	PbNb ₂ O ₆ –Pb ₂ NaNb ₅ O ₁₅	6C-a10	•		•													

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
a11	PbNb ₂ O ₆ –Pb ₂ KNb ₅ O ₁₅	6C-a11	•	•														
a12	PbNb ₂ O ₆ –Ba ₂ NaNb ₅ O ₁₅ –Pb ₂ NaNb ₅ O ₁₅	6C-a12	•															
a13	PbNb ₂ O ₆ –K ₃ Li ₂ Nb ₅ O ₁₅	6C-a13	•															
a14	PbNb ₂ O ₆ –K ₂ BiNb ₅ O ₁₅	6C-a14	•															
a15	PbNb ₂ O ₆ –R _{2/3} Nb ₂ O ₆ (R = Y, La, Sm)	6C-a15	•	•		•												
a16	PbNb ₂ O ₆ –M _{1/2} Nb ₂ O ₆ (M = Ce, Th, U)	6C-a16	•	•		•												
a17	PbNb ₂ O ₆ –Bi _{2/3} Nb ₂ O ₆	6C-a17	•	•		•												
a18	PbNb ₂ O ₆ –K _{1/2} La _{1/2} Nb ₂ O ₆	6C-a18	•	•		•		•										
a19	PbNb ₂ O ₆ –K _{1/2} Bi _{1/2} Nb ₂ O ₆	6C-a19	•			•		•										
a20	PbNb ₂ O ₆ –SrNb ₂ O ₆ –BaNb ₂ O ₆	6C-a20	•	•														
a21	PbNb ₂ O ₆ –BaNb ₂ O ₆ –La _{2/3} Nb ₂ O ₆	6C-a21	•			•		•		•								•
a22	PbNb ₂ O ₆ –PbTiO ₃	6C-a22	•	•	•	•												
a23	PbNb ₂ O ₆ –Bi _{4/3} Ti ₂ O ₆	6C-a23	•															
a24	PbNb ₂ O ₆ –BiTiNbO ₆	6C-a24	•															
a25	PbNb ₂ O ₆ –PbZrO ₃	6C-a25	•	•	•													
a26	PbNb ₂ O ₆ –PbO·SnO ₂	6C-a26	•	•														
a27	PbNb ₂ O ₆ –PbTa ₂ O ₆	6C-a27	•	•		•												
a28	PbTa ₂ O ₆ –SrTa ₂ O ₆	6C-a28	•															
a29	PbTa ₂ O ₆ –Pb ₂ NaTa ₅ O ₁₅	6C-a29	•	•														
a30	PbTa ₂ O ₆ –Pb ₂ KTa ₅ O ₁₅	6C-a30	•	•														
a31	PbTa ₂ O ₆ –M _{1/2} Ta ₂ O ₆ (M = Ce, Th, U)	6C-a31	•	•														
a32	(Pb,Ba)(Nb,Ta) ₂ O ₆	6C-a32	•	•														
a33	(Pb,Ca,Ba)(Nb,Ta) ₂ O ₆	6C-a33	•			•												
a34	(Pb,Sr,Ba)(Nb,Ta) ₂ O ₆	6C-a34	•			•												
6C-b Systems with A₆B₁₀O₃₀-type components																		
b1	Ca ₂ NaNb ₅ O ₁₅ –Sr ₂ NaNb ₅ O ₁₅	6C-b1					•											
b2	Sr ₂ NaNb ₅ O ₁₅ –Ba ₂ NaNb ₅ O ₁₅	6C-b2	•	•	•		•				•							
b3	Sr ₂ NaNb ₅ O ₁₅ –Pb ₂ NaNb ₅ O ₁₅	6C-b3	•				•		•									
b4	Sr ₂ NaNb ₅ O ₁₅ –Pb ₂ KNb ₅ O ₁₅	6C-b4	•		•		•											
b5	Sr ₂ NaNb ₅ O ₁₅ –Sr ₂ NaTa ₅ O ₁₅	6C-b5	•															

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
b6	$\text{Sr}_2\text{NaNb}_5\text{O}_{15}\text{--Na}_6\text{Mo}_4\text{Nb}_6\text{O}_{30}$	6C-b6	•	•														
b7	$\text{Sr}_2\text{NaNb}_5\text{O}_{15}\text{--Na}_6\text{W}_4\text{Nb}_6\text{O}_{30}$	6C-b7	•	•														
b8	$\text{Sr}_2\text{KNb}_5\text{O}_{15}\text{--}(\text{K},\text{M})\text{Nb}_5\text{O}_{15}$ (M = Ce, Th, U)	6C-b8	•															
b9	$\text{Sr}_2\text{KNb}_5\text{O}_{15}\text{--SrM}_{1/2}\text{KNb}_5\text{O}_{15}$ (M = Ce, Th, U)	6C-b9	•	•														
b10	$\text{Sr}_2\text{KNb}_5\text{O}_{15}\text{--Ba}_2\text{KNb}_5\text{O}_{15}$	6C-b10	•	•		•												
b11	$\text{Sr}_2\text{KNb}_5\text{O}_{15}\text{--Pb}_2\text{KNb}_5\text{O}_{15}$	6C-b11	•	•														
b12	$\text{Sr}_2\text{KNb}_5\text{O}_{15}\text{--Sr}_2\text{KTa}_5\text{O}_{15}$	6C-b12	•															
b13	$\text{Sr}_2\text{KNb}_5\text{O}_{15}\text{--K}_6\text{Mo}_4\text{Nb}_6\text{O}_{30}$	6C-b13	•	•		•												
b14	$\text{Sr}_2\text{KNb}_5\text{O}_{15}\text{--K}_6\text{W}_4\text{Nb}_6\text{O}_{30}$	6C-b14	•	•														
b15	$\text{Sr}_2\text{KNb}_5\text{O}_{15}\text{--SrK}_2\text{Nb}_5\text{O}_{14}\text{F}$	6C-b15	•	•														
b16	$\text{Sr}_2\text{KNb}_5\text{O}_{15}\text{--Sr}_2\text{KTiNb}_4\text{O}_{14}\text{F}$	6C-b16	•	•		•												
b17	$\text{Sr}_2\text{AgNb}_5\text{O}_{15}\text{--Sr}_2\text{AgTa}_5\text{O}_{15}$	6C-b17	•	•		•												
b18	$\text{Sr}_2\text{TlNb}_5\text{O}_{15}\text{--SrM}_{1/2}\text{TlNb}_5\text{O}_{15}$ (M = Ce, Th, U)	6C-b18	•	•														
b19	$\text{Ba}_2\text{LiNb}_5\text{O}_{15}\text{--Ba}_2\text{NaNb}_5\text{O}_{15}$	6C-b19	•	•		•					•						•	
b20	$\text{Ba}_2\text{LiNb}_5\text{O}_{15}\text{--Ba}_2\text{LiTa}_5\text{O}_{15}$	6C-b20	•	•		•												
b21	$\text{Ba}_2\text{NaNb}_5\text{O}_{15}\text{--Ba}_2\text{KNb}_5\text{O}_{15}$	6C-b21	•	•	•	•					•	•						
b22	$(\text{Sr},\text{Ba})_2(\text{Li},\text{Na})\text{Nb}_5\text{O}_{15}$	6C-b22	•			•							•					
b23	$(\text{Sr},\text{Ba})_2(\text{Li},\text{K})\text{Nb}_5\text{O}_{15}$	6C-b23	•	•		•												
b24	$(\text{Sr},\text{Ba})_2(\text{Na},\text{K})\text{Nb}_5\text{O}_{15}$	6C-b24	•	•		•		•	•	•			•				•	
b25	$\text{Ba}_2\text{NaNb}_5\text{O}_{15}\text{--Pb}_2\text{NaNb}_5\text{O}_{15}$	6C-b25	•	•		•		•										
b26	$\text{Ba}_2\text{NaNb}_5\text{O}_{15}\text{--Pb}_2\text{KNb}_5\text{O}_{15}$	6C-b26	•	•		•												
b27	$\text{Ba}_2\text{NaNb}_5\text{O}_{15}\text{--Ba}_2\text{Na}_3\text{LaNb}_{10}\text{O}_{30}$	6C-b27		•		•												
b28	$\text{Ba}_2\text{NaNb}_5\text{O}_{15}\text{--Ba}_2\text{LaLiNa}_2\text{Nb}_{10}\text{O}_{30}$	6C-b28	•	•		•												
b29	$\text{Ba}_2\text{NaNb}_5\text{O}_{15}\text{--Ba}_6\text{InNb}_9\text{O}_{30}$	6C-b29	•															
b30	$\text{Ba}_2\text{NaNb}_5\text{O}_{15}\text{--Ba}_2\text{NaTa}_5\text{O}_{15}$	6C-b30	•			•												
b31	$(\text{Ba},\text{Pb})_2\text{Na}(\text{Nb},\text{Ta})_5\text{O}_{15}$	6C-b31	•	•														
b32	$\text{Ba}_2\text{NaNb}_5\text{O}_{15}\text{--Ba}_6\text{Ti}_2\text{Nb}_8\text{O}_{30}$	6C-b32	•	•	•	•				•	•							
b33	$\text{Ba}_2\text{NaNb}_5\text{O}_{15}\text{--Ba}_2\text{LaCrNb}_4\text{O}_{15}$	6C-b33	•															
b34	$\text{Ba}_2\text{NaNb}_5\text{O}_{15}\text{--Na}_6\text{Mo}_4\text{Nb}_6\text{O}_{30}$	6C-b34	•	•														

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
b35	Ba ₂ NaNb ₅ O ₁₅ –Na ₆ W ₄ Nb ₆ O ₃₀	6C-b35	•		•		•											
b36	Ba ₂ NaNb ₅ O ₁₅ –BaNa ₂ Nb ₅ O ₁₄ F	6C-b36	•		•													
b37	Ba ₂ NaNb ₅ O ₁₅ –Ba ₄ Na ₂ TiNb ₉ O ₂₉ F	6C-b37	•		•		•											
b38	Ba ₂ KNb ₅ O ₁₅ –Pb ₂ KNb ₅ O ₁₅	6C-b38	•		•													
b39	Ba ₂ KNb ₅ O ₁₅ –Ba ₂ KTa ₅ O ₁₅	6C-b39	•															
b40	Ba ₂ AgNb ₅ O ₁₅ –Ba ₂ Ag ₃ RNb ₁₀ O ₃₀ (R = La, Pr)	6C-b40			•		•		•									
b41	Pb ₂ NaNb ₅ O ₁₅ –Pb ₂ KNb ₅ O ₁₅	6C-b41																•
b42	Pb ₂ NaNb ₅ O ₁₅ –K ₆ W ₄ Nb ₆ O ₃₀	6C-b42	•				•		•									
b43	Pb ₂ (K,Li)Nb ₅ O ₁₅	6C-b43	•		•													
b44	(Pb ₃ M _{1/2}) ₂ KNb ₅ O ₁₅ (M = Ce, Th, U)	6C-b44	•		•		•											
b45	Pb ₂ KNb ₅ O ₁₅ –Pb ₂ RbNb ₅ O ₁₅	6C-b45	•															
b46	Pb ₂ KNb ₅ O ₁₅ –Ba ₆ Ti ₂ Nb ₈ O ₃₀	6C-b46	•															
b47	Pb ₂ KNb ₅ O ₁₅ –Ba ₆ Zr ₂ Nb ₈ O ₃₀	6C-b47	•															
b48	Pb ₂ KNb ₅ O ₁₅ –K ₆ W ₄ Nb ₆ O ₃₀	6C-b48	•		•		•		•									
b49	Pb ₂ KNb ₅ O ₁₅ –Pb ₂ KLiTiNb ₄ O ₁₅	6C-b49	•		•		•											
b50	Pb ₂ KNb ₅ O ₁₅ –Pb ₂ KTa ₅ O ₁₅	6C-b50	•		•		•											
b51	K ₂ LaNb ₅ O ₁₅ –Pb ₂ KNb ₅ O ₁₅	6C-b51	•		•													
b52	K ₂ BiNb ₅ O ₁₅ –Pb ₂ NaNb ₅ O ₁₅	6C-b52	•															
b53	K ₂ BiNb ₅ O ₁₅ –Pb ₂ KNb ₅ O ₁₅	6C-b53	•															
b54	Sr ₂ KTa ₅ O ₁₅ –SrM _{1/2} KTa ₅ O ₁₅ (M = Ce, Th, U)	6C-b54	•		•													
b55	Sr ₂ TiTa ₅ O ₁₅ –SrM _{1/2} TiTa ₅ O ₁₅ (M = Ce, Th, U)	6C-b55	•		•													
b56	Ba ₂ NaTa ₅ O ₁₅ –BaTa ₂ O ₆	6C-b56			•													
b57	Pb ₂ KTa ₅ O ₁₅ –PbM _{1/2} KTa ₅ O ₁₅ (M = Ce, Th, U)	6C-b57	•		•													
b58	CaBaKNb ₅ O ₁₅ –BaM _{1/2} KNb ₅ O ₁₅ (M = Ce, Th, U)	6C-b58	•		•													
b59	CaBaTiNb ₅ O ₁₅ –BaM _{1/2} TiNb ₅ O ₁₅ (M = Ce, Th, U)	6C-b59	•		•													

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
b60	SrBaKNb ₅ O ₁₅ –BaM _{1/2} KNb ₅ O ₁₅ (M = Ce, Th, U)	6C-b60	•		•													
b61	SrBaTiNb ₅ O ₁₅ –BaM _{1/2} TiNb ₅ O ₁₅ (M = Ce, Th, U)	6C-b61	•		•													
b62	CaBaKTa ₅ O ₁₅ –BaM _{1/2} KTa ₅ O ₁₅ (M = Ce, Th, U)	6C-b62	•		•													
b63	CaBaTiTa ₅ O ₁₅ –BaM _{1/2} TiTa ₅ O ₁₅ M = (Ce, Th, U)	6C-b63	•		•													
b64	SrBaKTa ₅ O ₁₅ –BaM _{1/2} KTa ₅ O ₁₅ (M = Ce, Th, U)	6C-b64	•		•													
b65	SrBaTiTa ₅ O ₁₅ –BaM _{1/2} TiTa ₅ O ₁₅ (M = Ce, Th, U)	6C-b65	•		•													
6C-c Systems with M₆M'₄M''₁₀O₃₀-type components																		
c1	Na ₃ Li ₂ Nb ₅ O ₁₅ –K ₃ Li ₂ Nb ₅ O ₁₅	6C-c1	•		•		•											
c2	Na ₃ Li ₂ Nb ₅ O ₁₅ –K ₂ BiNb ₅ O ₁₅	6C-c2	•															
c3	Na ₃ Li ₂ Nb ₅ O ₁₅ –Pb ₂ KNb ₅ O ₁₅	6C-c3	•															
c4	K ₃ Li ₂ Nb ₅ O ₁₅ –K ₂ BiNb ₅ O ₁₅	6C-c4	•															
c5	K ₃ Li ₂ Nb ₅ O ₁₅ –Pb ₂ NaNb ₅ O ₁₅	6C-c5	•															
c6	K ₃ Li ₂ Nb ₅ O ₁₅ –Pb ₂ KNb ₅ O ₁₅	6C-c6	•		•	•	•		•									
c7	K ₃ Li ₂ Nb ₅ O ₁₅ –K ₃ Li ₂ Ta ₅ O ₁₅	6C-c7	•		•		•		•	•	•							
6C-d Systems with AB₂O₆-type components																		
d1	CaNb ₂ O ₆ –BaNb ₂ O ₆	6C-d1	•		•													
d2	SrNb ₂ O ₆ –BaNb ₂ O ₆ (SBN)	6C-d2	•	•	•	•	•	•	•	•	•	•	•			•	•	•
d3	CaNb ₂ O ₆ –SrNb ₂ O ₆ –BaNb ₂ O ₆	6C-d3	•		•		•				•							
d4	SrNb ₂ O ₆ –BaNb ₂ O ₆ –NaNbO ₃	6C-d4	•		•		•		•	•	•							
d5	SrNb ₂ O ₆ –BaNb ₂ O ₆ –La _{2/3} Nb ₂ O ₆	6C-d5					•											
d6	(Sr,Ba)Nb ₂ O ₆ –(Sr,Ba) ₅ Li ₂ Ti ₂ Nb ₈ O ₃₀	6C-d6	•		•													
d7	(Sr,Ba)Nb ₂ O ₆ –(Sr,Ba) ₂ TiNb ₄ O ₁₄ F	6C-d7	•		•		•											

No. Substance		No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
6C-e Others																		
e1	SrNb ₂ O ₆ –KNbO ₃ –LaNb ₃ O ₉	6C-e1	•		•		•											
e2	BaNb ₂ O ₆ –LiNbO ₃ –KNbO ₃	6C-e2	•								•							
e3	BaNb ₂ O ₆ –NaNbO ₃ –KNbO ₃	6C-e3	•		•													
e4	BaNb ₂ O ₆ –NaNbO ₃ –RbNbO ₃	6C-e4	•		•													
e5	BaNb ₂ O ₆ –NaNbO ₃ –LaNb ₃ O ₉	6C-e5	•															
e6	BaNb ₂ O ₆ –LiNbO ₃ –BaTiO ₃	6C-e6	•		•													
e7	BaNb ₂ O ₆ –NaNbO ₃ –BaTiO ₃	6C-e7	•	•	•													
e8	K ₂ O–Nb ₂ O ₅ –WO ₃	6C-e8	•	•	•		•				•							
e9	KNbO ₃ –M _{1/4} NbO ₃ (M = Ce, Th, U)	6C-e9	•		•		•											
e10	(K,Th) ₃ (Nb,Te) ₅ O ₁₅	6C-e10			•		•											
e11	CdO–K ₂ O–Ta ₂ O ₅	6C-e11			•		•											
7 Pyrochlore-type oxides																		
7A Pure compounds																		
1	Cd ₂ Nb ₂ O ₇ [F]	7A-1	•	•	•	•	•	•	•	•	•	•	•		•		•	
2	Cd ₂ Nb ₂ O ₆ S [(A), F]	7A-2	•	•	•		•	•			•							
3	Pb ₂ Nb ₂ O ₇	7A-3	•	•	•		•	•			•	•						
4	Cd ₂ Ta ₂ O ₇	7A-4	•		•						•	•						
5	Bi ₂ ScNbO ₇	7A-5	•		•	•	•											
6	Bi ₂ FeNbO ₇	7A-6	•	•	•	•	•											
7	Bi ₂ (Mg _{2/3} Nb _{4/3})O ₇	7A-7	•		•	•	•											
8	Bi ₂ (Ni _{2/3} Nb _{4/3})O ₇	7A-8	•			•	•											
9	Pb ₂ (Mg _{0.32} Nb _{1.87})O ₇	7A-9	•	•	•		•				•							
10	AA'BB'O ₇	7A-10	•		•	•												
7B Anion deficient compounds																		
1	Tl ₂ Ta ₂ O ₆	7B-1	•	•	•		•											
2	Cd ₂ BB'O ₆ (B = Sc, Cr, Mn, Fe, Sb; B' = Nb, Ta)	7B-2	•		•		•											

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
3	Pb ₂ BB'O ₆ (B' = Nb, Ta; B = Sc, Cr, Fe, Ga, Sb, Bi)	7B-3	•				•											
4	Pb ₂ B _{1/2} B' _{1/2} B''O ₆ (B = Li, Ca, Ti, Cd; B' = Ti, Mn, W; B'' = Sn, Nb, Ta)	7B-4	•															
5	Pb ₂ Li _{1/2} Nb _{3/2} O ₆	7B-5	•	•	•	•	•				•							
6	Pb ₂ (B _{2/3} B' _{4/3})O ₆ (B = Ni, Cu, Zn, Cd; B' = Nb, Ta)	7B-6	•				•											
7	Pb ₂ In _m Nb _n O ₆	7B-7	•	•	•	•	•				•						•	
8	Bi ₂ Mg _{4/3} Ta _{2/3} O ₆	7B-8	•		•													
9	Bi ₂ Zn _{4/3} Ta _{2/3} O ₆	7B-9	•		•		•											
7C Solid solutions																		
1	Cd ₂ Nb ₂ O ₇ –Mg ₂ Nb ₂ O ₇	7C-1					•											
2	Cd ₂ Nb ₂ O ₇ –Ca ₂ Nb ₂ O ₇	7C-2	•		•													
3	Cd ₂ Nb ₂ O ₇ –Pb ₂ Nb ₂ O ₇	7C-3	•		•													
4	Cd ₂ Nb ₂ O ₇ –Cd ₂ Ta ₂ O ₇	7C-4			•		•											
5	(Cd,Pb) ₂ (Nb,Ta) ₂ O ₇	7C-5	•				•											
6	Cd ₂ Nb ₂ O ₇ –CdANb ₂ O ₇ (A = Mg, Mn, Fe, Co, Ni, Cu, Zn)	7C-6	•															
7	Cd ₂ Nb ₂ O ₇ –Cd ₂ NbSbO ₇	7C-7					•											
8	Cd ₂ Nb ₂ O ₇ –CdBiNbTiO ₇	7C-8					•											
9	Cd ₂ Nb ₂ O ₇ –CdBiNb _{5/3} Zn _{1/3} O ₇	7C-9					•											
10	Cd ₂ Nb ₂ O ₇ –Cd _{4/3} BiNb _{5/3} O ₇	7C-10					•											
11	Cd ₂ Nb ₂ O ₇ –NaGdNbTiO ₆ F	7C-11	•		•		•											
12	Cd ₂ Nb ₂ O ₇ –CdGdTi ₂ O ₆ F	7C-12	•		•													
13	Cd ₂ Nb ₂ O ₇ –Cd ₂ SnO ₅ F ₂	7C-13	•		•										•			
14	Cd ₂ Nb ₂ O ₇ –Cd ₂ Nb ₂ O ₆ S	7C-14	•								•							
15	Cd ₂ Nb ₂ O ₇ –CdZnNb ₂ O ₆ S	7C-15	•				•											
16	Cd ₂ Nb ₂ O ₆ S–CdBNb ₂ O ₆ S (B = Mn, Fe, Co, Ni, Cu, Zn)	7C-16	•															
17	Pb ₂ Nb ₂ O ₇ –PbNaNb ₂ O ₆ F	7C-17	•		•		•											

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
8 Sr₂Nb₂O₇ family																		
8A Pure compounds																		
1	La ₂ Ti ₂ O ₇ [F]	8A-1	•	•	•		•		•	•	•		•			•	•	•
2	Pr ₂ Ti ₂ O ₇	8A-2									•							
3	Nd ₂ Ti ₂ O ₇ [F]	8A-3	•	•	•		•		•	•	•							
4	Ca ₂ Nb ₂ O ₇ [F]	8A-4	•	•	•	•	•				•							
5	Sr ₂ Nb ₂ O ₇ [F]	8A-5	•	•	•	•	•		•	•	•	•	•		•	•		
6	Sr ₂ Ta ₂ O ₇ [F]	8A-6	•	•	•		•		•		•	•			•	•	•	
8B Solid solutions																		
1	La ₂ Ti ₂ O ₇ –Sr ₂ Ta ₂ O ₇	8B-1	•				•											
2	Ca ₂ Nb ₂ O ₇ –Sr ₂ Ta ₂ O ₇	8B-2	•															
3	Sr ₂ Nb ₂ O ₇ –Ba ₂ Nb ₂ O ₇	8B-3	•															
4	Sr ₂ Nb ₂ O ₇ –Pb ₂ Nb ₂ O ₇	8B-4	•															
5	Ca ₂ Ta ₂ O ₇ –Sr ₂ Ta ₂ O ₇	8B-5	•				•											
6	Sr ₂ Nb ₂ O ₇ –Sr ₂ Ta ₂ O ₇	8B-6	•		•		•										•	
9 Layer-structure oxides																		
9A Pure compound of simple type																		
1	Bi ₂ WO ₆ [(F)]	9A-1	•	•	•	•	•		•		•		•		•		•	
2	Bi ₂ MoO ₆ [(F)]	9A-2	•	•	•	•	•	•			•							
3	Bi ₃ TiNbO ₉ [(F)]	9A-3	•	•	•	•	•				•							
4	Bi ₃ TiTaO ₉	9A-4	•		•	•	•											
5	K _{0.5} Bi _{2.5} Nb ₂ O ₉	9A-5					•											
6	Na _{0.5} Bi _{2.5} Nb ₂ O ₉	9A-6					•											
7	CaBi ₂ Nb ₂ O ₉	9A-7	•		•	•	•											
8	SrBi ₂ Nb ₂ O ₉ [(F)]	9A-8	•		•		•		•									
9	BaBi ₂ Nb ₂ O ₉ [(F)]	9A-9	•		•		•										•	
10	PbBi ₂ Nb ₂ O ₉ [(F)]	9A-10	•		•	•	•		•									
11	CaBi ₂ Ta ₂ O ₉	9A-11	•		•	•	•											

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
12	SrBi ₂ Ta ₂ O ₉ [F]	9A-12	•		•		•		•		•							
13	BaBi ₂ Ta ₂ O ₉ [(F)]	9A-13	•		•		•						•					
14	PbBi ₂ Ta ₂ O ₉ [F]	9A-14	•		•		•		•									
15	Bi ₄ Ti ₃ O ₁₂ [F]	9A-15	•	•	•	•	•		•	•	•	•	•		•		•	•
16	BaBi ₃ Ti ₂ NbO ₁₂	9A-16	•		•													
17	PbBi ₃ Ti ₂ NbO ₁₂	9A-17	•		•				•									
18	Na _{0.5} Bi _{4.5} Ti ₄ O ₁₅	9A-18	•		•		•		•									
19	K _{0.5} Bi _{4.5} Ti ₄ O ₁₅	9A-19	•		•		•		•									
20	CaBi ₄ Ti ₄ O ₁₅	9A-20	•		•		•					•	•					
21	SrBi ₄ Ti ₄ O ₁₅	9A-21	•		•		•		•	•		•	•					
22	BaBi ₄ Ti ₄ O ₁₅ [F]	9A-22	•		•		•		•		•	•					•	
23	PbBi ₄ Ti ₄ O ₁₅	9A-23	•		•		•		•	•		•	•					
24	BiBi ₄ Ti ₃ FeO ₁₅	9A-24			•						•						•	
25	Sr ₂ Bi ₄ Ti ₅ O ₁₈ [F]	9A-25	•		•		•		•			•						
26	Ba ₂ Bi ₄ Ti ₅ O ₁₈ [F]	9A-26	•		•	•	•										•	•
27	Pb ₂ Bi ₄ Ti ₅ O ₁₈ [F]	9A-27	•		•		•		•									
28	Pr ₂ Bi ₄ Ti ₃ Fe ₂ O ₁₈	9A-28	•	•			•								•			
29	(Pr,Bi)Bi ₄ Ti ₃ Fe ₂ O ₁₈	9A-29	•												•			
30	Bi ₂ Bi ₄ Ti ₃ Fe ₂ O ₁₈	9A-30	•												•			
31	Bi ₆ Ti ₃ WO ₁₈ [(F)]	9A-31	•	•	•	•	•										•	
32	Bi ₇ Ti ₄ NbO ₂₁	9A-32	•		•		•		•									
33	Bi ₇ Ti ₃ Fe ₃ O ₂₁	9A-33													•			
34	Bi ₇ Ti _{2.5} Sn _{0.5} Fe ₃ O ₂₁	9A-34													•			
35	Bi ₉ Ti ₃ Fe ₅ O ₂₇	9A-35												•	•			
36	Bi ₁₀ Ti ₃ W ₃ O ₃₀ [(F)]	9A-36	•	•	•		•											
9B Solid solutions and complex compounds																		
1	Bi ₂ (Me _{0.5} Nb _x)O _{6-x/2} (M = Mo, W)	9B-1														•		
2	Bi _{2-x} La _x WO ₆	9B-2	•	•	•		•											
3	SrBi ₂ Nb ₂ O ₉ –PbBi ₂ Nb ₂ O ₉	9B-3	•															
4	BaBi ₂ Nb ₂ O ₉ –PbBi ₂ Nb ₂ O ₉	9B-4	•				•											
5	Bi ₂ Pb _{1-x} M _x Nb ₂ O ₉	9B-5	•				•		•									

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
6	$\text{Bi}_2\text{Pb}_{1-x}\text{M}_{x/2}\text{La}_{x/2}\text{Nb}_2\text{O}_9$ (M = Li, Na, K)	9B-6					•											
7	$\text{MBi}_{2-x}\text{Ti}_x\text{Nb}_2\text{O}_9$ (M = Sr, Ba, Pb)	9B-7					•											
8	$\text{Sr}_{1-x}\text{Ba}_x\text{Bi}_2\text{Ta}_2\text{O}_9$	9B-8	•	•	•		•				•							
9	$\text{Bi}_{3-x}\text{M}_x\text{Ti}_{1-x}\text{Nb}_{1+x}\text{O}_9$ (M = Sr, Ba, Pb)	9B-9	•		•		•											
10	$\text{Bi}_{3-x}\text{Pb}_x\text{TiNb}_{1-x}\text{W}_x\text{O}_9$	9B-10			•		•											
11	$\text{Bi}_{3-x}\text{Pb}_x\text{Ti}_{1+x}\text{W}_{1-x}\text{O}_9$	9B-11			•		•											
12	$\text{Bi}_{4-x}\text{La}_x\text{Ti}_3\text{O}_{12}$	9B-12	•				•		•									
13	$\text{Bi}_{4-x}\text{Ti}_x\text{Ti}_3\text{O}_{12}$	9B-13					•											
14	$\text{Bi}_{4-x}\text{M}_x\text{Ti}_{3-x}\text{Nb}_x\text{O}_{12}$ (M = Sr, Ba, Pb)	9B-14	•		•		•											
15	$(\text{Na}_{1/2}\text{Bi}_{1/2})_{1-x}\text{M}_x\text{Bi}_4\text{Ti}_4\text{O}_{15}$ (M = Ca, Sr, Ba, La, Pb, $\text{K}_{1/2}\text{Bi}_{1/2}$)	9B-15	•				•		•									
16	$\text{Pb}_{1-x}(\text{Na}_{1/2}\text{Ce}_{1/2})_x\text{Bi}_4\text{Ti}_4\text{O}_{15}$	9B-16			•		•		•				•					
17	$\text{PbLa}_x\text{Bi}_{4-x}\text{Ti}_4\text{O}_{15}$	9B-17	•															
10 BaAl₂O₄-type oxides																		
10A Pure compounds																		
1	BaZnGeO_4 [F]	10A-1	•	•	•	•	•	•	•	•		•				•	•	
10B Solid solutions																		
1	$\text{Ba}(\text{Al}_{1-x}\text{Li}_x)_2(\text{O}_{1-x}\text{F}_x)_4$	10B-1	•	•	•		•										•	
11 LaBGeO₅																		
11A Pure compounds																		
1	LaBGeO_5 [F]	11A-1	•	•	•		•	•				•	•				•	
12 LiNaGe₄O₉-type oxides																		
12A Pure compounds																		
1	$\text{LiNaGe}_4\text{O}_9$ [F]	12A-1	•	•	•		•											
2	$\text{Li}_2\text{Ge}_4\text{O}_9$ [F]	12A-2	•	•	•		•											

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
12B Solid solutions																		
1	$\text{Li}_{2-x}\text{Na}_x\text{Ge}_4\text{O}_9$	12B-1	•		•		•											
13 $\text{Li}_2\text{Ge}_7\text{O}_{15}$ family																		
13A Pure compounds																		
1	$\text{Li}_2\text{Ge}_7\text{O}_{15}$ [F]	13A-1	•	•	•	•	•	•	•	•	•	•			•	•	•	
13B Solid solutions																		
1	$(\text{Li}_{1-x}\text{Na}_x)_2\text{Ge}_7\text{O}_{15}$	13B-1	•				•	•		•								
2	$\text{Li}_2(\text{Ge}_{1-x}\text{Si}_x)_7\text{O}_{15}$	13B-2	•				•											
14 $\text{Pb}_5\text{Ge}_3\text{O}_{11}$ family																		
14A Pure compounds																		
1	$\text{Pb}_5\text{Ge}_3\text{O}_{11}$ [F]	14A-1	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•
14B Solid solutions																		
1	$(\text{Pb}_{1-x}\text{Sr}_x)_5\text{Ge}_3\text{O}_{11}$	14B-1	•	•	•		•											
2	$(\text{Pb}_{1-x}\text{Ba}_x)_5\text{Ge}_3\text{O}_{11}$	14B-2	•		•		•	•		•	•	•						
3	$(\text{Pb}_{1-x}\text{Bi}_x)_5\text{Ge}_3\text{O}_{11}$	14B-3									•							
4	$(\text{Pb}_{1-x}\text{Cs}_{x/2}\text{Bi}_{x/2})_5\text{Ge}_3\text{O}_{11}$	14B-4	•				•											
5	$\text{Pb}_5(\text{Ge}_{1-x}\text{Ti}_x)_3\text{O}_{11}$	14B-5	•															
6	$\text{Pb}_5(\text{Ge}_{1-x}\text{Si}_x)_3\text{O}_{11}$	14B-6	•	•	•		•				•	•					•	
7	$\text{Pb}_5\text{Ge}_3\text{O}_{11-x}\text{F}_x$	14B-7	•		•		•											
15 $5\text{PbO}_2 \cdot 2\text{P}_2\text{O}_5$																		
15A Pure compounds																		
1	$5\text{PbO}_2 \cdot 2\text{P}_2\text{O}_5$ [(F)]	15A-1	•	•	•	•	•											

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
16 $\text{Ca}_3(\text{VO}_4)_2$ family																		
16A Pure compounds																		
1	$\text{Ca}_3(\text{VO}_4)_2$ [(F)]	16A-1	•	•	•	•	•		•	•	•	•	•				•	•
2	$\text{Pb}_3(\text{VO}_4)_2$ [(F)]	16A-2	•	•	•	•	•				•	•			•			
16B Solid solutions																		
1	$\text{Ca}_3(\text{VO}_4)_2\text{--Pb}_3(\text{VO}_4)_2$	16B-1	•										•					
2	$\text{Pb}_3(\text{VO}_4)_2\text{--Pb}_3(\text{PO}_4)_2$	16B-2	•		•	•	•	•		•		•				•		
17 $\text{Gd}_2(\text{MoO}_4)_3$ (GMO) family																		
17A Pure compounds																		
1	$\text{Sm}_2(\text{MoO}_4)_3$ [F]	17A-1	•	•	•		•				•		•				•	
2	$\text{Eu}_2(\text{MoO}_4)_3$ [F]	17A-2	•	•	•		•				•		•					
3	$\text{Gd}_2(\text{MoO}_4)_3$ [F]	17A-3	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•
4	$\text{Tb}_2(\text{MoO}_4)_3$ [F]	17A-4	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•
5	$\text{Dy}_2(\text{MoO}_4)_3$ [(F)]	17A-5	•	•	•		•	•			•							
17B Solid solutions																		
1	$\text{Nd}_2(\text{MoO}_4)_3\text{--Sm}_2(\text{MoO}_4)_3$	17B-1					•	•										
2	$\text{Sm}_2(\text{MoO}_4)_3\text{--Gd}_2(\text{MoO}_4)_3$	17B-2	•		•		•	•			•							
3	$\text{Eu}_2(\text{MoO}_4)_3\text{--Gd}_2(\text{MoO}_4)_3$	17B-3	•				•						•					
4	$\text{Eu}_2(\text{MoO}_4)_3\text{--Tb}_2(\text{MoO}_4)_3$	17B-4	•				•				•	•						
5	$\text{Gd}_2(\text{MoO}_4)_3\text{--Y}_2(\text{MoO}_4)_3$	17B-5	•				•										•	
6	$\text{Gd}_2(\text{MoO}_4)_3\text{--Nd}_2(\text{MoO}_4)_3$	17B-6	•		•		•				•							
7	$\text{Gd}_2(\text{MoO}_4)_3\text{--Tb}_2(\text{MoO}_4)_3$	17B-7	•				•				•	•		•			•	
8	$\text{Gd}_2(\text{MoO}_4)_3\text{--Dy}_2(\text{MoO}_4)_3$	17B-8	•		•		•				•	•					•	•
9	$\text{Gd}_2(\text{MoO}_4)_3\text{--Ho}_2(\text{MoO}_4)_3$	17B-9	•		•						•							
10	$\text{Gd}_2(\text{MoO}_4)_3\text{--Er}_2(\text{MoO}_4)_3$	17B-10	•		•													
11	$\text{Gd}_2(\text{MoO}_4)_3\text{--Yb}_2(\text{MoO}_4)_3$	17B-11	•		•						•							
12	$\text{Gd}_2(\text{MoO}_4)_3\text{--Bi}_2(\text{MoO}_4)_3$	17B-12	•		•	•	•											
13	$\text{Gd}_2(\text{MoO}_4)_3\text{--Tb}_2(\text{MoO}_4)_3\text{--Dy}_2(\text{MoO}_4)_3$	17B-13									•	•						
14	$\text{Gd}_2(\text{MoO}_4)_3\text{--Gd}_2(\text{WO}_4)_3$	17B-14	•		•		•										•	

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
18 Boracite-type family																		
18A Pure compounds																		
1	Mg ₃ B ₇ O ₁₃ Cl [F]	18A-1	•	•	•	•	•		•	•	•	•	•		•			
2	Cr ₃ B ₇ O ₁₃ Cl [F, A]	18A-2	•	•	•	•	•	•			•	•					•	
3	Mn ₃ B ₇ O ₁₃ Cl	18A-3	•	•	•		•				•	•		•	•		•	
4	Fe ₃ B ₇ O ₁₃ Cl [F]	18A-4	•	•	•		•	•			•			•	•		•	
5	Co ₃ B ₇ O ₁₃ Cl [F]	18A-5	•	•	•		•	•			•			•	•		•	
6	Ni ₃ B ₇ O ₁₃ Cl [F]	18A-6	•	•	•		•				•			•	•		•	
7	Cu ₃ B ₇ O ₁₃ Cl	18A-7	•	•	•	•	•		•	•	•		•				•	
8	Zn ₃ B ₇ O ₁₃ Cl [F]	18A-8	•	•	•		•	•			•				•		•	
9	Cd ₃ B ₇ O ₁₃ Cl [F]	18A-9	•	•	•		•	•			•						•	•
10	Mg ₃ B ₇ O ₁₃ Br	18A-10	•	•	•													
11	Cr ₃ B ₇ O ₁₃ Br	18A-11	•	•	•	•												
12	Mn ₃ B ₇ O ₁₃ Br [F]	18A-12	•	•	•		•	•			•							
13	Fe ₃ B ₇ O ₁₃ Br [F]	18A-13	•	•	•		•	•			•			•	•		•	
14	Co ₃ B ₇ O ₁₃ Br	18A-14	•	•	•		•	•			•			•				
15	Ni ₃ B ₇ O ₁₃ Br	18A-15	•	•	•	•	•				•		•	•	•		•	
16	Cu ₃ B ₇ O ₁₃ Br [F]	18A-16	•	•	•		•		•	•	•			•	•			
17	Zn ₃ B ₇ O ₁₃ Br	18A-17	•	•	•						•				•			
18	Cd ₃ B ₇ O ₁₃ Br [F]	18A-18	•	•	•			•			•						•	•
19	Cr ₃ B ₇ O ₁₃ I	18A-19	•	•	•									•				
20	Mn ₃ B ₇ O ₁₃ I	18A-20	•	•	•		•				•			•				
21	Fe ₃ B ₇ O ₁₃ I [F]	18A-21	•	•	•	•	•	•	•		•		•	•	•		•	
22	Co ₃ B ₇ O ₁₃ I [F]	18A-22	•	•	•		•	•	•		•			•		•	•	
23	Ni ₃ B ₇ O ₁₃ I [F]	18A-23	•	•	•	•	•		•	•	•	•	•	•	•	•		
24	Cu ₃ B ₇ O ₁₃ I	18A-24	•		•													
25	Zn ₃ B ₇ O ₁₃ I	18A-25	•	•	•			•			•				•			
26	Cd ₃ B ₇ O ₁₃ I	18A-26	•	•	•						•							
27	Li ₄ B ₇ O ₁₂ X (X = Cl, Br, I)	18A-27	•		•													
28	Li ₅ B ₇ O _{12.5} Cl	18A-28			•													

No.	Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
18B Solid solutions																		
1	Ni ₃ B ₇ O ₁₃ Cl–Ni ₃ B ₇ O ₁₃ Br	18B-1					•						•					
19 Rb₃MoO₃F₃ family																		
19A Pure compounds																		
1	Rb ₃ MoO ₃ F ₃ [F]	19A-1	•	•	•	•	•	•										
2	Na ₃ MoO ₃ F ₃ [(F)]	19A-2	•		•		•											
3	K ₃ MoO ₃ F ₃ [F]	19A-3	•	•	•		•	•				•						
4	Na ₃ WO ₃ F ₃ [(F)]	19A-4	•		•		•											
19B Solid solutions																		
1	A ₂ BMO ₃ F ₃ (A, B = K, Rb, Cs; M = Mo, W)	19B-1	•		•		•	•										
M Miscellaneous crystals																		
M1	TiO ₂	M1	•		•		•				•	•	•		•	•		•
M2	WO ₃	M2	•	•	•	•	•	•			•	•	•	•			•	•
M3 NaVO₃ group																		
M3-i	LiVO ₃ [(F)]	M3-i	•	•	•		•				•		•		•			
M3-ii	NaVO ₃ [F]	M3-ii	•	•	•		•				•	•			•			
M3-iii	KVO ₃	M3-iii	•		•		•				•		•		•			
M3-iv	RbVO ₃ [(F)]	M3-iv	•		•		•				•		•					
M3-v	CsVO ₃ [(F)]	M3-v	•		•		•				•	•	•					
M3-vi	(Li,Na)VO ₃	M3-vi	•				•											
M3-vii	(Li,K)VO ₃	M3-vii	•				•						•					
M3-viii	(Na,K)VO ₃	M3-viii	•				•											
M3-ix	(Na,Rb)VO ₃	M3-ix	•				•											
M3-x	(Na,Cs)VO ₃	M3-x	•				•											
M3-xi	(K,Cs)VO ₃	M3-xi	•				•						•					
M4	Fe ₃ O ₄ [(F)]	M4	•	•	•		•							•		•		
M5	RVO ₄ (R = Sc, Nd, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu) [F]	M5	•	•	•	•	•			•	•	•	•	•	•			

No. Substance	No.	Fundamentals	Material preparation	Crystal structure	Lattice distortion	Dielectric properties	Thermal properties	Electromechanical	Elastic properties	Optical properties	Light scattering	Conduction	Magnetism	NMR, ESR	Local structures	Domains	Miscellanea
M6 RAsO ₄ (R = Pr, Nd, Eu, Gd, Tb, Dy, Er, Yb) [F]	M6	•	•	•	•	•				•	•						
M7 Cr ₂ BeO ₄ [(F)]	M7	•		•		•							•				
M8 RMn ₂ O ₅ group (R = Y, Eu, Gd, Tb, Dy, Bi)																	
M8-i YMn ₂ O ₅ [(F)]	M8-i	•	•	•		•							•		•		
M8-ii EuMn ₂ O ₅	M8-ii	•	•	•		•							•				
M8-iii GdMn ₂ O ₅ [F]	M8-iii	•	•	•		•							•				
M8-iv TbMn ₂ O ₅ [F]	M8-iv	•	•	•		•							•		•		
M8-v DyMn ₂ O ₅	M8-v	•	•	•		•						•			•		
M8-vi BiMn ₂ O ₅	M8-vi	•		•		•							•		•		
M9 Pb ₃ TeO ₆ [(F)]	M9	•	•	•		•				•							
M10 Li ₂ B ₄ O ₇	M10	•	•	•	•	•		•	•	•	•			•	•		
M11 Ag ₂₆ I ₁₈ W ₄ O ₁₆ [(F)]	M11	•	•	•		•	•				•	•					
M12 Sr ₈ [Al ₁₂ O ₂₄](CrO ₄) ₂ [F]	M12	•	•	•		•	•			•							
M13 Pb ₅ Mo ₃ O ₉ F ₁₀ group																	
M13-i Pb ₅ Mo ₃ O ₉ F ₁₀	M13-i	•		•						•							
M13-ii Pb ₅ W ₃ O ₉ F ₁₀ [F]	M13-ii	•	•	•		•	•			•		•					
M14 Pb ₅ Cr ₃ F ₁₉ group																	
M14-i Pb ₅ Al ₃ F ₁₉ [(F)(A)]	M14-i	•	•	•	•	•	•			•							
M14-ii Pb ₅ Ti ₃ F ₁₉	M14-ii	•		•													
M14-iii Pb ₅ V ₃ F ₁₉	M14-iii	•		•		•											
M14-iv Pb ₅ Cr ₃ F ₁₉ [F]	M14-iv	•	•	•	•	•	•			•							
M14-v Pb ₅ Fe ₃ F ₁₉	M14-v	•		•			•										
M14-vi Pb ₅ Ga ₃ F ₁₉	M14-vi	•		•													
M14-vii A ₃ M ₃ F ₁₉ (A = Sr, Ba; M = Al, Ti, V, Cr, Fe, Ga)	M14-vii	•		•		•				•							
M14-viii Pb ₅ Cr ₃ F ₁₉ –Pb ₅ Al ₃ F ₁₉	M14-viii	•		•	•		•										
M14-ix Pb ₅ Cr ₃ F ₁₉ –Pb ₅ Fe ₃ F ₁₉	M14-ix	•		•													
M14-x Pb ₅ Cr ₃ F ₁₉ –Sr ₅ Al ₃ F ₁₉	M14-x			•													
M14-xi Sr ₅ Cr ₃ F ₁₉ –Sr ₅ Al ₃ F ₁₉	M14-xi			•													

Oxides other than Perovskite-type and LiNbO_3 family
2002, X, 540 p. 360 illus. With CD-ROM., Hardcover
ISBN: 978-3-540-42882-4