2023

Fundamentals, advances and perspectives of piezocatalysis: A marriage of solid-state physics and catalytic chemistry.

Structure and Conductivity in LISICON Analogues within the Li4GeO4-Li2MoO4 System.

Microwave characterization of two Ba 0.6 Sr 0.4 TiO 3 dielectric thin films with out-of-plane and in-plane electrode structures.

High-entropy MTiO3 perovskite oxides with glass-like thermal conductivity for thermoelectric applications.

Achieving Ultrahigh Energy Storage Density of La and Ta Codoped AgNbO3 Ceramics by Optimizing the Field-Induced Phase Transitions.

Structural evolution and coexistence of ferroelectricity and antiferromagnetism in Fe, Nb co-doped BaTiO3 ceramics.

Effect of Ag+ doping and Ag addition on the thermoelectric properties of KSr2Nb5O15.

Relaxor ferroelectric behaviour observed in (Ca0.5Sr0.5Ba0.5Pb0.5)Nb2O7 perovskite layered structure ceramics.

Simultaneous Increase in Dielectric Breakdown Strength and Thermal Conductivity of Oriented UHMWPE Containing Diamond Nanoparticles.

2022

Local Structure in -BIMEVOXes (ME = Ge, Sn).

Deciphering the peculiar hysteresis loops of 0.05Pb(Mn1/3Sb2/3)O30.95Pb(Zr0.52Ti0.48)O3 piezoelectric ceramics.

Grain orientation evolution and multi-scale interfaces enhanced thermoelectric properties of textured Sr0.9La0.1TiO3 based ceramics.

In-situ growth of carbon nanotubes on ZnO to enhance thermoelectric and mechanical properties.

Terahertz Faraday Rotation of SrFe12O19 Hexaferrites Enhanced by Nb Doping.

Effect of composition on the dielectric properties and thermal conductivity of -SiAlON ceramics.

Magnetoelectric coupling at microwave frequencies observed in bismuth ferrite-based multiferroics at room temperature.

Low thermal conductivity in A-site high entropy perovskite relaxor ferroelectric.

Dielectric polymer composites with ultra-high thermal conductivity and low dielectric loss.

Enhancement of Thermoelectric Performance in Bi0.5Sb1.5Te3Particulate Composites Including Ferroelectric BaTiO3 Nanodots.

A novel high-entropy perovskite ceramics Sr0.9La0.1(Zr0.25Sn0.25Ti0.25Hf0.25)O3 with low thermal conductivity and high Seebeck coefficient.

Chemical Solution Deposition of Single-Phase BiFeO3 Thin Films on Transparent Substrates.

Silver niobate perovskites: structure, properties and multifunctional applications.

Effect of La3+, Ag+ and Bi3+ doping on thermoelectric properties of SrTiO3: First-principles investigation.

Low-cost Free-standing ferroelectric polymer films with high polarization produced via pressing-and-folding.

Reduced lattice thermal conductivity of perovskite-type high-entropy (Ca0.25Sr0.25Ba0.25RE0.25)TiO3 ceramics by phonon engineering for thermoelectric applications.


High-entropy (Ca0.2Sr0.2Ba0.2La0.2Pb0.2)TiO3 perovskite ceramics with A-site short-range disorder for thermoelectric applications. Zhang P, Lou Z, Qin M, Xu J, Zhu J, Shi Z, Chen Q, Reece MJ, Yan H and Gao F. Journal of Materials Science and Technology vol. 97, 182-189.


2021


Electric field-induced transformations in bismuth sodium titanate-based materials.

Cationic Polymer Brush-Coated Bioglass Nanoparticles for the Design of Bioresorbable RNA Delivery Vectors.

Structural Evolution in BiNbO4.

Grain orientation evolution and thermoelectric properties of textured (Ca0.87Ag0.1La0.03)3Co4O9 ceramics prepared by tape casting.

Tunable phase transitions in NaNbO3ceramics through bismuth/vacancy modification.

TeraHertz Reading of Ferroelectric Domain Wall Dielectric Switching.

Investigation of transitions between the M-phases in AgNbO 3 based ceramics.

Effect of processing on the structures and properties of bismuth sodium titanate compounds.

Multi elements substituted Aurivillius phase relaxor ferroelectrics using high entropy design concept.

Response to comment on point defect structure of La-doped SrTiO3 ceramics with colossal permittivity.

Ferroelectric and photocatalytic properties of Aurivillius phase Ca2Bi4Ti5O18.

2020

Temperature-dependent deformation processes in two-phase TiAl+Ti3Al nano-polycrystalline alloys.

Ultrafast Electric Field-Induced Phase Transition in Bulk Bi0.5Na0.5TiO3 under High-Intensity Terahertz Irradiation.

Perovskite Bi0.5Na0.5TiO3-based materials for dielectric capacitors with ultrahigh thermal stability.

High Tunability and Low Loss in Layered Perovskite Dielectrics through Intrinsic Elimination of Oxygen Vacancies.
Low-loss High Entropy Relaxor-like Ferroelectrics with A-site Disorder.

Structure and dielectric properties of double A-site doped bismuth sodium titanate relaxor ferroelectrics for high power energy storage applications.

Multiscale understanding of electric polarization in poly(vinylidene fluoride)-based ferroelectric polymers.

Enhanced dielectric properties of highly dense Ba0.5Sr0.5TiO3 ceramics via non-toxic gelcasting.

Phase transitions in RbPrNb2O7, a layer structured ferroelectric with a high Curie point.


Solution-Processed Epitaxial Growth of Arbitrary Surface Nanopatterns on Hybrid Perovskite Monocrystalline Thin Films.

Room-temperature multiferroic behavior in layer-structured Aurivillius phase ceramics.

Interactive human-machine learning framework for modelling of ferroelectric-dielectric composites.

Ultrahigh field-induced strain in lead-free ceramics.

Boosting the Thermoelectric Performance of Calcium Cobaltite Composites through Structural Defect Engineering.

Cobalt-induced structural modulation in multiferroic Aurivillius-phase oxides.

Colossal thermoelectric enhancement in Cu2+xZn1xSn54solid solution by local disordering of crystal lattice and multi-scale defect engineering.

High Thermoelectric Performance in SnTe Nanocomposites with All-Scale Hierarchical Structures.

Polar nano-clusters in nominally paraelectric ceramics demonstrating high microwave tunability for wireless communication.
Ferroelectrics: Terahertz Probing Irreversible Phase Transitions Related to Polar Clusters in Bi0.5Na0.5TiO3Based Ferroelectric (Adv. Electron. Mater. 4/2020).

Pressure induced structure distortion in ferroelectrics with high Curie point and enhanced piezoelectric properties.

Giant energy storage density in PVDF with internal stress engineered polar nanostructures.

Terahertz Probing Irreversible Phase Transitions Related to Polar Clusters in Bi0.5Na0.5TiO3Based Ferroelectric.

Effect of MnO2 on the microstructure and electrical properties of 0.83Pb(Zr0.5Ti0.5)O3-0.11Pb(Zn1/3Nb2/3)O3-0.06Pb(Ni1/3Nb2/3)O3 piezoelectric ceramics.

Microstructure and thermoelectric performance of La-doped (Ca0.9Ag0.1)3Co4O9/nano-sized Ag composite ceramics.

The contribution of electrical conductivity, dielectric permittivity and domain switching in ferroelectric hysteresis loops.


2019

Ultrahigh -phase content poly(vinylidene fluoride) with relaxor-like ferroelectricity for high energy density capacitors.

Dielectric and ferroelectric properties of BTFCO thin films.

Isolation of a ferroelectric intermediate phase in antiferroelectric dense sodium niobate ceramics.

Relaxor behavior and photocatalytic properties of BaBi2Nb2O9.

Symmetry-mode analysis for intuitive observation of structure-property relationships in the lead-free antiferroelectric (1-x)AgNbO3-xLiTaO3.

Multiferroic properties of single phase Bi 3 NbTiO 9 based textured ceramics.
Spark plasma sintering of grain-oriented Sr2Bi4Ti5O18 aurivillius phase ceramics.

Orthoenstatite to forsterite phase transformation in magnesium germanate ceramics.

Microstructure and broadband dielectric properties of Zn 2 SiO 4 ceramics with nano-sized TiO 2 addition.

Bi 2 Fe 4 O 9 thin films as novel visible-light-active photoanodes for solar water splitting.

Orthoenstatite to forsterite phase transformation in magnesium germanate ceramics.

Microstructure and broadband dielectric properties of Zn 2 SiO 4 ceramics with nano-sized TiO 2 addition.

Bi 2 Fe 4 O 9 thin films as novel visible-light-active photoanodes for solar water splitting.

Phase transitions in tantalum-modified silver niobate ceramics for high power energy storage.

2018

Crystal structure and electrical properties of textured Ba2Bi4Ti5O18 ceramics.

Enhanced piezoelectric properties and electrocaloric effect in novel lead-free (Bi0.5K0.5)TiO3-La(Mg0.5Ti0.5)O3ceramics.

Preparation and mechanical performance of graphene platelet reinforced titanium nanocomposites for high temperature applications.

Point defect structure of La-doped SrTiO3 ceramics with colossal permittivity.

Microstructure characterization and thermoelectric properties of Sr0.9La0.1TiO3 ceramics with nano-sized Ag as additive.

Enhanced thermoelectric performance of Sn-doped Cu3SbS4.

Electric-field-induced local distortion and large electrostrictive effects in lead-free NBT-based relaxor ferroelectrics.
Crystal Chemistry and Magnetic Properties of Gd-Substituted Aurivillius-Type Bi5FeTi3O15 Ceramics.

Peroxskite Sr(xBi1-xNa0.97Li0.03)0.5TiO3 ceramics with polar nano regions for high power energy storage.

SrFe12O19 based ceramics with ultra-low dielectric loss in the millimetre-wave band.

Bi3.25La0.75Ti2.5Nb0.25(Fe0.5Co0.5)0.25O12, a single phase room temperature multiferroic.

Enhanced dielectric tunability and energy storage properties of plate-like Ba0.6Sr0.4TiO3/poly(vinylidene fluoride) composites through texture arrangement.

2017

Giant electrostrain accompanying structural evolution in lead-free NBT-based piezoceramics.

Phase evolution and electrical behaviour of samarium-substituted bismuth ferrite ceramics.


Ordered coalescence of nano-crystals in alkaline niobate ceramics with high remanent polarization.

Phase transitions in bismuth-modified silver niobate ceramics for high power energy storage.

Topochemical transformation of two-dimensional single crystalline Na0.5Bi0.5TiO3-BaTiO3 platelets from Na0.5Bi4.5Ti4O15 precursors and their piezoelectricity.

Phase-composition and temperature dependence of electrocaloric effect in lead-free Bi0.5Na0.5TiO3-BaTiO3-(Sr0.7Bi0.20.1)TiO3 ceramics.

TypeI pseudofirstorder phase transition induced electrocaloric effect in leadfree Bi0.5Na0.5TiO30.06BaTiO3 ceramics.

Microstructural comparison of effects of hafnium and titanium additions in spark-plasma-sintered Fe-based oxide-dispersion strengthened alloys.

Effect of Phase Transitions on Thermal Depoling in Lead-Free 0.94(Bi0.5Na0.5TiO3)0.06(BaTiO3) Based Piezoelectrics.
Terbium-induced phase transitions and weak ferromagnetism in multiferroic bismuth ferrite ceramics.

2016

**Theory-Guided Synthesis of an Eco-Friendly and Low-Cost Copper Based Sulfide Thermoelectric Material.**

Carriers concentration tailoring and phonon scattering from n-type zinc oxide (ZnO) nano inclusion in p- and n-type bismuth telluride (Bi2Te3): Leading to ultra low thermal conductivity and excellent thermoelectric properties.

Room temperature magnetoelectric coupling in intrinsic multiferroic Aurivillius phase textured ceramics.

Growth of SiC platelets using contactless flash technique.

**High energy density in silver niobate ceramics.**

**Tuning the electrocaloric enhancement near the morphotropic phase boundary in lead-free ceramics.**

Lead free Bi3TaTiO9 ferroelectric ceramics with high Curie point.

**Strain-Dependent Dielectric Behavior of Carbon Black Reinforced Natural Rubber.**

Crystallographic Structure and Ferroelectricity of (AxA1-x)2Ti2O7 (A = Sm and Eu) Solid Solutions with High Tc.

Efficacy of lone-pair electrons to engender ultralow thermal conductivity.

2015

A High Curie Point Ferroelectric Ceramic Ca3(VO4)2.
Ning H, Yan H and Reece MJ. *Ferroelectrics* vol. 487, (1) 94-100.

**Dielectric relaxation and electrical conductivity in Ca5Nb4TiO17 ceramics.**
Li C, Wei X, Fang L, Yan H and Reece MJ. *Ceramics International* vol. 41, (8) 9923-9930.

Role of synthesis method on microstructure and mechanical properties of graphene/carbon nanotube toughened Al2O3 nanocomposites.

Unfolding grain size effects in barium titanate ferroelectric ceramics.

**Processing and microstructure characterisation of oxide dispersion strengthened Fe-14Cr-0.4Ti-0.25Y2O3 ferritic steels fabricated by spark plasma sintering.**
Effect of Ca substitution sites on dielectric properties and relaxor behavior of Ca doped barium strontium titanate ceramics.

Study on properties of tantalum-doped La2Ti2O7 ferroelectric ceramics.

Reduced thermal conductivity by nanoscale intergrowths in perovskite like layered structure La2Ti2O7.

Ferroelectricity in Dion-Jacobson ABiNb2O7 (A = Rb, Cs) compounds.

Microwave and terahertz dielectric properties of MgTiO3-CaTiO3 ceramics.

Enhancement of electric field-induced strain in BaTiO3 ceramics through grain size optimization.

Ferroelectric and dielectric properties of nd2xcexti2o7 ceramics.
Gao ZP, Shi B, Ye H, Yan HX and Reece MJ. *Advances in Applied Ceramics* vol. 114, (4) 191-197.

Effect of different templates on structure evolution and large strain response under a low electric field in &lt;001&gtc; textured lead-free BNT-based piezoelectric ceramics.

2014

Dielectric relaxation and electrical conductivity in Ca5Nb4TiO17 ceramics.

Short range polar state transitions and deviation from Rayleigh-type behaviour in Bi0.5Na0.5TiO3-based perovskites.

Spark plasma sintering of alumina composites with graphene platelets and silicon carbide nanoparticles.

Enhancement of thermoelectric properties by atomic-scale percolation in digenite CuxS.

Large ZT enhancement in hot forged nanostructured p-type Bi 0.5Sb1.5Te3 bulk alloys.

Lithium-induced phase transitions in lead-free Bi0.5Na0.5TiO3 based ceramics.

Effect of dysprosium substitution on crystal structure and physical properties of multiferroic BiFeO3 ceramics.

High field ZnO varistors prepared by spark plasma sintering.

Utilizing the phonon glass electron crystal concept to improve the thermolectric properties of combined Yb-stuffed and Te-substituted CoSb 3.

Low-temperature magnetic and dielectric anomalies in rare-earth-substituted BiFeO3 ceramics.

Three layer perovskite-like structured Pr3Ti2TaO11 ferroelectrics with super-high curie point.

2013

MgAl2O4-LaCr0.5Mn0.5O 3 composite ceramics for high temperature NTC thermistors.

Effect of grain size on domain structures, dielectric and thermal depoling of Nd-substituted bismuth titanate ceramics.

Effects of zinc substitution on the dielectric properties of Ca5Nb4TiO17 microwave ceramics.

Effect of donor dopants cerium and tungsten on the dielectric and electrical properties of high Curie point ferroelectric strontium niobate.

Mechanical properties of graphene platelet-reinforced alumina ceramic composites.

Dielectric relaxation, lattice dynamics and polarization mechanisms in Bi0.5Na0.5TiO3-based lead-free ceramics.

Microwave dielectric properties of CaO-La2O3-Nb 2O5-TiO2 ceramics.

Piezoelectric and dielectric properties of Ce substituted La2Ti2O7 ceramics.

The effect of barium substitution on the ferroelectric properties of Sr2 Nb2 O7 Ceramics.

Reverse boundary layer capacitor model in glass/ceramic composites for energy storage applications.

Effect of donor dopants cerium and tungsten on the dielectric and electrical properties of high Curie point ferroelectric strontium niobate.

Effect of Fe Substitution on Thermoelectric Properties of Fe (x) In4-x Se-3 Compounds.

Ferroelectricity of Pr2Ti2O7 ceramics with super high Curie point.
Gao ZP, Yan HX, Ning HP and Reece MJ. Advances in Applied Ceramics vol. 112, (2) 69-74.
Active ferroelectricity in nanostructured multiferroic BiFeO3 bulk ceramics.

Contribution of piezoelectric effect, electrostriction and ferroelectric/ferroelastic switching to strain-electric field response of dielectrics.

2012

Microwave dielectric properties of La 3Ti 2TaO 11 ceramics with perovskite-like layered structure.

Toughening of zirconia/alumina composites by the addition of graphene platelets.

Ferroelectric ceramics with enhanced remnant polarization by ordered coalescence of nano-crystals.

Reversibility in electric field-induced transitions and energy storage properties of bismuth-based perovskite ceramics.

Spherical instrumented indentation of porous nanocrystalline zirconia.

Phase stability and rapid consolidation of hydroxyapatite-zirconia nano-coprecipitates made using continuous hydrothermal flow synthesis.

Analysis of femtosecond laser surface patterning on bulk single-crystalline diamond.

Kinetics of Densification and Grain Growth of Pure Tungsten During Spark Plasma Sintering.

2011

Ferroelectric domain structures and electrical properties of fine-grained lead-free sodium potassium niobate ceramics.

Magneto-electric properties of multiferroic Pb(Zr0.52Ti 0.48)O3-NiFe2O4 nanoceramic composites.

High-strength nanograined and translucent hydroxyapatite monoliths via continuous hydrothermal synthesis and optimized spark plasma sintering.

THE CONTRIBUTION OF ELECTRICAL CONDUCTIVITY, DIELECTRIC PERMITTIVITY AND DOMAIN SWITCHING IN FERROELECTRIC HYSTERESIS LOOPS.

Yao X.
2010


Textured high Curie point piezoelectric ceramics prepared by spark plasma sintering. Yan HX, Ning HP, Zhang HT and Reece MJ. Adv Appl Ceram vol. 109, (3) 139-142.


2009


The effect of Nd substitution on the electrical properties of Bi3NbTiO9 Aurivillius phase ceramics.

High-temperature ferroelectric phase transition observed in multiferroic Bi0.91La0.05Tb0.04FeO3.

2008

Effect of a site substitution on the properties of CaBi2Nb 2O9 ferroelectric ceramics.
Zhang X, Yan H and Reece MJ. *Journal of The American Ceramic Society* vol. 91, (9) 2928-2932.

Dimethylformamide: an effective dispersant for making ceramic-carbon nanotube composites.

Luminescence of Sr2SiO4-xN2x/3 : Eu2+ phosphors prepared by spark plasma sintering.

2007

Dielectric, piezoelectric, and ferroelectric properties of grain-orientated Bi3.25La0.75Ti3O12 ceramics.

Effect of annealing on dielectric behavior and electrical conduction of W6+ doped Bi3TiNbO9 ceramics.

2006

Lanthanum distribution and dielectric properties of Bi3-xLaxTiNbO9 bismuth layer-structured ceramics.
Zhou ZY, Dong XL and Yan HX. *Scripta Mater* vol. 55, (9) 791-794.

Effect of texture on dielectric properties and thermal depoling of Bi4Ti3O12 ferroelectric ceramics.

B-site donor and acceptor doped Aurivillius phase Bi3NbTiO9 ceramics.

Dielectric relaxation of La3+-modified Bi3TiNbO9 Aurivillius phase ceramics.
Zhou ZY, Dong XL, Huang SM and Yan HX. *J Am Ceram Soc* vol. 89, (9) 2939-2942.

Orientation dependence of dielectric and relaxor behaviour in Aurivillius phase BaBi2Nb2O9 ceramics prepared by spark plasma sintering.

Doping effects on the electrical conductivity of bismuth layered Bi3TiNbO9-based ceramics.
Zhou ZY, Dong XL, Yan HX, Chen H and Mao CL. *J Appl Phys* vol. 100, (4).

Structural and electrical properties of W6+-doped Bi3TiNbO9 high-temperature piezoceramics.

2005

Thermal depoling of high Curie point Aurivillius phase ferroelectric ceramics.

A LeadFree HighCuriePoint Ferroelectric Ceramic, CaBi2Nb2O9.

A lead-free high-Curie-point ferroelectric ceramic, CaBi2Nb2O9.

Effective grain alignment in Bi4Ti3O12 ceramics by superplastic-deformation-induced directional dynamic ripening.
Dielectric properties of single crystal diamond.
Ye HT, Yan HX and Jackman RB. *Semicond Sci Tech* vol. 20, (3) 296-298.

2004

The effect of (Li,Ce) and (K,Ce) doping in Aurivillius phase material CaBi4Ti4O15.

Grain orientation effects on the properties of a bismuth layer-structured ferroelectric (BLSF) Bi3NbTiO9 solid solution.

2003

Preparation and electrical properties of bismuth layer-structured ceramic Bi3NbTiO9 solid solution.

Influence of sintering temperature on the properties of high T-c bismuth layer structure ceramics.

2002

Formation of magnesium niobates in the MgO-Nb2O5 system and the effects of Fe2O3.

Formation of columbite-type precursors in the mixture of MgO-Fe2O3-Nb2O5 and the effects on fabrication of perovskites.

Effects of A-site (NaCe) substitution with Na-deficiency on structures and properties of CaBi4Ti4O15-based high- Curie-temperature ceramics.

Effects of Cr2O3 addition on the piezoelectric properties and microstructure of PbZrxTiy(Mg1/3Nb2/3)(1-x-y)O-3 ceramics.

Effects of processing routes on structures and dielectric properties of lead iron niobate-lead magnesium niobate binary system.

2001

Study on low frequency internal friction for Pb(Zr,Ti)O3 ferroelectric ceramics.

Anomalous internal friction in lead metaniobate ceramics.
He LX, Li CE, Yan HX and Chen TG. *Journal of Applied Physics* vol. 87, (6) 3186-3188.

A-site (MCo) substitution effects on the structures and properties of CaBi4Ti4O15 ceramics.

Low-frequency internal friction study on modified lead metaniobate ceramics.
He LX, Li CE, Chen TG and Yan HX. *Chinese Physics* vol. 9, (2) 149-152.

© 2023 List created 10/09/2023