

# Kalim Deshmukh

## List of Publications by Year in descending order

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121  
papers

6,416  
citations

76196

40  
h-index

71532

76  
g-index

124  
all docs

124  
docs citations

124  
times ranked

5535  
citing authors

#	ARTICLE	IF	CITATIONS
1	A review on recent advances in hybrid supercapacitors: Design, fabrication and applications. Renewable and Sustainable Energy Reviews, 2019, 101, 123-145.	8.2	1,049
2	Recent advances in electromagnetic interference shielding properties of metal and carbon filler reinforced flexible polymer composites: A review. Composites Part A: Applied Science and Manufacturing, 2018, 114, 49-71.	3.8	554
3	Graphene quantum dot based materials for sensing, bio-imaging and energy storage applications: a review. RSC Advances, 2020, 10, 23861-23898.	1.7	194
4	Synthesis, optimization and applications of ZnO/polymer nanocomposites. Materials Science and Engineering C, 2019, 98, 1210-1240.	3.8	191
5	State of the art recent progress in two dimensional MXenes based gas sensors and biosensors: A comprehensive review. Coordination Chemistry Reviews, 2020, 424, 213514.	9.5	169
6	Characterization of polyvinyl alcohol/gelatin blend hydrogel films for biomedical applications. Journal of Applied Polymer Science, 2008, 109, 3431-3437.	1.3	152
7	MXene based emerging materials for supercapacitor applications: Recent advances, challenges, and future perspectives. Coordination Chemistry Reviews, 2022, 462, 214518.	9.5	148
8	Recent advances in mechanical properties of biopolymer composites: a review. Polymer Composites, 2020, 41, 32-59.	2.3	146
9	Influence of $\text{TiO}_2$ on the Chemical, Mechanical, and Gas Separation Properties of Polyvinyl Alcohol-Titanium Dioxide ( $\text{PVA-TiO}_2$ ) Nanocomposite Membranes. International Journal of Polymer Analysis and Characterization, 2013, 18, 287-296.	0.9	129
10	Recent advances and future perspectives of sol-gel derived porous bioactive glasses: a review. RSC Advances, 2020, 10, 33782-33835.	1.7	108
11	Stretchable quaternary phasic PVDF-HFP nanocomposite films containing graphene-titania- $\text{SrTiO}_3$ for mechanical energy harvesting. Emergent Materials, 2018, 1, 55-65.	3.2	105
12	Preparation and characterization of poly(vinyl alcohol) and gelatin blend films. Journal of Applied Polymer Science, 2008, 109, 1328-1337.	1.3	103
13	Graphene oxide reinforced polyvinyl alcohol/polyethylene glycol blend composites as high-performance dielectric material. Journal of Polymer Research, 2016, 23, 1.	1.2	101
14	Dielectric properties of polyvinyl alcohol (PVA) nanocomposites filled with green synthesized zinc sulphide ( $\text{ZnS}$ ) nanoparticles. Journal of Materials Science: Materials in Electronics, 2019, 30, 4676-4687.	1.1	98
15	Highly dispersible graphene oxide reinforced polypyrrole/polyvinyl alcohol blend nanocomposites with high dielectric constant and low dielectric loss. RSC Advances, 2015, 5, 61933-61945.	1.7	93
16	Graphene oxide reinforced poly (4-styrenesulfonic acid)/polyvinyl alcohol blend composites with enhanced dielectric properties for portable and flexible electronics. Materials Chemistry and Physics, 2017, 186, 188-201.	2.0	93
17	Synergistic effect of vanadium pentoxide and graphene oxide in polyvinyl alcohol for energy storage application. European Polymer Journal, 2016, 76, 14-27.	2.6	91
18	Surface properties of graphene oxide reinforced polyvinyl chloride nanocomposites. Journal of Polymer Research, 2013, 20, 1.	1.2	89

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19	Influence of TiO <sub>2</sub> Nanoparticles on the Morphological, Thermal and Solution Properties of PVA/TiO <sub>2</sub> Nanocomposite Membranes. Arabian Journal for Science and Engineering, 2014, 39, 6805-6814.	1.1	79
20	Thermo-mechanical properties of poly (vinyl chloride)/graphene oxide as high performance nanocomposites. Polymer Testing, 2014, 34, 211-219.	2.3	75
21	Fumed SiO <sub>2</sub> nanoparticle reinforced biopolymer blend nanocomposites with high dielectric constant and low dielectric loss for flexible organic electronics. Journal of Applied Polymer Science, 2017, 134, .	1.3	75
22	Investigation of the structural, thermal, mechanical, and optical properties of poly(methyl) Tj ETQqO 0 0 rgBT /Overlock 10 Tf 50 627 Td 2169-2179.	1.3	73
23	Influence of K <sub>2</sub> CrO <sub>4</sub> Doping on the Structural, Optical and Dielectric Properties of Polyvinyl Alcohol/K <sub>2</sub> CrO <sub>4</sub> Composite Films. Polymer-Plastics Technology and Engineering, 2016, 55, 231-241.	1.9	73
24	Newly developed biodegradable polymer nanocomposites of cellulose acetate and Al <sub>2</sub> O <sub>3</sub> nanoparticles with enhanced dielectric performance for embedded passive applications. Journal of Materials Science: Materials in Electronics, 2017, 28, 973-986.	1.1	73
25	Eco-Friendly Synthesis of Graphene Oxide Reinforced Hydroxypropyl Methylcellulose/Polyvinyl Alcohol Blend Nanocomposites Filled with Zinc Oxide Nanoparticles for High-k Capacitor Applications. Polymer-Plastics Technology and Engineering, 2016, 55, 1240-1253.	1.9	72
26	Impedance spectroscopy, ionic conductivity and dielectric studies of new Li <sup>+</sup> ion conducting polymer blend electrolytes based on biodegradable polymers for solid state battery applications. Journal of Materials Science: Materials in Electronics, 2016, 27, 11410-11424.	1.1	65
27	Polyvinyl alcohol (PVA)/polystyrene sulfonic acid (PSSA)/carbon black nanocomposite for flexible energy storage device applications. Journal of Materials Science: Materials in Electronics, 2017, 28, 6099-6111.	1.1	64
28	Influence of Cerium Oxide (CeO <sub>2</sub> ) Nanoparticles on the Structural, Morphological, Mechanical and Dielectric Properties of PVA/PPy Blend Nanocomposites. Materials Today: Proceedings, 2016, 3, 1864-1873.	0.9	61
29	Investigation of Microstructure, Morphology, Mechanical, and Dielectric Properties of PVA/PbO Nanocomposites. Advances in Polymer Technology, 2017, 36, 352-361.	0.8	60
30	Striking multiple synergies in novel three-phase fluoropolymer nanocomposites by combining titanium dioxide and graphene oxide as hybrid fillers. Journal of Materials Science: Materials in Electronics, 2017, 28, 559-575.	1.1	60
31	Solution-processed white graphene-reinforced ferroelectric polymer nanocomposites with improved thermal conductivity and dielectric properties for electronic encapsulation. Journal of Polymer Research, 2017, 24, 1.	1.2	59
32	Fabrication and characterization of polymer blends consisting of cationic polyallylamine and anionic polyvinyl alcohol. Ionics, 2014, 20, 957-967.	1.2	57
33	White graphene reinforced polypyrrole and poly(vinyl alcohol) blend nanocomposites as chemiresistive sensors for room temperature detection of liquid petroleum gases. Mikročimica Acta, 2017, 184, 3977-3987.	2.5	55
34	Zeolite 4A Filled Poly (3, 4-ethylenedioxythiophene): (polystyrenesulfonate) (PEDOT: PSS) And Polyvinyl Alcohol (PVA) Blend Nanocomposites As High-k Dielectric Materials For Embedded Capacitor Applications. Advanced Materials Letters, 2016, 7, 996-1002.	0.3	50
35	Enhanced electromagnetic absorption in NiO and BaTiO <sub>3</sub> based polyvinylidene fluoride nanocomposites. Materials Letters, 2018, 218, 217-220.	1.3	49
36	Dielectric and electromagnetic interference shielding properties of germanium dioxide nanoparticle reinforced poly(vinyl chloride) and poly(methylmethacrylate) blend nanocomposites. Journal of Materials Science: Materials in Electronics, 2018, 29, 20172-20188.	1.1	48

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37	Flexible, biodegradable and recyclable solar cells: a review. Journal of Materials Science: Materials in Electronics, 2019, 30, 951-974.	1.1	48
38	Surface characterization of air plasma treated poly vinylidene fluoride and poly methyl methacrylate films. Polymer Engineering and Science, 2009, 49, 808-818.	1.5	47
39	Structural, dielectric and EMI shielding properties of polyvinyl alcohol/chitosan blend nanocomposites integrated with graphite oxide and nickel oxide nanofillers. Journal of Materials Science: Materials in Electronics, 2021, 32, 764-779.	1.1	45
40	Morphology, Dielectric and EMI Shielding Characteristics of Graphene Nanoplatelets, Montmorillonite Nanoclay and Titanium Dioxide Nanoparticles Reinforced Polyvinylidene fluoride Nanocomposites. Journal of Inorganic and Organometallic Polymers and Materials, 2021, 31, 2003-2016.	1.9	43
41	Enhanced dielectric properties of green synthesized Nickel Sulphide (NiS) nanoparticles integrated polyvinylalcohol nanocomposites*. Materials Research Express, 2020, 7, 064007.	0.8	43
42	Influence of CuO nanoparticles and graphene nanoplatelets on the sensing behaviour of poly(vinyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 Science: Materials in Electronics, 2018, 29, 5186-5205.	1.1	40
43	Dielectric and electromagnetic interference shielding properties of carbon black nanoparticles reinforced PVA/PEG blend nanocomposite films. Materials Research Express, 2020, 7, 064008.	0.8	40
44	High- quality factor poly (vinylidene fluoride) based novel nanocomposites filled with graphene nanoplatelets and vanadium pentoxide for high-Q capacitor applications. Advanced Materials Letters, 2017, 8, 288-294.	0.3	40
45	Electromagnetic interference shielding properties of graphene <scp>quantumâ€dots</scp> reinforced poly(vinyl alcohol)/polypyrrole blend nanocomposites. Journal of Applied Polymer Science, 2020, 137, 49392.	1.3	39
46	Impedance Spectroscopy And Conductivity Studies Of CdCl <sub>2</sub> Doped Polymer Electrolyte. Advanced Materials Letters, 2015, 6, 165-171.	0.3	39
47	Dielectric and electromagnetic interference shielding properties of zeolite<scp>13X</scp>and carbon black nanoparticles based<scp>PVDF</scp>nanocomposites. Journal of Applied Polymer Science, 2021, 138, 50107.	1.3	38
48	Electromagnetic interference shielding properties of polyvinylchloride (PVC), barium titanate (BaTiO <sub>3</sub> ) and nickel oxide (NiO) based nanocomposites. Polymer Testing, 2019, 77, 105925.	2.3	37
49	Significantly enhanced electromagnetic interference shielding effectiveness of montmorillonite nanoclay and copper oxide nanoparticles based polyvinylchloride nanocomposites. Polymer Testing, 2020, 91, 106744.	2.3	37
50	Eeonomer 200F <sup>®</sup> : A High-Performance Nanofiller for Polymer Reinforcementâ€”Investigation of the Structure, Morphology and Dielectric Properties of Polyvinyl Alcohol/Eeonomer-200F <sup>®</sup> Nanocomposites for Embedded Capacitor Applications. Journal of Electronic Materials, 2017, 46, 2406-2418.	1.0	35
51	Study on Structure, Thermal Behavior, and Viscoelastic Properties of Nanodiamond-Reinforced Poly (vinyl alcohol) Nanocomposites. Polymers, 2021, 13, 1426.	2.0	32
52	Recent advances in electrochemical biosensor and gas sensors based on graphene and carbon nanotubes (CNT) - A review. Advanced Materials Letters, 2017, 8, 196-205.	0.3	32
53	Graphene oxide nanocomposites based room temperature gas sensors: A review. Chemosphere, 2021, 280, 130641.	4.2	31
54	3D and 4D printing of pH-responsive and functional polymers and their composites. , 2020, , 85-117.		30

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55	Optimized Quality Factor of Graphene Oxide-Reinforced PVC Nanocomposite. Journal of Electronic Materials, 2014, 43, 1161-1165.	1.0	29
56	Novel nanocomposites of graphene oxide reinforced poly (3,4-ethylenedioxythiophene)-block-poly (ethylene glycol) and polyvinylidene fluoride for embedded capacitor applications. RSC Advances, 2014, 4, 37954-37963.	1.7	29
57	Optimized AC conductivity correlated to structure, morphology and thermal properties of PVDF/PVA/Nafion composites. Ionics, 2014, 20, 1427-1433.	1.2	29
58	Electrical conductivity, optical properties and mechanical stability of 3, 4, 9, 10-perylenetetracarboxylic dianhydride based organic semiconductor. Journal of Physics and Chemistry of Solids, 2015, 80, 52-61.	1.9	29
59	Chemiresistive gas sensors based on vanadium pentoxide reinforced polyvinyl alcohol/polypyrrole blend nanocomposites for room temperature LPG sensing. Synthetic Metals, 2021, 273, 116687.	2.1	29
60	Cellular ceramic foam derived from potassium-based geopolymers composite: Thermal, mechanical and structural properties. Materials and Design, 2021, 198, 109355.	3.3	28
61	Structure, morphology and modelling studies of polyvinylalcohol nanocomposites reinforced with nickel oxide nanoparticles and graphene quantum dots. Environmental Research, 2022, 203, 111842.	3.7	28
62	Introduction to 3D and 4D printing technology: State of the art and recent trends. , 2020, , 1-24.		27
63	Green synthesized materials for sensor, actuator, energy storage and energy generation: a review. Polymer-Plastics Technology and Materials, 2020, 59, 1-62.	0.6	26
64	Influence of $\gamma$ irradiation on the properties of polyacrylonitrile films. Journal of Applied Polymer Science, 2008, 110, 2569-2578.	1.3	25
65	Fundamentals and applications of 3D and 4D printing of polymers: Challenges in polymer processing and prospects of future research. , 2020, , 527-560.		25
66	Effect of Poly Ethylene Glycol (PEG) on Structural, Thermal and Photoluminescence Properties of CdO Nanoparticles For Optoelectronic Applications. Materials Today: Proceedings, 2019, 9, 175-183.	0.9	24
67	Green chemistry mediated synthesis of cadmium sulphide/polyvinyl alcohol nanocomposites: Assessment of microstructural, thermal, and dielectric properties. Polymer Composites, 2020, 41, 2054-2067.	2.3	24
68	Hydrothermal synthesis of ZnWO <sub>4</sub> •MnO <sub>2</sub> nanopowder doped with carbon black nanoparticles for high-performance supercapacitor applications. Journal of Materials Science: Materials in Electronics, 2019, 30, 21250-21258.	1.1	23
69	Electromagnetic Interference Shielding Characteristics of SrTiO <sub>3</sub> Nanoparticles Induced Polyvinyl Chloride and Polyvinylidene Fluoride Blend Nanocomposites. Journal of Inorganic and Organometallic Polymers and Materials, 2021, 31, 3481-3495.	1.9	23
70	Preparation of modified polymer blend and electrical performance. Composite Interfaces, 2015, 22, 167-178.	1.3	22
71	Natural polymer based composite membranes for water purification: a review. Polymer-Plastics Technology and Materials, 2019, 58, 1295-1310.	0.6	22
72	Optimization of Dielectric Constant of Polycarbonate/Polystyrene Modified Blend by Ceramic Metal Oxide. Polymer-Plastics Technology and Engineering, 2015, 54, 383-389.	1.9	21

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73	Dielectric Spectroscopy. , 2017, , 237-299.		21
74	Electrical and Electromagnetic Interference (EMI) shielding properties of hexagonal boron nitride nanoparticles reinforced polyvinylidene fluoride nanocomposite films. Polymer-Plastics Technology and Materials, 2019, 58, 1191-1209.	0.6	21
75	A systematic review on 2D materials for volatile organic compound sensing. Coordination Chemistry Reviews, 2022, 461, 214502.	9.5	20
76	Hydrothermal synthesis of CeO <sub>2</sub> SnO <sub>2</sub> nanocomposites with highly enhanced gas sensing performance towards n-butanol. Journal of Science: Advanced Materials and Devices, 2018, 3, 139-144.	1.5	19
77	A High Sensitivity Isopropanol Vapor Sensor Based on Cr <sub>2</sub> O <sub>3</sub> –SnO <sub>2</sub> Heterojunction Nanocomposites via Chemical Precipitation Route. Journal of Nanoscience and Nanotechnology, 2018, 18, 5454-5460.	0.9	19
78	Enhanced Quality Factor of Polyvinyl formal (PVF) Based Nanocomposites Filled with Zinc Oxide and Carbon Black Nanoparticles for Wireless Sensing Applications. Materials Today: Proceedings, 2019, 9, 199-216.	0.9	19
79	A review on porous polymer composite materials for multifunctional electronic applications. Polymer-Plastics Technology and Materials, 2019, 58, 1253-1294.	0.6	19
80	Study of conjugated polymer/graphene oxide nanocomposites as flexible dielectric medium. Journal of Materials Science: Materials in Electronics, 2016, 27, 3397-3409.	1.1	18
81	Studies on the Electrical Properties of Graphene Oxide-Reinforced Poly (4-Styrene Sulfonic Acid) and Polyvinyl Alcohol Blend Composites. International Journal of Nanoscience, 2018, 17, 1760005.	0.4	18
82	Dielectric and electromagnetic interference shielding performance of graphene nanoplatelets and copper oxide nanoparticles reinforced polyvinylidene fluoride/poly(3,4-ethylenedioxythiophene)-block-poly (ethylene glycol) blend nanocomposites. Synthetic Metals, 2021, 282, 116923.	2.1	18
83	Morphology, Ionic Conductivity, and Impedance Spectroscopy Studies of Graphene Oxide-Filled Polyvinylchloride Nanocomposites. Polymer-Plastics Technology and Engineering, 2015, 54, 1743-1752.	1.9	17
84	Investigation on the Electrical Properties of Lithium Ion Conducting Polymer Electrolyte Films Based on Biodegradable Polymer Blends. Advanced Science Letters, 2018, 24, 5496-5502.	0.2	17
85	Electrical characterization of polymer composite gel under biasing as polar medium. Ionics, 2014, 20, 529-534.	1.2	16
86	Studies on the Mechanical, Morphological and Electrical Properties of Highly Dispersible Graphene Oxide Reinforced Polypyrrole and Polyvinylalcohol Blend Composites. Materials Today: Proceedings, 2018, 5, 8744-8752.	0.9	16
87	Dynamic mechanical analysis and broadband electromagnetic interference shielding characteristics of poly (vinyl alcohol)-poly (4-styrenesulfonic acid)-titanium dioxide nanoparticles based tertiary nanocomposites. Polymer-Plastics Technology and Materials, 2020, 59, 847-863.	0.6	16
88	2D MXenes for combatting COVID-19 Pandemic: A perspective on latest developments and innovations. FlatChem, 2022, 33, 100377.	2.8	16
89	Electrospun Polymeric Nanofibers: Fundamental Aspects of Electrospinning Processes, Optimization of Electrospinning Parameters, Properties, and Applications. Lecture Notes in Bioengineering, 2019, , 375-409.	0.3	14
90	Embedded capacitor applications of graphene oxide reinforced poly(3,4-ethylenedioxythiophene)-tetramethacrylate (PEDOT-TMA) composites. Journal of Materials Science: Materials in Electronics, 2015, 26, 5896-5909.	1.1	13

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91	Ceramic-Based Polymer Nanocomposites as Piezoelectric Materials. Springer Series on Polymer and Composite Materials, 2017, , 77-93.	0.5	13
92	3D Printing Technology of Polymer Composites and Hydrogels for Artificial Skin Tissue Implementations. Lecture Notes in Bioengineering, 2019, , 205-233.	0.3	13
93	Dielectric properties and electromagnetic interference shielding studies of nickel oxide and tungsten oxide reinforced polyvinylchloride nanocomposites. Polymer-Plastics Technology and Materials, 2020, 59, 1667-1678.	0.6	13
94	Recent Advances in Poly (Amide-B-Ethylene) Based Membranes for Carbon Dioxide (CO <sub>2</sub> ) Capture: A Review. Polymer-Plastics Technology and Materials, 2019, 58, 366-383.	0.6	12
95	Silica-based geopolymer spherical beads: Influence of viscosity on porosity architecture. Cement and Concrete Composites, 2021, 124, 104261.	4.6	12
96	Influence of nickel on the structural, optical and magnetic properties of PbS thin films synthesized by successive ionic layer adsorption and reaction (SILAR) method. Materials Letters, 2016, 164, 108-110.	1.3	11
97	Surface Modified Zinc Oxide Nanoparticles as Smart UV Sensors. Journal of Electronic Materials, 2019, 48, 4726-4732.	1.0	11
98	Mechanical analysis of polymers. , 2020, , 117-152.		11
99	Preparation and Performance Characterization of Soft Polymer Composites as a Function of Single and Mixed Nano Entities. Polymer-Plastics Technology and Engineering, 2014, 53, 588-595.	1.9	9
100	Stability and electrokinetic properties of aqueous TiO <sub>2</sub> nanoparticles dispersion in polyallylamine and polyvinyl alcohol blend systems. Journal of Polymer Research, 2014, 21, 1.	1.2	9
101	Room temperature ammonia sensing based on graphene oxide integrated flexible polyvinylidene fluoride/cerium oxide nanocomposite films. Polymer-Plastics Technology and Materials, 2020, 59, 1429-1446.	0.6	8
102	Fabrication of flexible ternary polymer blends comprising polypyrrole, polyvinylalcohol, and poly(4-vinylstyrenesulfonic acid): Study of structural, morphological, and dielectric properties. Journal of Applied Polymer Science, 2022, 139, .	1.3	6
103	Biomedical Applications of Electrospun Polymer Composite Nanofibres. Lecture Notes in Bioengineering, 2019, , 111-165.	0.3	5
104	Enhanced LPG Sensitivity for Electron Beam Irradiated Al <sub>2</sub> O <sub>3</sub> /ZnO Nanoparticles. Macromolecular Symposia, 2020, 392, 2000168.	0.4	4
105	CHAPTER 12. Hybrid Nano-filler for Value Added Rubber Compounds for Recycling. RSC Green Chemistry, 2018, , 310-329.	0.0	4
106	MXene-based flexible polymer composites as high dielectric constant materials. , 2022, , 725-758.		4
107	Structure defects and electronic properties of MXenes. , 2022, , 91-129.		3
108	Conjugated polymer/graphene oxide nanocomposite as thermistor. AIP Conference Proceedings, 2015, , .	0.3	2



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109	Optical Analysis of Iron-Doped Lead Sulfide Thin Films for Opto-Electronic Applications. International Journal of Nanoscience, 2018, 17, 1760004.	0.4	2
110	Microstructural evaluation and thermal properties of sol-gel derived silica-titania based porous glasses. Journal of Physics: Conference Series, 2020, 1527, 012031.	0.3	2
111	MXene-based multifunctional polymer composites for electromagnetic interference shielding applications. , 2022, , 649-686.		2
112	Amorphous and Semicrystalline Thermoplastic Polymer Nanocomposites Applied in Biomedical Engineering. Lecture Notes in Bioengineering, 2019, , 57-84.	0.3	1
113	Processing and Industrial Applications of Sustainable Nanocomposites Containing Nanofillers. , 2019, , 451-478.		1
114	Fabrication and Excellent Dielectric Performance of Exfoliated Graphite Sheets. Journal of Nano- and Electronic Physics, 2016, 8, 01022-1-01022-3.	0.2	1
115	MXenes and their composites for energy harvesting applications. , 2022, , 687-723.		1
116	Dielectric Properties of Epoxy/Natural Fiber Composites. , 2022, , 1-35.		1
117	Shape Memory Polymer Composites in Biomedical Field. Lecture Notes in Bioengineering, 2019, , 299-329.	0.3	0
118	Introduction to 2D MXenes: fundamental aspects, MAX phases and MXene derivatives, current challenges, and future prospects. , 2022, , 1-47.		0
119	MXenes and their composites: emerging materials for gas sensing and biosensing. , 2022, , 241-279.		0
120	Electrical Properties of Synthetic Fiber/Epoxy Composites. , 2022, , 1-30.		0
121	Photosensitivity and Photocatalytic Activity of ZnO Thin Films Annealed in Different Environmental Conditions. Journal of Electronic Materials, 0, , 1.	1.0	0