Igor Krupa

List of Publications by Citations

75 papers	1,897 citations	27 h-index	40 g-index
78 ext. papers	2,216 ext. citations	5 avg, IF	4.93 L-index

#	Paper	IF	Citations
75	A comparative study on the electrical and mechanical behaviour of multi-walled carbon nanotube composites prepared by diluting a masterbatch with various types of polypropylenes. *Journal of Applied Polymer Science*, **2009**, 113, 2536-2551	2.9	129
74	Thermal characterization of phase change materials based on linear low-density polyethylene, paraffin wax and expanded graphite. *Renewable Energy*, **2016**, 88, 372-382	8.1	90
73	Graphene and graphitic derivative filled polymer composites as potential sensors. *Physical Chemistry Chemical Physics*, **2015**, 17, 3954-81	3.6	88
72	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	10.6	77
71	Phase change materials based on high-density polyethylene filled with microencapsulated paraffin wax. *Energy Conversion and Management*, **2014**, 87, 400-409	10.6	68
70	Unconventional experimental technologies available for phase change materials (PCM) characterization. Part 1. Thermophysical properties. *Renewable and Sustainable Energy Reviews*, **2015**, 43, 1399-1414	16.2	65
69	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		64
68	2D Ti3C2Tx (MXene)-reinforced polyvinyl alcohol (PVA) nanofibers with enhanced mechanical and electrical properties. *PLoS ONE*, **2017**, 12, e0183705	3.7	62
67	Analysis of correlation between percolation concentration and elongation at break in filled electroconductive epoxy-based adhesives. *European Polymer Journal*, **2003**, 39, 585-592	5.2	62
66	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	7	60
65	Effect of expanded graphite on the phase change materials of high density polyethylene/wax blends. *Thermochimica Acta*, **2015**, 600, 35-44	2.9	53
64	Electro-conductive resins filled with graphite for casting applications. *European Polymer Journal*, **2004**, 40, 1417-1422	5.2	46
63	Zwitterionic hydrogels crosslinked with novel zwitterionic crosslinkers: Synthesis and characterization. *Polymer*, **2011**, 52, 3011-3020	3.9	44
62	Thermal properties of smart microencapsulated paraffin/plaster composites for the thermal regulation of buildings. *Energy and Buildings*, **2015**, 88, 183-192	7	41
61	Heat transfer performance of paraffin wax based phase change materials applicable in building industry. *Applied Thermal Engineering*, **2016**, 107, 1313-1323	5.8	38
60	Effect of filler size on thermophysical and electrical behavior of nanocomposites based on expanded graphite nanoparticles filled in low-density polyethylene matrix. *Polymer Composites*, **2013**, 34, 149-155	3	37
59	Conductive polymer-coated textiles: The role of fabric treatment by pyrrole-functionalized triethoxysilane. *Synthetic Metals*, **2007**, 157, 914-923	3.6	36

58	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	3.9	34
57	Effect of waste wax and chain structure on the mechanical and physical properties of polyethylene. *Arabian Journal of Chemistry*, **2015**, 8, 388-399	5.9	33
56	Thermal and mechanical characterization of injection moulded high density polyethylene/paraffin wax blends as phase change materials. *Renewable Energy*, **2014**, 68, 140-145	8.1	31
55	Calorimetric and dynamic mechanical behavior of phase change materials based on paraffin wax supported by expanded graphite. *Thermochimica Acta*, **2015**, 617, 111-119	2.9	30
54	Designing dual phase sensing materials from polyaniline filled styrene–isoprene–styrene composites. *Materials Chemistry and Physics*, **2014**, 147, 1029-1036	4.4	30
53	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	2.3	30
52	Effect of corona treatment on adhesion enhancement of LLDPE. *Surface and Coatings Technology*, **2018**, 335, 118-125	4.4	29
51	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	2.9	28
50	Thermal characterization of polymer matrix composites containing microencapsulated paraffin in solid or liquid state. *Energy Conversion and Management*, **2014**, 78, 796-804	10.6	28
49	The preparation, properties and applications of electrospun co-polyamide 6,12 membranes modified by cellulose nanocrystals. *Materials and Design*, **2017**, 132, 314-323	8.1	28
48	Photo-actuating materials based on elastomers and modified carbon nanotubes. *Journal of Nanophotonics*, **2012**, 6, 063522	1.1	27
47	Anti-corrosive and oil sensitive coatings based on epoxy/polyaniline/magnetite-clay composites through diazonium interfacial chemistry. *Scientific Reports*, **2018**, 8, 13369	4.9	27
46	Nanocomposite photoactuators based on an ethylene vinyl acetate copolymer filled with carbon nanotubes. *Sensors and Actuators B: Chemical*, **2013**, 186, 701-710	8.5	26
45	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	3.2	26
44	Thermal lag and its practical consequence in the dynamic mechanical analysis of polymers. *Polymer Testing*, **2000**, 19, 755-771	4.5	26
43	Mechanical and electrical properties of composites based on thermoplastic matrices and conductive cellulose fibers. *Journal of Applied Polymer Science*, **2006**, 101, 133-142	2.9	25
42	Piezoresistive Sensors Based on Electrospun Mats Modified by 2D TiCT MXene. *Sensors*, **2019**, 19,	3.8	23
41	Unconventional experimental technologies used for phase change materials (PCM) characterization: part 2 – morphological and structural characterization, physico-chemical stability and mechanical properties. *Renewable and Sustainable Energy Reviews*, **2015**, 43, 1415-1426	16.2	22

40	Bentonite-decorated calix [4] arene: A new, promising hybrid material for heavy-metal removal. *Applied Clay Science*, **2018**, 161, 15-22	5.2	21
39	Modification of Polyethylene by RF Plasma in Different/Mixture Gases. *Coatings*, **2019**, 9, 145	2.9	17
38	The stabilizing effect of expanded graphite on the artificial aging of shape stabilized phase change materials. *Polymer Testing*, **2015**, 46, 65-71	4.5	17
37	Electrically Conductive, Transparent Polymeric Nanocomposites Modified by 2D TiCT (MXene). *Polymers*, **2019**, 11,	4.5	16
36	Foamy phase change materials based on linear low-density polyethylene and paraffin wax blends. *Emergent Materials*, **2018**, 1, 47-54	3.5	15
35	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	3.4	15
34	Emerging clay-aryl-gold nanohybrids for efficient electrocatalytic proton reduction. *Energy Conversion and Management*, **2018**, 168, 170-177	10.6	14
33	Influence of surface modification of carbon nanotubes on interactions with polystyrene-b-polyisoprene-b-polystyrene matrix and its photo-actuation properties. *Polymers for Advanced Technologies*, **2014**, 25, 1293-1300	3.2	13
32	Elastomeric photo-actuators and their investigation by confocal laser scanning microscopy. *Smart Materials and Structures*, **2013**, 22, 104001	3.4	12
31	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	8.5	12
30	Overview: Clay Preparation, Properties, Modification **2017**, 1-28		11
29	Photoimmobilization of zwitterionic polymers on surfaces to reduce cell adhesion. *Journal of Colloid and Interface Science*, **2017**, 500, 294-303	9.3	9
28	Polyzwitterionic Hydrogels in Engines Based on the Antipolyelectrolyte Effect and Driven by the Salinity Gradient. *Environmental Science & Technology*, **2019**, 53, 9260-9268	10.3	9
27	Superhydrophobic Polyester/Cotton Fabrics Modified by Barrier Discharge Plasma and Organosilanes. *Polymer-Plastics Technology and Engineering*, **2018**, 57, 440-448		9
26	FLEXIBLE OIL SENSORS BASED ON MULTIWALLED CARBON NANOTUBE-FILLED ISOPRENE ELASTOMER COMPOSITES. *Rubber Chemistry and Technology*, **2016**, 89, 306-315	1.7	9
25	PE/wax blends: interesting observations. *Macromolecular Symposia*, **2002**, 178, 109-116	0.8	9
24	Thermally Conductive Polyethylene/Expanded Graphite Composites as Heat Transfer Surface: Mechanical, Thermo-Physical and Surface Behavior. *Polymers*, **2020**, 12,	4.5	9
23	Natural aging of shape stabilized phase change materials based on paraffin wax. *Polymer Testing*, **2017**, 63, 567-572	4.5	8

22	Electrochemical Investigation of Interfacial Properties of TiCT MXene Modified by Aryldiazonium Betaine Derivatives. *Frontiers in Chemistry*, **2020**, 8, 553	5	8
21	An updated review on boron removal from water through adsorption processes. *Emergent Materials*,1	3.5	8
20	A polysulfobetaine hydrogel for immobilization of a glucose-binding protein. *RSC Advances*, **2016**, 6, 83890-83900	3.7	8
19	A new experimental device and inverse method to characterize thermal properties of composite phase change materials. *Composite Structures*, **2015**, 133, 1149-1159	5.3	7
18	Alginate-Halloysite Nanocomposite Aerogel: Preparation, Structure, and Oil/Water Separation Applications. *Biomolecules*, **2020**, 10,	5.9	7
17	Piezoresponse, Mechanical, and Electrical Characteristics of Synthetic Spider Silk Nanofibers. *Nanomaterials*, **2018**, 8,	5.4	7
16	Preparation of Progressive Antibacterial LDPE Surface via Active Biomolecule Deposition Approach. *Polymers*, **2019**, 11,	4.5	7
15	Glucose diffusivity and porosity in silica hydrogel based on organofunctional silanes. *European Polymer Journal*, **2011**, 47, 1477-1484	5.2	7
14	Recycled Polyethylene/Paraffin Wax/Expanded Graphite Based Heat Absorbers for Thermal Energy Storage: An Artificial Aging Study. *Molecules*, **2019**, 24,	4.8	6
13	Novel Enzyme-Free Multifunctional Bentonite/Polypyrrole/Silver Nanocomposite Sensor for Hydrogen Peroxide Detection over a Wide pH Range. *Sensors*, **2019**, 19,	3.8	6
12	Electrical and Mechanical Properties of Ethylene Vinyl Acetate Based Composites. *Materials Science Forum*, **2012**, 714, 193-199	0.4	6
11	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	4.6	6
10	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	8.5	5
9	Silica hydrogel formation and aging monitored by pyrene-based fluorescence probes. *Journal of Sol-Gel Science and Technology*, **2010**, 55, 143-150	2.3	4
8	Separation of Water/Oil Emulsions by an Electrospun Copolyamide Mat Covered with a 2D TiCT MXene. *Materials*, **2020**, 13,	3.5	4
7	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	3	3
6	Electrically Conductive Electrospun Polymeric Mats for Sensing Dispersed Vegetable Oil Impurities in Wastewater. *Processes*, **2019**, 7, 906	2.9	3
5	Smart Non-Woven Fiber Mats with Light-Induced Sensing Capability. *Nanomaterials*, **2019**, 10,	5.4	2

4	Electrospun Copolyamide Mats Modified by Functionalized Multiwall Carbon Nanotubes. *Polymer Composites*, **2019**, 40, E1451-E1460	3	2
3	Some Theoretical Aspects of Tertiary Treatment of Water/Oil Emulsions by Adsorption and Coalescence Mechanisms: A Review. *Water (Switzerland)*, **2021**, 13, 652	3	2
2	Phase change materials for thermal energy storage applications in greenhouses: A review. *Sustainable Energy Technologies and Assessments*, **2022**, 52, 102241	4.7	0
1	Preparation and Characterization of New Electrically Conductive Composites Based on Expanded Graphite with Potential Use as Remote Environmental Detectors. *Processes*, **2020**, 8, 1176	2.9	