Petr Formanek

List of Publications by Year in descending order

113 papers	3,273 citations	117625 34 h-index	182427 51 g-index
115 all docs	115 docs citations	115 times ranked	5149 citing authors

#	Article	IF	Citations
1	Ensuring patient safety by rational choice of color masterbatch for medical device applicationsâ€"A case study investigating the properties of an ABS / SAN blend colored by different masterbatches based on styrenic polymers. Journal of Applied Polymer Science, 2022, 139, 51844.	2.6	1
2	Distribution of Carbon Nanotubes in Polycarbonate-Based Blends for Electromagnetic Interference Shielding. ACS Applied Nano Materials, 2022, 5, 662-677.	5.0	18
3	Nanoparticle-Stabilized Perforated Lamellar Morphology in Block Copolymer/Quantum Dot Hybrids. Macromolecules, 2021, 54, 1216-1223.	4.8	8
4	Proton Conductive Membranes from Covalently Crossâ€Linked Poly(Acrylate)/Silica Interpenetrating Networks. Macromolecular Materials and Engineering, 2021, 306, 2000776.	3.6	1
5	Designing Supertough and Ultrastretchable Liquid Metal-Embedded Natural Rubber Composites for Soft-Matter Engineering. ACS Applied Materials & Interfaces, 2021, 13, 15610-15620.	8.0	21
6	The Localization Behavior of Different CNTs in PC/SAN Blends Containing a Reactive Component. Molecules, 2021, 26, 1312.	3.8	2
7	High-Power All-Carbon Fully Printed and Wearable SWCNT-Based Organic Thermoelectric Generator. ACS Applied Materials & Interfaces, 2021, 13, 11151-11165.	8.0	49
8	Enhanced Photoluminescence of Gold Nanoparticleâ€Quantum Dot Hybrids Confined in Hairy Polymer Nanofibers. ChemNanoMat, 2021, 7, 831-841.	2.8	5
9	Podosome-Driven Defect Development in Lamellar Bone under the Conditions of Senile Osteoporosis Observed at the Nanometer Scale. ACS Biomaterials Science and Engineering, 2021, 7, 2255-2267.	5.2	0
10	A high performance flexible and robust printed thermoelectric generator based on hybridized Te nanowires with PEDOT:PSS. Applied Energy, 2021, 294, 117004.	10.1	16
11	Flexible Pressure Sensors Based on the Controlled Buckling of Doped Semiconducting Polymer Nanopillars. ACS Applied Materials & Interfaces, 2021, 13, 37445-37454.	8.0	4
12	Feedback-Induced and Oscillating pH Regulation of a Binary Enzymeâ€"Polymersomes System. Chemistry of Materials, 2021, 33, 6692-6700.	6.7	18
13	Fully printed and flexible carbon nanotube-based thermoelectric generator capable for high-temperature applications. Journal of Power Sources, 2021, 507, 230323.	7.8	18
14	Ultrathin structures derived from interfacially modified polymeric nanocomposites to curb electromagnetic pollution. Nanoscale Advances, 2021, 3, 2632-2648.	4.6	10
15	Mask-painting symmetrical micro-supercapacitors based on scalable, pore size adjustable, N-doped hierarchical porous carbon. Journal of Materials Chemistry A, 2021, 9, 14052-14063.	10.3	19
16	Structural Templating of an Organic Solar Cell Absorber by Ellagic Acid To Tune Its Aggregation, Molecular Orientation, and Optical Properties. ACS Applied Energy Materials, 2021, 4, 14273-14286.	5.1	3
17	High permeation and antifouling polysulfone ultrafiltration membranes with in situ synthesized silica nanoparticles. Materials Today Communications, 2020, 22, 100784.	1.9	18
18	New insights into the structure of two-dimensional lead iodide-based perovskites. Organic Electronics, 2020, 87, 105935.	2.6	7

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19	Tuning the Piezoresistive Behavior of Poly(Vinylidene Fluoride)/Carbon Nanotube Composites Using Poly(Methyl Methacrylate). ACS Applied Materials & Interfaces, 2020, 12, 43125-43137.	8.0	23
20	An intimate view into the silica deposition vesicles of diatoms. BMC Materials, 2020, 2, .	6.8	25
21	Unraveling Structure and Device Operation of Organic Permeable Base Transistors. Advanced Electronic Materials, 2020, 6, 2000230.	5.1	11
22	Hollow Au@TiO₂ porous electrospun nanofibers for catalytic applications. RSC Advances, 2020, 10, 6592-6602.	3.6	12
23	In Situ Zirconia: A Superior Reinforcing Filler for High-Performance Nitrile Rubber Composites. ACS Omega, 2020, 5, 7751-7761.	3.5	17
24	Sequentially Processed P3HT/CN6â€CP^{â€¢â^'}NBu⁴⁺ Films: Interfacial or Bulk Doping?. Advanced Electronic Materials, 2020, 6, 1901346.	5.1	8
25	Bio-inspired poly(3,4-ethylenedioxythiophene): Poly(styrene sulfonate)-sulfur@polyacrylonitrile electrospun nanofibers for lithium-sulfur batteries. Journal of Power Sources, 2019, 431, 250-258.	7.8	32
26	Silver Particles with Rhombicuboctahedral Shape and Effective Isotropic Interactions with Light. Chemistry of Materials, 2019, 31, 2822-2827.	6.7	9
27	Vertical Organic Thinâ€Film Transistors with an Anodized Permeable Base for Very Low Leakage Current. Advanced Materials, 2019, 31, e1900917.	21.0	21
28	Exploring Whether a Buried Nanoscale Interphase Exists within Epoxyâ€“Amine Coatings: Implications for Adhesion, Fracture Toughness, and Corrosion Resistance. ACS Applied Nano Materials, 2019, 2, 2494-2502.	5.0	15
29	Layer-by-Layer Assembly Enabled by the Anionic p-Dopant CN6-CP^{â€¢â€“}K⁺: a Route to Achieve Interfacial Doping of Organic Semiconductors. ACS Applied Materials & Interfaces, 2019, 11, 4159-4168.	8.0	8
30	Toward Functional Synthetic Cells: Inâ€Depth Study of Nanoparticle and Enzyme Diffusion through a Crossâ€Linked Polymersome Membrane. Advanced Science, 2019, 6, 1801299.	11.2	57
31	Entrapped Styrene Butadiene Polymer Chains by Solâ€“Gel-Derived Silica Nanoparticles with Hierarchical Raspberry Structures. Journal of Physical Chemistry B, 2018, 122, 2010-2022.	2.6	10
32	Highly Oriented Nanowire Thin Films with Anisotropic Optical Properties Driven by the Simultaneous Influence of Surface Templating and Shear Forces. ACS Applied Materials & Interfaces, 2018, 10, 3046-3057.	8.0	33
33	Au@p4VP core@shell pH-sensitive nanocomposites suitable for drug entrapment. Journal of Colloid and Interface Science, 2018, 514, 704-714.	9.4	19
34	Phase Inversion Strategy to Fabricate Porous Carbon for Liâ€S Batteries via Block Copolymer Selfâ€Assembly. Advanced Materials Interfaces, 2018, 5, 1701116.	3.7	18
35	Highâ€Motility Visible Lightâ€Driven Ag/AgCl Janus Micromotors. Small, 2018, 14, e1803613.	10.0	56
36	Hierarchical Porous Carbon Cathode for Lithiumâ€“Sulfur Batteries Using Carbon Derived from Hybrid Materials Synthesized by Twin Polymerization. Particle and Particle Systems Characterization, 2018, 35, 1800364.	2.3	18

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37	One pot preparation of polysulfone-amino functionalized SiO2 nanoparticle ultrafiltration membranes for water purification. Journal of Environmental Chemical Engineering, 2018, 6, 4598-4604.	6.7	31
38	Effects of Particle Size and Surface Chemistry on the Dispersion of Graphite Nanoplates in Polypropylene Composites. Polymers, 2018, 10, 222.	4.5	25
39	Porous carbon prepared from polyacrylonitrile for lithium-sulfur battery cathodes using phase inversion technique. Polymer, 2018, 151, 171-178.	3.8	19
40	Nanorattles with tailored electric field enhancement. Nanoscale, 2017, 9, 9376-9385.	5.6	76
41	Fabrication and efficiency measurement of a Mo/C/Si/C three material system multilayer Laue lens. Applied Physics Letters, 2017, 110, .	3.3	9
42	On Razors Edge: Influence of the Source Insulator Edge on the Charge Transport of Vertical Organic Field Effect Transistors. MRS Advances, 2017, 2, 1249-1257.	0.9	2
43	Carbon onionâ€“sulfur hybrid cathodes for lithiumâ€“sulfur batteries. Sustainable Energy and Fuels, 2017, 1, 84-94.	4.9	34
44	Functional Cellular Mimics for the Spatiotemporal Control of Multiple Enzymatic Cascade Reactions. Angewandte Chemie - International Edition, 2017, 56, 16233-16238.	13.8	88
45	Functional Cellular Mimics for the Spatiotemporal Control of Multiple Enzymatic Cascade Reactions. Angewandte Chemie, 2017, 129, 16451-16456.	2.0	29
46	Dynamic Docking and Undocking Processes Addressing Selectively the Outside and Inside of Polymersomes. Macromolecular Rapid Communications, 2017, 38, 1700486.	3.9	20
47	WÃssrige GoldÃ¼berwachsung von Silbernanopartikeln: Vereinigung der plasmonischen Eigenschaften von Silber mit der FunktionalitÄt von Gold. Angewandte Chemie, 2017, 129, 16082-16086.	2.0	3
48	Aqueous Gold Overgrowth of Silver Nanoparticles: Merging the Plasmonic Properties of Silver with the Functionality of Gold. Angewandte Chemie - International Edition, 2017, 56, 15866-15870.	13.8	44
49	Nanocrystalline and stacking-disordered Î²-cristobalite AlPO4 chemically stabilized at room temperature: synthesis, physical characterization, and X-ray powder diffraction data. Powder Diffraction, 2017, 32, S193-S200.	0.2	0
50	Synthesis of High-Crystallinity DPP Polymers with Balanced Electron and Hole Mobility. Chemistry of Materials, 2017, 29, 10220-10232.	6.7	40
51	Temperature-Dependent Reinforcement of Hydrophilic Rubber Using Ice Crystals. ACS Omega, 2017, 2, 363-371.	3.5	9
52	Contact Doping for Vertical Organic Fieldâ€Effect Transistors. Advanced Functional Materials, 2016, 26, 768-775.	14.9	72
53	In-situ monitoring of silica shell growth on PS-b-P4VP micelles as templates using DLS. Polymer, 2016, 107, 485-491.	3.8	4
54	Fabrication of titania nanostructures using coreâ€“shell polymer nanofibers from block copolymers as templates. Nano Structures Nano Objects, 2016, 6, 14-22.	3.5	12

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55	Enhanced Electrochemical Energy Storage by Nanoscopic Decoration of Endohedral and Exohedral Carbon with Vanadium Oxide via Atomic Layer Deposition. Chemistry of Materials, 2016, 28, 2802-2813.	6.7	44
56	Polydopamine modified membranes with in situ synthesized gold nanoparticles for catalytic and environmental applications. Chemical Engineering Journal, 2016, 295, 358-369.	12.7	113
57	Multifunctional and Dual-Responsive Polymersomes as Robust Nanocontainers: Design, Formation by Sequential Post-Conjugations, and pH-Controlled Drug Release. Chemistry of Materials, 2016, 28, 1513-1525.	6.7	73
58	Ultrathin and Switchable Nanoporous Catalytic Membranes of Polystyreneâ€bâ€polyâ€4â€Vinyl Pyridine Block Copolymer Spherical Micelles. Advanced Materials Interfaces, 2015, 2, 1500097.	3.7	23
59	Nanoporous Cathodes for High-Energy Liâ€“S Batteries from Gyroid Block Copolymer Templates. ACS Nano, 2015, 9, 6147-6157.	14.6	82
60	Multifunctional coreâ€“shell polymerâ€“inorganic hybrid nanofibers prepared via block copolymer self-assembly. RSC Advances, 2015, 5, 89861-89868.	3.6	12
61	Experimental and theoretical study of phase separation in ZnPc:C60 blends. Organic Electronics, 2015, 27, 183-191.	2.6	5
62	Highly reinforced blends of nitrile butadiene rubber and in-situ synthesized polyurethaneâ€“urea. European Polymer Journal, 2015, 73, 75-87.	5.4	8
63	Overcoming Concealment Effects of Targeting Moieties in the PEG Corona: Controlled Permeable Polymersomes Decorated with Folateâ€Antennae for Selective Targeting of Tumor Cells. Small, 2015, 11, 1580-1591.	10.0	63
64	Interconnection of Nanoparticles within 2D Superlattices of PbS/Oleic Acid Thin Films. Advanced Materials, 2014, 26, 3042-3049.	21.0	51
65	Functionalization of track-etched poly (ethylene terephthalate) membranes as a selective filter forÂhydrogen purification. International Journal of Hydrogen Energy, 2014, 39, 9356-9365.	7.1	27
66	Multimetallic Aerogels by Template-Free Self-Assembly of Au, Ag, Pt, and Pd Nanoparticles. Chemistry of Materials, 2014, 26, 1074-1083.	6.7	148
67	Helical Packing of Nanoparticles Confined in Cylindrical Domains of a Selfâ€Assembled Block Copolymer Structure. Angewandte Chemie - International Edition, 2014, 53, 9090-9093.	13.8	55
68	Amphiphilic dendritic copolymers of tert-butyl-glycidylether and glycidol as a nanocontainer for an anticancer ruthenium complex. Journal of Polymer Science Part A, 2014, 52, n/a-n/a.	2.3	5
69	Evidence for an in Situ Developed Polymer Phase in Ionic Elastomers. Macromolecules, 2014, 47, 3436-3450.	4.8	79
70	MFC-structured biodegradable poly(l-lactide)/poly(butylene adipate-co-terephatalate) blends with improved mechanical and barrier properties. Journal of Materials Science, 2013, 48, 6312-6330.	3.7	43
71	Multilayer polymer thin films for fabrication of ordered multifunctional polymer nanocomposites. Nanoscale, 2013, 5, 10849.	5.6	12
72	Synthesis of hollow silica nanostructures using functional hairy polymer nanofibers as templates. RSC Advances, 2013, 3, 24009.	3.6	11

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73	Polymers as Templates for Au and Au@Ag Bimetallic Nanorods: UVâ€“Vis and Surface Enhanced Raman Spectroscopy. Chemistry of Materials, 2013, 25, 158-169.	6.7	85
74	A Stepâ€Wise Approach for Dual Nanoparticle Patterning via Block Copolymer Selfâ€Assembly. Advanced Functional Materials, 2013, 23, 483-490.	14.9	45
75	Catalytically Active Nanocomposites Based on Palladium and Platinum Nanoparticles in Poly(2â€vinylpyridine) Brushes. Macromolecular Chemistry and Physics, 2013, 214, 2301-2311.	2.2	18
76	Tailored Synthesis of Intelligent Polymer Nanocapsules: An Investigation of Controlled Permeability and pH-Dependent Degradability. ACS Nano, 2012, 6, 9718-9726.	14.6	63
77	pH-Triggered Aggregate Shape of Different Generations Lysine-Dendronized Maleimide Copolymers with Maltose Shell. Biomacromolecules, 2012, 13, 4222-4235.	5.4	43
78	Synthesis of Heteroâ€Polymer Functionalized Nanocarriers by Combining Surfaceâ€Initiated ATRP and RAFT Polymerization. Small, 2012, 8, 3579-3583.	10.0	44
79	Fabrication of carbon microtubes from thin films of supramolecular assemblies via self-rolling approach. Journal of Materials Chemistry, 2011, 21, 10813.	6.7	19
80	Synthesis and Self-Assembly of Donorâ€“Acceptorâ€“Donor Based Oligothiophenes and Their Optoelectronic Properties. Journal of Physical Chemistry C, 2011, 115, 14369-14376.	3.1	31
81	Synthesis of Well-Defined Photo-Cross-Linked Polymeric Nanocapsules by Surface-Initiated RAFT Polymerization. Macromolecules, 2011, 44, 8351-8360.	4.8	58
82	Imaging modes for potential mapping in semiconductor devices by electron holography with improved lateral resolution. Ultramicroscopy, 2011, 111, 290-302.	1.9	28
83	Charge transport and localization in nanocrystalline CdS films: A time-resolved terahertz spectroscopy study. Physical Review B, 2011, 83, .	3.2	20
84	Off-axis and inline electron holography: Experimental comparison. Ultramicroscopy, 2010, 110, 472-482.	1.9	59
85	Hexagonally ordered arrays of metallic nanodots from thin films of functional block copolymers. Polymer, 2010, 51, 2661-2667.	3.8	35
86	Highly ordered arrays of magnetic nanoparticles prepared via block copolymer assembly. Journal of Materials Chemistry, 2010, 20, 7734.	6.7	45
87	Tailored Growth of In(OH)₃Shell on Functionalized Polystyrene Beads. Langmuir, 2010, 26, 526-532.	3.5	28
88	Arrays of Inorganic Nanodots and Nanowires Using Nanotemplates Based on Switchable Block Copolymer Supramolecular Assemblies. Advanced Functional Materials, 2009, 19, 2805-2811.	14.9	64
89	Buried porous SiNxlayer in nitrogen-implanted silicon. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1580-1583.	0.8	1
90	TEM, HRTEM, electron holography and electron tomography studies of Î³â€² and Î³â€³ nanoparticles in Inconel 718 superalloy. Journal of Microscopy, 2009, 236, 149-157.	1.8	26

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91	NANOSTRUCTURE OF NITROGEN-IMPLANTED SILICON ANNEALED AT ENHANCED PRESSURE. , 2009, , .		0
92	Electron holography of biological samples. Micron, 2008, 39, 229-256.	2.2	41
93	Chemical bath deposition of CdSe and CdS nanocrystalline films: tailoring of morphology, optical properties and carrier dynamics. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2324-2329.	1.8	14
94	Electron Holography: Applications to Materials Questions. Annual Review of Materials Research, 2007, 37, 539-588.	9.3	116
95	MoirÃ© Patterns in Superimposed Nanoporous Thin Films Derived from Block-Copolymer Assemblies. Nano Letters, 2007, 7, 3628-3632.	9.1	45
96	On specimen tilt for electron holography of semiconductor devices. Ultramicroscopy, 2006, 106, 292-300.	1.9	17
97	Specimen preparation for electron holography of semiconductor devices. Ultramicroscopy, 2006, 106, 365-375.	1.9	16
98	Morphology of CdSe films prepared by chemical bath deposition: The role of substrate. Thin Solid Films, 2006, 511-512, 71-75.	1.8	21
99	Application of electron holography to extended defects: Schottky barriers at NiSi2 precipitates in silicon. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 1878-1885.	0.8	2
100	Potential and Limitations of Electron Holography in Silicon Research. Solid State Phenomena, 2005, 108-109, 603-608.	0.3	4
101	Direct evidence of internal Schottky barriers at NiSi2 precipitates in silicon by electron holography. Journal of Applied Physics, 2005, 97, 063707.	2.5	9
102	Electron holography on silicon microstructures and its comparison to other microscopic techniques. Journal of Physics Condensed Matter, 2004, 16, S193-S200.	1.8	13
103	Oxide formation during ion bombardment of small silicon structures. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 1179.	1.6	3
104	Assessing the performance of two-dimensional dopant profiling techniques. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 385.	1.6	61
105	Ultrathin Dielectric Films Grown by Solid Phase Reaction of Pr with SiO2. Materials Research Society Symposia Proceedings, 2004, 811, 350.	0.1	1
106	Solid-state reaction between Pr and SiO2 studied by photoelectron spectroscopy and ab initio calculations. Materials Science in Semiconductor Processing, 2004, 7, 215-220.	4.0	5
107	First investigation of metalâ€“insulatorâ€“metal (MIM) capacitor using Pr2O3 dielectrics. Materials Science in Semiconductor Processing, 2004, 7, 227-230.	4.0	43
108	On the real-structure of biomimetically grown hexagonal prismatic seeds of fluorapatiteâ€“gelatine-composites: TEM investigations along [001]. Journal of Materials Chemistry, 2004, 14, 2218-2224.	6.7	71

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109	Electron Holography of Organic and Biological Materials. Advanced Materials, 2003, 15, 1475-1481.	21.0	24
110	Segregation and Diffusion of Sb Compared to as for Ultra-Shallow Implantation Into Silicon. Materials Research Society Symposia Proceedings, 2003, 765, 1.	0.1	0
111	Ultrafast Optical Nonlinearities in CdS Nanocrystalline Thin Films Prepared by Chemical Bath Deposition. Physica Status Solidi (B): Basic Research, 2001, 224, 481-485.	1.5	10
112	A complementary BiCMOS technology with high speed npn and pnp SiGe:C HBTs. , 0, , .		26
113	A low-parasitic collector construction for high-speed SiGe:C HBTs. , 0, , .		35