

John V Badding

List of Publications by Year in descending order

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132
papers

5,562
citations

101384

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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. <i>Polymer Chemistry</i> , 2022, 13, 1359-1368.	1.9	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. <i>Journal of the American Ceramic Society</i> , 2021, 104, 691-696.	1.9	5
4	Perfect and Defective ¹³ C-Furan-Derived Nanothreads from Modest-Pressure Synthesis Analyzed by ¹³ C NMR. <i>Journal of the American Chemical Society</i> , 2021, 143, 9529-9542.	6.6	11
5	Synchrotron X-ray metrology of dopant distribution and oxidation state in high pressure CVD grown TM ₂ +ZnSe optical fibers. <i>Optical Materials Express</i> , 2021, 11, 289.	1.6	4
6	Scalable Synthesis of Crystalline One-Dimensional Carbon Nanothreads through Modest-Pressure Polymerization of Furan. <i>ACS Nano</i> , 2021, 15, 4134-4143.	7.3	32
7	HPCVD of Zn _x Se _{1-x} Claddings for ZnSe Optical Fibers. , 2021, , .		0
8	Tuning Triplet-Pair Separation versus Relaxation Using a Diamond Anvil Cell. <i>Cell Reports Physical Science</i> , 2020, 1, 100005.	2.8	7
9	Diamond encapsulated silicon optical fibers synthesized by chemical vapor deposition. <i>AIP Advances</i> , 2020, 10, 095009.	0.6	2
10	â€œSacrificialâ€™ supramolecular assembly and pressure-induced polymerization: toward sequence-defined functionalized nanothreads. <i>Chemical Science</i> , 2020, 11, 11419-11424.	3.7	22
11	Oxide-Free Three-Dimensional Germanium/Silicon Coreâ€œShell Metalattice Made by High-Pressure Confined Chemical Vapor Deposition. <i>ACS Nano</i> , 2020, 14, 12810-12818.	7.3	6
12	Achieving Minimal Heat Conductivity by Ballistic Confinement in Phononic Metalattices. <i>ACS Nano</i> , 2020, 14, 4235-4243.	7.3	14
13	Nanoarchitecture through Strained Molecules: Cubane-Derived Scaffolds and the Smallest Carbon Nanothreads. <i>Journal of the American Chemical Society</i> , 2020, 142, 17944-17955.	6.6	32
14	Nondestructive Measurements of the Mechanical and Structural Properties of Nanostructured Metalattices. <i>Nano Letters</i> , 2020, 20, 3306-3312.	4.5	10
15	Quantum transport in three-dimensional metalattices of platinum featuring an unprecedentedly large surface area to volume ratio. <i>Physical Review Materials</i> , 2020, 4, .	0.9	3
16	Continuous wave Fe ²⁺ :ZnSe mid-IR optical fiber lasers. <i>Optics Express</i> , 2020, 28, 30263.	1.7	14
17	Chromium doped zinc selenide optical fiber lasers. <i>Optical Materials Express</i> , 2020, 10, 1843.	1.6	18
18	Post-processing ZnSe optical fibers with a micro-chemical vapor transport technique. <i>Optical Materials Express</i> , 2020, 10, 3125.	1.6	8

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19	Plasmonic Metalattices: A Correlated Monochromated Electron Energy Loss Study and Theoretical Calculations. <i>Microscopy and Microanalysis</i> , 2019, 25, 678-679.	0.2	0
20	Evidence for Orientational Order in Nanothreads Derived from Thiophene. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 7164-7171.	2.1	36
21	Local Structure and Bonding of Carbon Nanothreads Probed by High-Resolution Transmission Electron Microscopy. <i>Journal of the American Chemical Society</i> , 2019, 141, 6937-6945.	6.6	26
22	Tetracyanomethane under Pressure: Extended CN Polymers from Precursors with Built-in sp^3 Centers. <i>Journal of Physical Chemistry A</i> , 2018, 122, 2858-2863.	1.1	14
23	Chemistry through cocrystals: pressure-induced polymerization of $C_2H_2 \cdot C_6H_6$ to an extended crystalline hydrocarbon. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 7282-7294.	1.3	15
24	All the Ways To Have Substituted Nanothreads. <i>Journal of Chemical Theory and Computation</i> , 2018, 14, 1131-1140.	2.3	14
25	Confined Chemical Fluid Deposition of Ferromagnetic Metalattices. <i>Nano Letters</i> , 2018, 18, 546-552.	4.5	21
26	Conformal coating of amorphous silicon and germanium by high pressure chemical vapor deposition for photovoltaic fabrics. <i>APL Materials</i> , 2018, 6, 046105.	2.2	11
27	Surprising Stability of Cubane under Extreme Pressure. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 2031-2037.	2.1	12
28	Carbon Nitride Nanowire Crystals Derived from Pyridine. <i>Journal of the American Chemical Society</i> , 2018, 140, 4969-4972.	6.6	81
29	Electronic and Structural Characterization of Diamondoid Carbon Nanowires by Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2018, 24, 1992-1993.	0.2	1
30	Investigation of Surface Plasmon Resonances in Silver Infiltrated Metalattices by Monochromated Electron Energy Loss Spectroscopy. <i>Microscopy and Microanalysis</i> , 2018, 24, 432-433.	0.2	1
31	Low-dose Transmission Electron Microscopy of Highly-Oriented Polyacetylene. <i>Microscopy and Microanalysis</i> , 2018, 24, 2030-2031.	0.2	4
32	The Chemical Structure of Carbon Nanowires Analyzed by Advanced Solid-State NMR. <i>Journal of the American Chemical Society</i> , 2018, 140, 7658-7666.	6.6	59
33	Constraining Carbon Nanowire Structures by Experimental and Calculated Nuclear Magnetic Resonance Spectra. <i>Nano Letters</i> , 2018, 18, 4934-4942.	4.5	24
34	Exploring the Effect of the Core Boundary Curvature in Hollow Antiresonant Fibers. <i>IEEE Photonics Technology Letters</i> , 2017, 29, 263-266.	1.3	22
35	A silicon microwire under a three-dimensional anisotropic tensile stress. <i>Applied Physics Letters</i> , 2017, 110, 091911.	1.5	0
36	Single-Crystal Silicon Optical Fiber by Direct Laser Crystallization. <i>ACS Photonics</i> , 2017, 4, 85-92.	3.2	43

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37	Optoelectronic Fibers: Single-Crystal Germanium Core Optoelectronic Fibers (Advanced Optical) Tj ETQq1 1 0.784314 rgBT ₀ /Overlook	3.6	0
38	Mechanochemical Synthesis of Carbon Nanothread Single Crystals. Journal of the American Chemical Society, 2017, 139, 16343-16349.	6.6	88
39	Low Dose Characterization of Diamondoid Carbon Nanothreads by Transmission Electron Microscopy. Microscopy and Microanalysis, 2017, 23, 1846-1847.	0.2	4
40	In-situ TEM Study on Size-dependent Thermal Stability of Nickel Filled Silica Nano-Opals. Microscopy and Microanalysis, 2017, 23, 956-957.	0.2	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.	1.8	5
42	From Linear Molecular Chains to Extended Polycyclic Networks: Polymerization of Dicyanoacetylene. Chemistry of Materials, 2017, 29, 6706-6718.	3.2	9
43	Single-Crystal Germanium Core Optoelectronic Fibers. Advanced Optical Materials, 2017, 5, 1600592.	3.6	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.	11.1	11
46	Monochromated Low-Dose Aberration-Corrected Transmission Electron Microscopy of Diamondoid Carbon Nanothreads. Microscopy and Microanalysis, 2016, 22, 1840-1841.	0.2	6
47	High-Pressure Reactivity of Triptycene Probed by Raman Spectroscopy. Journal of Physical Chemistry B, 2016, 120, 11035-11042.	1.2	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.	11.1	1
49	Imprinting of Local Metallic States into VO ₂ with Ultraviolet Light. Advanced Functional Materials, 2016, 26, 6612-6618.	7.8	43
50	Pressure-Induced Polymerization of LiN(CN) ₂ . Journal of Physical Chemistry A, 2016, 120, 9370-9377.	1.1	15
51	Low-dose Microscopy and Beam Damage Study of Infiltrated Zeolite Y. Microscopy and Microanalysis, 2016, 22, 1638-1639.	0.2	3
52	Generation of Microwave Capillary Argon Plasmas at Atmospheric Pressure. IEEE Transactions on Plasma Science, 2016, 44, 2603-2607.	0.6	2
53	Crystalline Silicon Optical Fibers with Low Optical Loss. ACS Photonics, 2016, 3, 378-384.	3.2	34
54	Cr ²⁺ :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 Gallium-Indium Eutectic Nanowires. Nano Letters, 2015, 15, 153-158.	4.5	20
58	Linearly Polymerized Benzene Arrays As Intermediates, Tracing Pathways to Carbon Nanotubes. Journal of the American Chemical Society, 2015, 137, 14373-14386.	6.6	86
59	Infrared fibers. Advances in Optics and Photonics, 2015, 7, 379.	12.1	274
60	Hollow core silicon-silica Bragg fiber. , 2015, , .		1
61	Benzene-derived carbon nanotubes. Nature Materials, 2015, 14, 43-47.	13.3	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.	1.7	7
63	Extreme electronic bandgap modification in laser-crystallized silicon optical fibres. Nature Materials, 2014, 13, 1122-1127.	13.3	94
64	Templated Chemically Deposited Semiconductor Optical Fiber Materials. Annual Review of Materials Research, 2013, 43, 527-557.	4.3	33
65	Silicon p - i - n Junction Fibers. Advanced Materials, 2013, 25, 1461-1467.	11.1	76
66	Conformal Coating by High Pressure Chemical Deposition for Patterned Microwires of II-VI Semiconductors. Advanced Functional Materials, 2013, 23, 1647-1654.	7.8	21
67	Integration of Optical Fiber and Optoelectronic Devices. , 2013, , .		2
68	Silicon p - i - n Junction Fibers (Adv. Mater. 10/2013). Advanced Materials, 2013, 25, 1460-1460.	11.1	3
69	Thermal nonlinearity in silicon microcylindrical resonators. Applied Physics Letters, 2012, 100, 181101.	1.5	9
70	A magnifying fiber element with an array of sub-wavelength Ge/ZnSe pixel waveguides for infrared imaging. Applied Physics Letters, 2012, 101, .	1.5	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.	6.6	56

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73	Integration of gigahertz-bandwidth semiconductor devices inside microstructured optical fibres. <i>Nature Photonics</i> , 2012, 6, 174-179.	15.6	107
74	Spontaneous Waveguide Raman Spectroscopy of Self-Assembled Monolayers in Silica Micropores. <i>Langmuir</i> , 2011, 27, 630-636.	1.6	6
75	Selective Semiconductor Filling of Microstructured Optical Fibers. <i>Journal of Lightwave Technology</i> , 2011, 29, 2005-2008.	2.7	13
76	Polycrystalline silicon optical fibers with atomically smooth surfaces. <i>Optics Letters</i> , 2011, 36, 2480.	1.7	22
77	Ultra-smooth microcylindrical resonators fabricated from the silicon optical fiber platform. <i>Applied Physics Letters</i> , 2011, 99, 031117.	1.5	19
78	Zinc Selenide Optical Fibers. <i>Advanced Materials</i> , 2011, 23, 1647-1651.	11.1	108
79	High-Pressure Chemical Deposition for Void-Free Filling of Extreme Aspect Ratio Templates. <i>Advanced Materials</i> , 2010, 22, 4605-4611.	11.1	26
80	Mid-infrared transmission properties of amorphous germanium optical fibers. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	40
81	Low loss silicon fibers for photonics applications. <i>Applied Physics Letters</i> , 2010, 96, 041105.	1.5	75
82	Optical multistability in a silicon-core silica-cladding fiber. <i>Optics Express</i> , 2010, 18, 5305.	1.7	11
83	Thermal and Electrical Conductivity of Size-Tuned Bismuth Telluride Nanoparticles. <i>Small</i> , 2009, 5, 933-937.	5.2	132
84	Superhydrophobic effect on the adsorption of human serum albumin. <i>Acta Biomaterialia</i> , 2009, 5, 1389-1398.	4.1	49
85	Foam formation from fluorinated polyphosphazenes by liquid CO ₂ processing. <i>Polymer Engineering and Science</i> , 2008, 48, 683-686.	1.5	6
86	Single-Crystal Semiconductor Wires Integrated into Microstructured Optical Fibers. <i>Advanced Materials</i> , 2008, 20, 1135-1140.	11.1	39
87	Role of Carbon Order in Structural Transformations and Hydrogen Evolution Induced by Reactive Ball Milling in Cyclohexene. <i>Journal of Physical Chemistry C</i> , 2008, 112, 17427-17435.	1.5	6
88	Organosilane Self-Assembled Monolayer Growth from Supercritical Carbon Dioxide in Microstructured Optical Fiber Capillary Arrays. <i>Langmuir</i> , 2008, 24, 3636-3644.	1.6	14
89	All-optical modulation of laser light in amorphous silicon-filled microstructured optical fibers. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	50
90	Electrical and Raman characterization of silicon and germanium-filled microstructured optical fibers. <i>Applied Physics Letters</i> , 2007, 90, 132110.	1.5	46

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91	Reversible high pressure sp ² →sp ³ transformations in carbon. <i>Phase Transitions</i> , 2007, 80, 1033-1038.	0.6	8
92	Cell Adhesion on Nanofibrous Polytetrafluoroethylene (nPTFE). <i>Langmuir</i> , 2007, 23, 747-754.	1.6	37
93	Controlled Assembly of Zero-, One-, Two-, and Three-Dimensional Metal Chalcogenide Structures. <i>Inorganic Chemistry</i> , 2007, 46, 7238-7240.	1.9	40
94	Electronic and Plasmonic Materials Inside Microstructured Optical Fibers. , 2007, , .		0
95	Microstructured Optical Fibers as High-Pressure Microfluidic Reactors. <i>Science</i> , 2006, 311, 1583-1586.	6.0	442
96	UV Raman studies on carbon nitride structures. <i>Journal of Materials Science</i> , 2006, 41, 7145-7149.	1.7	12
97	Polytetrafluoroethylene nano/microfibers by jet blowing. <i>Polymer</i> , 2006, 47, 8337-8343.	1.8	50
98	High pressure CVD inside microstructured optical fibres. , 2006, , .		2
99	Thermoelectric power and phase transition of polycrystalline As ₂ Te ₃ under pressure. <i>Journal of Physics and Chemistry of Solids</i> , 2005, 66, 1744-1747.	1.9	32
100	Improved thermoelectric properties due to electronic topological transition under high pressure. <i>Physica B: Condensed Matter</i> , 2005, 358, 14-18.	1.3	45
101	Tl ₂ AXTe ₄ (A = Cd, Hg, Mn; X = Ge, Sn): Crystal Structure, Electronic Structure, and Thermoelectric Properties. <i>Chemistry of Materials</i> , 2005, 17, 6186-6191.	3.2	37
102	Chalcogenide Glass Thin Films and Planar Waveguides. <i>Journal of the American Ceramic Society</i> , 2005, 88, 2451-2455.	1.9	28
103	Thermoelectric power and resistivity studies of graphitic nanotubules under high pressure. <i>Materials Letters</i> , 2005, 59, 3973-3975.	1.3	1
104	Electronic structure and thermoelectric power of cerium compounds at high pressure. <i>Journal of Alloys and Compounds</i> , 2005, 388, 215-220.	2.8	20
105	The high-pressure chemistry of potassium→copper mixtures. <i>Solid State Communications</i> , 2004, 131, 157-161.	0.9	3
106	Deposition and characterization of germanium sulphide glass planar waveguides. <i>Optics Express</i> , 2004, 12, 2501.	1.7	84
107	Electronic structure of $\hat{\Gamma}^2$ -As ₂ Te ₃ . <i>Solid State Communications</i> , 2003, 127, 667-670.	0.9	21
108	Cobalt oxide layers. <i>Nature Materials</i> , 2003, 2, 208-210.	13.3	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.	3.2	32
110	Thermoelectric properties of Sb ₂ Te ₃ under pressure and uniaxial stress. Physical Review B, 2003, 68, .	1.1	175
111	Transport coefficients from first-principles calculations. Physical Review B, 2003, 68, .	1.1	663
112	Improvement in the thermoelectric properties of pressure-tuned $\text{K}_2\text{Bi}_8\text{Se}_{13}$. Journal of Applied Physics, 2003, 94, 4485-4488.	1.1	30
113	FLAPW investigation of the stability and equation of state of rectangulated carbon. Solid State Communications, 2002, 122, 473-477.	0.9	16
114	UV Raman Spectroscopy of Single-Walled Carbon Nanotubes. Chemistry of Materials, 2001, 13, 4187-4191.	3.2	23
115	Large Improvement in Thermoelectric Properties in Pressure-Tuned p-Type Sb _{1.5} Bi _{0.5} Te ₃ . Chemistry of Materials, 2001, 13, 2068-2071.	3.2	189
116	High-Pressure Stability, Pressure-Volume Equation of State, and Crystal Structure under Pressure of the Thermoelectric Material IrSb ₃ . Chemistry of Materials, 2000, 12, 697-700.	3.2	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.	0.6	8
119	Solid-state Carbon Nitrides. Advanced Materials, 1997, 9, 877-886.	11.1	65
120	Czochralski growth of single crystals of EuNi ₅ P ₃ in an arc furnace. Journal of Crystal Growth, 1997, 181, 363-366.	0.7	0
121	High-Pressure Synthesis of sp ² -Bonded Carbon Nitrides. Chemistry of Materials, 1996, 8, 1535-1539.	3.2	83
122	Thermodynamic Analysis of the Formation of Carbon Nitrides under Pressure. Chemistry of Materials, 1996, 8, 535-540.	3.2	74
123	Transition Element-Like Chemistry for Potassium Under Pressure. Science, 1996, 273, 95-97.	6.0	119
124	A high resolution laboratory-based high pressure x-ray diffraction system. Review of Scientific Instruments, 1995, 66, 4496-4500.	0.6	21
125	Poly(phenylcarbyne): A Polymer Precursor to Diamond-Like Carbon. Science, 1993, 260, 1496-1499.	6.0	117
126	High-Pressure Chemistry of Hydrogen in Metals: In Situ Study of Iron Hydride. Science, 1991, 253, 421-424.	6.0	200

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127	Synthesis and crystal structure of a new alkaline earth nickel phosphide phase: BaNi ₉ P ₅ . Journal of Solid State Chemistry, 1990, 87, 10-14.	1.4	14
128	Magnetic phase transitions in EuNi ₅ P ₃ : Unusual steps in the magnetization with field. Physical Review B, 1987, 35, 8880-8883.	1.1	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.	6.6	29
130	Synthesis and crystal structure of a new europium nickel phosphide phase, EuNi ₅ P ₃ . Journal of Solid State Chemistry, 1987, 67, 354-358.	1.4	16
131	Synthesis and structural-magnetic study of a new type of high-nuclearity metal carbonyl cluster possessing an eleven-atom Rh ₅ Ni ₆ 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.	6.6	36
132	Synthesizing carbon nanothreads from benzene. SPIE Newsroom, 0, , .	0.1	2