

# Venkataraman Thangadurai

## List of Publications by Citations

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182  
papers

10,546  
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100  
g-index

209  
ext. papers

12,476  
ext. citations

7.4  
avg, IF

6.86  
L-index

#	Paper	IF	Citations
182	Fast lithium ion conduction in garnet-type Li(7)La(3)Zr(2)O(12). <i>Angewandte Chemie - International Edition</i> , <b>2007</b> , 46, 7778-81	16.4	1876
181	Negating interfacial impedance in garnet-based solid-state Li metal batteries. <i>Nature Materials</i> , <b>2017</b> , 16, 572-579	27	1192
180	Garnet-type solid-state fast Li ion conductors for Li batteries: critical review. <i>Chemical Society Reviews</i> , <b>2014</b> , 43, 4714-27	58.5	934
179	Anhydrous proton conduction at 150 °C in a crystalline metal-organic framework. <i>Nature Chemistry</i> , <b>2009</b> , 1, 705-10	17.6	640
178	Novel Fast Lithium Ion Conduction in Garnet-Type Li5La3M2O12 (M = Nb, Ta). <i>Journal of the American Ceramic Society</i> , <b>2003</b> , 86, 437-440	3.8	549
177	Electrolyte selection for supercapacitive devices: a critical review. <i>Nanoscale Advances</i> , <b>2019</b> , 1, 3807-3835	35.1	337
176	Garnet-Type Solid-State Electrolytes: Materials, Interfaces, and Batteries. <i>Chemical Reviews</i> , <b>2020</b> , 120, 4257-4300	68.1	271
175	Recent progress in solid oxide and lithium ion conducting electrolytes research. <i>Ionics</i> , <b>2006</b> , 12, 81-92	2.7	250
174	Li6Ala2Nb2O12 (A=Ca, Sr, Ba): A New Class of Fast Lithium Ion Conductors with Garnet-Like Structure. <i>Journal of the American Ceramic Society</i> , <b>2005</b> , 88, 411-418	3.8	215
173	A bird's-eye view of Li-stuffed garnet-type Li7La3Zr2O12 ceramic electrolytes for advanced all-solid-state Li batteries. <i>Energy and Environmental Science</i> , <b>2019</b> , 12, 2957-2975	35.4	192
172	Fast Solid-State Li Ion Conducting Garnet-Type Structure Metal Oxides for Energy Storage. <i>Journal of Physical Chemistry Letters</i> , <b>2015</b> , 6, 292-9	6.4	158
171	Crystal Structure Revision and Identification of Li+-Ion Migration Pathways in the Garnet-like Li5La3M2O12 (M = Nb, Ta) Oxides. <i>Chemistry of Materials</i> , <b>2004</b> , 16, 2998-3006	9.6	147
170	External-stimuli responsive photophysics and liquid crystal properties of self-assembled "phosphole-lipids". <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 17014-26	16.4	131
169	Interface in Solid-State Lithium Battery: Challenges, Progress, and Outlook. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 22029-22050	9.5	127
168	Effect of sintering on the ionic conductivity of garnet-related structure Li5La3Nb2O12 and In- and K-doped Li5La3Nb2O12. <i>Journal of Solid State Chemistry</i> , <b>2006</b> , 179, 974-984	3.3	125
167	Trends in electrode development for next generation solid oxide fuel cells. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 17913-17932	13	97
166	Bio-inspired phosphole-lipids: from highly fluorescent organogels to mechanically responsive FRET. <i>Angewandte Chemie - International Edition</i> , <b>2012</b> , 51, 3964-8	16.4	97

- 165 Li<sub>2</sub>CO<sub>3</sub>: A Critical Issue for Developing Solid Garnet Batteries. *ACS Energy Letters*, **2020**, 5, 252-262 20.1 96
- 164 Structure and lithium ion conductivity of bismuth containing lithium garnets Li<sub>5</sub>La<sub>3</sub>Bi<sub>2</sub>O<sub>12</sub> and Li<sub>6</sub>SrLa<sub>2</sub>Bi<sub>2</sub>O<sub>12</sub>. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2007**, 143, 14-20 3.1 84
- 163 Engineering Materials for Progressive All-Solid-State Na Batteries. *ACS Energy Letters*, **2018**, 3, 2181-2192 20.1 78
- 162 LiF modified stable flexible PVDF-garnet hybrid electrolyte for high performance all-solid-state Li-ion batteries. *Energy Storage Materials*, **2020**, 24, 198-207 19.4 77
- 161 Enhancing Li Ion Conductivity of Garnet-Type Li<sub>5</sub>La<sub>3</sub>Nb<sub>2</sub>O<sub>12</sub> by Y- and Li-Codoping: Synthesis, Structure, Chemical Stability, and Transport Properties. *Journal of Physical Chemistry C*, **2012**, 116, 20154-20162 3.8 75
- 160 Soft-Chemistry of Garnet-Type Li<sub>5+x</sub>Ba<sub>x</sub>La<sub>3-2x</sub>Nb<sub>2</sub>O<sub>12</sub> (x = 0, 0.5, 1): Reversible H<sup>+</sup> <-jLi<sup>+</sup> Ion-Exchange Reaction and Their X-ray, <sup>7</sup>Li MAS NMR, IR, and AC Impedance Spectroscopy Characterization. *Chemistry of Materials*, **2011**, 23, 3970-3977 9.6 72
- 159 Lithium ion conductivity of Li<sub>5+x</sub>Ba<sub>x</sub>La<sub>3-2x</sub>Ta<sub>2</sub>O<sub>12</sub> (x = 0-2) with garnet-related structure in dependence of the barium content. *Ionics*, **2007**, 13, 195-203 2.7 70
- 158 Sr-rich chromium ferrites as symmetrical solid oxide fuel cell electrodes. *Journal of Power Sources*, **2013**, 236, 68-79 8.9 68
- 157 Present understanding of the stability of Li-stuffed garnets with moisture, carbon dioxide, and metallic lithium. *Journal of Power Sources*, **2018**, 390, 297-312 8.9 66
- 156 Lattice Parameter and Sintering Temperature Dependence of Bulk and Grain-Boundary Conduction of Garnet-like Solid Li-Electrolytes. *Journal of the Electrochemical Society*, **2008**, 155, A90 3.9 64
- 155 Amphoteric oxide semiconductors for energy conversion devices: a tutorial review. *Chemical Society Reviews*, **2013**, 42, 1961-72 58.5 62
- 154 Evaluation of fundamental transport properties of Li-excess garnet-type Li<sub>(5+2x)</sub>La<sub>(3)</sub>Ta<sub>(2-x)</sub>Y<sub>(x)</sub>O<sub>(12)</sub> (x = 0.25, 0.5 and 0.75) electrolytes using AC impedance and dielectric spectroscopy. *Physical Chemistry Chemical Physics*, **2014**, 16, 11356-65 3.6 61
- 153 Tailor-made development of fast Li ion conducting garnet-like solid electrolytes. *ACS Applied Materials & Interfaces*, **2010**, 2, 385-90 9.5 59
- 152 Structure and lithium ion conductivity of garnet-like Li<sub>5</sub>La<sub>3</sub>Sb<sub>2</sub>O<sub>12</sub> and Li<sub>6</sub>SrLa<sub>2</sub>Sb<sub>2</sub>O<sub>12</sub>. *Materials Research Bulletin*, **2008**, 43, 2579-2591 5.1 58
- 151 Highly conductive Li garnets by a multielement doping strategy. *Inorganic Chemistry*, **2015**, 54, 3600-7 5.1 57
- 150 Chemically stable proton conducting doped BaCe<sub>0.9</sub>no more fear to SOFC wastes. *Scientific Reports*, **2013**, 3, 2138 4.9 55
- 149 Effect of composition and microstructure on electrical properties and CO<sub>2</sub> stability of donor-doped, proton conducting BaCe<sub>1-x/4</sub>(x+y)Zr<sub>x</sub>Nb<sub>y</sub>O<sub>3</sub>. *Journal of Materials Chemistry A*, **2014**, 2, 2363 13 52
- 148 New lithium-ion conductors based on the NASICON structure. *Journal of Materials Chemistry*, **1999**, 9, 739-741 52

- 147 Facile proton conduction in H<sup>+</sup>/Li<sup>+</sup> ion-exchanged garnet-type fast Li-ion conducting Li<sub>5</sub>La<sub>3</sub>Nb<sub>2</sub>O<sub>12</sub>. *Journal of Materials Chemistry A*, **2013**, 1, 13469 13 49
- 146 Synthesis, Structure and Electrical Properties of Mo-doped CeO<sub>2</sub> Materials for SOFCs. *Fuel Cells*, **2009**, 9, 684-698 2.9 48
- 145 Simple Protocol for Generating TiO<sub>2</sub> Nanofibers in Organic Media. *Chemistry of Materials*, **2008**, 20, 7022-7030 4.8 48
- 144 Chemical synthesis of Ca-doped CeO<sub>2</sub> Intermediate temperature oxide ion electrolytes. *Journal of Power Sources*, **2007**, 168, 178-183 8.9 48
- 143 Mixed ionic-electronic conductivity in phases in the praseodymium oxide system. *Journal of Solid State Electrochemistry*, **2001**, 5, 531-537 2.6 47
- 142 X-ray Photoelectron Spectroscopy and AC Impedance Spectroscopy Studies of Li-La-Zr-O Solid Electrolyte Thin Film/LiCoO<sub>2</sub>Cathode Interface for All-Solid-State Li Batteries. *Journal of the Electrochemical Society*, **2017**, 164, A1133-A1139 3.9 44
- 141 Magnetically aligned iron oxide/gold nanoparticle-decorated carbon nanotube hybrid structure as a humidity sensor. *ACS Applied Materials & Interfaces*, **2015**, 7, 15506-13 9.5 44
- 140 Effect of Y substitution for Nb in Li<sub>5</sub>La<sub>3</sub>Nb<sub>2</sub>O<sub>12</sub> on Li ion conductivity of garnet-type solid electrolytes. *Journal of Power Sources*, **2011**, 196, 8085-8090 8.9 44
- 139 A surfactant-assisted strategy to tailor Li-ion charge transfer interfacial resistance for scalable all-solid-state Li batteries. *Sustainable Energy and Fuels*, **2018**, 2, 2165-2170 5.8 38
- 138 Synthesis and characterization of carbon dioxide and boiling water stable proton conducting double perovskite-type metal oxides. *Journal of Power Sources*, **2009**, 186, 311-319 8.9 38
- 137 Synthesis, Structure, and Electrical Conductivity of A<sub>2</sub>[A<sub>2</sub>B<sub>3</sub>O<sub>10</sub>](A<sub>2</sub>=Rb, Cs; A=Sr, Ba; B=Nb, Ta): New Members of Dionâ€¦Jacobson-Type Layered Perovskites. *Journal of Solid State Chemistry*, **2001**, 158, 279-289 3.3 38
- 136 First total H<sup>+</sup>/Li<sup>+</sup> ion exchange in garnet-type Li<sub>5</sub>La<sub>3</sub>Nb<sub>2</sub>O<sub>12</sub> using organic acids and studies on the effect of Li stuffing. *Inorganic Chemistry*, **2012**, 51, 1222-4 5.1 37
- 135 Challenges and prospects of anodes for solid oxide fuel cells (SOFCs). *Ionics*, **2015**, 21, 301-318 2.7 35
- 134 Highly Li-Stuffed Garnet-Type Li<sub>7+x</sub>La<sub>3</sub>Zr<sub>2-x</sub>Y<sub>x</sub>O<sub>12</sub>. *Journal of the Electrochemical Society*, **2013**, 160, A1248-A1255 3.9 34
- 133 Cruising in ceramicsâ€¦discovering new structures for all-solid-state batteriesâ€¦fundamentals, materials, and performances. *Ionics*, **2018**, 24, 639-660 2.7 33
- 132 BaCe<sub>0.85-x</sub>Zr<sub>x</sub>Sm<sub>0.15</sub>O<sub>3-Î³</sub>(0.01) *Journal of the Electrochemical Society*, **2013**, 160, F18-F26 3.9 33
- 131 Dopant Concentration-Porosity-Li-Ion Conductivity Relationship in Garnet-Type Li<sub>5+2x</sub>La<sub>3</sub>Ta<sub>2-x</sub>Y<sub>x</sub>O<sub>12</sub> (0.05 â‰¤ x â‰¤ 0.75) and Their Stability in Water and 1 M LiCl. *Inorganic Chemistry*, **2015**, 54, 6968-77 5.1 32
- 130 Fabrication of a Dendrite-Free all Solid-State Li Metal Battery via Polymer Composite/Garnet/Polymer Composite Layered Electrolyte. *Advanced Materials Interfaces*, **2019**, 6, 1900186 4.6 31

129	Dielectric characteristics of fast Li ion conducting garnet-type $\text{Li}_{5+2x}\text{La}_3\text{Nb}_{2-x}\text{Y}_x\text{O}_{12}$ ( $x = 0.25, 0.5$ and $0.75$ ). <i>Physical Chemistry Chemical Physics</i> , <b>2016</b> , 18, 15418-26	3.6	31
128	Seawater electrolysis for hydrogen production: a solution looking for a problem?. <i>Energy and Environmental Science</i> , <b>2021</b> , 14, 4831-4839	35.4	31
127	Hybrid Gel Electrolytes Derived from Keggin-Type Polyoxometalates and Imidazolium-Based Ionic Liquid with Enhanced Electrochemical Stability and Fast Ionic Conductivity. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 7621-7630	3.8	29
126	Surface and bulk study of strontium-rich chromium ferrite oxide as a robust solid oxide fuel cell cathode. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 22614-22626	13	29
125	Sintering temperature, excess sodium, and phosphorous dependencies on morphology and ionic conductivity of NASICON $\text{Na}_3\text{Zr}_2\text{Si}_2\text{PO}_{12}$ . <i>Solid State Ionics</i> , <b>2019</b> , 331, 22-29	3.3	29
124	A comparative 2 and 4-probe DC and 2-probe AC electrical conductivity of novel co-doped $\text{Ce}_{0.9}\text{RE}_x\text{Mo}_{0.1}\text{O}_{2.1}\text{â}0.5x$ ( $\text{RE} = \text{Y}, \text{Sm}, \text{Gd}; x = 0.2, 0.3$ ). <i>Journal of Materials Chemistry</i> , <b>2010</b> , 20, 7970		27
123	Revisiting tungsten trioxide hydrates (TTHs) synthesis--is there anything new?. <i>Inorganic Chemistry</i> , <b>2009</b> , 48, 6804-11	5.1	26
122	Perspective of perovskite-type oxides for proton conducting solid oxide fuel cells. <i>Solid State Ionics</i> , <b>2019</b> , 339, 114951	3.3	24
121	Dielectric Properties of Ga-Doped $\text{Na}_{0.5}\text{K}_{0.5}\text{NbO}_3$ . <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 4648-4653	3.8	24
120	Transformation of proton-conducting Perovskite-type into fluorite-type fast oxide ion electrolytes using a $\text{CO}_2$ capture technique and their electrical properties. <i>Inorganic Chemistry</i> , <b>2008</b> , 47, 8972-84	5.1	24
119	Chemical stability of Li-stuffed garnet-type $\text{Li}_{5+x}\text{Ba}_x\text{La}_{3-x}\text{TaO}_{12}$ ( $x=0, 0.5, 1$ ) in water: a comparative analysis with the Nb analogue. <i>Solid State Ionics</i> , <b>2013</b> , 247-248, 1-7	3.3	23
118	Effect of Excess Li on the Structural and Electrical Properties of Garnet-Type $\text{Li}_6\text{La}_3\text{Ta}_{1.5}\text{Y}_{0.5}\text{O}_{12}$ . <i>Journal of the Electrochemical Society</i> , <b>2015</b> , 162, A1772-A1777	3.9	22
117	$\text{AA}_2\text{M}_3\text{O}_{10}$ ( $\text{A} = \text{K}, \text{Rb}, \text{Cs}; \text{A}' = \text{Ca}; \text{M} = \text{Nb}$ ) layered perovskites: low-temperature proton conductors in hydrogen atmospheres. <i>Journal of Materials Chemistry</i> , <b>2001</b> , 11, 636-639		21
116	Synthesis, Structure and Li Ion Conductivity of Garnet-like $\text{Li}_{5+2x}\text{La}_3\text{Nb}_{2-x}\text{Sm}_x\text{O}_{12}$ ( $0 \leq x \leq 0.7$ ). <i>Journal of the Electrochemical Society</i> , <b>2014</b> , 161, A2060-A2067	3.9	20
115	Thermochemical $\text{CO}_2$ splitting using double perovskite-type $\text{Ba}_2\text{Ca}_{0.66}\text{Nb}_{1.34}\text{FexO}_6$ . <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 6874-6883	13	19
114	Bioelectrochemical remediation of phenanthrene in a microbial fuel cell using an anaerobic consortium enriched from a hydrocarbon-contaminated site. <i>Journal of Hazardous Materials</i> , <b>2020</b> , 389, 121845	12.8	19
113	Garnet-Based Solid-State Li Batteries: From Materials Design to Battery Architecture. <i>ACS Energy Letters</i> , <b>2021</b> , 6, 1920-1941	20.1	19
112	Electrochemical Stability of Garnet-Type $\text{Li}_7\text{La}_{2.75}\text{Ca}_{0.25}\text{Zr}_{1.75}\text{Nb}_{0.25}\text{O}_{12}$ with and without Atomic Layer Deposited- $\text{Al}_2\text{O}_3$ under $\text{CO}_2$ and Humidity. <i>Journal of the Electrochemical Society</i> , <b>2019</b> , 166, A1844-A1852	3.9	18

111	The activation entropy for ionic conduction and critical current density for Li charge transfer in novel garnet-type $\text{Li}_{6.5}\text{La}_{2.9}\text{A}_{0.1}\text{Zr}_{1.4}\text{Ta}_{0.6}\text{O}_{12}$ (A = Ca, Sr, Ba) solid electrolytes. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 2581-2590	13	18
110	Structure, Ionic Conductivity, and Dielectric Properties of Li-Rich Garnet-type $\text{LiLaTaSmO}$ ( $0 \leq x \leq 0.55$ ) and Their Chemical Stability. <i>Inorganic Chemistry</i> , <b>2017</b> , 56, 8865-8877	5.1	18
109	Studies on Chemical Stability and Electrical Properties of Proton Conducting Perovskite-Like Doped $\text{BaCeO}_3$ . <i>Journal of the Electrochemical Society</i> , <b>2010</b> , 157, B1413	3.9	17
108	Effect of Ti substitution for Nb in double perovskite-type $\text{Ba}_3\text{CaNb}_2\text{O}_9$ on chemical stability and electrical conductivity. <i>Electrochimica Acta</i> , <b>2010</b> , 56, 227-234	6.7	17
107	Ligand-Engineered Metal-Organic Frameworks for Electrochemical Reduction of Carbon Dioxide to Carbon Monoxide. <i>ACS Catalysis</i> , <b>2021</b> , 11, 7350-7357	13.1	17
106	Editors' Choice Review Solid-State Electrochemical Carbon Dioxide Sensors: Fundamentals, Materials and Applications. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 037567	3.9	16
105	Understanding the Role of Solvents on the Morphological Structure and Li-Ion Conductivity of Poly(vinylidene fluoride)-Based Polymer Electrolytes. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 070552	3.9	16
104	Microstructural and Electrochemical Properties of Alkaline Earth Metal-Doped Li Garnet-Type Solid Electrolytes Prepared by Solid-State Sintering and Spark Plasma Sintering Methods. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 1765-1773	6.1	15
103	$\text{CO}_2$ and $\text{SO}_2$ tolerant Fe-doped metal oxides for solid state gas sensors. <i>Solid State Ionics</i> , <b>2014</b> , 262, 274-278	3.3	15
102	Effect of Zr substitution for Ce in $\text{BaCe}_{0.8}\text{Gd}_{0.15}\text{Pr}_{0.05}\text{O}_{3-\delta}$ on the chemical stability in $\text{CO}_2$ and water, and electrical conductivity. <i>RSC Advances</i> , <b>2013</b> , 3, 3599	3.7	15
101	Evaluation of chemical stability, thermal expansion coefficient, and electrical properties of solid state and wet-chemical synthesized Y and Mn-codoped $\text{CeO}_2$ for solid oxide fuel cells. <i>Journal of Power Sources</i> , <b>2013</b> , 243, 458-471	8.9	15
100	Electrical conductivity and chemical stability of perovskite-type $\text{BaCe}_{0.8-x}\text{Ti}_x\text{Y}_{0.2}\text{O}_{3-\delta}$ . <i>Ionics</i> , <b>2011</b> , 17, 195-200	2.7	15
99	Electrical transport properties of aliovalent cation-doped $\text{CeO}_2$ . <i>Asia-Pacific Journal of Chemical Engineering</i> , <b>2009</b> , 4, 33-44	1.3	15
98	Facile conversion of layered Ruddlesden-Popper-related structure $\text{Y}_2\text{O}_3$ -doped $\text{Sr}_2\text{CeO}_4$ into fast oxide ion-conducting fluorite-type $\text{Y}_2\text{O}_3$ -doped $\text{CeO}_2$ . <i>Inorganic Chemistry</i> , <b>2009</b> , 48, 257-66	5.1	15
97	Comparative Evaluation of Coated and Non-Coated Carbon Electrodes in a Microbial Fuel Cell for Treatment of Municipal Sludge. <i>Energies</i> , <b>2019</b> , 12, 1034	3.1	14
96	Detecting $\text{CO}_2$ at ppm level in synthetic air using mixed conducting double perovskite-type metal oxides. <i>Sensors and Actuators B: Chemical</i> , <b>2013</b> , 178, 598-605	8.5	14
95	Research status in preparation of $\text{FePO}_4$ : a review. <i>Ionics</i> , <b>2014</b> , 20, 1501-1510	2.7	14
94	Effect of substitution of B-sites by Mn, Fe and Co in double perovskite-type $\text{Ba}_3\text{CaNb}_2\text{O}_9$ on structure and electrical properties. <i>RSC Advances</i> , <b>2013</b> , 3, 23824	3.7	14



93	Synthesis, structure, chemical stability, and electrical properties of Nb-, Zr-, and Nb-codoped BaCeO <sub>3</sub> perovskites. <i>Inorganic Chemistry</i> , <b>2011</b> , 50, 6493-9	5.1	14
92	Ionics—key technology for our energy and environmental needs on the rise. <i>Ionics</i> , <b>2006</b> , 12, 1-6	2.7	14
91	Amphiphilic Cyclodextrin-Based Liquid Crystals for Proton Conduction. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 9217-9224	16.4	13
90	A perovskite-type NdSrCoFeO cathode for advanced solid oxide fuel cells. <i>Chemical Communications</i> , <b>2019</b> , 55, 3713-3716	5.8	13
89	Synthesis and characterisation of ceramic proton conducting perovskite-type multi-element-doped Ba <sub>0.5</sub> Sr <sub>0.5</sub> Ce <sub>1-x</sub> Y <sub>x</sub> Zr <sub>x</sub> Gd <sub>y</sub> Y <sub>z</sub> O <sub>3-δ</sub> (0 International Journal of Hydrogen Energy, <b>2016</b> , 41, 13227-13237)	6.7	13
88	Determination of Fe oxidation states in the B-site ordered perovskite-type Ba <sub>2</sub> Ca <sub>0.67</sub> Fe <sub>0.33</sub> NbO <sub>6</sub> at the surface (nano-scale) and bulk by variable temperature XPS and TGA and their impact on electrochemical catalysis. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 8736	13	13
87	Effect of Sintering Temperature on Microstructure, Chemical Stability, and Electrical Properties of Transition Metal or Yb-Doped BaZr <sub>0.1</sub> Ce <sub>0.7</sub> Y <sub>0.1</sub> M <sub>0.1</sub> O <sub>3-δ</sub> (M = Fe, Ni, Co, and Yb). <i>Frontiers in Energy Research</i> , <b>2014</b> , 2,	3.8	13
86	Synthesis and characterization of novel Li-stuffed garnet-like LiLaTaGdO (0 <math>x <= 0.55</math>): structure-property relationships. <i>Dalton Transactions</i> , <b>2017</b> , 46, 933-946	4.3	12
85	Liquid crystalline lithium-ion electrolytes derived from biodegradable cyclodextrin. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 12201-12213	13	12
84	Characterization of lithium-rich garnet-type Li <sub>6.5</sub> La <sub>2.5</sub> Ba <sub>0.5</sub> ZrTaO <sub>12</sub> for beyond intercalation chemistry-based lithium-ion batteries. <i>Solid State Ionics</i> , <b>2018</b> , 318, 71-81	3.3	12
83	Novel Nd <sub>2</sub> WO <sub>6</sub> -type Sm <sub>2</sub> A <sub>x</sub> M <sub>1</sub> ByO <sub>6</sub> (A = Ca, Sr; M = Mo, W; B = Ce, Ni) mixed conductors. <i>Journal of Power Sources</i> , <b>2011</b> , 196, 169-178	8.9	12
82	Electrochemical studies on symmetric solid-state Na-ion full cell using Na <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> electrodes and polymer composite electrolyte. <i>Journal of Power Sources</i> , <b>2020</b> , 454, 227954	8.9	11
81	Particle size dependence of proton conduction in a cationic lanthanum phosphonate MOF. <i>Dalton Transactions</i> , <b>2020</b> , 49, 4022-4029	4.3	11
80	Semiconducting SnO <sub>2</sub> -TiO <sub>2</sub> (S-T) composites for detection of SO <sub>2</sub> gas. <i>Ionics</i> , <b>2016</b> , 22, 1927-1935	2.7	11
79	Electrochemical studies of Gd <sub>0.5</sub> Pr <sub>0.5</sub> BaCo <sub>2</sub> O <sub>5+δ</sub> (GPBC) cathode for oxide ion and proton conducting solid oxide fuel cells. <i>Solid State Ionics</i> , <b>2016</b> , 288, 351-356	3.3	11
78	Studies on polymorphic sequence during the formation of the 1:1 ordered perovskite-type BaCa <sub>(0.335)M<sub>(0.165)Nb<sub>(0.5)O<sub>(3-δ)</sub></sub></sub> (M = Mn, Fe, Co) using in situ and ex situ powder X-ray diffraction. <i>Inorganic Chemistry</i>, <b>2014</b>, 53, 10085-93</sub>	5.1	11
77	Growth of Crystalline Tungsten Carbides Using 1,1,3,3-Tetramethyl-1,3-disilacyclobutane on a Heated Tungsten Filament. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 3389-3395	3.8	11
76	High Performance Tubular Solid Oxide Fuel Cell Based on Ba <sub>0.5</sub> Sr <sub>0.5</sub> Ce <sub>0.6</sub> Zr <sub>0.2</sub> Gd <sub>0.1</sub> Y <sub>0.1</sub> O <sub>3-δ</sub> Proton Conducting Electrolyte. <i>Journal of the Electrochemical Society</i> , <b>2018</b> , 165, F764-F769	3.9	10

75	Electrochemical characterization of multi-element-doped ceria as potential anodes for SOFCs. <i>Solid State Ionics</i> , <b>2014</b> , 262, 359-364	3.3	10
74	In-situ powder X-ray diffraction investigation of reaction pathways for the BaCO(3)-CeO(2)-In(2)O(3) and CeO(2)-In(2)O(3) systems. <i>Inorganic Chemistry</i> , <b>2010</b> , 49, 1699-704	5.1	10
73	Grain Boundary Space Charge Effect and Proton Dynamics in Chemically Stable Perovskite-Type Ba <sub>0.5</sub> Sr <sub>0.5</sub> Ce <sub>0.6</sub> Zr <sub>0.2</sub> Gd <sub>0.1</sub> Y <sub>0.1</sub> O <sub>3-<math>\delta</math></sub> (BSCZGY): A Case Study on Effect of Sintering Temperature. <i>Journal of the American Ceramic Society</i> , <b>2016</b> , 99, 866-875	3.8	10
72	Electrochemical studies of Ruddlesden-Popper layered perovskite-type La <sub>0.6</sub> Sr <sub>1.4</sub> Co <sub>0.2</sub> Fe <sub>0.8</sub> O <sub>4+<math>\delta</math></sub> cathode for solid oxide fuel cells and associated electrical loss phenomena. <i>Ceramics International</i> , <b>2019</b> , 45, 1641-1650	5.1	10
71	Critical Current Densities for High-Performance All-Solid-State Li-Metal Batteries: Fundamentals, Mechanisms, Interfaces, Materials, and Applications. <i>ACS Energy Letters</i> , <b>2022</b> , 7, 1492-1527	20.1	10
70	A 20 °C operating high capacity solid-state Li-S battery with an engineered carbon support cathode structure. <i>Applied Materials Today</i> , <b>2020</b> , 19, 100585	6.6	9
69	Towards Mixed Ionic and Electronic Conducting Li-Stuffed Garnets. <i>Journal of the Electrochemical Society</i> , <b>2018</b> , 165, A2303-A2311	3.9	9
68	Li-Ion-Permeable and Electronically Conductive Membrane Comprising Garnet-Type Li <sub>6</sub> La <sub>3</sub> Ta <sub>1.5</sub> Y <sub>0.5</sub> O <sub>12</sub> and Graphene Toward Ultrastable and High-Rate Lithium Sulfur Batteries. <i>ACS Applied Energy Materials</i> , <b>2018</b> , 1, 3733-3741	6.1	9
67	Kinetics and thermodynamics of carbonation of a promising SOFC cathode material La <sub>0.5</sub> Ba <sub>0.5</sub> CoO <sub>3-<math>\delta</math></sub> (LBC). <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 15117	13	9
66	Thermochemistry of Sr <sub>2</sub> Ce(1-x)Pr(x)O <sub>4</sub> (x = 0, 0.2, 0.5, 0.8, and 1): variable-temperature and -atmosphere in-situ and ex-situ powder X-ray diffraction studies and their physical properties. <i>Inorganic Chemistry</i> , <b>2012</b> , 51, 8973-81	5.1	9
65	Preparation, Structure and CO <sub>2</sub> Sensor Studies of BaCa <sub>0.33</sub> Nb <sub>0.67-<math>\delta</math></sub> FexO <sub>3-<math>\delta</math></sub> . <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, B95-B101	3.9	9
64	Investigations on the thermo-chemical stability and electrical conductivity of K-doped Ba <sub>3-<math>\delta</math></sub> KxCaNb <sub>2</sub> O <sub>9-<math>\delta</math></sub> (x=0.5, 0.75, 1, 1.25). <i>Solid State Ionics</i> , <b>2011</b> , 192, 229-234	3.3	9
63	Understanding the Na-Ion Storage Mechanism in Na <sub>3+x</sub> V <sub>2-<math>\delta</math></sub> Mx(PO <sub>4</sub> ) <sub>3</sub> (M = Ni <sup>2+</sup> , Co <sup>2+</sup> , Mg <sup>2+</sup> ; x = 0.1-0.5) Cathodes. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 8475-8486	6.1	9
62	Understanding of Oxygen Reduction Reaction on Perovskite-Type Ba <sub>0.5</sub> Sr <sub>0.5</sub> Fe <sub>0.91</sub> Al <sub>0.09</sub> O <sub>3-<math>\delta</math></sub> and Ba <sub>0.5</sub> Sr <sub>0.5</sub> Fe <sub>0.8</sub> Cu <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> Using AC Impedance Spectroscopy Genetic Programming. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 15097-15107	3.8	9
61	Efficient Synthesis and Characterization of Robust MoS and S Cathode for Advanced Li-S Battery: Combined Experimental and Theoretical Studies. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 35729-35737	9.5	8
60	Synthesis and characterization of perovskite-type BaMg <sub>0.33</sub> Nb <sub>0.67-<math>\delta</math></sub> FexO <sub>3-<math>\delta</math></sub> for potential high temperature CO <sub>2</sub> sensors application. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 6874	13	8
59	Overview of Lithium-Ion Grid-Scale Energy Storage Systems. <i>Current Sustainable/Renewable Energy Reports</i> , <b>2017</b> , 4, 197-208	2.8	8
58	Sintering Effects on Proton Conductivity of Ta-Doped Ba <sub>[sub 2]</sub> (CaNb) <sub>[sub 2]</sub> O <sub>[sub 6]</sub> and its Reactivity with SOFC Cathodes. <i>Journal of the Electrochemical Society</i> , <b>2009</b> , 156, B634	3.9	8



57	Electrical transport properties of In-doped Ce(1-x)In(x)O(2-delta) (x = 0.1; 0.2). <i>Dalton Transactions</i> , <b>2009</b> , 9520-8	4.3	8
56	Effect of V-doping on the structure and conductivity of garnet-type Li5La3Nb2O12. <i>Ionics</i> , <b>2015</b> , 21, 373-379	3.7	7
55	Capture of sulfur dioxide from Claus tail gas using fiber-like alumina-based adsorbents. <i>Journal of Sulfur Chemistry</i> , <b>2012</b> , 33, 131-142	2.3	7
54	Synthesis, Rietveld refinement of crystal structure, electron diffraction, and electrical transport properties of Ba2(Ca1-xFexNby)(Nb1-zFez)O6 double perovskites. <i>Canadian Journal of Chemistry</i> , <b>2011</b> , 89, 688-696	0.9	7
53	Development of Novel Fe-Doped Barium Calcium Niobates as Promising Mixed Conductors for Solid Oxide Fuel Cells (SOFCs). <i>ECS Transactions</i> , <b>2011</b> , 35, 1259-1266	1	7
52	Probing surface valence, magnetic property, and oxide ion diffusion pathway in B-site ordered perovskite-type Ba2Ca0.67M0.33NbO6 (M Mn, Fe, Co). <i>Solid State Ionics</i> , <b>2016</b> , 290, 90-97	3.3	7
51	Morphological, dielectric and transport properties of garnet-type Li6.25+yAl0.25La3Zr2-yMnyO12 (y=0, 0.05, 0.1, and 0.2). <i>Solid State Ionics</i> , <b>2020</b> , 351, 115339	3.3	6
50	Investigating the effect of Cu-doping on the electrochemical properties of perovskite-type Ba0.5Sr0.5Fe1-xCuxO3-δ (0 ≤ x ≤ 0.20) cathodes. <i>Journal of Power Sources</i> , <b>2020</b> , 451, 227777	8.9	6
49	Insights into B-Site Ordering in Double Perovskite-Type BaCaNbO (0 ≤ x ≤ 0.45): Combined Synchrotron and Neutron Diffraction and Electrical Transport Analyses. <i>Inorganic Chemistry</i> , <b>2018</b> , 57, 2609-2619	5.1	6
48	The synthesis and electrical properties of hybrid gel electrolytes derived from Keggin-type heteropoly acids and 3-(pyridin-1-ium-1-yl)propane-1-sulfonate (PyPs). <i>RSC Advances</i> , <b>2016</b> , 6, 102549-102556	3.7	6
47	Hierarchical carbon-free NiCo2O4 cathode for Li-ion batteries. <i>Ionics</i> , <b>2019</b> , 25, 1669-1677	2.7	6
46	Materials for Proton Conducting Solid Oxide Fuel Cells (H-SOFCs). <i>ECS Transactions</i> , <b>2011</b> , 35, 483-492	1	6
45	Electrochemical Performance and H2S Poisoning Study of Mo-Doped Ceria (CMO) SOFC Anodes. <i>ECS Transactions</i> , <b>2011</b> , 35, 1727-1734	1	6
44	Toward Understanding the Reactivity of Garnet-Type Solid Electrolytes with HO/CO in a Glovebox Using X-ray Photoelectron Spectroscopy and Electrochemical Methods. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 36119-36127	9.5	6
43	A Review on Perovskite-Type LaFeO3 Based Electrodes for CO2 Reduction in Solid Oxide Electrolysis Cells: Current Understanding of Structure-Functional Property Relationships. <i>Chemistry of Materials</i> , <b>2021</b> , 33, 4249-4268	9.6	6
42	Electrical Properties of Hollandite-Type BaGaTiO, KGaTiO, and KMgTiO. <i>Inorganic Chemistry</i> , <b>2019</b> , 58, 4782-4791	5.1	5
41	Effect of Postannealing on the Properties of a Ta-Doped Li7La3Zr2O12 Solid Electrolyte Degraded by Li Dendrite Penetration. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 12517-12524	6.1	5
40	Profound Understanding of Effect of Transition Metal Dopant, Sintering Temperature, and pO2 on the Electrical and Optical Properties of Proton Conducting BaCe0.9Sm0.1O3-δ. <i>Inorganic Chemistry</i> , <b>2016</b> , 55, 729-44	5.1	5

- 39 Interstitial oxygens and cation deficiency in Mo-doped ceria, an anode material for SOFCs. *Journal of Materials Chemistry A*, **2013**, 1, 8344 13 5
- 38 Perovskite-type metal oxides exhibiting negligible grain boundary resistance to total electrical conductivity. *Inorganic Chemistry*, **2011**, 50, 647-55 5.1 5
- 37 Superlattice ordering in SrFeO<sub>3</sub>δ: Electron microscopy and diffraction study. *Physica Status Solidi A*, **2005**, 202, 2330-2335 5
- 36 Recent Advances, Practical Challenges, and Perspectives of Intermediate Temperature Solid Oxide Fuel Cell Cathodes. *Journal of Materials Chemistry A*, 13 5
- 35 Structure Evolution and Reactivity of the ScV O (0 ≤ x ≤ 2.0) System. *Inorganic Chemistry*, **2018**, 57, 5607-5614 3
- 34 Role of Presulfidation and H<sub>2</sub>S Cofeeding on Carbon Formation on SS304 Alloy during the Ethane Steam Cracking Process at 700 °C. *Industrial & Engineering Chemistry Research*, **2018**, 57, 1146-1158 3.9 3
- 33 Electrical properties of ionic liquid and double perovskite-type metal oxide composites: A new method to tailor grain-boundary impedance of ceramic electrolytes. *Solid State Ionics*, **2013**, 232, 106-111 3.3 3
- 32 Chemical reactivity between Ce<sub>0.7</sub>RE<sub>0.2</sub>Mo<sub>0.1</sub>O<sub>2</sub> (RE = Y, Sm) and 8YSZ, and conductivity studies of their solid solutions. *Solid State Ionics*, **2014**, 262, 444-448 3.3 3
- 31 Facet-Engineered Tungsten Disulfide for Promoting Polysulfide Electrocatalysis in Lithium-Sulfur Batteries. *Inorganic Chemistry*, **2021**, 60, 12883-12892 5.1 3
- 30 Rational design of a carbonate-glyme hybrid electrolyte for practical anode-free lithium metal batteries. *Energy Storage Materials*, **2021**, 42, 295-306 19.4 3
- 29 Evaluation on the effect of gadolinium-doping for niobium on the morphology and ionic conductivity of garnet-like Li<sub>5</sub>La<sub>3</sub>Nb<sub>2</sub>O<sub>12</sub>. *Canadian Journal of Chemistry*, **2016**, 94, 321-329 0.9 2
- 28 Can fossil fuel energy be recovered and used without any CO<sub>2</sub> emissions to the atmosphere?. *Reviews in Environmental Science and Biotechnology*, **2020**, 19, 217-240 13.9 2
- 27 Evaluation of MIEC Ce<sub>0.8</sub>Y<sub>0.1</sub>Mn<sub>0.1</sub>O<sub>2-δ</sub> Anode in Electrolyte-Supported SOFC. *Journal of the Electrochemical Society*, **2016**, 163, F3091-F3098 3.9 2
- 26 Formulation of a Statistical Mechanical Theory To Understand the Li Ion Conduction in Crystalline Electrolytes: A Case Study on Li-Stuffed Garnets. *Journal of Physical Chemistry C*, **2017**, 121, 17137-17142 2.8 2
- 25 Electrical Properties of Fe-doped Perovskite-like BaNb<sub>0.75-x</sub>FexNa<sub>0.25</sub>O<sub>3-δ</sub> (0 ≤ x ≤ 0.05). *Solid State Ionics*, **2011**, 192, 205-209 3.3 2
- 24 Recent Progress in Anode Materials for Solid Oxide Fuel Cells. *ECS Transactions*, **2010**, 28, 213-220 1 2
- 23 TEM and ED confirmation of conversion of 3D and 2D perovskite-type into fluorite-type structure. *Journal of Alloys and Compounds*, **2010**, 503, L5-L8 5.7 2
- 22 An auxiliary electrode mediated membrane-free redox electrochemical cell for energy storage. *Sustainable Energy and Fuels*, **2020**, 4, 2149-2152 5.8 2

21	Microstructural Tuning of Solid Electrolyte Na <sub>3</sub> Zr <sub>2</sub> Si <sub>2</sub> PO <sub>12</sub> by Polymer-Assisted Solution Synthesis Method and Its Effect on Ionic Conductivity and Dielectric Properties. <i>ACS Applied Energy Materials</i> , <b>2021</b> , 4, 5475-5485	6.1	2
20	Synthesis and characterization of calcium double perovskites for the potential application of semiconducting CO <sub>2</sub> sensors. <i>Ceramics International</i> , <b>2021</b> , 47, 30483-30503	5.1	2
19	Abundant Canadian pine with polysulfide redox mediating ZnS/CuS nanocomposite to attain high-capacity lithium sulfur battery. <i>Carbon</i> , <b>2022</b> , 195, 253-262	10.4	2
18	Synthesis, Structure, Transport Properties, Electrochemical Stability Window, and Lithium Plating/Stripping of Mg and Nb Codoped Li <sub>7</sub> La <sub>3</sub> Zr <sub>2</sub> O <sub>12</sub> Garnet-Type Solid Electrolytes. <i>Journal of Physical Chemistry C</i> , <b>2022</b> , 126, 7828-7840	3.8	2
17	Ni-Ba <sub>0.5</sub> Sr <sub>0.5</sub> Ce <sub>0.6</sub> Zr <sub>0.2</sub> Gd <sub>0.1</sub> Y <sub>0.1</sub> O <sub>3</sub> -Delta Anode Composites for Proton Conducting Solid Oxide Fuel Cells (H-SOFCs). <i>Journal of Materials Science Research</i> , <b>2016</b> , 5, 34	1	1
16	Establishment and practical application of the electron transfer model in lithium-air batteries. <i>Ionics</i> , <b>2018</b> , 24, 743-752	2.7	1
15	Solid-State Electrolytes: Structural Approach <b>2019</b> , 3-24		1
14	Studies on effect of Ca-doping on structure and electrochemical properties of garnet-type Y <sub>3-x</sub> CaxFe <sub>5</sub> O <sub>12</sub> . <i>Journal of Solid State Chemistry</i> , <b>2020</b> , 290, 121530	3.3	1
13	Communication—Anode-Free Lithium Metal Batteries: A Case Study of Compression Effects on Coin Cell Performance. <i>Journal of the Electrochemical Society</i> , <b>2021</b> , 168, 060532	3.9	1
12	Water-splitting photoelectrodes consisting of heterojunctions of carbon nitride with a-type low bandgap double perovskite oxide. <i>Nanotechnology</i> , <b>2021</b> , 32,	3.4	1
11	Deciphering the Interaction of Single-Phase LaSrFeCrO with CO/CO Environments for Application in Reversible Solid Oxide Cells.. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2022</b> ,	9.5	1
10	A global design principle for polysulfide electrocatalysis in lithium-sulfur batteries—a computational perspective20220003		1
9	LaNi <sub>0.6</sub> Co <sub>0.4</sub> Fe <sub>x</sub> O <sub>3</sub> as Air-Side Contact Material for La <sub>0.3</sub> Ca <sub>0.7</sub> Fe <sub>0.7</sub> Cr <sub>0.3</sub> O <sub>3</sub> Reversible Solid Oxide Fuel Cell Electrodes. <i>Crystals</i> , <b>2022</b> , 12, 73	2.3	0
8	Perovskite-type semiconductors for detecting ppm level of carbon dioxide. <i>Ionics</i> ,1	2.7	0
7	Understanding transport properties of conducting solids: Meyer-Neldel rule revisited. <i>Ionics</i> , <b>2021</b> , 27, 4917	2.7	0
6	Li-stuffed garnet electrolytes: structure, ionic conductivity, chemical stability, interface, and applications. <i>Canadian Journal of Chemistry</i> ,1-9	0.9	0
5	Materials for All-Solid-State Lithium Ion Batteries. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1496, 1		
4	Dielectric properties of Ba <sub>3-x</sub> KxCaNb <sub>2</sub> O <sub>9</sub> (0.5. <i>Materials Research Bulletin</i> , <b>2011</b> , 46, 668-674	5.1	

- 3 Studies on chemical stability in CO<sub>2</sub> and H<sub>2</sub>O and electrical conductivity of perovskite-type Ba<sub>3</sub>In<sub>2</sub>Zr<sub>1-x</sub>Ce<sub>x</sub>O<sub>8</sub> (x = 0, 0.5, 1). *Ionics*, **2010**, 16, 581-589 2.7
- 2 Career acknowledgement. *Ionics*, **2007**, 13, 105-106 2.7
- 1 Professor Werner Weppner. *Ionics*, **2007**, 13, 101-102 2.7