Prashant N Kumta

List of Publications by Citations

162 papers	7,995 citations	44 h-index	86 g-index
165 ext. papers	9,053 ext. citations	6.7 avg, IF	6.4 L-index

#	Paper	IF	Citations
162	Recent advances in bone tissue engineering scaffolds. *Trends in Biotechnology*, **2012**, 30, 546-54	15.1	1417
161	Nanostructured hybrid silicon/carbon nanotube heterostructures: reversible high-capacity lithium-ion anodes. *ACS Nano*, **2010**, 4, 2233-41	16.7	460
160	Rechargeable magnesium battery: Current status and key challenges for the future. *Progress in Materials Science*, **2014**, 66, 1-86	42.2	435
159	Nanostructured silicon anodes for lithium ion rechargeable batteries. *Small*, **2009**, 5, 2236-42	11	330
158	Tin and graphite based nanocomposites: Potential anode for sodium ion batteries. *Journal of Power Sources*, **2013**, 225, 316-322	8.9	229
157	Nanostructured calcium phosphates (NanoCaPs) for non-viral gene delivery: influence of the synthesis parameters on transfection efficiency. *Biomaterials*, **2007**, 28, 1267-79	15.6	226
156	In vivo study of magnesium plate and screw degradation and bone fracture healing. *Acta Biomaterialia*, **2015**, 18, 262-9	10.8	211
155	Novel processing of iron-manganese alloy-based biomaterials by inkjet 3-D printing. *Acta Biomaterialia*, **2013**, 9, 8593-603	10.8	150
154	Nanocrystalline TiN Derived by a Two-Step Halide Approach for Electrochemical Capacitors. *Journal of the Electrochemical Society*, **2006**, 153, A2298	3.9	143
153	Binder-jetting 3D printing and alloy development of new biodegradable Fe-Mn-Ca/Mg alloys. *Acta Biomaterialia*, **2016**, 45, 375-386	10.8	125
152	Phase stability and biological property evaluation of plasma sprayed hydroxyapatite coatings for orthopedic and dental applications. *Acta Biomaterialia*, **2015**, 17, 47-55	10.8	125
151	A layer-by-layer approach to natural polymer-derived bioactive coatings on magnesium alloys. *Acta Biomaterialia*, **2013**, 9, 8690-703	10.8	123
150	Amorphous silicon–carbon based nano-scale thin film anode materials for lithium ion batteries. *Electrochimica Acta*, **2011**, 56, 4717-4723	6.7	102
149	In vitro degradation and cytotoxicity response of Mg-4% Zn-0.5% Zr (ZK40) alloy as a potential biodegradable material. *Acta Biomaterialia*, **2013**, 9, 8534-47	10.8	100
148	In situ electrochemical synthesis of lithiated silicon–carbon based composites anode materials for lithium ion batteries. *Journal of Power Sources*, **2009**, 194, 1043-1052	8.9	98
147	Magnesium Phosphate Cement Systems for Hard Tissue Applications: A Review. *ACS Biomaterials Science and Engineering*, **2016**, 2, 1067-1083	5.5	94
146	Magnesium alloys as a biomaterial for degradable craniofacial screws. *Acta Biomaterialia*, **2014**, 10, 2323-328	1528	91

145	In vitro and in vivo corrosion, cytocompatibility and mechanical properties of biodegradable Mg-Y-Ca-Zr alloys as implant materials. *Acta Biomaterialia*, **2013**, 9, 8518-33	10.8	90
144	Vertically aligned silicon/carbon nanotube (VASCNT) arrays: Hierarchical anodes for lithium-ion battery. *Electrochemistry Communications*, **2011**, 13, 429-432	5.1	84
143	High performance and durable nanostructured TiN supported Pt50Ru50 anode catalyst for direct methanol fuel cell (DMFC). *Journal of Power Sources*, **2015**, 293, 437-446	8.9	82
142	Synthesis, Structure, and Electrochemical Characterization of Nanocrystalline Tantalum and Tungsten Nitrides. *Journal of the American Ceramic Society*, **2007**, 90, 3113-3120	3.8	82
141	Silicon and carbon based composite anodes for lithium ion batteries. *Journal of Power Sources*, **2006**, 158, 557-563	8.9	82
140	Induction plasma sprayed Sr and Mg doped nano hydroxyapatite coatings on Ti for bone implant. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2011**, 99, 258-65	3.5	81
139	Noble metal-free bifunctional oxygen evolution and oxygen reduction acidic media electro-catalysts. *Scientific Reports*, **2016**, 6, 28367	4.9	77
138	Biodegradable poly(lactide-co-glycolide) coatings on magnesium alloys for orthopedic applications. *Journal of Materials Science: Materials in Medicine*, **2013**, 24, 85-96	4.5	76
137	3D heterogeneous islet organoid generation from human embryonic stem cells using a novel engineered hydrogel platform. *Biomaterials*, **2018**, 177, 27-39	15.6	76
136	Silicon, graphite and resin based hard carbon nanocomposite anodes for lithium ion batteries. *Journal of Power Sources*, **2007**, 165, 368-378	8.9	68
135	Guar gum: Structural and electrochemical characterization of natural polymer based binder for silicon–carbon composite rechargeable Li-ion battery anodes. *Journal of Power Sources*, **2015**, 298, 331-340	8.9	65
134	Corrosion protection and improved cytocompatibility of biodegradable polymeric layer-by-layer coatings on AZ31 magnesium alloys. *Acta Biomaterialia*, **2013**, 9, 8704-13	10.8	64
133	Effects of Zinc and Strontium Substitution in Tricalcium Phosphate on Osteoclast Differentiation and Resorption. *Biomaterials Science*, **2013**, 1,	7.4	64
132	Synthesis and Characterization of Nanostructured Niobium and Molybdenum Nitrides by a Two-Step Transition Metal Halide Approach. *Journal of the American Ceramic Society*, **2011**, 94, 2371-2378	3.8	62
131	Nitrogen and cobalt co-doped zinc oxide nanowires as viable photoanodes for hydrogen generation via photoelectrochemical water splitting. *Journal of Power Sources*, **2015**, 299, 11-24	8.9	61
130	High performance robust F-doped tin oxide based oxygen evolution electro-catalysts for PEM based water electrolysis. *Journal of Materials Chemistry A*, **2013**, 1, 4026	13	57
129	Nano-sized calcium phosphate (CaP) carriers for non-viral gene deilvery. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2012**, 177, 289-302	3.1	57
128	Experimental and Theoretical Validation of High Efficiency and Robust Electrocatalytic Response of One-Dimensional (1D) (Mn,Ir)O2:10F Nanorods for the Oxygen Evolution Reaction in PEM-Based Water Electrolysis. *ACS Catalysis*, **2019**, 9, 2134-2157	13.1	57

127	First-principles studies on alloying and simplified thermodynamic aqueous chemical stability of calcium-, zinc-, aluminum-, yttrium- and iron-doped magnesium alloys. *Acta Biomaterialia*, **2010**, 6, 1698-704	10.8	56
126	Novel (Ir,Sn,Nb)O2 anode electrocatalysts with reduced noble metal content for PEM based water electrolysis. *International Journal of Hydrogen Energy*, **2012**, 37, 3001-3013	6.7	54
125	High energy density titanium doped-vanadium oxide-vertically aligned CNT composite electrodes for supercapacitor applications. *Journal of Materials Chemistry A*, **2015**, 3, 8413-8432	13	53
124	Novel Composite Polymer Electrolytes of PVdF-HFP Derived by Electrospinning with Enhanced Li-Ion Conductivities for Rechargeable Lithium□Sulfur Batteries. *ACS Applied Energy Materials*, **2018**, 1, 483-494	6.1	50
123	Alginate encapsulation of human embryonic stem cells to enhance directed differentiation to pancreatic islet-like cells. *Tissue Engineering - Part A*, **2014**, 20, 3198-211	3.9	45
122	Understanding the Origin of Irreversible Capacity loss in Non-Carbonized Carbonate □based Metal Organic Framework (MOF) Sulfur hosts for Lithium □Sulfur battery. *Electrochimica Acta*, **2017**, 229, 208-218	6.7	44
121	Gold-coated carbon nanotube electrode arrays: Immunosensors for impedimetric detection of bone biomarkers. *Biosensors and Bioelectronics*, **2016**, 77, 580-8	11.8	44
120	Novel F-doped IrO2 oxygen evolution electrocatalyst for PEM based water electrolysis. *Journal of Power Sources*, **2013**, 222, 313-317	8.9	44
119	Effects of Silicon on Osteoclast Cell Mediated Degradation, Osteogenesis and Vasculogenesis of Brushite Cement. *Journal of Materials Chemistry B*, **2015**, 3, 8973-8982	7.3	44
118	Fluorine doped (Ir,Sn,Nb)O2 anode electro-catalyst for oxygen evolution via PEM based water electrolysis. *International Journal of Hydrogen Energy*, **2014**, 39, 664-674	6.7	43
117	Electrodeposition of amorphous silicon anode for lithium ion batteries. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2012**, 177, 1157-1162	3.1	43
116	Effects of grain refinement on the biocorrosion and in vitro bioactivity of magnesium. *Materials Science and Engineering C*, **2015**, 57, 294-303	8.3	42
115	Intracellular trafficking pathways involved in the gene transfer of nano-structured calcium phosphate-DNA particles. *Biomaterials*, **2011**, 32, 7662-70	15.6	41
114	Chemical synthesis and stabilization of magnesium substituted brushite. *Materials Science and Engineering C*, **2010**, 30, 934-943	8.3	41
113	An Alternative Chemical Route for the Synthesis and Thermal Stability of Chemically Enriched Hydroxyapatite. *Journal of the American Ceramic Society*, **2006**, 89, 444-449	3.8	41
112	Novel sol□gel derived calcium phosphate coatings on Mg4Y alloy. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2011**, 176, 1679-1689	3.1	40
111	Nanostructured F doped IrO2 electro-catalyst powders for PEM based water electrolysis. *Journal of Power Sources*, **2014**, 269, 855-865	8.9	39
110	Capsule stiffness regulates the efficiency of pancreatic differentiation of human embryonic stem cells. *Acta Biomaterialia*, **2016**, 35, 153-65	10.8	38

109	Fluorine substituted (Mn,Ir)O2:F high performance solid solution oxygen evolution reaction electro-catalysts for PEM water electrolysis. *RSC Advances*, **2017**, 7, 17311-17324	3.7	36
108	High performance fluorine doped (Sn,Ru)O2 oxygen evolution reaction electro-catalysts for proton exchange membrane based water electrolysis. *Journal of Power Sources*, **2014**, 245, 362-370	8.9	35
107	A Review of PMMA Bone Cement and Intra-Cardiac Embolism. *Materials*, **2016**, 9,	3.5	35
106	In vivo monitoring the biodegradation of magnesium alloys with an electrochemical H2 sensor. *Acta Biomaterialia*, **2016**, 36, 361-8	10.8	35
105	In vivo characterization of magnesium alloy biodegradation using electrochemical H monitoring, ICP-MS, and XPS. *Acta Biomaterialia*, **2017**, 50, 556-565	10.8	34
104	Osteoclastogenesis and osteoclastic resorption of tricalcium phosphate: effect of strontium and magnesium doping. *Journal of Biomedical Materials Research - Part A*, **2012**, 100, 2450-61	5.4	33
103	Porous calcium phosphate-poly (lactic-co-glycolic) acid composite bone cement: A viable tunable drug delivery system. *Materials Science and Engineering C*, **2016**, 59, 92-101	8.3	32
102	Early differentiation patterning of mouse embryonic stem cells in response to variations in alginate substrate stiffness. *Journal of Biological Engineering*, **2013**, 7, 9	6.3	32
101	Nanoscale engineered electrochemically active silicon□CNT heterostructures-novel anodes for Li-ion application. *Electrochimica Acta*, **2012**, 85, 680-684	6.7	32
100	A simple and scalable approach to hollow silicon nanotube (h-SiNT) anode architectures of superior electrochemical stability and reversible capacity. *Journal of Materials Chemistry A*, **2015**, 3, 11117-11129	13	31
99	Electrochemically active and robust cobalt doped copper phosphosulfide electro-catalysts for hydrogen evolution reaction in electrolytic and photoelectrochemical water splitting. *International Journal of Hydrogen Energy*, **2018**, 43, 7855-7871	6.7	31
98	Programmed Platelet-Derived Growth Factor-BB and Bone Morphogenetic Protein-2 Delivery from a Hybrid Calcium Phosphate/Alginate Scaffold. *Tissue Engineering - Part A*, **2017**, 23, 1382-1393	3.9	29
97	Synthesis of Nanostructured TiN Using a Two-Step Transition Metal Halide Approach. *Journal of the American Ceramic Society*, **2005**, 88, 2030-2035	3.8	29
96	Scribable multi-walled carbon nanotube-silicon nanocomposites: a viable lithium-ion battery system. *Nanoscale*, **2015**, 7, 3504-10	7.7	28
95	Silicon□Carbon Core□Shell Hollow Nanotubular Configuration High-Performance Lithium-Ion Anodes. *Journal of Physical Chemistry C*, **2017**, 121, 9662-9671	3.8	26
94	Synthesis, Osteoblast, and Osteoclast Viability of Amorphous and Crystalline Tri-Magnesium Phosphate. *ACS Biomaterials Science and Engineering*, **2015**, 1, 52-63	5.5	26
93	Vertically aligned nitrogen doped (Sn,Nb)O2 nanotubes □Robust photoanodes for hydrogen generation by photoelectrochemical water splitting. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2016**, 208, 1-14	3.1	25
92	A study of strontium doped calcium phosphate coatings on AZ31. *Materials Science and Engineering C*, **2014**, 40, 357-65	8.3	25

91	Fluorine-Doped IrO2: A Potential Electrocatalyst for Water Electrolysis. *Journal of Physical Chemistry C*, **2013**, 117, 20542-20547	3.8	25
90	Novel in-situ synthesis and characterization of nanostructured magnesium substituted tricalcium phosphate (TCMP). *Materials Science and Engineering C*, **2009**, 29, 69-77	8.3	25
89	First report of vertically aligned (Sn,Ir)O2:F solid solution nanotubes: Highly efficient and robust oxygen evolution electrocatalysts for proton exchange membrane based water electrolysis. *Journal of Power Sources*, **2018**, 392, 139-149	8.9	24
88	Nanostructured robust cobalt metal alloy based anode electro-catalysts exhibiting remarkably high performance and durability for proton exchange membrane fuel cells. *Journal of Materials Chemistry A*, **2015**, 3, 14015-14032	13	24
87	Cobalt based nanostructured alloys: Versatile high performance robust hydrogen evolution reaction electro-catalysts for electrolytic and photo-electrochemical water splitting. *International Journal of Hydrogen Energy*, **2017**, 42, 17049-17062	6.7	23
86	WO3 based solid solution oxide promising proton exchange membrane fuel cell anode electro-catalyst. *Journal of Materials Chemistry A*, **2015**, 3, 18296-18309	13	23
85	Ab-initio study of fluorine-doped tin dioxide: A prospective catalyst support for water electrolysis. *Physica B: Condensed Matter*, **2011**, 406, 471-477	2.8	22
84	Chemical synthesis and characterization of magnesium substituted amorphous calcium phosphate (MG-ACP). *Materials Science and Engineering C*, **2010**, 30, 1313-1317	8.3	22
83	Sulfonic Acid Based Complex Framework Materials (CFM): Nanostructured Polysulfide Immobilization Systems for Rechargeable LithiumSulfur Battery. *Journal of the Electrochemical Society*, **2019**, 166, A1827-A1835	3.9	21
82	Recent Developments in Magnesium Metal-Matrix Composites for Biomedical Applications: A Review. *ACS Biomaterials Science and Engineering*, **2020**, 6, 4748-4773	5.5	21
81	Visual H sensor for monitoring biodegradation of magnesium implants in vivo. *Acta Biomaterialia*, **2016**, 45, 399-409	10.8	21
80	MC3T3-E1 proliferation and differentiation on biphasic mixtures of Mg substituted tricalcium phosphate and amorphous calcium phosphate. *Materials Science and Engineering C*, **2014**, 45, 589-98	8.3	20
79	A rapid solid-state synthesis of electrochemically active Chevrel phases (Mo6T8; T = S, Se) for rechargeable magnesium batteries. *Nano Research*, **2017**, 10, 4415-4435	10	20
78	Cross-linked enzyme aggregates of alginate lyase: A systematic engineered approach to controlled degradation of alginate hydrogel. *International Journal of Biological Macromolecules*, **2018**, 115, 176-184	7.9	19
77	Solgel synthesis of Pt-Ru-Os-Ir based anode electro-catalysts for direct methanol fuel cells. *Journal of Alloys and Compounds*, **2010**, 506, 698-702	5.7	19
76	Computational and Experimental Study of Fluorine Doped (Mn1Nbx)O2 Nanorod Electrocatalysts for Acid-Mediated Oxygen Evolution Reaction. *ACS Applied Energy Materials*, **2020**, 3, 541-557	6.1	19
75	Active and robust novel bilayer photoanode architectures for hydrogen generation via direct non-electric bias induced photo-electrochemical water splitting. *International Journal of Hydrogen Energy*, **2018**, 43, 13158-13176	6.7	18
74	Nanostructured (Ir,Sn)O2:F Oxygen Evolution Reaction Anode Electro-Catalyst Powders for PEM Based Water Electrolysis. *Journal of the Electrochemical Society*, **2014**, 161, F868-F875	3.9	18

73	A simple facile approach to large scale synthesis of high specific surface area silicon nanoparticles. *Journal of Solid State Chemistry*, **2013**, 208, 93-98	3.3	17
72	Synergistic Effects of Silicon/Zinc Doped Brushite and Silk Scaffolding in Augmenting the Osteogenic and Angiogenic Potential of Composite Biomimetic Bone Grafts. *ACS Biomaterials Science and Engineering*, **2019**, 5, 1462-1475	5.5	16
71	Mechanical and in vitro degradation behavior of magnesium-bioactive glass composites prepared by SPS for biomedical applications. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2019**, 107, 352-365	3.5	16
70	Biomimetic Rotated Lamellar Plywood Motifs by Additive Manufacturing of Metal Alloy Scaffolds for Bone Tissue Engineering. *ACS Biomaterials Science and Engineering*, **2017**, 3, 648-657	5.5	15
69	In Vitro and in Vivo Evaluation of Multiphase Ultrahigh Ductility Mg-Li-Zn Alloys for Cardiovascular Stent Application. *ACS Biomaterials Science and Engineering*, **2018**, 4, 919-932	5.5	15
68	Systematic Assessment of Synthesized Tri-magnesium Phosphate Powders (Amorphous, Semi-crystalline and Crystalline) and Cements for Ceramic Bone Cement Applications. *Journal of Materials Science and Technology*, **2015**, 31, 437-444	9.1	15
67	Study of fluorine doped (Nb,Ir)O2 solid solution electro-catalyst powders for proton exchange membrane based oxygen evolution reaction. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2016**, 212, 101-108	3.1	15
66	Nanostructured silicate substituted calcium phosphate (NanoSiCaPs) nanoparticles - Efficient calcium phosphate based non-viral gene delivery systems. *Materials Science and Engineering C*, **2016**, 69, 486-95	8.3	15
65	Novel alginate based coatings on Mg alloys. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2011**, 176, 1703-1710	3.1	14
64	In Vivo Biocompatibility of Zinc-Doped Magnesium Silicate Bio-Ceramics. *ACS Biomaterials Science and Engineering*, **2018**, 4, 2126-2133	5.5	13
63	Highly active robust oxide solid solution electro-catalysts for oxygen reduction reaction for proton exchange membrane fuel cell and direct methanol fuel cell cathodes. *International Journal of Hydrogen Energy*, **2017**, 42, 24079-24089	6.7	13
62	Exploring tin tantalates and niobates as prospective catalyst supports for water electrolysis. *Physica B: Condensed Matter*, **2009**, 404, 1737-1745	2.8	13
61	Murine osteoblastic and osteoclastic differentiation on strontium releasing hydroxyapatite forming cements. *Materials Science and Engineering C*, **2016**, 63, 429-38	8.3	13
60	Flexible sulfur wires (Flex-SWs)□A new versatile platform for lithium-sulfur batteries. *Electrochimica Acta*, **2016**, 212, 286-293	6.7	12
59	Evaluation of magnesium-yttrium alloy as an extraluminal tracheal stent. *Journal of Biomedical Materials Research - Part A*, **2014**, 102, 611-20	5.4	12
58	Direct writing of polymeric coatings on magnesium alloy for tracheal stent applications. *Annals of Biomedical Engineering*, **2015**, 43, 1158-65	4.7	11
57	Study of hMSC proliferation and differentiation on Mg and Mg-Sr containing biphasic □tricalcium phosphate and amorphous calcium phosphate ceramics. *Materials Science and Engineering C*, **2016**, 64, 219-228	8.3	11
56	Effect of zinc oxide doping on in vitro degradation of magnesium silicate bioceramics. *Materials Letters*, **2017**, 207, 100-103	3.3	11

55	Resorbable Tricalcium Phosphates for Bone Tissue Engineering: Influence of SrO Doping. *Journal of the American Ceramic Society*, **2012**, 95, 3095-3102	3.8	11
54	Complexed sol–gel synthesis of improved Pt–RuO2-based anode electro-catalysts for direct methanol fuel cells. *Journal of Physics and Chemistry of Solids*, **2009**, 70, 1019-1023	3.9	11
53	Biodegradation and Biocompatibility of Forsterite Bio-Ceramics: Effects of Strontium Substitution. *ACS Biomaterials Science and Engineering*, **2019**, 5, 530-543	5.5	11
52	Anticorrosive Self-Assembled Hybrid Alkylsilane Coatings for Resorbable Magnesium Metal Devices. *ACS Biomaterials Science and Engineering*, **2017**, 3, 518-529	5.5	10
51	In vitro corrosion and cytocompatibility studies of hot press sintered magnesium-bioactive glass composite. *Materialia*, **2019**, 5, 100245	3.2	9
50	Synthesis and electrochemical study of Mg1.5MnO3: A defect spinel cathode for rechargeable magnesium battery. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2015**, 202, 8-14	3.1	9
49	Pulsed Current Electrodeposition of Silicon Thin Films Anodes for Lithium Ion Battery Applications. *Inorganics*, **2017**, 5, 27	2.9	9
48	Effect of cerium-based conversion coating on corrosion behavior of squeeze cast Mg-4 wt% Y alloy in 0.1 M NaCl solution. *Surface and Coatings Technology*, **2021**, 421, 127451	4.4	9
47	Anomalous in Vitro and in Vivo Degradation of Magnesium Phosphate Bioceramics: Role of Zinc Addition. *ACS Biomaterials Science and Engineering*, **2019**, 5, 5097-5106	5.5	8
46	Magnesium Silicate Bioceramics for Bone Regeneration: A Review. *Journal of the Indian Institute of Science*, **2019**, 99, 261-288	2.4	8
45	First principles study of the elastic properties of magnesium and iron based bio-resorbable alloys. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2018**, 230, 20-23	3.1	8
44	Potential trade-offs between biomineralization and immunity revealed by shell properties and gene expression profiles of two closely related species. *Journal of Experimental Biology*, **2018**, 221,	3	8
43	Heterostructures for Improved Stability of Lithium Sulfur Batteries. *Journal of the Electrochemical Society*, **2014**, 161, A1173-A1180	3.9	8
42	Corrosion and bone healing of Mg-Y-Zn-Zr-Ca alloy implants: Comparative in vivo study in a non-immobilized rat femoral fracture model. *Journal of Biomaterials Applications*, **2019**, 33, 1178-1194	2.9	7
41	Engineered peptide modified hydrogel platform for propagation of human pluripotent stem cells. *Acta Biomaterialia*, **2020**, 113, 228-239	10.8	7
40	Ferrocene and Inconel assisted growth of dense carbon nanotube forests on copper foils. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2011**, 29, 04D102	1.3	7
39	Evaluation of magnesium alloys for use as an intraluminal tracheal for pediatric applications in a rat tracheal bypass model. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2019**, 107, 1844-1853	3.5	7
38	Constitutional under-potential plating (CUP) – New insights for predicting the morphological stability of deposited lithium anodes in lithium metal batteries. *Journal of Power Sources*, **2020**, 467, 228243	8.9	6

37	Effect of Lithium and Aluminum on the Mechanical Properties, and Degradation, and Toxicity of Multiphase Ultrahigh Ductility Mg-Li-Al-Zn Quaternary Alloys for Vascular Stent Application. *ACS Biomaterials Science and Engineering*, **2020**, 6, 1950-1964	5.5	6
36	Platinum aptasensor wire arrays for cardiac biomarker detection. *Materials Today Communications*, **2018**, 15, 55-60	2.5	6
35	Exploring calcium tantalates and niobates as prospective catalyst supports for water electrolysis. *Journal of Power Sources*, **2012**, 202, 190-199	8.9	6
34	Water-soluble-template-derived nanoscale silicon nanoflake and nano-rod morphologies: Stable architectures for lithium-ion battery anodes. *Nano Research*, **2017**, 10, 4284-4297	10	6
33	Regenerative Technologies for Craniomaxillofacial Surgery. *Journal of Oral and Maxillofacial Surgery*, **2015**, 73, S116-25	1.8	6
32	Microstructure of Mg□Zn□Ca thin film derived by pulsed laser deposition. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2011**, 176, 1690-1694	3.1	6
31	A Novel Sulforaphane-Regulated Gene Network in Suppression of Breast Cancer-Induced Osteolytic Bone Resorption. *Molecular Cancer Therapeutics*, **2020**, 19, 420-431	6.1	6
30	Computational and experimental investigation of Co and S-doped Ni2P as an efficient electrocatalyst for acid mediated proton exchange membrane hydrogen evolution reaction. *Catalysis Science and Technology*, **2021**, 11, 861-873	5.5	6
29	Visual Hydrogen Mapping Sensor for Noninvasive Monitoring of Bioresorbable Magnesium Implants In Vivo. *Jom*, **2020**, 72, 1851-1858	2.1	5
28	Synthesis, characterization, and in-vitro cytocompatibility of amorphous □tri-calcium magnesium phosphate ceramics. *Materials Science and Engineering C*, **2016**, 67, 636-645	8.3	5
27	Effective Bipyridine and Pyrazine-Based Polysulfide Dissolution Resistant Complex Framework Material Systems for High Capacity Rechargeable Lithium□Sulfur Batteries. *Energy Technology*, **2019**, 7, 1900141	3.5	4
26	Influence of Defects on Activity-Stability of Cu1.5Mn1.5O4 for Acid-Mediated Oxygen Evolution Reaction. *Journal of the Electrochemical Society*, **2020**, 167, 144511	3.9	4
25	Tartrate Resistant Acid Phosphatase Assisted Degradation of Single-Wall Carbon Nanotubes (SWCNTs). *ACS Biomaterials Science and Engineering*, **2016**, 2, 712-721	5.5	4
24	A feasibility study of biodegradable magnesium-aluminum-zinc-calcium-manganese (AZXM) alloys for tracheal stent application. *Journal of Biomaterials Applications*, **2019**, 33, 1080-1093	2.9	3
23	In vivo performance analysis of silanized and coated nitinol wires in biological environment. *Journal of Materials Research*, **2020**, 35, 1262-1270	2.5	3
22	Development of an Alginate Array Platform to Decouple the Effect of Multiparametric Perturbations on Human Pluripotent Stem Cells During Pancreatic Differentiation. *Biotechnology Journal*, **2018**, 13, 1700099	5.6	3
21	Surface mediated non-viral gene transfection on titanium substrates using polymer electrolyte and nanostructured silicate substituted calcium phosphate pDNA (NanoSiCaPs) composites. *Materials Today Communications*, **2018**, 16, 169-173	2.5	3
20	A CALPHAD study on the thermodynamic stability of calcium-, zinc-, and yttrium-doped magnesium in aqueous environments. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2011**, 176, 1727-1732	3.1	3

19	Degradability and in vivo biocompatibility of doped magnesium phosphate bioceramic scaffolds. *Materials Letters*, **2020**, 259, 126892	3.3	3
18	Effects of cerium addition on the corrosion resistance and biocompatibility of Mg2Sr1Zr Alloy. *Journal of Materials Research*, **2020**, 35, 3124-3135	2.5	3
17	Quantitative assessment of degradation, cytocompatibility, and in vivo bone regeneration of silicon-incorporated magnesium phosphate bioceramics. *Journal of Materials Research*, **2019**, 34, 4024-4036	2.5	3
16	Theoretical and Experimental Strategies for New Heterostructures with Improved Stability for Rechargeable Lithium Sulfur Batteries. *Journal of the Electrochemical Society*, **2020**, 167, 040513	3.9	2
15	Nano-Sized Calcium Phosphate (CaP) Carriers for Non-Viral Gene/Drug Delivery **2013**, 203-236		2
14	Carbon Nanotube-Based Impedimetric Biosensors for Bone Marker Detection. *Ceramic Transactions* , **2015**, 187-193	0.1	2
13	A Complexed Sol-Gel (CSG) Approach to High Surface Area (HSA) Durable Ultra Active Platinum-Ruthenium Electro-Catalysts for Direct Methanol Fuel Cells. *Journal of the Electrochemical Society*, **2014**, 161, F1053-F1060	3.9	2
12	In-vivo efficacy of biodegradable ultrahigh ductility Mg-Li-Zn alloy tracheal stents for pediatric airway obstruction. *Communications Biology*, **2020**, 3, 787	6.7	2
11	Highly Efficient Fluorine Doped Ni2P Electrocatalysts for Alkaline Mediated Oxygen Evolution Reaction. *Journal of the Electrochemical Society*, **2021**, 168, 064512	3.9	2
10	One-step synthesis of fluorescently labelled, single-walled carbon nanotubes. *Chemical Communications*, **2015**, 51, 17233-6	5.8	1
9	Subglottic Stenosis: Development of a Clinically Relevant Endoscopic Animal Model. *Otolaryngology - Head and Neck Surgery*, **2020**, 162, 905-913	5.5	1
8	Growth of Carbon Nanotubes on Copper Substrates Using a Nickel Thin Film Catalyst. *Materials Research Society Symposia Proceedings*, **2009**, 1204, 1		1
7	In vivo osteogenesis of plasma sprayed ternary-ion doped hydroxyapatite coatings on Ti6Al4V for orthopaedic applications. *Ceramics International*, **2022**,	5.1	1
6	Molybdenum doped bilayer photoanode nanotubes for enhanced photoelectrochemical water splitting. *International Journal of Hydrogen Energy*, **2021**,	6.7	1
5	Batteries for aeronautics and space exploration: Recent developments and future prospects **2022**, 531-595		0
4	Exploration of Amorphous and Crystalline Tri-Magnesium Phosphates for Bone Cements. *Ceramic Transactions*,33-46	0.1	
3	Synthesis of Oxide and Non-Oxide Advanced Ceramics **2021**, 2-26		
2	Recent advances in silicon materials for Li-ion batteries: Novel processing, alternative raw materials, and practical considerations **2022**, 47-92		

List of Publications

1 New approaches to high-energy-density cathode and anode architectures for lithium-sulfur batteries **2022**, 353-439