

# Shigeomi Takai

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1948600/publications.pdf>

Version: 2024-02-01

97  
papers

813  
citations

687363

13  
h-index

610901

24  
g-index

98  
all docs

98  
docs citations

98  
times ranked

824  
citing authors

#	ARTICLE	IF	CITATIONS
1	Increased Enantioselectivity and Remarkable Acceleration of Lipase-Catalyzed Transesterification by Using an Imidazolium PEG-Alkyl Sulfate Ionic Liquid. <i>Chemistry - A European Journal</i> , 2006, 12, 9228-9237.	3.3	135
2	Powder neutron diffraction study of Ln-substituted PbWO <sub>4</sub> oxide ion conductors. <i>Solid State Ionics</i> , 2002, 148, 123-133.	2.7	50
3	Ionic conduction properties of Pb <sub>1-x</sub> MxWO <sub>4</sub> (M = Pr, Tb). <i>Materials Research Bulletin</i> , 1999, 34, 193-202.	5.2	47
4	Tracer diffusion coefficients of lithium ion in LiMn <sub>2</sub> O <sub>4</sub> measured by neutron radiography. <i>Solid State Ionics</i> , 2014, 256, 93-96.	2.7	38
5	Effect of pores formation process and oxygen plasma treatment to hydroxyapatite formation on bioactive PEEK prepared by incorporation of precursor of apatite. <i>Materials Science and Engineering C</i> , 2017, 81, 349-358.	7.3	35
6	Fabrication of Bioactive Fiber-reinforced PEEK and MXD6 by Incorporation of Precursor of Apatite. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2018, 106, 2254-2265.	3.4	25
7	Diffusion coefficient measurements of LaLiTiO using neutron radiography. <i>Solid State Ionics</i> , 2005, 176, 2227-2233.	2.7	24
8	Low-temperature heat capacities and Verwey transition of magnetite. <i>Journal of Chemical Thermodynamics</i> , 1994, 26, 1259-1266.	2.0	21
9	Synthesis and Electrochemical Properties of LATP-LLTO Lithium Ion Conductive Composites. <i>Electrochemistry</i> , 2016, 84, 967-970.	1.4	19
10	Relaxation Analysis of Li <sub>x</sub> Ni <sub>2</sub> and Li <sub>x</sub> (NCA)O <sub>2</sub> in the Deeply Lithium Extracted Region (x ≈ 0.12). <i>Journal of the Electrochemical Society</i> , 2017, 164, A1514-A1519.	2.9	18
11	Lithium ion conduction in scheelite-type oxides and analysis of lithium ion motion by neutron radiography. <i>Solid State Ionics</i> , 2001, 140, 71-76.	2.7	17
12	Structural and electrical properties of Pb-substituted La <sub>2</sub> Mo <sub>2</sub> O <sub>9</sub> oxide ion conductors. <i>Solid State Ionics</i> , 2013, 238, 36-43.	2.7	16
13	Cathode Performance of LiMn <sub>2</sub> O <sub>4</sub> Thick Films Prepared by Gas-Deposition for Lithium Rechargeable Battery. <i>Electrochemistry</i> , 2008, 76, 293-296.	1.4	13
14	Effect of Doubled Sandblasting Process and Basic Simulated Body Fluid Treatment on Fabrication of Bioactive Stainless Steels. <i>Materials</i> , 2018, 11, 1334.	2.9	13
15	Effect of local cell reaction at cathode on the performance of nickel metal-hydride battery. <i>Journal of Alloys and Compounds</i> , 2019, 772, 256-262.	5.5	12
16	Properties of the perovskite-type oxide ceramic Ca <sub>1-x</sub> La <sub>2x/3</sub> MnO <sub>3</sub> as the cathode active materials in alkaline batteries. <i>Materials Research Bulletin</i> , 1997, 32, 1359-1366.	5.2	11
17	Defect properties of mechanically alloyed La-substituted PbWO <sub>4</sub> . <i>Solid State Ionics</i> , 2000, 138, 161-168.	2.7	11
18	Relaxation Structure Analysis of the Single-Phase Reaction of LiMn <sub>0.75</sub> Fe <sub>0.25</sub> PO <sub>4</sub> . <i>Journal of the Electrochemical Society</i> , 2014, 161, A1759-A1763.	2.9	11

#	ARTICLE	IF	CITATIONS
19	Chemical transformation of PbO <sub>2</sub> due to local cell reaction on the cathode of lead acid battery. Journal of Alloys and Compounds, 2019, 780, 85-89.	5.5	11
20	Relaxation Analysis of LiNi <sub>0.5</sub> Mn <sub>1.5</sub> O <sub>4</sub> ; 5 V Cathode Material by Means of the Rietveld Refinement. Electrochemistry, 2016, 84, 808-811.	1.4	10
21	Defect Structure and Oxide Ion Conduction of Potassium Ion Substituted CaWO <sub>4</sub> . Materials, 2018, 11, 1092.	2.9	10
22	Low temperature phase transition in K <sub>2</sub> ZnCl <sub>4</sub> at 146 K. Journal of Physics and Chemistry of Solids, 1993, 54, 213-216.	4.0	9
23	PbO <sub>2</sub> Formation on the Cathode of Lead Acid Battery due to the Local Cell Reaction. Journal of the Electrochemical Society, 2016, 163, A3087-A3090.	2.9	9
24	Structural Relaxation of Li <sub>x</sub> (Ni <sub>0.874</sub> Co <sub>0.090</sub> Al <sub>0.036</sub> )O <sub>2</sub> after Lithium Extraction down to x = 0.12. Materials, 2018, 11, 1299.	2.9	9
25	Fabrication of bioactive titanium and its alloys by combination of doubled sandblasting process and alkaline simulated body fluid treatment. Journal of the Ceramic Society of Japan, 2019, 127, 669-677.	1.1	9
26	Role of Magnesium and the Effect of Surface Roughness on the Hydroxyapatite-Forming Ability of Zirconia Induced by Biomimetic Aqueous Solution Treatment. Materials, 2020, 13, 3045.	2.9	9
27	Synthesis and Characterization of LAGP-Based Lithium Ion-Conductive Composites with an LLTO Additive. Journal of Alloys and Compounds, 2021, 853, 157089.	5.5	9
28	Synthesis and Characterization of Lithium-Ion Conductive LAMP-LaPO <sub>4</sub> Composites Using La <sub>2</sub> O <sub>3</sub> Nano-Powder. Materials, 2021, 14, 3502.	2.9	9
29	Conductivity Relaxation Study of the Cubic and Tetragonal Zn <sub>2-x</sub> Ti <sub>x</sub> Ta <sub>x</sub> O <sub>4</sub> . Journal of the Electrochemical Society, 2000, 147, 272.	2.9	8
30	Synthesis of Tungsten, Molybdenum and Vanadium Bronzes by Mechanochemical Method Milling with Liquid Hydrocarbons. Electrochemistry, 2004, 72, 876-879.	1.4	8
31	Neutron Diffraction Study on the Defect Structure of Ta-Substituted Zn <sub>2</sub> TiO <sub>4</sub> Oxide Ion Conductors. Journal of the Ceramic Society of Japan, 2007, 115, 780-785.	1.1	8
32	Electrochemical properties of Cs-substituted CaWO <sub>4</sub> and BaWO <sub>4</sub> oxide ion conductors. Journal of the Ceramic Society of Japan, 2016, 124, 819-822.	1.1	8
33	Fabrication of Bioactive Co-Cr-Mo-W Alloy by Using Doubled Sandblasting Process and Apatite Nuclei Treatment. Transactions of the Materials Research Society of Japan, 2018, 43, 143-147.	0.2	8
34	Heat capacity anomalies at the Verwey transition of Fe <sub>3</sub> (AsO <sub>4</sub> ). Thermochimica Acta, 1994, 246, 1-10.	2.7	7
35	Conduction Property of PbWO <sub>4</sub> - and PbMoO <sub>4</sub> -based Oxide Ion Conductors in Lower Oxygen Partial Pressures. Electrochemistry, 2011, 79, 696-700.	1.4	7
36	Tracer diffusion coefficients measurements on LaPO <sub>4</sub> -dispersed LAMP by means of neutron radiography. Solid State Ionics, 2022, 377, 115873.	2.7	7

#	ARTICLE	IF	CITATIONS
37	X-Ray Diffraction Study on Phase Relation of BaZnGeO <sub>4</sub> . Japanese Journal of Applied Physics, 1993, 32, 4635-4640.	1.5	6
38	Enzyme Immobilization by Using Apatite Microcapsules with Magnetic Properties. Key Engineering Materials, 0, 696, 259-264.	0.4	6
39	Biomimetic Method for Production of Magnetic Hydroxyapatite Microcapsules for Enzyme Immobilization. Transactions of the Materials Research Society of Japan, 2018, 43, 153-156.	0.2	6
40	Relaxation stage analysis of lithium inserted graphite. Journal of Physics and Chemistry of Solids, 2020, 142, 109440.	4.0	6
41	Application of Cold Neutron Radiography to Study the Lithium Ion Movement in Li <sub>1.33</sub> Ti <sub>1.67</sub> O <sub>4</sub> . Electrochemistry, 1996, 64, 984-987.	0.3	6
42	Surface Modification of Carbon Fiber-Polyetheretherketone Composite to Impart Bioactivity by Using Apatite Nuclei. Materials, 2021, 14, 6691.	2.9	6
43	Defect structure of Ta- and Al-doped Zn <sub>2</sub> TiO <sub>4</sub> showing oxide ion conduction via cation vacancy. Journal of the Ceramic Society of Japan, 2008, 116, 525-529.	1.1	5
44	Development of Apatite Nuclei Precipitated Carbon Nanotube-Polyether Ether Ketone Composite with Biological and Electrical Properties. Coatings, 2020, 10, 191.	2.6	5
45	Low temperature heat capacity of $\text{Li-K}_2\text{ZnBr}_4$ and phase transition at 156 K. Journal of Physics and Chemistry of Solids, 1995, 56, 179-182.	4.0	4
46	Application of NR to Study the Lithium Ion Transfer in Solid Ionic Conductors. Key Engineering Materials, 1997, 132-136, 1393-1396.	0.4	4
47	Crystal structure analysis of $\text{Li}^3\text{-Fe}_2\text{O}_3$ with chemical lithium insertion. Solid State Ionics, 2014, 255, 50-55.	2.7	4
48	Low-temperature phase transition phenomena for bismuth-substituted La <sub>2</sub> Mo <sub>2</sub> O <sub>9</sub> . Solid State Ionics, 2014, 262, 540-542.	2.7	4
49	Differences between the Kinetically Preferred States of LiFePO <sub>4</sub> during Charging and Discharging Observed Using In Situ X-ray Diffraction Measurements. Journal of the Electrochemical Society, 2017, 164, A1281-A1284.	2.9	4
50	Synthesis and anode properties of corundum-type structured (Fe <sub>2</sub> O <sub>3</sub> ) <sub>1-x</sub> (Al <sub>2</sub> O <sub>3</sub> ) <sub>x</sub> solid solutions in the whole compositional range. Solid State Ionics, 2017, 313, 1-6.	2.7	4
51	Relaxation Analysis of Li <sub>x</sub> Ni <sub>0.8</sub> Co <sub>0.1</sub> Mn <sub>0.1</sub> O <sub>2</sub> after Lithium Extraction to High-Voltage Region (x ≈ 0.12). Journal of the Electrochemical Society, 2021, 168, 010518.	2.9	4
52	Preparation of Functional Oxide Materials by Means of Mechanical Alloying “in View of Ionic Conductive Oxides. Defect and Diffusion Forum, 2002, 206-207, 3-18.	0.4	3
53	Defects and oxide ion transport properties in the substituted Zn <sub>2</sub> TiO <sub>4</sub> . Journal of the Ceramic Society of Japan, 2010, 118, 895-898.	1.1	3
54	Effect of heat treatment time on cycle performance of LiMn <sub>2</sub> O <sub>4</sub> with “Nano Inclusion” for lithium ion batteries. RSC Advances, 2015, 5, 42455-42460.	3.6	3

#	ARTICLE	IF	CITATIONS
55	THE EFFECTS OF SBF CONDITIONS ON ENCAPSULATION OF AGAROSE GEL WITH HYDROXYAPATITE MICROCAPSULES. Phosphorus Research Bulletin, 2016, 31, 9-14.	0.6	3
56	Fabrication of Hydroxyapatite Microcapsules for Controlled Release of Hydrophobic Drug. Key Engineering Materials, 0, 720, 12-16.	0.4	3
57	Development of Bioactive PEEK by the Function of Apatite Nuclei. Key Engineering Materials, 0, 696, 145-150.	0.4	3
58	Bioactivity Treatments for Zirconium and Ti-6Al-4V Alloy by the Function of Apatite Nuclei. Key Engineering Materials, 0, 720, 175-179.	0.4	3
59	EFFECTS OF SANDBLASTING CONDITIONS IN PREPARATION OF BIOACTIVE STAINLESS STEELS BY THE FUNCTION OF APATITE NUCLEI. Phosphorus Research Bulletin, 2016, 31, 15-19.	0.6	3
60	INVESTIGATION OF EFFECTIVE PROCEDURES IN FABRICATION OF BIOACTIVE PEEK USING THE FUNCTION OF APATITE NUCLEI. Phosphorus Research Bulletin, 2016, 31, 31-37.	0.6	3
61	Low temperature phase transition phenomena in Ba- and Pb-substituted La <sub>2</sub> Mo <sub>2</sub> O <sub>9</sub> oxide ion conductors. Solid State Ionics, 2020, 354, 115405.	2.7	3
62	Immobilization and collection of enzymes by hydroxyapatite/maghemite composite particles with magnetism. Journal of the Ceramic Society of Japan, 2020, 128, 883-889.	1.1	3
63	Morphological Observation of the Mechanically Alloying (Bi <sub>2</sub> O <sub>3</sub> ) <sub>0.80</sub> (Nb <sub>2</sub> O <sub>5</sub> ) <sub>0.20</sub> . Electrochemistry, 1999, 67, 466-469.	1.4	3
64	Development of bioactive zirconium-tin alloy by combination of micropores formation and apatite nuclei deposition. IET Nanobiotechnology, 2020, 14, 701-706.	3.8	3
65	Improvement of hydroxyapatite formation ability of titanium-based alloys by combination of acid etching and apatite nuclei precipitation. IET Nanobiotechnology, 2020, 14, 688-694.	3.8	3
66	Fabrication of Bioactive Fiber Reinforced Polyetheretherketone by the Function of Apatite Nuclei. Key Engineering Materials, 0, 720, 246-251.	0.4	2
67	Fabrication of Bioactive Stainless Steel by the Function of Apatite Nuclei. Key Engineering Materials, 0, 696, 151-156.	0.4	2
68	Structural Relaxation of Li <sub>x</sub> Ni <sub>0.874</sub> Co <sub>0.090</sub> Al <sub>0.036</sub> O <sub>2</sub> after Lithium Extraction down to (x % 0.12). Journal of the Electrochemical Society, 2019, 166, A5153-A5156.	2.9	2
69	Impartation of hydroxyapatite formation ability to ultra-high molecular weight polyethylene by deposition of apatite nuclei. IET Nanobiotechnology, 2020, 14, 673-679.	3.8	2
70	A COMPARITIVE IN VITRO BIOACTIVY EVALUATION OF POLYVINYLIDENE FLUORIDE AND POLYCAPROLACTONE INCORPORATED WITH AMORPHOUS CALCIUM PHOSPHATE PARTICLES. Phosphorus Research Bulletin, 2020, 36, 15-22.	0.6	2
71	Relaxation Analysis of Graphite Anode Materials after Charge-Discharge Cycles. Electrochemistry, 2020, 88, 434-436.	1.4	2
72	Improved cathode performance and relaxation properties of LiMn <sub>2</sub> O <sub>4</sub> prepared by optimized ball-milling with single-step sintering. Journal of the Ceramic Society of Japan, 2021, 129, 744-752.	1.1	2

#	ARTICLE	IF	CITATIONS
73	Dependence property of isoelectric points and pH environment on enzyme immobilization on maghemite/hydroxyapatite composite particles. Journal of the Ceramic Society of Japan, 2022, 130, 74-80.	1.1	2
74	Lead acid battery with high resistance to overcharge using graphite based materials as cathode current collector. Nano Select, 0, .	3.7	2
75	Mechanical Alloying of the Perovskite-Type Structured Powder of $\text{La}_{2/3-x}\text{Li}_{3x}\text{TiO}_3$ Showing Lithium Ion Conduction. Materials Science Forum, 1998, 269-272, 93-98.	0.3	1
76	Fabrication of Bioactive Cobalt-Chromium Alloys by Incorporation of Apatite Nuclei. Key Engineering Materials, 2016, 720, 180-184.	0.4	1
77	Fabrication of Bioactive Glass Fiber Reinforced Polyamide with High Mechanical Performance by the Function of Apatite Nuclei. Key Engineering Materials, 2016, 720, 241-245.	0.4	1
78	Bioactivity Treatment to Polylactic Acid Fabric Cloth and Foam by Precipitation of Apatite Nuclei. Transactions of the Materials Research Society of Japan, 2018, 43, 139-142.	0.2	1
79	Relaxation analysis of NCAs in high-voltage region and effect of cobalt content. Journal of Electroanalytical Chemistry, 2020, 878, 114566.	3.8	1
80	Lead Acid Battery with Composite Cathode of Active Material and Graphite Current Collector. ECS Meeting Abstracts, 2021, MA2021-01, 1989-1989.	0.0	1
81	Thickness Effect of Composite Cathode of Active Material and Graphite Current Collector on Performance of Lead Acid Battery. ECS Meeting Abstracts, 2021, MA2021-02, 1694-1694.	0.0	1
82	Electrochemical Properties of Cs and La Co-doped $\text{CaWO}_4$ Oxide Ion Conductor. Electrochemistry, 2022, 90, 027004-027004.	1.4	1
83	Crystal chemical investigation of nano inclusion in $\text{LiMn}_2\text{O}_4$ cathode material of lithium ion battery. RSC Advances, 2014, 4, 59858-59861.	3.6	0
84	Fabrication of Bone-Like Apatite-Phosphatidylcholine Composite Thin Film by Biomimetic Method. Key Engineering Materials, 0, 696, 40-44.	0.4	0
85	Effect of Isoelectric Point on Enzyme Immobilization Property of Magnetic Apatite Microcapsules Encapsulating Maghemite. Key Engineering Materials, 0, 758, 178-183.	0.4	0
86	Bioactivity Treatment for Co-Cr-Mo Alloy by Precipitation of Low Crystalline Calcium Phosphate Using Simulated Body Fluid with Alkalinized Condition. Funtai Oyobi Fummtsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 2018, 65, 211-214.	0.2	0
87	Enzyme Immobilization Behavior on the Surface of Hydroxyapatite Capsules under Alkaline Condition. Key Engineering Materials, 2018, 782, 21-26.	0.4	0
88	Effect of Oxygen Plasma Treatment on Fabrication of Bioactive Ultrahigh Molecular Weight Polyethylene Composite. Funtai Oyobi Fummtsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy, 2018, 65, 207-210.	0.2	0
89	Development of Bioactive Apatite Nuclei-Precipitated Ti-12Ta-9Nb-6Zr-3V-O Alloy. Key Engineering Materials, 2019, 829, 125-130.	0.4	0
90	Fabrication of Bioactive Zirconia by Doubled Sandblasting Process and Incorporation of Apatite Nuclei. Key Engineering Materials, 2019, 829, 151-156.	0.4	0

#	ARTICLE	IF	CITATIONS
91	Performance of Lead Acid Battery Using Graphite Composite Current Collector. ECS Meeting Abstracts, 2021, MA2021-01, 1990-1990.	0.0	0
92	TEM Observation of LaPO <sub>4</sub> -Dispersed LTP Lithium-Ion Conductor. Electrochemistry, 2021, 89, 480-483.	1.4	0
93	Visualization of Electric Field in Ion Conductive Oxides using Neutron Computed Tomography. Journal of the Visualization Society of Japan, 2000, 20, 375-376.	0.0	0
94	Diffusion Coefficient Measurements in Lithium Ion Conductive Oxides by means of Neutron Radiography. Hamon, 2006, 16, 168-173.	0.0	0
95	Effective Procedure of Bioactivity Treatment to Bearing Grade PEEK by Incorporation of Apatite Nuclei. Transactions of the Materials Research Society of Japan, 2018, 43, 149-152.	0.2	0
96	Impartation of apatite-forming ability to chitosan nanofibres by using apatite nuclei. IET Nanobiotechnology, 2020, 14, 668-672.	3.8	0
97	Evaluation of calcium phosphate coating on biodegradable Mg-Al-Zn-Ca alloy formed under ordinary conditions on temperature and pressure. Journal of the Ceramic Society of Japan, 2022, 130, 81-87.	1.1	0