Beate Krause

List of Publications by Year
in descending order

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101 papers	4,440 citations	101543 36 h-index	106344 65 g-index
101 all docs	101 docs citations	101 times ranked	4058 citing authors

#	Article	IF	Citations
1	Long-Chain Branched Polypropylenes by Electron Beam Irradiation and Their Rheological Properties. Macromolecules, 2004, 37, 9465-9472.	4.8	303
2	The influence of matrix viscosity on MWCNT dispersion and electrical properties in different thermoplastic nanocomposites. Polymer, 2012, 53, 495-504.	3.8	227
3	Dispersability and particle size distribution of CNTs in an aqueous surfactant dispersion as a function of ultrasonic treatment time. Carbon, 2010, 48, 2746-2754.	10.3	220
4	Influence of small scale melt mixing conditions on electrical resistivity of carbon nanotube-polyamide composites. Composites Science and Technology, 2009, 69, 1505-1515.	7.8	215
5	Effect of synthesis catalyst on structure of nitrogen-doped carbon nanotubes and electrical conductivity and electromagnetic interference shielding of their polymeric nanocomposites. Carbon, 2016, 98, 358-372.	10.3	202
6	Tuning the Network Structure in Poly(vinylidene fluoride)/Carbon Nanotube Nanocomposites Using Carbon Black: Toward Improvements of Conductivity and Piezoresistive Sensitivity. ACS Applied Materials & Interfaces, 2016, 8, 14190-14199.	8.0	163
7	Electrical and thermal properties of polyamide 12 composites with hybrid fillers systems of multiwalled carbon nanotubes and carbon black. Composites Science and Technology, 2011, 71, 1053-1059.	7.8	157
8	Electrical, mechanical, and glass transition behavior of polycarbonate-based nanocomposites with different multi-walled carbon nanotubes. Polymer, 2011, 52, 3835-3845.	3.8	156
9	A method for determination of length distributions of multiwalled carbon nanotubes before and after melt processing. Carbon, 2011, 49, 1243-1247.	10.3	139
10	Influence of dry grinding in a ball mill on the length of multiwalled carbon nanotubes and their dispersion and percolation behaviour in melt mixed polycarbonate composites. Composites Science and Technology, 2011, 71, 1145-1153.	7.8	128
11	Correlation of carbon nanotube dispersability in aqueous surfactant solutions and polymers. Carbon, 2009, 47, 602-612.	10.3	111
12	Aspect ratio effects of multiâ€walled carbon nanotubes on electrical, mechanical, and thermal properties of polycarbonate/MWCNT composites. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 73-83.	2.1	101
13	Low electrical percolation threshold in poly(ethylene terephthalate)/multi-walled carbon nanotube nanocomposites. European Polymer Journal, 2010, 46, 928-936.	5.4	99
14	Effects of synthesis catalyst and temperature on broadband dielectric properties of nitrogen-doped carbon nanotube/polyvinylidene fluoride nanocomposites. Carbon, 2016, 106, 260-278.	10.3	99
15	Influence of feeding conditions in twin-screw extrusion of PP/MWCNT composites on electrical and mechanical properties. Composites Science and Technology, 2011, 71, 1535-1542.	7.8	87
16	Percolation behaviour of multiwalled carbon nanotubes of altered length and primary agglomerate morphology in melt mixed isotactic polypropylene-based composites. Composites Science and Technology, 2011, 71, 1936-1943.	7.8	83
17	Nanoporous Cathodes for High-Energy Liâ€“S Batteries from Gyroid Block Copolymer Templates. ACS Nano, 2015, 9, 6147-6157.	14.6	82
18	Melt mixed PCL/MWCNT composites prepared at different rotation speeds: Characterization of rheological, thermal, and electrical properties, molecular weight, MWCNT macrodispersion, and MWCNT length distribution. Polymer, 2013, 54, 3071-3078.	3.8	80

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19	Melt mixed nano composites of PA12 with MWNTs: Influence of MWNT and matrix properties on macrodispersion and electrical properties. Composites Science and Technology, 2011, 71, 306-314.	7.8	77
20	Cellulose-carbon nanotube composite aerogels as novel thermoelectric materials. Composites Science and Technology, 2018, 163, 133-140.	7.8	72
21	Ultralow percolation threshold in polyamide 6.6/MWCNT composites. Composites Science and Technology, 2015, 114, 119-125.	7.8	71
22	Electrically Conductive Polyetheretherketone Nanocomposite Filaments: From Production to Fused Deposition Modeling. Polymers, 2018, 10, 925.	4.5	71
23	Polypropylene-based melt mixed composites with singlewalled carbon nanotubes for thermoelectric applications: Switching from p-type to n-type by the addition of polyethylene glycol. Polymer, 2017, 108, 513-520.	3.8	62
24	Characterization of electron beam irradiated polypropylene: Influence of irradiation temperature on molecular and rheological properties. Journal of Applied Polymer Science, 2006, 100, 2770-2780.	2.6	61
25	Melt mixed SWCNT-polypropylene composites with very low electrical percolation. Polymer, 2016, 98, 45-50.	3.8	59
26	Does the Processing Method Resulting in Different States of an Interconnected Network of Multiwalled Carbon Nanotubes in Polymeric Blend Nanocomposites Affect EMI Shielding Properties?. ACS Omega, 2018, 3, 5771-5782.	3.5	58
27	Comparison of nanotubes produced by fixed bed and aerosol-CVD methods and their electrical percolation behaviour in melt mixed polyamide 6.6 composites. Composites Science and Technology, 2010, 70, 151-160.	7.8	55
28	A successful approach to disperse MWCNTs in polyethylene by melt mixing using polyethylene glycol as additive. Polymer, 2012, 53, 3079-3083.	3.8	52
29	Comparative study of singlewalled, multiwalled, and branched carbon nanotubes melt mixed in different thermoplastic matrices. Polymer, 2018, 159, 75-85.	3.8	47
30	Characterization of Highly Filled PP/Graphite Composites for Adhesive Joining in Fuel Cell Applications. Polymers, 2019, 11, 462.	4.5	46
31	Impact of synthesis temperature on morphology, rheology and electromagnetic interference shielding of CVD-grown carbon nanotube/polyvinylidene fluoride nanocomposites. Synthetic Metals, 2017, 230, 39-50.	3.9	45
32	Long-chain branching of polypropylene by electron-beam irradiation in the molten state. Journal of Applied Polymer Science, 2006, 99, 260-265.	2.6	44
33	Improvement of carbon nanotube dispersion in thermoplastic composites using a three roll mill at elevated temperatures. Composites Science and Technology, 2013, 74, 78-84.	7.8	43
34	Hybrid conductive filler/polycarbonate composites with enhanced electrical and thermal conductivities for bipolar plate applications. Polymer Composites, 2019, 40, 3189-3198.	4.6	43
35	Thermal Conductivity and Electrical Resistivity of Melt-Mixed Polypropylene Composites Containing Mixtures of Carbon-Based Fillers. Polymers, 2019, 11, 1073.	4.5	42
36	An updated micromechanical model based on morphological characterization of carbon nanotube nanocomposites. Composites Part B: Engineering, 2017, 115, 70-78.	12.0	39

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37	Melt-Mixed PP/MWCNT Composites: Influence of CNT Incorporation Strategy and Matrix Viscosity on Filler Dispersion and Electrical Resistivity. Polymers, 2019, 11, 189.	4.5	38
38	Screening of Different Carbon Nanotubes in Melt-Mixed Polymer Composites with Different Polymer Matrices for Their Thermoelectrical Properties. Journal of Composites Science, 2019, 3, 106.	3.0	38
39	Surface modification of MWCNT and its influence on properties of paraffin/MWCNT nanocomposites as phase change material. Journal of Applied Polymer Science, 2020, 137, 48428.	2.6	31
40	Determination of low amounts of long-chain branches in polypropylene using a combination of chromatographic and rheological methods. Journal of Chromatography A, 2004, 1056, 217-222.	3.7	29
41	Electrical and melt rheological characterization of PC and coâ€continuous PC/SAN blends filled with CNTs: Relationship between meltâ€mixing parameters, filler dispersion, and filler aspect ratio. Journal of Polymer Science, Part B: Polymer Physics, 2018, 56, 79-88.	2.1	29
42	Melt-mixed thermoplastic composites containing carbon nanotubes for thermoelectric applications. AIMS Materials Science, 2016, 3, 1107-1116.	1.4	29
43	Development of electrically conductive microstructures based on polymer/CNT nanocomposites via two-photon polymerization. Microelectronic Engineering, 2017, 179, 48-55.	2.4	28
44	Elongational Viscosity and Foaming Behavior of PP Modified by Electron Irradiation or Nanotube Addition. Macromolecular Symposia, 2007, 254, 400-408.	0.7	26
45	A promising approach to low electrical percolation threshold in PMMA nanocomposites by using MWCNT-PEO predispersions. Materials and Design, 2016, 111, 253-262.	7.0	23
46	Direction Dependent Electrical Conductivity of Polymer/Carbon Filler Composites. Polymers, 2019, 11, 591.	4.5	23
47	Nitrogen-Doped Carbon Nanotube/Polypropylene Composites with Negative Seebeck Coefficient. Journal of Composites Science, 2020, 4, 14.	3.0	22
48	High-Performance, Lightweight, and Flexible Thermoplastic Polyurethane Nanocomposites with Zn²⁺-Substituted CoFe₂O₄ Nanoparticles and Reduced Graphene Oxide as Shielding Materials against Electromagnetic Pollution. ACS Omega, 2021, 6, 28098-28118.	3.5	22
49	Characterization of the State of Dispersion of Carbon Nanotubes in Polymer Nanocomposites. Chemie-Ingenieur-Technik, 2011, 83, 767-781.	0.8	20
50	Boron Doping of SWCNTs as a Way to Enhance the Thermoelectric Properties of Melt-Mixed Polypropylene/SWCNT Composites. Energies, 2020, 13, 394.	3.1	20
51	Comparison of the molecular properties and morphology of polypropylenes irradiated under different atmospheres and after annealing. Journal of Applied Polymer Science, 2006, 100, 634-639.	2.6	19
52	Distribution of Carbon Nanotubes in Polycarbonate-Based Blends for Electromagnetic Interference Shielding. ACS Applied Nano Materials, 2022, 5, 662-677.	5.0	18
53	The Influence of the Blend Ratio in PA6/PA66/MWCNT Blend Composites on the Electrical and Thermal Properties. Polymers, 2019, 11, 122.	4.5	17
54	Messanlage zur Untersuchung des Seebeck-Effektes in Polymermaterialien. TM Technisches Messen, 2020, 87, 495-503.	0.7	17

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55	Influence of talc with different particle sizes in meltâ€mixed LLDPE/MWCNT composites. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 1680-1691.	2.1	16
56	Dispersability of multiwalled carbon nanotubes in polycarbonate-chloroform solutions. Polymer, 2014, 55, 6335-6344.	3.8	16
57	Tuneable Dielectric Properties Derived from Nitrogen-Doped Carbon Nanotubes in PVDF-Based Nanocomposites. ACS Omega, 2018, 3, 9966-9980.	3.5	16
58	The force of MOFs: the potential of switchable metalâ€“organic frameworks as solvent stimulated actuators. Chemical Communications, 2020, 56, 7411-7414.	4.1	15
59	Localization of carbon nanotubes in polyamide 6 blends with non-reactive and reactive rubber. Polymer, 2014, 55, 3062-3067.	3.8	14
60	Electrical and thermal conductivity of polypropylene filled with combinations of carbon fillers. AIP Conference Proceedings, 2016, , .	0.4	14
61	Graphene Derivatives Doped with Nickel Ferrite Nanoparticles as Excellent Microwave Absorbers in Soft Nanocomposites. ChemistrySelect, 2017, 2, 5984-5999.	1.5	14
62	Electrically conductive and piezoresistive polymer nanocomposites using multiwalled carbon nanotubes in a flexible copolyester: Spectroscopic, morphological, mechanical and electrical properties. Nano Structures Nano Objects, 2022, 29, 100806.	3.5	14
63	CuxCo1-xFe2O4 (x = 0.33, 0.67, 1) Spinel Ferrite Nanoparticles Based Thermoplastic Polyurethane Nanocomposites with Reduced Graphene Oxide for Highly Efficient Electromagnetic Interference Shielding. International Journal of Molecular Sciences, 2022, 23, 2610.	4.1	13
64	Influence of different carbon nanotubes on the electrical and mechanical properties of melt mixed poly(ether sulfone)-multi walled carbon nanotube composites. Composites Science and Technology, 2012, 72, 1933-1940.	7.8	12
65	â€œSliding Crystalsâ€•on Low-Dimensional Carbonaceous Nanofillers as Distributed Nanopistons for Highly Damping Materials. ACS Applied Materials & Interfaces, 2019, 11, 38147-38159.	8.0	12
66	Three-Dimensional Printed and Biocompatible Conductive Composites Comprised of Polyhydroxybutyrate and Multiwalled Carbon Nanotubes. Industrial & Engineering Chemistry Research, 2021, 60, 885-897.	3.7	12
67	Achieving Electrical Conductive Tracks by Laser Treatment of non-Conductive Polypropylene/Polycarbonate Blends Filled with MWCNTs. Macromolecular Materials and Engineering, 2014, 299, 869-877.	3.6	11
68	Lightweight Polymer-Carbon Composite Current Collector for Lithium-Ion Batteries. Batteries, 2020, 6, 60.	4.5	10
69	Does the Type of Polymer and Carbon Nanotube Structure Control the Electromagnetic Shielding in Melt-Mixed Polymer Nanocomposites?. Journal of Composites Science, 2020, 4, 9.	3.0	10
70	Thermoelectric Performance of Polypropylene/Carbon Nanotube/Ionic Liquid Composites and Its Dependence on Electron Beam Irradiation. Journal of Composites Science, 2022, 6, 25.	3.0	10
71	Improvement of electrical resistivity of highly filled graphite/PP composite based bipolar plates for fuel cells by addition of carbon black. AIP Conference Proceedings, 2019, , .	0.4	9
72	Melt mixed composites of polypropylene with singlewalled carbon nanotubes for thermoelectric applications: Switching from p- to n-type behavior by additive addition. AIP Conference Proceedings, 2019, , .	0.4	9

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73	Blend Structure and n-Type Thermoelectric Performance of PA6/SAN and PA6/PMMA Blends Filled with Singlewalled Carbon Nanotubes. Nanomaterials, 2021, 11, 1146.	4.1	9
74	Determination of low amounts of long-chain branches in polypropylene using a combination of chromatographic and rheological methods. Journal of Chromatography A, 2004, 1056, 217-222.	3.7	9
75	Polymer - Carbon nanotube composites for thermoelectric applications. AIP Conference Proceedings, 2017, , .	0.4	8
76	Extruded polycarbonate/Di-Allyl phthalate composites with ternary conductive filler system for bipolar plates of polymer electrolyte membrane fuel cells. Smart Materials and Structures, 2019, 28, 064004.	3.5	8
77	Electrically conductive nanocomposites based on poly(lactic acid)/flexible copolyester blends with multiwalled carbon nanotubes. Journal of Applied Polymer Science, 2022, 139, 51554.	2.6	8
78	Highly Tunable Piezoresistive Behavior of Carbon Nanotube-Containing Conductive Polymer Blend Composites Prepared from Two Polymers Exhibiting Crystallization-Induced Phase Separation. ACS Applied Materials & Interfaces, 2021, 13, 43333-43347.	8.0	8
79	Influence of graphite and SEBS addition on thermal and electrical conductivity and mechanical properties of polypropylene composites. AIP Conference Proceedings, 2017, , .	0.4	7
80	Effect of Filler Synergy and Cast Film Extrusion Parameters on Extrudability and Direction-Dependent Conductivity of PVDF/Carbon Nanotube/Carbon Black Composites. Polymers, 2020, 12, 2992.	4.5	7
81	Thermoelectric properties of polypropylene carbon nanofiber melt-mixed composites: exploring the role of polymer on their Seebeck coefficient. Polymer Journal, 2021, 53, 1145-1152.	2.7	7
82	Nanocomposites with p- and n-Type Conductivity Controlled by Type and Content of Nanotubes in Thermosets for Thermoelectric Applications. Nanomaterials, 2020, 10, 1144.	4.1	6
83	Influence of a supplemental filler in twin-screw extruded PP/CNT composites using masterbatch dilution. AIP Conference Proceedings, 2019, , .	0.4	5
84	Mixed Carbon Nanomaterial/Epoxy Resin for Electrically Conductive Adhesives. Journal of Composites Science, 2020, 4, 105.	3.0	5
85	Nonlinear Thermopower Behaviour of N-Type Carbon Nanofibres and Their Melt Mixed Polypropylene Composites. Polymers, 2022, 14, 269.	4.5	5
86	Development of a polymer composite with high electrical conductivity and improved impact strength for the application as bipolar plate. AIP Conference Proceedings, 2016, , .	0.4	4
87	The effect of branched carbon nanotubes as reinforcing nano-filler in polymer nanocomposites. Composite Structures, 2022, 295, 115794.	5.8	4
88	Methods to Characterize the Dispersability of Carbon Nanotubes and Their Length Distribution. Chemie-Ingenieur-Technik, 2012, 84, 263-271.	0.8	3
89	Interfacial chemistry using a bifunctional coupling agent for enhanced electrical properties of carbon nanotube based composites. Polymer, 2013, 54, 5391-5398.	3.8	3
90	Influence of mixing conditions on carbon nanotube shortening and curling in polycarbonate composites. AIP Conference Proceedings, 2017, , .	0.4	3

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91	PP/SWCNT composites modified with ionic liquid. AIP Conference Proceedings, 2017, , .	0.4	3
92	Characterization of Dispersability of Industrial Nanotube Materials and their Length Distribution Before and After Melt Processing. RSC Nanoscience and Nanotechnology, 2013, , 212-233.	0.2	2
93	Thermal conductivity of hybrid filled HDPE nanocomposites. AIP Conference Proceedings, 2017, , .	0.4	2
94	Impact of synthesis temperature on structure of carbon nanotubes and morphological and electrical characterization of their polymeric nanocomposites. AIP Conference Proceedings, 2017, , .	0.4	2
95	Development of joining methods for highly filled graphite/PP composite based bipolar plates for fuel cells: Adhesive joining and welding. AIP Conference Proceedings, 2019, , .	0.4	2
96	Effects of high energy electrons on the properties of polyethylene / multiwalled carbon nanotubes composites: Comparison of as-grown and oxygen-functionalised MWCNT. , 2014, , .		1
97	Effect of additives on MWCNT dispersion and electrical percolation in polyamide 12 composites. AIP Conference Proceedings, 2017, , .	0.4	1
98	Graphite modified epoxy-based adhesive for joining of aluminium and PP/graphite composites. Journal of Adhesion, 2020, 96, 229-252.	3.0	1
99	Determination of low amounts of long-chain branches in polypropylene using a combination of chromatographic and rheological methods. Journal of Chromatography A, 2004, 1056, 217-22.	3.7	1
100	Polymer/CNT Composites and Filaments for Smart Textiles: Melt Mixing of Composites. Solid State Phenomena, 0, 333, 91-96.	0.3	1
101	Elongational Viscosity and Foaming Behavior of PP Modified by Electron Irradiation or Nanotube Addition. Macromolecular Symposia, 2007, 254, 400-408.	0.7	0