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	Multimetallic Aerogels by Template-Free Self-Assembly of Au, Ag, Pt, and Pd Nanoparticles. Chemistry of Materials, 2014, 26, 1074-1083.	6.7	148
2	Electron Holography: Applications to Materials Questions. Annual Review of Materials Research, 2007, 37, 539-588.	9.3	116
3	Polydopamine modified membranes with in situ synthesized gold nanoparticles for catalytic and environmental applications. Chemical Engineering Journal, 2016, 295, 358-369.	12.7	113
4	Functional Cellular Mimics for the Spatiotemporal Control of Multiple Enzymatic Cascade Reactions. Angewandte Chemie - International Edition, 2017, 56, 16233-16238.	13.8	88
5	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
6	Nanoporous Cathodes for High-Energy Liâ€“S Batteries from Gyroid Block Copolymer Templates. ACS Nano, 2015, 9, 6147-6157.	14.6	82
7	Evidence for an in Situ Developed Polymer Phase in Ionic Elastomers. Macromolecules, 2014, 47, 3436-3450.	4.8	79
8	Nanorattles with tailored electric field enhancement. Nanoscale, 2017, 9, 9376-9385.	5.6	76
9	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
10	Contact Doping for Vertical Organic Fieldâ€Effect Transistors. Advanced Functional Materials, 2016, 26, 768-775.	14.9	72
11	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
12	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
13	Tailored Synthesis of Intelligent Polymer Nanocapsules: An Investigation of Controlled Permeability and pH-Dependent Degradability. ACS Nano, 2012, 6, 9718-9726.	14.6	63
14	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
15	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
16	Off-axis and inline electron holography: Experimental comparison. Ultramicroscopy, 2010, 110, 472-482.	1.9	59
17	Synthesis of Well-Defined Photo-Cross-Linked Polymeric Nanocapsules by Surface-Initiated RAFT Polymerization. Macromolecules, 2011, 44, 8351-8360.	4.8	58
18	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

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19	Highâ€Motility Visible Lightâ€Driven Ag/AgCl Janus Micromotors. Small, 2018, 14, e1803613.	10.0	56
20	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
21	Interconnection of Nanoparticles within 2D Superlattices of PbS/Oleic Acid Thin Films. Advanced Materials, 2014, 26, 3042-3049.	21.0	51
22	High-Power All-Carbon Fully Printed and Wearable SWCNT-Based Organic Thermoelectric Generator. ACS Applied Materials & Interfaces, 2021, 13, 11151-11165.	8.0	49
23	MoirÃ© Patterns in Superimposed Nanoporous Thin Films Derived from Block-Copolymer Assemblies. Nano Letters, 2007, 7, 3628-3632.	9.1	45
24	Highly ordered arrays of magnetic nanoparticles prepared via block copolymer assembly. Journal of Materials Chemistry, 2010, 20, 7734.	6.7	45
25	A Stepâ€Wise Approach for Dual Nanoparticle Patterning via Block Copolymer Selfâ€Assembly. Advanced Functional Materials, 2013, 23, 483-490.	14.9	45
26	Synthesis of Heteroâ€Polymer Functionalized Nanocarriers by Combining Surfaceâ€Initiated ATRP and RAFT Polymerization. Small, 2012, 8, 3579-3583.	10.0	44
27	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
28	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
29	First investigation of metalâ€“insulatorâ€“metal (MIM) capacitor using Pr2O3 dielectrics. Materials Science in Semiconductor Processing, 2004, 7, 227-230.	4.0	43
30	pH-Triggered Aggregate Shape of Different Generations Lysine-Dendronized Maleimide Copolymers with Maltose Shell. Biomacromolecules, 2012, 13, 4222-4235.	5.4	43
31	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
32	Electron holography of biological samples. Micron, 2008, 39, 229-256.	2.2	41
33	Synthesis of High-Crystallinity DPP Polymers with Balanced Electron and Hole Mobility. Chemistry of Materials, 2017, 29, 10220-10232.	6.7	40
34	A low-parasitic collector construction for high-speed SiGe:C HBTs. , 0, , .		35
35	Hexagonally ordered arrays of metallic nanodots from thin films of functional block copolymers. Polymer, 2010, 51, 2661-2667.	3.8	35
36	Carbon onionâ€“sulfur hybrid cathodes for lithiumâ€“sulfur batteries. Sustainable Energy and Fuels, 2017, 1, 84-94.	4.9	34

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37	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
38	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
39	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
40	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
41	Functional Cellular Mimics for the Spatiotemporal Control of Multiple Enzymatic Cascade Reactions. Angewandte Chemie, 2017, 129, 16451-16456.	2.0	29
42	Tailored Growth of In(OH)‹sub›3‹/sub›Shell on Functionalized Polystyrene Beads. Langmuir, 2010, 26, 526-532.	3.5	28
43	Imaging modes for potential mapping in semiconductor devices by electron holography with improved lateral resolution. Ultramicroscopy, 2011, 111, 290-302.	1.9	28
44	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
45	A complementary BiCMOS technology with high speed npn and pnp SiGe:C HBTs. , 0, , .		26
46	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
47	Effects of Particle Size and Surface Chemistry on the Dispersion of Graphite Nanoplates in Polypropylene Composites. Polymers, 2018, 10, 222.	4.5	25
48	An intimate view into the silica deposition vesicles of diatoms. BMC Materials, 2020, 2, .	6.8	25
49	Electron Holography of Organic and Biological Materials. Advanced Materials, 2003, 15, 1475-1481.	21.0	24
50	Ultrathin and Switchable Nanoporous Catalytic Membranes of Polystyreneâ€‹i›b‹/i›â€‹polyâ€4â€Vinyl Pyridine Block Copolymer Spherical Micelles. Advanced Materials Interfaces, 2015, 2, 1500097.	3.7	23
51	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
52	Morphology of CdSe films prepared by chemical bath deposition: The role of substrate. Thin Solid Films, 2006, 511-512, 71-75.	1.8	21
53	Vertical Organic Thinâ€Film Transistors with an Anodized Permeable Base for Very Low Leakage Current. Advanced Materials, 2019, 31, e1900917.	21.0	21
54	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

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55	Charge transport and localization in nanocrystalline CdS films: A time-resolved terahertz spectroscopy study. Physical Review B, 2011, 83, .	3.2	20
56	Dynamic Docking and Undocking Processes Addressing Selectively the Outside and Inside of Polymersomes. Macromolecular Rapid Communications, 2017, 38, 1700486.	3.9	20
57	Fabrication of carbon microtubes from thin films of supramolecular assemblies via self-rolling approach. Journal of Materials Chemistry, 2011, 21, 10813.	6.7	19
58	Au@p4VP core@shell pH-sensitive nanocomposites suitable for drug entrapment. Journal of Colloid and Interface Science, 2018, 514, 704-714.	9.4	19
59	Porous carbon prepared from polyacrylonitrile for lithium-sulfur battery cathodes using phase inversion technique. Polymer, 2018, 151, 171-178.	3.8	19
60	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
61	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
62	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
63	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
64	High permeation and antifouling polysulfone ultrafiltration membranes with in situ synthesized silica nanoparticles. Materials Today Communications, 2020, 22, 100784.	1.9	18
65	Feedback-Induced and Oscillating pH Regulation of a Binary Enzymeâ€“Polymersomes System. Chemistry of Materials, 2021, 33, 6692-6700.	6.7	18
66	Fully printed and flexible carbon nanotube-based thermoelectric generator capable for high-temperature applications. Journal of Power Sources, 2021, 507, 230323.	7.8	18
67	Distribution of Carbon Nanotubes in Polycarbonate-Based Blends for Electromagnetic Interference Shielding. ACS Applied Nano Materials, 2022, 5, 662-677.	5.0	18
68	On specimen tilt for electron holography of semiconductor devices. Ultramicroscopy, 2006, 106, 292-300.	1.9	17
69	In Situ Zirconia: A Superior Reinforcing Filler for High-Performance Nitrile Rubber Composites. ACS Omega, 2020, 5, 7751-7761.	3.5	17
70	Specimen preparation for electron holography of semiconductor devices. Ultramicroscopy, 2006, 106, 365-375.	1.9	16
71	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
72	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

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73	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
74	Electron holography on silicon microstructures and its comparison to other microscopic techniques. Journal of Physics Condensed Matter, 2004, 16, S193-S200.	1.8	13
75	Multilayer polymer thin films for fabrication of ordered multifunctional polymer nanocomposites. Nanoscale, 2013, 5, 10849.	5.6	12
76	Multifunctional coreâ€“shell polymerâ€“inorganic hybrid nanofibers prepared via block copolymer self-assembly. RSC Advances, 2015, 5, 89861-89868.	3.6	12
77	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
78	Hollow Au@TiO₂ porous electrospun nanofibers for catalytic applications. RSC Advances, 2020, 10, 6592-6602.	3.6	12
79	Synthesis of hollow silica nanostructures using functional hairy polymer nanofibers as templates. RSC Advances, 2013, 3, 24009.	3.6	11
80	Unraveling Structure and Device Operation of Organic Permeable Base Transistors. Advanced Electronic Materials, 2020, 6, 2000230.	5.1	11
81	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
82	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
83	Ultrathin structures derived from interfacially modified polymeric nanocomposites to curb electromagnetic pollution. Nanoscale Advances, 2021, 3, 2632-2648.	4.6	10
84	Direct evidence of internal Schottky barriers at NiSi2 precipitates in silicon by electron holography. Journal of Applied Physics, 2005, 97, 063707.	2.5	9
85	Fabrication and efficiency measurement of a Mo/C/Si/C three material system multilayer Laue lens. Applied Physics Letters, 2017, 110, .	3.3	9
86	Silver Particles with Rhombicuboctahedral Shape and Effective Isotropic Interactions with Light. Chemistry of Materials, 2019, 31, 2822-2827.	6.7	9
87	Temperature-Dependent Reinforcement of Hydrophilic Rubber Using Ice Crystals. ACS Omega, 2017, 2, 363-371.	3.5	9
88	Highly reinforced blends of nitrile butadiene rubber and in-situ synthesized polyurethaneâ€“urea. European Polymer Journal, 2015, 73, 75-87.	5.4	8
89	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
90	Sequentially Processed P3HT/CN6â€CP^{â€¢â˜}NBu⁴⁺ Films: Interfacial or Bulk Doping?. Advanced Electronic Materials, 2020, 6, 1901346.	5.1	8

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91	Nanoparticle-Stabilized Perforated Lamellar Morphology in Block Copolymer/Quantum Dot Hybrids. Macromolecules, 2021, 54, 1216-1223.	4.8	8
92	New insights into the structure of two-dimensional lead iodide-based perovskites. Organic Electronics, 2020, 87, 105935.	2.6	7
93	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
94	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
95	Experimental and theoretical study of phase separation in ZnPc:C60 blends. Organic Electronics, 2015, 27, 183-191.	2.6	5
96	Enhanced Photoluminescence of Gold Nanoparticleâ€Quantum Dot Hybrids Confined in Hairy Polymer Nanofibers. ChemNanoMat, 2021, 7, 831-841.	2.8	5
97	Potential and Limitations of Electron Holography in Silicon Research. Solid State Phenomena, 2005, 108-109, 603-608.	0.3	4
98	In-situ monitoring of silica shell growth on PS-b-P4VP micelles as templates using DLS. Polymer, 2016, 107, 485-491.	3.8	4
99	Flexible Pressure Sensors Based on the Controlled Buckling of Doped Semiconducting Polymer Nanopillars. ACS Applied Materials & Interfaces, 2021, 13, 37445-37454.	8.0	4
100	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
101	WÃssrige GoldÃ¼berwachsung von Silbernanopartikeln: Vereinigung der plasmonischen Eigenschaften von Silber mit der FunktionalitÄt von Gold. Angewandte Chemie, 2017, 129, 16082-16086.	2.0	3
102	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
103	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
104	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
105	The Localization Behavior of Different CNTs in PC/SAN Blends Containing a Reactive Component. Molecules, 2021, 26, 1312.	3.8	2
106	Ultrathin Dielectric Films Grown by Solid Phase Reaction of Pr with SiO2. Materials Research Society Symposia Proceedings, 2004, 811, 350.	0.1	1
107	Buried porous SiNxlayer in nitrogen-implanted silicon. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1580-1583.	0.8	1
108	Proton Conductive Membranes from Covalently Crossâ€Linked Poly(Acrylate)/Silica Interpenetrating Networks. Macromolecular Materials and Engineering, 2021, 306, 2000776.	3.6	1

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109	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
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	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
112	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
113	NANOSTRUCTURE OF NITROGEN-IMPLANTED SILICON ANNEALED AT ENHANCED PRESSURE. , 2009, , .		0