John V Badding

List of Publications by Year
in descending order

132 papers	5,562 citations	101543 36 h-index	82547 72 g-index
139 all docs	139 docs citations	139 times ranked	5270 citing authors

#	Article	IF	Citations
1	Mechanistic insights into the pressure-induced polymerization of aryl/perfluoroaryl co-crystals. Polymer Chemistry, 2022, 13, 1359-1368.	3.9	5
2	Direct observation of topological magnetic monopoles using soft x-ray vector ptychography at 10 nm resolution. , 2022, , .		0
3	Aluminosilicate glasses for zinc selenide tunable fiber laser cladding. Journal of the American Ceramic Society, 2021, 104, 691-696.	3.8	5
4	Perfect and Defective ¹³C-Furan-Derived Nanothreads from Modest-Pressure Synthesis Analyzed by ¹³C NMR. Journal of the American Chemical Society, 2021, 143, 9529-9542.	13.7	11
5	Synchrotron X-ray metrology of dopant distribution and oxidation state in high pressure CVD grown TM2+:ZnSe optical fibers. Optical Materials Express, 2021, 11, 289.	3.0	4
6	Scalable Synthesis of Crystalline One-Dimensional Carbon Nanothreads through Modest-Pressure Polymerization of Furan. ACS Nano, 2021, 15, 4134-4143.	14.6	32
7	HPCVD of ZnSxSe1â€“x Claddings for ZnSe Optical Fibers. , 2021, , .		0
8	Tuning Triplet-Pair Separation versus Relaxation Using a Diamond Anvil Cell. Cell Reports Physical Science, 2020, 1, 100005.	5.6	7
9	Diamond encapsulated silicon optical fibers synthesized by chemical vapor deposition. AIP Advances, 2020, 10, 095009.	1.3	2
10	â€˜Sacrificialâ€™ supramolecular assembly and pressure-induced polymerization: toward sequence-defined functionalized nanothreads. Chemical Science, 2020, 11, 11419-11424.	7.4	22
11	Oxide-Free Three-Dimensional Germanium/Silicon Coreâ€“Shell Metalattice Made by High-Pressure Confined Chemical Vapor Deposition. ACS Nano, 2020, 14, 12810-12818.	14.6	6
12	Achieving Minimal Heat Conductivity by Ballistic Confinement in Phononic Metalattices. ACS Nano, 2020, 14, 4235-4243.	14.6	14
13	Nanoarchitecture through Strained Molecules: Cubane-Derived Scaffolds and the Smallest Carbon Nanothreads. Journal of the American Chemical Society, 2020, 142, 17944-17955.	13.7	32
14	Nondestructive Measurements of the Mechanical and Structural Properties of Nanostructured Metalattices. Nano Letters, 2020, 20, 3306-3312.	9.1	10
15	Quantum transport in three-dimensional metalattices of platinum featuring an unprecedentedly large surface area to volume ratio. Physical Review Materials, 2020, 4, .	2.4	3
16	Continuous wave Fe²⁺:ZnSe mid-IR optical fiber lasers. Optics Express, 2020, 28, 30263.	3.4	14
17	Chromium doped zinc selenide optical fiber lasers. Optical Materials Express, 2020, 10, 1843.	3.0	18
18	Post-processing ZnSe optical fibers with a micro-chemical vapor transport technique. Optical Materials Express, 2020, 10, 3125.	3.0	8

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19	Plasmonic Metalattices: A Correlated Monochromated Electron Energy Loss Study and Theoretical Calculations. Microscopy and Microanalysis, 2019, 25, 678-679.	0.4	0
20	Evidence for Orientational Order in Nanothreads Derived from Thiophene. Journal of Physical Chemistry Letters, 2019, 10, 7164-7171.	4.6	36
21	Local Structure and Bonding of Carbon Nanothreads Probed by High-Resolution Transmission Electron Microscopy. Journal of the American Chemical Society, 2019, 141, 6937-6945.	13.7	26
22	Tetracyanomethane under Pressure: Extended CN Polymers from Precursors with Built-in sp³ Centers. Journal of Physical Chemistry A, 2018, 122, 2858-2863.	2.5	14
23	Chemistry through cocrystals: pressure-induced polymerization of C₂H₂Â·C₆H₆to an extended crystalline hydrocarbon. Physical Chemistry Chemical Physics, 2018, 20, 7282-7294.	2.8	15
24	All the Ways To Have Substituted Nanothreads. Journal of Chemical Theory and Computation, 2018, 14, 1131-1140.	5.3	14
25	Confined Chemical Fluid Deposition of Ferromagnetic Metalattices. Nano Letters, 2018, 18, 546-552.	9.1	21
26	Conformal coating of amorphous silicon and germanium by high pressure chemical vapor deposition for photovoltaic fabrics. APL Materials, 2018, 6, 046105.	5.1	11
27	Surprising Stability of Cubane under Extreme Pressure. Journal of Physical Chemistry Letters, 2018, 9, 2031-2037.	4.6	12
28	Carbon Nitride Nanothread Crystals Derived from Pyridine. Journal of the American Chemical Society, 2018, 140, 4969-4972.	13.7	81
29	Electronic and Structural Characterization of Diamondoid Carbon Nanothreads by Transmission Electron Microscopy. Microscopy and Microanalysis, 2018, 24, 1992-1993.	0.4	1
30	Investigation of Surface Plasmon Resonances in Silver Infiltrated Metalattices by Monochromated Electron Energy Loss Spectroscopy. Microscopy and Microanalysis, 2018, 24, 432-433.	0.4	1
31	Low-dose Transmission Electron Microscopy of Highly-Oriented Polyacetylene. Microscopy and Microanalysis, 2018, 24, 2030-2031.	0.4	4
32	The Chemical Structure of Carbon Nanothreads Analyzed by Advanced Solid-State NMR. Journal of the American Chemical Society, 2018, 140, 7658-7666.	13.7	59
33	Constraining Carbon Nanothread Structures by Experimental and Calculated Nuclear Magnetic Resonance Spectra. Nano Letters, 2018, 18, 4934-4942.	9.1	24
34	Exploring the Effect of the Core Boundary Curvature in Hollow Antiresonant Fibers. IEEE Photonics Technology Letters, 2017, 29, 263-266.	2.5	22
35	A silicon microwire under a three-dimensional anisotropic tensile stress. Applied Physics Letters, 2017, 110, 091911.	3.3	0
36	Single-Crystal Silicon Optical Fiber by Direct Laser Crystallization. ACS Photonics, 2017, 4, 85-92.	6.6	43

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37	Optoelectronic Fibers: Singleâ€Crystal Germanium Core Optoelectronic Fibers (Advanced Optical) Tj ETQq1 1 0.784314 rgBT /Overlock	7.3	0
38	Mechanochemical Synthesis of Carbon Nanothread Single Crystals. Journal of the American Chemical Society, 2017, 139, 16343-16349.	13.7	88
39	Low Dose Characterization of Diamondoid Carbon Nanothreads by Transmission Electron Microscopy. Microscopy and Microanalysis, 2017, 23, 1846-1847.	0.4	4
40	In-situ TEM Study on Size-dependent Thermal Stability of Nickel Filled Silica Nano-Opals. Microscopy and Microanalysis, 2017, 23, 956-957.	0.4	1
41	Kinetics of Silane Decomposition in High-Pressure Confined Chemical Vapor Deposition of Hydrogenated Amorphous Silicon. Industrial & Engineering Chemistry Research, 2017, 56, 14995-15000.	3.7	5
42	From Linear Molecular Chains to Extended Polycyclic Networks: Polymerization of Dicyanoacetylene. Chemistry of Materials, 2017, 29, 6706-6718.	6.7	9
43	Singleâ€Crystal Germanium Core Optoelectronic Fibers. Advanced Optical Materials, 2017, 5, 1600592.	7.3	35
44	Small core SiGe alloy optical fibers by templated deposition. , 2017, , .		3
45	High Pressure Chemical Vapor Deposition of Hydrogenated Amorphous Silicon Films and Solar Cells. Advanced Materials, 2016, 28, 5939-5942.	21.0	11
46	Monochromated Low-Dose Aberration-Corrected Transmission Electron Microscopy of Diamondoid Carbon Nanothreads. Microscopy and Microanalysis, 2016, 22, 1840-1841.	0.4	6
47	High-Pressure Reactivity of Triptycene Probed by Raman Spectroscopy. Journal of Physical Chemistry B, 2016, 120, 11035-11042.	2.6	11
48	Flexible Electronics: High Pressure Chemical Vapor Deposition of Hydrogenated Amorphous Silicon Films and Solar Cells (Adv. Mater. 28/2016). Advanced Materials, 2016, 28, 5938-5938.	21.0	1
49	Imprinting of Local Metallic States into VO₂ with Ultraviolet Light. Advanced Functional Materials, 2016, 26, 6612-6618.	14.9	43
50	Pressure-Induced Polymerization of LiN(CN)₂. Journal of Physical Chemistry A, 2016, 120, 9370-9377.	2.5	15
51	Low-dose Microscopy and Beam Damage Study of Infiltrated Zeolite Y. Microscopy and Microanalysis, 2016, 22, 1638-1639.	0.4	3
52	Generation of Microwave Capillary Argon Plasmas at Atmospheric Pressure. IEEE Transactions on Plasma Science, 2016, 44, 2603-2607.	1.3	2
53	Crystalline Silicon Optical Fibers with Low Optical Loss. ACS Photonics, 2016, 3, 378-384.	6.6	34
54	Cr2+:ZnSe Fiber Lasers. , 2016, , .		3

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55	Hydrogenated Amorphous Germanium Optical Fiber. , 2015, , .		2
56	Templated growth of II-VI semiconductor optical fiber devices and steps towards infrared fiber lasers. Proceedings of SPIE, 2015, , .	0.8	1
57	Single-Fluxon Controlled Resistance Switching in Centimeter-Long Superconducting Galliumâ€“Indium Eutectic Nanowires. Nano Letters, 2015, 15, 153-158.	9.1	20
58	Linearly Polymerized Benzene Arrays As Intermediates, Tracing Pathways to Carbon Nanothreads. Journal of the American Chemical Society, 2015, 137, 14373-14386.	13.7	86
59	Infrared fibers. Advances in Optics and Photonics, 2015, 7, 379.	25.5	274
60	Hollow core silicon-silica Bragg fiber. , 2015, , .		1
61	Benzene-derived carbon nanothreads. Nature Materials, 2015, 14, 43-47.	27.5	250
62	Mid-infrared spectroscopic imaging enabled by an array of Ge-filled waveguides in a microstructured optical fiber probe. Optics Express, 2014, 22, 28459.	3.4	7
63	Extreme electronic bandgap modification in laser-crystallized silicon optical fibres. Nature Materials, 2014, 13, 1122-1127.	27.5	94
64	Templated Chemically Deposited Semiconductor Optical Fiber Materials. Annual Review of Materials Research, 2013, 43, 527-557.	9.3	33
65	Silicon pâ€iâ€n Junction Fibers. Advanced Materials, 2013, 25, 1461-1467.	21.0	76
66	Conformal Coating by High Pressure Chemical Deposition for Patterned Microwires of IIâ€“VI Semiconductors. Advanced Functional Materials, 2013, 23, 1647-1654.	14.9	21
67	Integration of Optical Fiber and Optoelectronic Devices. , 2013, , .		2
68	Siliconp-i-nJunction Fibers (Adv. Mater. 10/2013). Advanced Materials, 2013, 25, 1460-1460.	21.0	3
69	Thermal nonlinearity in silicon microcylindrical resonators. Applied Physics Letters, 2012, 100, 181101.	3.3	9
70	A magnifying fiber element with an array of sub-wavelength Ge/ZnSe pixel waveguides for infrared imaging. Applied Physics Letters, 2012, 101, .	3.3	9
71	Characterization of Thermal Induced Nonlinear Effects in Silicon Microcylindrical Resonators. , 2012, , .		0
72	Confined High-Pressure Chemical Deposition of Hydrogenated Amorphous Silicon. Journal of the American Chemical Society, 2012, 134, 19-22.	13.7	56

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73	Integration of gigahertz-bandwidth semiconductor devices inside microstructured optical fibres. Nature Photonics, 2012, 6, 174-179.	31.4	107
74	Spontaneous Waveguide Raman Spectroscopy of Self-Assembled Monolayers in Silica Micropores. Langmuir, 2011, 27, 630-636.	3.5	6
75	Selective Semiconductor Filling of Microstructured Optical Fibers. Journal of Lightwave Technology, 2011, 29, 2005-2008.	4.6	13
76	Polycrystalline silicon optical fibers with atomically smooth surfaces. Optics Letters, 2011, 36, 2480.	3.3	22
77	Ultra-smooth microcylindrical resonators fabricated from the silicon optical fiber platform. Applied Physics Letters, 2011, 99, 031117.	3.3	19
78	Zinc Selenide Optical Fibers. Advanced Materials, 2011, 23, 1647-1651.	21.0	108
79	Highâ€Pressure Chemical Deposition for Voidâ€Free Filling of Extreme Aspect Ratio Templates. Advanced Materials, 2010, 22, 4605-4611.	21.0	26
80	Mid-infrared transmission properties of amorphous germanium optical fibers. Applied Physics Letters, 2010, 97, .	3.3	40
81	Low loss silicon fibers for photonics applications. Applied Physics Letters, 2010, 96, 041105.	3.3	75
82	Optical multistability in a silicon-core silica-cladding fiber. Optics Express, 2010, 18, 5305.	3.4	11
83	Thermal and Electrical Conductivity of Sizeâ€Tuned Bismuth Telluride Nanoparticles. Small, 2009, 5, 933-937.	10.0	132
84	Superhydrophobic effect on the adsorption of human serum albumin. Acta Biomaterialia, 2009, 5, 1389-1398.	8.3	49
85	Foam formation from fluorinated polyphosphazenes by liquid CO2 processing. Polymer Engineering and Science, 2008, 48, 683-686.	3.1	6
86	Singleâ€Crystal Semiconductor Wires Integrated into Microstructured Optical Fibers. Advanced Materials, 2008, 20, 1135-1140.	21.0	39
87	Role of Carbon Order in Structural Transformations and Hydrogen Evolution Induced by Reactive Ball Milling in Cyclohexene. Journal of Physical Chemistry C, 2008, 112, 17427-17435.	3.1	6
88	Organosilane Self-Assembled Monolayer Growth from Supercritical Carbon Dioxide in Microstructured Optical Fiber Capillary Arrays. Langmuir, 2008, 24, 3636-3644.	3.5	14
89	All-optical modulation of laser light in amorphous silicon-filled microstructured optical fibers. Applied Physics Letters, 2007, 91, .	3.3	50
90	Electrical and Raman characterization of silicon and germanium-filled microstructured optical fibers. Applied Physics Letters, 2007, 90, 132110.	3.3	46

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91	Reversible high pressure sp2â€“sp3transformations in carbon. Phase Transitions, 2007, 80, 1033-1038.	1.3	8
92	Cell Adhesion on Nanofibrous Polytetrafluoroethylene (nPTFE). Langmuir, 2007, 23, 747-754.	3.5	37
93	Controlled Assembly of Zero-, One-, Two-, and Three-Dimensional Metal Chalcogenide Structures. Inorganic Chemistry, 2007, 46, 7238-7240.	4.0	40
94	Electronic and Plasmonic Materials Inside Microstructured Optical Fibers. , 2007, , .		0
95	Microstructured Optical Fibers as High-Pressure Microfluidic Reactors. Science, 2006, 311, 1583-1586.	12.6	442
96	UV Raman studies on carbon nitride structures. Journal of Materials Science, 2006, 41, 7145-7149.	3.7	12
97	Polytetrafluoroethylene nano/microfibers by jet blowing. Polymer, 2006, 47, 8337-8343.	3.8	50
98	High pressure CVD inside microstructured optical fibres. , 2006, , .		2
99	Thermoelectric power and phase transition of polycrystalline As2Te3 under pressure. Journal of Physics and Chemistry of Solids, 2005, 66, 1744-1747.	4.0	32
100	Improved thermoelectric properties due to electronic topological transition under high pressure. Physica B: Condensed Matter, 2005, 358, 14-18.	2.7	45
101	Tl2AXTe4 (A = Cd, Hg, Mn; X = Ge, Sn):â€‰ Crystal Structure, Electronic Structure, and Thermoelectric Properties. Chemistry of Materials, 2005, 17, 6186-6191.	6.7	37
102	Chalcogenide Glass Thin Films and Planar Waveguides. Journal of the American Ceramic Society, 2005, 88, 2451-2455.	3.8	28
103	Thermoelectric power and resistivity studies of graphitic nanotubules under high pressure. Materials Letters, 2005, 59, 3973-3975.	2.6	1
104	Electronic structure and thermoelectric power of cerium compounds at high pressure. Journal of Alloys and Compounds, 2005, 388, 215-220.	5.5	20
105	The high-pressure chemistry of potassiumâ€“copper mixtures. Solid State Communications, 2004, 131, 157-161.	1.9	3
106	Deposition and characterization of germanium sulphide glass planar waveguides. Optics Express, 2004, 12, 2501.	3.4	84
107	Electronic structure of Î²-As2Te3. Solid State Communications, 2003, 127, 667-670.	1.9	21
108	Cobalt oxide layers. Nature Materials, 2003, 2, 208-210.	27.5	22

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109	UV Raman Analysis of the C:H Network Formed by Compression of Benzene. Chemistry of Materials, 2003, 15, 1820-1824.	6.7	32
110	Thermoelectric properties ofSb2Te3under pressure and uniaxial stress. Physical Review B, 2003, 68, .	3.2	175
111	Transport coefficients from first-principles calculations. Physical Review B, 2003, 68, .	3.2	663
112	Improvement in the thermoelectric properties of pressure-tuned Î²-K2Bi8Se13. Journal of Applied Physics, 2003, 94, 4485-4488.	2.5	30
113	FLAPW investigation of the stability and equation of state of rectangulated carbon. Solid State Communications, 2002, 122, 473-477.	1.9	16
114	UV Raman Spectroscopy of Single-Walled Carbon Nanotubes. Chemistry of Materials, 2001, 13, 4187-4191.	6.7	23
115	Large Improvement in Thermoelectric Properties in Pressure-Tuned p-Type Sb1.5Bi0.5Te3. Chemistry of Materials, 2001, 13, 2068-2071.	6.7	189
116	High-Pressure Stability, Pressureâ^'Volume Equation of State, and Crystal Structure under Pressure of the Thermoelectric Material IrSb3. Chemistry of Materials, 2000, 12, 697-700.	6.7	21
117	HIGH-PRESSURE SYNTHESIS, CHARACTERIZATION, AND TUNING OF SOLID STATE MATERIALS. Annual Review of Materials Research, 1998, 28, 631-658.	5.5	164
118	Rietveld analysis using a laboratory-based high pressure x-ray diffraction system and film-based detection. Review of Scientific Instruments, 1997, 68, 2298-2300.	1.3	8
119	Solid-state Carbon Nitrides. Advanced Materials, 1997, 9, 877-886.	21.0	65
120	Czochralski growth of single crystals of EuNi5P3 in an arc furnace. Journal of Crystal Growth, 1997, 181, 363-366.	1.5	0
121	High-Pressure Synthesis of sp2-Bonded Carbon Nitrides. Chemistry of Materials, 1996, 8, 1535-1539.	6.7	83
122	Thermodynamic Analysis of the Formation of Carbon Nitrides under Pressure. Chemistry of Materials, 1996, 8, 535-540.	6.7	74
123	Transition Element-Like Chemistry for Potassium Under Pressure. Science, 1996, 273, 95-97.	12.6	119
124	A high resolution laboratoryâ€based high pressure xâ€ray diffraction system. Review of Scientific Instruments, 1995, 66, 4496-4500.	1.3	21
125	Poly(phenylcarbyne): A Polymer Precursor to Diamond-Like Carbon. Science, 1993, 260, 1496-1499.	12.6	117
126	High-Pressure Chemistry of Hydrogen in Metals: In Situ Study of Iron Hydride. Science, 1991, 253, 421-424.	12.6	200

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127	Synthesis and crystal structure of a new alkaline earth nickel phosphide phase: BaNi9P5. Journal of Solid State Chemistry, 1990, 87, 10-14.	2.9	14
128	Magnetic phase transitions inEuNi5P3: Unusual steps in the magnetization with field. Physical Review B, 1987, 35, 8880-8883.	3.2	16
129	High-temperature superconductivity in yttrium-barium-copper oxide: identification of a copper-rich superconducting phase. Journal of the American Chemical Society, 1987, 109, 2528-2530.	13.7	29
130	Synthesis and crystal structure of a new europium nickel phosphide phase, EuNi5P3. Journal of Solid State Chemistry, 1987, 67, 354-358.	2.9	16
131	Synthesis and structural-magnetic study of a new type of high-nuclearity metal carbonyl cluster possessing an eleven-atom Rh5Ni6 core: formation of a heterometallic core via nickel capping of a pentarhodium trigonal-bipyramidal kernel. Journal of the American Chemical Society, 1986, 108, 3825-3827.	13.7	36
132	Synthesizing carbon nanothreads from benzene. SPIE Newsroom, 0, , .	0.1	2