Igor Krupa

List of Publications by Year
in descending order

77 papers	2,556 citations	147566 31 h-index	214527 47 g-index
78 all docs	78 docs citations	78 times ranked	3055 citing authors

#	Article	IF	Citations
1	A comparative study on the electrical and mechanical behaviour of multiâ€walled carbon nanotube composites prepared by diluting a masterbatch with various types of polypropylenes. Journal of Applied Polymer Science, 2009, 113, 2536-2551.	1.3	141
2	Thermal characterization of phase change materials based on linear low-density polyethylene, paraffin wax and expanded graphite. Renewable Energy, 2016, 88, 372-382.	4.3	115
3	Thermal conductivity and latent heat thermal energy storage properties of LDPE/wax as a shape-stabilized composite phase change material. Energy Conversion and Management, 2014, 77, 586-596.	4.4	104
4	Graphene and graphitic derivative filled polymer composites as potential sensors. Physical Chemistry Chemical Physics, 2015, 17, 3954-3981.	1.3	98
5	2D Ti3C2Tx (MXene)-reinforced polyvinyl alcohol (PVA) nanofibers with enhanced mechanical and electrical properties. PLoS ONE, 2017, 12, e0183705.	1.1	92
6	Unconventional experimental technologies available for phase change materials (PCM) characterization. Part 1. Thermophysical properties. Renewable and Sustainable Energy Reviews, 2015, 43, 1399-1414.	8.2	85
7	Phase change materials based on high-density polyethylene filled with microencapsulated paraffin wax. Energy Conversion and Management, 2014, 87, 400-409.	4.4	79
8	The mechanical and adhesive properties of electrically and thermally conductive polymeric composites based on high density polyethylene filled with nickel powder. Materials & Design, 2013, 51, 620-628.	5.1	77
9	Thermal properties of phase-change materials based on high-density polyethylene filled with micro-encapsulated paraffin wax for thermal energy storage. Energy and Buildings, 2015, 88, 144-152.	3.1	69
10	Analysis of correlation between percolation concentration and elongation at break in filled electroconductive epoxy-based adhesives. European Polymer Journal, 2003, 39, 585-592.	2.6	67
11	Effect of expanded graphite on the phase change materials of high density polyethylene/wax blends. Thermochimica Acta, 2015, 600, 35-44.	1.2	62
12	Heat transfer performance of paraffin wax based phase change materials applicable in building industry. Applied Thermal Engineering, 2016, 107, 1313-1323.	3.0	54
13	Electro-conductive resins filled with graphite for casting applications. European Polymer Journal, 2004, 40, 1417-1422.	2.6	52
14	Thermal properties of smart microencapsulated paraffin/plaster composites for the thermal regulation of buildings. Energy and Buildings, 2015, 88, 183-192.	3.1	51
15	Zwitterionic hydrogels crosslinked with novel zwitterionic crosslinkers: Synthesis and characterization. Polymer, 2011, 52, 3011-3020.	1.8	48
16	Thermal and mechanical characterization of injection moulded high density polyethylene/paraffin wax blends as phase change materials. Renewable Energy, 2014, 68, 140-145.	4.3	48
17	Facile preparation of N-S co-doped graphene quantum dots (GQDs) from graphite waste for efficient humidity sensing. Sensors and Actuators B: Chemical, 2021, 328, 129058.	4.0	48
18	Effect of waste wax and chain structure on the mechanical and physical properties of polyethylene. Arabian Journal of Chemistry, 2015, 8, 388-399.	2.3	43

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19	Piezoresistive Sensors Based on Electrospun Mats Modified by 2D Ti3C2Tx MXene. Sensors, 2019, 19, 4589.	2.1	43
20	Viscoelastic and photo-actuation studies of composites based on polystyrene-grafted carbon nanotubes and styrene-b-isoprene-b-styrene block copolymer. Polymer, 2014, 55, 211-218.	1.8	42
21	Effect of corona treatment on adhesion enhancement of LLDPE. Surface and Coatings Technology, 2018, 335, 118-125.	2.2	42
22	An updated review on boron removal from water through adsorption processes. Emergent Materials, 2021, 4, 1167-1186.	3.2	41
23	Conductive polymer-coated textiles: The role of fabric treatment by pyrrole-functionalized triethoxysilane. Synthetic Metals, 2007, 157, 914-923.	2.1	40
24	Electrically Conductive, Transparent Polymeric Nanocomposites Modified by 2D Ti3C2Tx (MXene). Polymers, 2019, 11, 1272.	2.0	40
25	Effect of filler size on thermophysical and electrical behavior of nanocomposites based on expanded graphite nanoparticles filled in lowâ€density polyethylene matrix. Polymer Composites, 2013, 34, 149-155.	2.3	38
26	Anti-corrosive and oil sensitive coatings based on epoxy/polyaniline/magnetite-clay composites through diazonium interfacial chemistry. Scientific Reports, 2018, 8, 13369.	1.6	37
27	Calorimetric and dynamic mechanical behavior of phase change materials based on paraffin wax supported by expanded graphite. Thermochimica Acta, 2015, 617, 111-119.	1.2	36
28	Mechanical properties of silica hydrogels prepared and aged at physiological conditions: testing in the compression mode. Journal of Sol-Gel Science and Technology, 2010, 53, 107-114.	1.1	35
29	Positive influence of expanded graphite on the physical behavior of phase change materials based on linear low-density polyethylene and paraffin wax. Thermochimica Acta, 2015, 614, 218-225.	1.2	35
30	The preparation, properties and applications of electrospun co-polyamide 6,12 membranes modified by cellulose nanocrystals. Materials and Design, 2017, 132, 314-323.	3.3	35
31	Designing dual phase sensing materials from polyaniline filled styreneâ€“isopreneâ€“styrene composites. Materials Chemistry and Physics, 2014, 147, 1029-1036.	2.0	34
32	Unconventional experimental technologies used for phase change materials (PCM) characterization: part 2 â€“ morphological and structural characterization, physico-chemical stability and mechanical properties. Renewable and Sustainable Energy Reviews, 2015, 43, 1415-1426.	8.2	33
33	Thermal lag and its practical consequence in the dynamic mechanical analysis of polymers. Polymer Testing, 2000, 19, 755-771.	2.3	32
34	Study of adhesion and surface properties of low-density poly(ethylene) pre-treated by cold discharge plasma. Polymers for Advanced Technologies, 2007, 18, 97-105.	1.6	30
35	Photo-actuating materials based on elastomers and modified carbon nanotubes. Journal of Nanophotonics, 2012, 6, 063522.	0.4	30
36	Modification of Polyethylene by RF Plasma in Different/Mixture Gases. Coatings, 2019, 9, 145.	1.2	30

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37	Mechanical and electrical properties of composites based on thermoplastic matrices and conductive cellulose fibers. Journal of Applied Polymer Science, 2006, 101, 133-142.	1.3	29
38	Nanocomposite photoactuators based on an ethylene vinyl acetate copolymer filled with carbon nanotubes. Sensors and Actuators B: Chemical, 2013, 186, 701-710.	4.0	29
39	Thermal characterization of polymer matrix composites containing microencapsulated paraffin in solid or liquid state. Energy Conversion and Management, 2014, 78, 796-804.	4.4	29
40	Bentonite-decorated calix [4] arene: A new, promising hybrid material for heavy-metal removal. Applied Clay Science, 2018, 161, 15-22.	2.6	26
41	Foamy phase change materials based on linear low-density polyethylene and paraffin wax blends. Emergent Materials, 2018, 1, 47-54.	3.2	25
42	The stabilizing effect of expanded graphite on the artificial aging of shape stabilized phase change materials. Polymer Testing, 2015, 46, 65-71.	2.3	22
43	Electrochemical Investigation of Interfacial Properties of Ti3C2Tx MXene Modified by Aryldiazonium Betaine Derivatives. Frontiers in Chemistry, 2020, 8, 553.	1.8	20
44	Emerging clay-aryl-gold nanohybrids for efficient electrocatalytic proton reduction. Energy Conversion and Management, 2018, 168, 170-177.	4.4	19
45	Polyzwitterionic Hydrogels in Engines Based on the Antipolyelectrolyte Effect and Driven by the Salinity Gradient. Environmental Science & Technology, 2019, 53, 9260-9268.	4.6	19
46	Preparation of Progressive Antibacterial LDPE Surface via Active Biomolecule Deposition Approach. Polymers, 2019, 11, 1704.	2.0	18
47	Influence of surface modification of carbon nanotubes on interactions with polystyreneâ€bâ€polyisopreneâ€bâ€polystyrene matrix and its photoâ€actuation properties. Polymers for Advanced Technologies, 2014, 25, 1293-1300.	1.6	17
48	Alginateâ€“Halloysite Nanocomposite Aerogel: Preparation, Structure, and Oil/Water Separation Applications. Biomolecules, 2020, 10, 1632.	1.8	17
49	Separation of Water/Oil Emulsions by an Electrospun Copolyamide Mat Covered with a 2D Ti3C2Tx MXene. Materials, 2020, 13, 3171.	1.3	16
50	Thermally Conductive Polyethylene/Expanded Graphite Composites as Heat Transfer Surface: Mechanical, Thermo-Physical and Surface Behavior. Polymers, 2020, 12, 2863.	2.0	16
51	Elastomeric photo-actuators and their investigation by confocal laser scanning microscopy. Smart Materials and Structures, 2013, 22, 104001.	1.8	15
52	Electrically conductive composites based on an elastomeric matrix filled with expanded graphite as a potential oil sensing material. Smart Materials and Structures, 2014, 23, 125020.	1.8	15
53	FLEXIBLE OIL SENSORS BASED ON MULTIWALLED CARBON NANOTUBEâ€“FILLED ISOPRENE ELASTOMER COMPOSITES. Rubber Chemistry and Technology, 2016, 89, 306-315.	0.6	15
54	Natural aging of shape stabilized phase change materials based on paraffin wax. Polymer Testing, 2017, 63, 567-572.	2.3	14

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55	Some Theoretical Aspects of Tertiary Treatment of Water/Oil Emulsions by Adsorption and Coalescence Mechanisms: A Review. Water (Switzerland), 2021, 13, 652.	1.2	14
56	Foamed Phase Change Materials Based on Recycled Polyethylene/Paraffin Wax Blends. Polymers, 2021, 13, 1987.	2.0	14
57	Materials and Technologies for the Tertiary Treatment of Produced Water Contaminated by Oil Impurities through Nonfibrous Deep-Bed Media: A Review. Water (Switzerland), 2020, 12, 3419.	1.2	13
58	Superhydrophobic Polyester/Cotton Fabrics Modified by Barrier Discharge Plasma and Organosilanes. Polymer-Plastics Technology and Engineering, 2018, 57, 440-448.	1.9	12
59	Piezoresponse, Mechanical, and Electrical Characteristics of Synthetic Spider Silk Nanofibers. Nanomaterials, 2018, 8, 585.	1.9	12
60	Impact of ionic liquids on the processing and photo-actuation behavior of SBR composites containing graphene nanoplatelets. Sensors and Actuators B: Chemical, 2021, 329, 129195.	4.0	12
61	PE/wax blends: interesting observations. Macromolecular Symposia, 2002, 178, 109-116.	0.4	11
62	A polysulfobetaine hydrogel for immobilization of a glucose-binding protein. RSC Advances, 2016, 6, 83890-83900.	1.7	11
63	Photoimmobilization of zwitterionic polymers on surfaces to reduce cell adhesion. Journal of Colloid and Interface Science, 2017, 500, 294-303.	5.0	11
64	Controllably coated graphene oxide particles with enhanced compatibility with poly(ethylene-co-propylene) thermoplastic elastomer for excellent photo-mechanical actuation capability. Reactive and Functional Polymers, 2020, 148, 104487.	2.0	11
65	A new experimental device and inverse method to characterize thermal properties of composite phase change materials. Composite Structures, 2015, 133, 1149-1159.	3.1	10
66	Recycled Polyethylene/Paraffin Wax/Expanded Graphite Based Heat Absorbers for Thermal Energy Storage: An Artificial Aging Study. Molecules, 2019, 24, 1217.	1.7	10
67	Novel Enzyme-Free Multifunctional Bentonite/Polypyrrole/Silver Nanocomposite Sensor for Hydrogen Peroxide Detection over a Wide pH Range. Sensors, 2019, 19, 4442.	2.1	9
68	Glucose diffusivity and porosity in silica hydrogel based on organofunctional silanes. European Polymer Journal, 2011, 47, 1477-1484.	2.6	7
69	Electrical and Mechanical Properties of Ethylene Vinyl Acetate Based Composites. Materials Science Forum, 0, 714, 193-199.	0.3	6
70	Silica hydrogel formation and aging monitored by pyrene-based fluorescence probes. Journal of Sol-Gel Science and Technology, 2010, 55, 143-150.	1.1	4
71	Electrospun Copolyamide Mats Modified by Functionalized Multiwall Carbon Nanotubes. Polymer Composites, 2019, 40, E1451-E1460.	2.3	4
72	Phase change materials for thermal energy storage applications in greenhouses: A review. Sustainable Energy Technologies and Assessments, 2022, 52, 102241.	1.7	4

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73	Modified os sepiae of Sepiella inermis as a low cost, sustainable, bio-based adsorbent for the effective remediation of boron from aqueous solution. Environmental Science and Pollution Research, 2022, 29, 71014-71032.	2.7	4
74	Fluorescent Zn(II)-Based Metal-Organic Framework: Interaction with Organic Solvents and CO2 and Methane Capture. Molecules, 2022, 27, 3845.	1.7	4
75	Electrically Conductive Electrospun Polymeric Mats for Sensing Dispersed Vegetable Oil Impurities in Wastewater. Processes, 2019, 7, 906.	1.3	3
76	Smart Non-Woven Fiber Mats with Light-Induced Sensing Capability. Nanomaterials, 2020, 10, 77.	1.9	3
77	Preparation and Characterization of New Electrically Conductive Composites Based on Expanded Graphite with Potential Use as Remote Environmental Detectors. Processes, 2020, 8, 1176.	1.3	0