Conductive diamond: synthesis, properties, and electro

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Citation Report

#	Article	IF	Citations
1	Diamond surface functionalization: from gemstone to photoelectrochemical applications. Journal of Materials Chemistry C, 2019, 7, 10134-10165.	2.7	62
2	The Use of Boron-Doped Diamond Electrode for the Determination of Selected Biocides in Water Samples. Water (Switzerland), 2019, 11, 1595.	1.2	9
3	Trends in Synthetic Diamond for Electrochemical Applications. ChemElectroChem, 2019, 6, 4330-4331.	1.7	2
4	Fast and sensitive simultaneous determination of antihypertensive drugs amlodipine besylate and ramipril using an electrochemical method: application to pharmaceuticals and blood serum samples. Analytical Methods, 2019, 11, 4006-4013.	1.3	17
5	Efficiently degradation of perfluorooctanoic acid in synergic electrochemical process combining cathodic electro-Fenton and anodic oxidation. Chemical Engineering Journal, 2019, 378, 122071.	6.6	89
6	Multifunctional Boronâ€Doped Diamond Colloidal AFM Probes. Small, 2019, 15, 1902099.	5.2	15
7	Imaging and Modeling the Optical Emission from CH Radicals in Microwave Activated C/H Plasmas. Journal of Physical Chemistry A, 2019, 123, 9966-9977.	1.1	10
8	Porous boron doped diamond for dopamine sensing: Effect of boron doping level on morphology and electrochemical performance. Electrochimica Acta, 2019, 327, 135025.	2.6	49
9	Simple and rapid voltammetric determination of cephalosporin drug cefixime on boron-doped diamond electrode. Monatshefte FÃ¼r Chemie, 2019, 150, 1895-1902.	0.9	8
10	Recent Advances of Porous Graphene: Synthesis, Functionalization, and Electrochemical Applications. Small, 2019, 15, e1903780.	5.2	144
11	High-performance supercabatteries using graphite@diamond nano-needle capacitor electrodes and redox electrolytes. Nanoscale, 2019, 11, 17939-17946.	2.8	30
12	Interrogating the Surface Intermediates and Water Oxidation Products of Boronâ€Doped Diamond Electrodes with Scanning Electrochemical Microscopy. ChemElectroChem, 2019, 6, 3507-3515.	1.7	8
13	Impact of sp² Carbon Edge Effects on the Electron-Transfer Kinetics of the Ferrocene/Ferricenium Process at a Boron-Doped Diamond Electrode in an Ionic Liquid. Journal of Physical Chemistry C, 2019, 123, 17397-17406.	1.5	19
14	Evaluating the carbon inventory, carbon fluxes and carbon cycles for a long-term sustainable world. Green Chemistry, 2019, 21, 3994-4013.	4.6	47
15	Origins of boron catalysis in peroxymonosulfate activation and advanced oxidation. Journal of Materials Chemistry A, 2019, 7, 23904-23913.	5.2	67
16	Electrochemical Technologies for Detecting and Degrading Benzoquinone Using Diamond Films. ChemElectroChem, 2019, 6, 4383-4390.	1.7	24
17	Nanoporous Cu@Cu₂O hybrid arrays enable photo-assisted supercapacitor with enhanced capacities. Journal of Materials Chemistry A, 2019, 7, 15691-15697.	5.2	66
18	3D Hierarchical Boron-Doped Diamond-Multilayered Graphene Nanowalls as an Efficient Supercapacitor Electrode. Journal of Physical Chemistry C, 2019, 123, 15458-15466.	1.5	35

#	Article	IF	Citations
19	The Electrochemical Oxidation of Sulphite on Gold Electrodes. Electroanalysis, 2019, 31, 1783-1796.	1.5	9
20	Recent progress in the applications of boron doped diamond electrodes in electroanalysis of organic compounds and biomolecules â€“ A review. Analytica Chimica Acta, 2019, 1077, 30-66.	2.6	158
21	Recent progress on carbon nanomaterials for the electrochemical detection and removal of environmental pollutants. Nanoscale, 2019, 11, 11992-12014.	2.8	118
22	Achieving Ultrahigh Energy Densities of Supercapacitors with Porous Titanium Carbide/Boronâ€Doped Diamond Composite Electrodes. Advanced Energy Materials, 2019, 9, 1803623.	10.2	61
23	Insight into the Effect of the Coreâ€“Shell Microstructure on the Electrochemical Properties of Undoped 3D-Networked Conductive Diamond/Graphite. Journal of Physical Chemistry C, 2019, 123, 6018-6029.	1.5	21
24	Electrochemical CO₂ Reduction Using Electrons Generated from Photoelectrocatalytic Phenol Oxidation. Advanced Energy Materials, 2019, 9, 1900364.	10.2	31
25	Boronâ€Doped Diamond for Hydroxyl Radical and Sulfate Radical Anion Electrogeneration, Transformation, and Voltageâ€Free Sustainable Oxidation. Small, 2019, 15, e1900153.	5.2	45
26	Electrochemical Pinacol Coupling of Acetophenone Using Boronâ€Doped Diamond Electrode. ChemElectroChem, 2019, 6, 4153-4157.	1.7	21
27	Electrochemical reduction of CO₂ using palladium modified boron-doped diamond electrodes: enhancing the production of CO. Physical Chemistry Chemical Physics, 2019, 21, 15297-15301.	1.3	24
28	An sp² Patterned Boron Doped Diamond Electrode for the Simultaneous Detection of Dissolved Oxygen and pH. ACS Sensors, 2019, 4, 756-763.	4.0	30
29	Enhanced electrochemical supercapacitor performance with a three-dimensional porous boron-doped diamond film. New Journal of Chemistry, 2019, 43, 18813-18822.	1.4	16
30	Nanostructured Materials for Treating Aquatic Pollution. Engineering Materials, 2019, , .	0.3	4
31	Phosphorusâ€Doped Nanocrystalline Diamond for Supercapacitor Application. ChemElectroChem, 2019, 6, 1088-1093.	1.7	26
32	Electrochemical oxidation of perfluorooctane sulfonate (PFOS) substitute by modified boron doped diamond (BDD) anodes. Chemical Engineering Journal, 2020, 379, 122280.	6.6	82
33	Structure of Diamond Films Grown Using High-Speed Flow of a Thermally Activated CH4-H2 Gas Mixture. Materials, 2020, 13, 219.	1.3	9
34	Unusual Electrochemical Properties of Low-Doped Boron-Doped Diamond Electrodes Containing sp² Carbon. Journal of the American Chemical Society, 2020, 142, 2310-2316.	6.6	68
35	Design Framework and Sensing System for Noninvasive Wearable Electroactive Drug Monitoring. ACS Sensors, 2020, 5, 265-273.	4.0	28
36	Nanodiamond in composite: Biomedical application. Journal of Biomedical Materials Research - Part A, 2020, 108, 906-922.	2.1	36

#	Article	IF	Citations
38	Microstructure and electrochemical properties of nanocrystalline diamond and graphene hybridized films. Journal of Applied Physics, 2020, 127, .	1.1	8
39	Carboxymethyl-botryosphaeran stabilized carbon nanotubes aqueous dispersion: A new platform design for electrochemical sensing of desloratadine. Talanta, 2020, 210, 120642.	2.9	9
40	Electrochemical oxidation of anti-inflammatory drug meloxicam and its determination using boron doped diamond electrode. Journal of Electroanalytical Chemistry, 2020, 858, 113758.	1.9	12
41	Characterization of the reaction environment in flow reactors fitted with BDD electrodes for use in electrochemical advanced oxidation processes: A critical review. Electrochimica Acta, 2020, 331, 135373.	2.6	87
42	High-performance 2.6ÂV aqueous symmetric supercapacitor based on porous boron-doped diamond via regrowth of diamond nanoparticles. Carbon, 2020, 160, 71-79.	5.4	41
43	Diamond in medical devices and sensors: An overview of diamond surfaces. Medical Devices & Sensors, 2020, 3, e10127.	2.7	10
44	Preparation of boron-doped diamond nanospikes on porous Ti substrate for high-performance supercapacitors. Electrochimica Acta, 2020, 354, 136649.	2.6	14
45	Hybrid supercapacitors from porous boron-doped diamond with water-soluble redox electrolyte. Surface and Coatings Technology, 2020, 398, 126103.	2.2	22
46	Comparison of Carbonâ€based Electrodes for Detection of Cresols in Voltammetry and HPLC with Electrochemical Detection. Electroanalysis, 2020, 32, 2193-2204.	1.5	14
47	Noninvasive wearable electroactive pharmaceutical monitoring for personalized therapeutics. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 19017-19025.	3.3	71
48	Fabrication and evaluation of mechanical properties of polycrystalline diamond reinforced with carbon-nanotubes by HPHT sintering. Ceramics International, 2020, 46, 21527-21532.	2.3	6
49	A Fouling-Resistant Voltammetric Sensing System for Wearable Electroactive Biomarker Monitoring. Journal of Microelectromechanical Systems, 2020, 29, 1059-1063.	1.7	4
50	Microstructure of boron doped diamond electrodes and studies on its basic electrochemical characteristics and applicability of dye degradation. Journal of Environmental Chemical Engineering, 2020, 8, 104348.	3.3	16
51	Flexible Diamond Fibers for Highâ€Energyâ€Density Zincâ€Ion Supercapacitors. Advanced Energy Materials, 2020, 10, 2002202.	10.2	69
52	Nanopile Interlocking Separator Coating toward Uniform Li Deposition of the Li Metal Anodes. ACS Applied Materials & Interfaces, 2020, 12, 43543-43552.	4.0	22
53	In Vivo Real-Time Simultaneous Examination of Drug Kinetics at Two Separate Locations Using Boron-Doped Diamond Microelectrodes. Analytical Chemistry, 2020, 92, 13742-13749.	3.2	20
54	Advanced Electrochemical Processes for the Elimination of Pharmaceutical Compounds in Contaminated Waters. Handbook of Environmental Chemistry, 2020, , 327-347.	0.2	0
55	Microscale diamond protection for a ZnO coated fiber optic sensor. Scientific Reports, 2020, 10, 19141.	1.6	7

#	Article	IF	Citations
56	Identification of Mechanistic Subtleties that Apply to Voltammetric Studies at Boron-Doped Diamond Electrodes. Journal of Physical Chemistry C, 2020, 124, 24232-24244.	1.5	1
57	Effect of sp2 species in a boron-doped diamond electrode on the electrochemical reduction of CO2. Electrochemistry Communications, 2020, 115, 106731.	2.3	26
58	Is There a Relationship between Surface Wettability of Structured Surfaces and Lyophobicity toward Liquid Metals?. Materials, 2020, 13, 2283.	1.3	14
59	Ultra-high energy density supercapacitors using a nickel phosphide/nickel/titanium carbide nanocomposite capacitor electrode. Nanoscale, 2020, 12, 13618-13625.	2.8	19
60	Assessment of acid and thermal oxidation treatments for removing sp2 bonded carbon from the surface of boron doped diamond. Carbon, 2020, 167, 1-10.	5.4	32
61	Performance evaluation of vitrified/diamond composites by adding ZnF2. Diamond and Related Materials, 2020, 108, 107910.	1.8	1
62	New polymorphism for BaTi(IO₃)₆ with two polymorphs crystallizing in the same space group. Dalton Transactions, 2020, 49, 8443-8447.	1.6	8
63	Interfacial integrity enhancement of atomic layer deposited alumina on boron doped diamond by surface plasma functionalization. Surface and Coatings Technology, 2020, 397, 125991.	2.2	4
64	Tunable Photoâ€Electrochemistry of Patterned TiO₂/BDD Heterojunctions. Small Methods, 2020, 4, 2000257.	4.6	26
65	Die â€œgrÃ¼neâ€•elektrochemische Synthese von Periodat. Angewandte Chemie, 2020, 132, 8112-8118.	1.6	17
66	The â€œGreenâ€•Electrochemical Synthesis of Periodate. Angewandte Chemie - International Edition, 2020, 59, 8036-8041.	7.2	52
67	Fabrication of Au/Ni/boron-doped diamond electrodes via hydrogen plasma etching graphite and amorphous boron for efficient non-enzymatic sensing of glucose. Journal of Electroanalytical Chemistry, 2020, 871, 114264.	1.9	13
68	Quantification of electrogenerated chemiluminescence from tris(bipyridine)ruthenium(<scp>ii</scp>) and hydroxyl ions. Physical Chemistry Chemical Physics, 2020, 22, 15413-15417.	1.3	13
69	High pressure: a feasible tool for the synthesis of unprecedented inorganic compounds. Inorganic Chemistry Frontiers, 2020, 7, 2890-2908.	3.0	18
70	Analytical Applications of Electrochemically Pretreated Boronâ€Doped Diamond Electrodes. ChemElectroChem, 2020, 7, 1291-1311.	1.7	66
71	Reviewâ€”Recent Advances in Carbon Nanomaterials as Electrochemical Biosensors. Journal of the Electrochemical Society, 2020, 167, 037555.	1.3	272
73	Investigation of sp²-Carbon Pattern Geometry in Boron-Doped Diamond Electrodes for the Electrochemical Quantification of Hypochlorite at High Concentrations. ACS Sensors, 2020, 5, 789-797.	4.0	13
74	Microfabricated electrochemical sensing devices. Lab on A Chip, 2020, 20, 1358-1389.	3.1	62

#	Article	IF	Citations
75	Carrier mobility enhancement on the H-terminated diamond surface. Diamond and Related Materials, 2020, 104, 107750.	1.8	11
76	A differential pulse voltammetric method for submicromolar determination of antihistamine drug desloratadine using an unmodified boron-doped diamond electrode. Analytical Methods, 2020, 12, 1115-1121.	1.3	8
77	Electrochemical behavior of plant growth stimulator 1-naphthaleneacetic acid and its voltammetric determination using boron doped diamond electrode. Journal of Electroanalytical Chemistry, 2020, 859, 113855.	1.9	3
78	Voltammetric study of triazole antifungal agent terconazole on sp3 and sp2 carbon-based electrode materials. Journal of Electroanalytical Chemistry, 2020, 863, 114054.	1.9	9
79	Structural, Raman and photoluminescence studies on nanocrystalline diamond films: Effects of ammonia in feedstock. Diamond and Related Materials, 2020, 106, 107872.	1.8	6
80	Conducting nitrogen-incorporated ultrananocrystalline diamond coating for highly structural stable anode materials in lithium ion battery. Nano Energy, 2020, 74, 104811.	8.2	10
81	Determination of bisphenol S, simultaneously to bisphenol A in different water matrices or solely in electrolyzed solutions, using a cathodically pretreated boron-doped diamond electrode. Talanta, 2020, 217, 121041.	2.9	22
82	A novel thermo-controlled acetaminophen electrochemical sensor based on carboxylated multi-walled carbon nanotubes and thermosensitive polymer. Diamond and Related Materials, 2020, 107, 107877.	1.8	20
83	A novel voltammetric approach to the detection of primary bile acids in serum samples. Bioelectrochemistry, 2020, 134, 107539.	2.4	7
84	Diamond Nanoparticles in Heterogeneous Catalysis. Chemistry of Materials, 2020, 32, 4116-4143.	3.2	23
85	Optical properties of diamond-like carbon films prepared by pulsed laser deposition onto 3D surface substrate. Surface Engineering, 2021, 37, 414-421.	1.1	2
86	Advanced and in situ transmission electron microscopy of diamond: A review. Semiconductors and Semimetals, 2021, , 31-104.	0.4	3
87	High pressure high temperature synthesis of highly boron doped diamond microparticles and porous electrodes for electrochemical applications. Carbon, 2021, 171, 845-856.	5.4	24
88	Comparison of electrochemical performance of various boron-doped diamond electrodes: Dopamine sensing in biomimicking media used for cell cultivation. Bioelectrochemistry, 2021, 137, 107646.	2.4	26
89	A review on diamond-like carbon films grown by pulsed laser deposition. Applied Surface Science, 2021, 541, 148573.	3.1	32
90	Fast and portable voltammetric method for the determination of the amphetamine adulterant ephedrine in natural over-the-counter weight-loss products. Microchemical Journal, 2021, 160, 105757.	2.3	10
91	Fabrication and electrochemical properties of boron-doped SiC. Carbon, 2021, 174, 240-247.	5.4	2
92	Modular Electrochemical Synthesis Using a Redox Reservoir Paired with Independent Half-Reactions. Joule, 2021, 5, 149-165.	11.7	37

#	Article	IF	Citations
93	Photoelectrocatalytic interface of boron-doped diamond: Modification, functionalization and environmental applications. Carbon, 2021, 175, 454-466.	5.4	21
94	Electrogenerated Chemiluminescence of Luminol Mediated by Carbonate Electrochemical Oxidation at a Boron-Doped Diamond. Analytical Chemistry, 2021, 93, 2336-2341.	3.2	34
95	The sustainable synthesis of levetiracetam by an enzymatic dynamic kinetic resolution and an ex-cell anodic oxidation. Green Chemistry, 2021, 23, 388-395.	4.6	25
96	3D Carbon Frameworks for Ultrafast Charge/Discharge Rate Supercapacitors with High Energy-Power Density. Nano-Micro Letters, 2021, 13, 8.	14.4	64
97	Ultrananocrystalline Diamond Nanowires: Fabrication, Characterization, and Sensor Applications. Materials, 2021, 14, 661.	1.3	5
98	Effect of Pt-Ni Deposition Sequence in PtNi-Modified Boron-Doped Diamond on Catalytic Performance for Glucose Oxidation Under Neutral pH Conditions. SSRN Electronic Journal, 0, , .	0.4	0
99	Boron-Doped Diamond Electrodes: Recent Developments and Advances in View of Electrochemical Drug Sensors. Critical Reviews in Analytical Chemistry, 2022, 52, 1122-1138.	1.8	27
100	A Nanometer-Sized Graphite/Boron-Doped Diamond Electrochemical Sensor for Sensitive Detection of Acetaminophen. ACS Omega, 2021, 6, 6326-6334.	1.6	30
101	Achieving high capacitance from porous boron-doped diamond by tuning the surface termination. Surface and Coatings Technology, 2021, 408, 126814.	2.2	6
102	Boron-doped diamond film and multiple linear regression-based calibration applied to the simultaneous electrochemical determination of paracetamol, phenylephrine hydrochloride, and loratadine in fixed-dose combinations. Microchemical Journal, 2021, 162, 105831.	2.3	6
103	Polishing and planarization of single crystal diamonds: state-of-the-art and perspectives. International Journal of Extreme Manufacturing, 2021, 3, 022003.	6.3	31
104	Nanodiamond-Based Fibrous Composites: A Review of Fabrication Methods, Properties, and Applications. ACS Applied Nano Materials, 2021, 4, 2317-2332.	2.4	15
105	Anodic Oxidation of Phenols: A Key Step for the Synthesis of Natural Products. Chemical Record, 2021, 21, 2254-2268.	2.9	8
106	Chemical Vapor Deposition Synthesis and Characterization of Hollow Carbon Nanospheres with High Specific Capacitance and Excellent Cycling Stability. Journal of Electronic Materials, 2021, 50, 2922-2931.	1.0	0
107	Nanoscale Reactivity Mapping of a Single-Crystal Boron-Doped Diamond Particle. Analytical Chemistry, 2021, 93, 5831-5838.	3.2	33
108	Advances in Carbon-Based Microfiber Electrodes for Neural Interfacing. Frontiers in Neuroscience, 2021, 15, 658703.	1.4	26
109	Conductive Boron-doped Diamond Powder/Nanoparticles for Electrochemical Applications. Chemistry Letters, 2021, 50, 733-741.	0.7	12
110	Electrochemical and photochemical CO2 reduction using diamond. Carbon, 2021, 175, 440-453.	5.4	24

#	Article	IF	Citations
111	Diamond fibers for efficient electrocatalytic degradation of environmental pollutants. Carbon, 2021, 175, 36-42.	5.4	25
112	Ultrathin Diamond Nanofilmsâ€"Development, Challenges, and Applications. Small, 2021, 17, e2007529.	5.2	61
113	Electrosynthesis of Stable Betulinâ€Derived Nitrile Oxides and their Application in Synthesis of Cytostatic Lupaneâ€Type Triterpenoidâ€Isoxazole Conjugates. European Journal of Organic Chemistry, 2021, 2021, 2557-2577.	1.2	13
114	The first study of triazole fungicide difenoconazole oxidation and its voltammetric and flow amperometric detection on boron doped diamond electrode. Electrochimica Acta, 2021, 381, 138260.	2.6	11
115	Single-Step Fabrication Method toward 3D Printing Composite Diamondâ€"Titanium Interfaces for Neural Applications. ACS Applied Materials & Interfaces, 2021, 13, 31474-31484.	4.0	6
116	Diamond supercapacitors: Progress and perspectives. Current Opinion in Solid State and Materials Science, 2021, 25, 100922.	5.6	18
118	Electrochemistry of nitrogen and boron Bi-element incorporated diamond films. Carbon, 2021, 178, 19-25.	5.4	14
119	Controllable synthesized diamond/CNWs film as a novel nanocarbon electrode with wide potential window and enhanced S/B ratio for electrochemical sensing. Applied Surface Science, 2021, 551, 149418.	3.1	12
120	Effect of surface oxidation on photoluminescence of silicon vacancy color centers in the nanocrystalline diamond films. Applied Surface Science, 2021, 552, 149475.	3.1	9
121	Room-temperature synthesis of various allotropes of carbon nanostructures (graphene, graphene) Tj ETQq1 1 0.784314 rgBT /Overlo using ethanol and potassium hydroxide. Carbon, 2021, 179, 133-141.	5.4	17
122	Diamond thin films integrated with flexible substrates and their physical, chemical and biological characteristics. Journal Physics D: Applied Physics, 2021, 54, 384004.	1.3	5
123	Voltammetry of 7-dehydrocholesterol as a new and useful tool for Smith-Lemli-Opitz syndrome diagnosis. Talanta, 2021, 229, 122260.	2.9	3
124	A comprehensive account of biomedical applications of CVD diamond coatings. Journal Physics D: Applied Physics, 2021, 54, 443001.	1.3	4
125	Calibrating SECCM measurements by means of a nanoelectrode ruler. The intrinsic oxygen reduction activity of PtNi catalyst nanoparticles. Nano Research, 2022, 15, 1564-1569.	5.8	8
126	Introductory Chapter: Engineering Applications of Diamond. , 0, , .		1
127	Effect of plasma-assisted electrochemical treatment of the boron-doped synthetic diamond compact electrodes on the oxygen electroreduction kinetics. Electrochimica Acta, 2021, 390, 138843.	2.6	2
128	Localized Graphitization on Diamond Surface as a Manifestation of Dopants. Advanced Materials, 2021, 33, e2103250.	11.1	5
129	Optimization Strategies for the Anodic Phenolâ€Arene Crossâ€Coupling Reaction. ChemElectroChem, 2021, 8, 3904-3910.	1.7	17

#	Article	IF	Citations
130	Large Power Increase Enabled by High-Q Diamond-Loaded Cavities for Terahertz Gyrotrons. Journal of Infrared, Millimeter, and Terahertz Waves, 2021, 42, 863-877.	1.2	6
131	Unique properties of fine bubbles in the electrochemical reduction of carbon dioxide using boron-doped diamond electrodes. Electrochimica Acta, 2021, 389, 138769.	2.6	3
132	Reviewâ€"Bio-Nanosensors: Fundamentals and Recent Applications. Journal of the Electrochemical Society, 2021, 168, 107506.	1.3	14
133	Electrochemical Sensing Applications Using Diamond Microelectrodes. Bulletin of the Chemical Society of Japan, 2021, 94, 2838-2847.	2.0	2
134	Electrochemical Nitration with Nitrite. ChemSusChem, 2021, 14, 4936-4940.	3.6	21
135	Laserâ€induced Graphene in Facts, Numbers, and Notes in View of Electroanalytical Applications: A Review. Electroanalysis, 2022, 34, 574-589.	1.5	28
136	Atomic-scale and damage-free polishing of single crystal diamond enhanced by atmospheric pressure inductively coupled plasma. Carbon, 2021, 182, 175-184.	5.4	28
137	Effects of pressure on the structural, mechanical and anisotropic behavior of BC8N compound. Materials Today Communications, 2021, 29, 102782.	0.9	0
138	Carbon nanomaterials: Synthesis, properties and applications in electrochemical sensors and energy conversion systems. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 272, 115341.	1.7	40
139	A supramolecular hybrid sensor based on cucurbit[8]uril, 2D-molibdenum disulphide and diamond nanoparticles towards methyl viologen analysis. Analytica Chimica Acta, 2021, 1182, 338940.	2.6	11
140	Enhancing electroanalytical performance of porous boron-doped diamond electrodes by increasing thickness for dopamine detection. Analytica Chimica Acta, 2021, 1182, 338949.	2.6	11
141	Single-step synthesis of core-shell diamond-graphite hybrid nano-needles as efficient supercapacitor electrode. Electrochimica Acta, 2021, 397, 139267.	2.6	4
142	Porous graphene oxide functionalized by covalent organic framework for the application in adsorption and electrochemical: The effect of C-F bonds to structure. Microchemical Journal, 2021, 170, 106710.	2.3	10
143	Electrochemical CO2 reduction on sub-microcrystalline boron-doped diamond electrodes. Diamond and Related Materials, 2021, 120, 108608.	1.8	10
144	A highly stable microporous boron-doped diamond electrode etched by oxygen plasma for enhanced electrochemical ozone generation. Journal of Environmental Chemical Engineering, 2021, 9, 106369.	3.3	15
145	Electrochemical treatment of soil-washing effluent with boron-doped diamond electrodes: A review. Current Opinion in Solid State and Materials Science, 2021, 25, 100962.	5.6	17
146	A perspective on diamond composites and their electrochemical applications. Current Opinion in Electrochemistry, 2021, 30, 100835.	2.5	11
147	Relationship between substrate type and BDD electrode structure, performance and antibiotic tetracycline mineralization. Journal of Alloys and Compounds, 2022, 890, 161760.	2.8	24

#	Article	IF	Citations
148	Integration of 3D interconnected porous microstructure and high electrochemical property for boron-doped diamond by facile strategy. Journal of Materials Science and Technology, 2022, 105, 26-35.	5.6	9
149	Nucleation of diamond films on heterogeneous substrates: a review. RSC Advances, 2021, 11, 10159-10182.	1.7	57
150	Review on carbonaceous materials as persulfate activators: structureâ€“performance relationship, mechanism and future perspectives on water treatment. Journal of Materials Chemistry A, 2021, 9, 8012-8050.	5.2	90
151	Sensing Materials: Diamond-Based Materials. , 2023, , 45-72.		5
152	Enantioselective Voltammetric Sensors on the Basis of Chiral Materials. Journal of Analytical Chemistry, 2020, 75, 1514-1526.	0.4	17
153	Pulsed laser deposition of the protective and Anti-reflective DLC film. Infrared Physics and Technology, 2021, 119, 103949.	1.3	3
154	Diamond-Based Nanostructured Materials for Detection of Water Contaminants. Engineering Materials, 2019, , 147-174.	0.3	0
155	Template-free synthesis of millimeter-scale carbon nanorod arrays on boron-doped diamond with superior glucose sensing performance. Applied Surface Science, 2022, 572, 151468.	3.1	4
156	Structural and electrochemical heterogeneities of boron-doped diamond surfaces. Current Opinion in Electrochemistry, 2022, 31, 100876.	2.5	6
157	Design of diamond anodes in electrochemical degradation of organic pollutants. Current Opinion in Electrochemistry, 2022, 32, 100878.	2.5	7
158	T-carbon: Experiments, properties, potential applications and derivatives. Nano Today, 2022, 42, 101346.	6.2	23
159	Strengthening Superhard Materials by Nanostructure Engineering. Journal of Superhard Materials, 2021, 43, 307-329.	0.5	2
160	Progress in electrochemistry of hybrid diamond/sp2-C nanostructures. Current Opinion in Electrochemistry, 2022, 32, 100884.	2.5	8
161	Challenges in the Electrochemical Synthesis of Si₂Cl₆ Starting from Tetrachlorosilane and Trichlorosilane. ChemElectroChem, 2022, 9, .	1.7	6
162	Review on the electrochemical oxidation of endocrine-disrupting chemicals using BDD anodes. Current Opinion in Electrochemistry, 2022, 32, 100900.	2.5	11
163	In situ electrochemical spectroscopy for boron-doped diamond electrode reactions: recent progress and perspectives. Current Opinion in Electrochemistry, 2022, 32, 100892.	2.5	2
164	Promoting CO2 electroreduction on boron-doped diamond electrodes: Challenges and trends. Current Opinion in Electrochemistry, 2022, 32, 100890.	2.5	8
165	Hierarchical Carbon Nanofibers@Nickel Phosphide Nanoparticles for Highâ€Performance Supercapacitors. Small Structures, 2022, 3, 2100183.	6.9	9

#	Article	IF	Citations
166	Correlation of the role of boron concentration on the microstructure and electrochemical properties of diamond electrodes. Functional Diamond, 2021, 1, 197-204.	1.7	10
167	A Nanoporous Single Diamond Particle Microelectrode and Its In Situ Surface Modification. SSRN Electronic Journal, 0, , .	0.4	0
169	Ultrasound and UV technologies for wastewater treatment using boron-doped diamond anodes. Current Opinion in Electrochemistry, 2022, 33, 100935.	2.5	3
170	Opportunities and challenges of thin-film boron-doped diamond electrochemistry for valuable resources recovery from waste: Organic, inorganic, and volatile productÂelectrosynthesis. Current Opinion in Electrochemistry, 2022, 32, 100903.	2.5	12
171	Three-Dimensional PbO₂-Modified Carbon Felt Electrode for Efficient Electrocatalytic Oxidation of Phenol Characterized with In Situ ATR-FTIR. Journal of Physical Chemistry C, 2022, 126, 912-921.	1.5	8
172	Reducing Threading Dislocations of Single-Crystal Diamond via In Situ Tungsten Incorporation. Materials, 2022, 15, 444.	1.3	6
173	Coreâ€“shell copper-gold nanoparticles modified at the boron-doped diamond electrode for oxygen sensors. Analytical Methods, 2022, 14, 726-733.	1.3	3
174	Achievement and electrochemical responsiveness of advanced boron-doped ultrananocrystalline diamond on highly ordered titanium dioxide nanotubes. Diamond and Related Materials, 2022, 121, 108793.	1.8	6
175	Ultrafast transient absorption spectroelectrochemistry: femtosecond to nanosecond excited-state relaxation dynamics of the individual components of an anthraquinone redox couple. Chemical Science, 2022, 13, 486-496.	3.7	8
176	Coexistence of carbonyl and ether groups on oxygen-terminated (110)-oriented diamond surfaces. Communications Materials, 2022, 3, .	2.9	10
177	Effect of Pt-Ni deposition sequence on the bimetal-modified boron-doped diamond on catalytic performance for glucose oxidation in neutral media. Journal of Electroanalytical Chemistry, 2022, 907, 116084.	1.9	1
178	Development of nano boron-doped diamond electrodes for environmental applications. Journal of Electroanalytical Chemistry, 2022, 907, 116028.	1.9	11
181	Electrochemical Properties of BDD Electrodes by Surface Control. , 2022, , 9-22.		0
184	Electrochemical CO2 Reduction. , 2022, , 161-176.		1
186	Diamond semiconductor and elastic strain engineering. Journal of Semiconductors, 2022, 43, 021801.	2.0	19
187	Towards Use of Persulfate Electrogenerated at Boron Doped Diamond Electrodes as Ex-Situ Oxidation Approach: Storage and Service-Life Solution Parameters. Journal of the Electrochemical Society, 2022, 169, 033506.	1.3	10
188	Oxygen Concentration Dependence in Microwave Plasmaâ€Enhanced Chemical Vapor Deposition Diamond Growth in the (H, C, O, N) System. Physica Status Solidi (A) Applications and Materials Science, 0, , 2100887.	0.8	0
189	Concentrated Aqueous Peroxodicarbonate: Efficient Electrosynâ€thesis and Use as Oxidizer in Epoxidations, Sâ€, and Nâ€Oxidations. Angewandte Chemie - International Edition, 2022, 61, .	7.2	23

#	Article	IF	Citations
190	Konzentriertes WÃssriges Peroxodikarbonat: Effiziente Elektrosynthese und Anwendungen in Epoxidierungen, Sâ€‚und Nâ€Oxidationen. Angewandte Chemie, 2022, 134, .	1.6	4
191	Structure, mechanical properties and tribological behavior of sp2-C:Ti/sp3-C:Ti multilayer films deposited by magnetron sputtering. Diamond and Related Materials, 2022, 125, 108963.	1.8	5
192	Electrochemical production of hydrogen peroxide on Boron-Doped diamond (BDD) electrode. Current Opinion in Solid State and Materials Science, 2022, 26, 100988.	5.6	27
193	Functionalized nanodiamonds as a perspective green carbo-catalyst for removal of emerging organic pollutants. Current Opinion in Solid State and Materials Science, 2022, 26, 100991.	5.6	8
194	Influence of B/N co-doping on electrical and photoluminescence properties of CVD grown homoepitaxial diamond films. Nanotechnology, 2022, 33, 125603.	1.3	5
195	Promoting electrochemical reduction of CO2 to ethanol by B/N-doped sp3/sp2 nanocarbon electrode. Chinese Chemical Letters, 2022, 33, 4691-4694.	4.8	12
196	Versatile Tools for Understanding Electrosynthetic Mechanisms. Chemical Reviews, 2022, 122, 3292-3335.	23.0	59
197	VBNet: A VLC Enabled Hybrid Data Center Network. , 2021, , .		0
198	Novel Screen-Printed Sensor with Chemically Deposited Boron-Doped Diamond Electrode: Preparation, Characterization, and Application. Biosensors, 2022, 12, 241.	2.3	10
199	Sustainable development information management of carbon nanomaterial-based sensors. , 2022, , 3-12.		7
200	Multifunctional and Mechanically Robust Porous Diamond with Large Electroactive Surfaces via Electrically Conductive and Insulating Templates for 3D Electrode Applications. Advanced Materials Interfaces, 2022, 9, .	1.9	1
201	Paraâ€Fluorination of Anilides Using Electrochemically Generated Hypervalent Iodoarenes. Chemistry - A European Journal, 2022, 28, .	1.7	6
202	Engineering an Au-NPs/Nafion modified nanoporous diamond sensing interface for reliable voltammetric quantification of dopamine in human serum. Chemical Engineering Journal, 2022, , 136927.	6.6	2
203	Diamond for antifouling applications: A review. Carbon, 2022, 196, 923-939.	5.4	25
204	Application of Boron-doped Diamond Electrodes: Focusing on the Electrochemical Reduction of Carbon Dioxide. Electrochemistry, 2022, 90, 101002-101002.	0.6	4
205	A General Electroâ€Synthesis Approach to Amaryllidaceae Alkaloids. Chemistry - A European Journal, 2022, 28, .	1.7	6
206	Synthesis of graphene interlayer diamond films for enhanced electrochemical performance. Carbon, 2022, 196, 602-611.	5.4	7
207	Study on preparation and electrochemical properties of nano-diamond/vertical graphene composite three-dimensional electrodes. Wuli Xuebao/Acta Physica Sinica, 2022, .	0.2	0

#	Article	IF	Citations
208	High-quality diamond microparticles containing SiV centers grown by chemical vapor deposition with preselected seeds. Journal of Materials Chemistry C, 2022, 10, 13734-13740.	2.7	7
209	Electrochemical degradation of tetracycline hydrochloride in sulfate solutions on boron-doped diamond electrode: The accumulation and transformation of persulfate. Chemosphere, 2022, 305, 135448.	4.2	13
210	Enhanced Visible-Light-Driven Photoelectrochemical Activity in Nitrogen-Doped TiO₂/Boron-Doped Diamond Heterojunction Electrodes. ACS Applied Energy Materials, 2022, 5, 7144-7156.	2.5	9
211	Battery-like flexible supercapacitors from vertical 3D diamond/graphite composite films on carbon cloth. Carbon, 2022, 197, 400-407.	5.4	7
212	Robust and Selfâ€Cleaning Electrochemical Production of Periodate. ChemSusChem, 2022, 15, .	3.6	6
213	High temperature operation of logic AND gate based on diamond Schottky diodes fabricated by selective growth method. Carbon, 2022, 197, 292-300.	5.4	8
214	Flow-through working electrode based on free-standing porous boron-doped diamond. Electrochimica Acta, 2022, 426, 140758.	2.6	1
215	Compacts of Boron-Doped Synthetic Diamond: Acceleration of Cathodic Reactions by Plasma-Assisted and Electrochemical Treatment of the Electrodes. Russian Journal of Electrochemistry, 2022, 58, 520-527.	0.3	2
216	Flow Injection Analysis System Coupled to Chronoamperometry and Boron-Doped Diamond Electrode for Determination of Synthetic Hormones 17Î±-Ethinylestradiol and Cyproterone Acetate. Analytical Letters, 0, , 1-17.	1.0	0
217	Conductive-synthetic diamond materials in meeting the sustainable development goals. Current Opinion in Solid State and Materials Science, 2022, 26, 101019.	5.6	4
218	Application of Solid Carbon Electrodes in Voltammetric (Bio)analysis of Selected Cytostatic Drugs. , 2022, , 761-782.		0
219	Tuning the Laserâ€Induced Processing of 3D Porous Graphenic Nanostructures by Boronâ€Doped Diamond Particles for Flexible Microsupercapacitors. Advanced Functional Materials, 2022, 32, .	7.8	25
220	Synthesis of Diamonds and Their Identification. Reviews in Mineralogy and Geochemistry, 2022, 88, 689-753.	2.2	11
221	Planar carbon allotrope B-graphyne as lithium-ion battery anode materials. Chemical Physics Letters, 2022, 804, 139897.	1.2	1
222	GAS-PHASE SYNTHESIS OF NITROGEN-DOPED DIAMOND COATING USING A HIGH-VELOCITY MICROWAVE PLASMA FLOW. Journal of Structural Chemistry, 2022, 63, 1170-1179.	0.3	0
223	Reactor Design for the Direct Electrosynthesis of Periodate. Organic Process Research and Development, 2022, 26, 2447-2455.	1.3	8
224	Electrochemically Initiated Synthesis of Methanesulfonic Acid. Angewandte Chemie, 0, , .	1.6	0
225	Electrochemically Initiated Synthesis of Methanesulfonic Acid. Angewandte Chemie - International Edition, 0, , .	7.2	3

#	Article	IF	Citations
226	Porous BiVO4/Boron-Doped Diamond Heterojunction Photoanode with Enhanced Photoelectrochemical Activity. Molecules, 2022, 27, 5218.	1.7	2
227	A nanoporous diamond particle microelectrode and its surface modification. Electrochimica Acta, 2022, 430, 141015.	2.6	4
228	Recent advances on electrochemistry of diamond related materials. Carbon, 2022, 200, 517-542.	5.4	21
229	Structural features of heavily boron-doped graphite and diamond microcrystals synthesized at high pressures. Diamond and Related Materials, 2022, 129, 109383.	1.8	1
230	Enhancement of magnetic sensing performance of diamond resonators coupling with magnetic-strictive FeGa films by various interlayers. Carbon, 2022, 200, 401-409.	5.4	2
231	Exploring structural evolution and graphitization of the interface between tungsten and diamond (1 1) Tj ETQq1 1 0.784314 rgBT /Ov	3.1	3
232	Inconsistency of BDD reactivity assessed by ferri/ferro-cyanide redox system and electrocatalytic degradation capability. Functional Diamond, 2022, 2, 71-79.	1.7	5
233	Electro-conversion of cumene into acetophenone using boron-doped diamond electrodes. Beilstein Journal of Organic Chemistry, 0, 18, 1154-1158.	1.3	3
234	Achieving Sustainable Development Goal 6 Electrochemical-Based Solution for Treating Groundwater Polluted by Fuel Station. Water (Switzerland), 2022, 14, 2911.	1.2	5
235	Synthesis and Applications of Periodate for Fine Chemicals and Important Pharmaceuticals. Organic Process Research and Development, 2022, 26, 2564-2613.	1.3	13
236	Editorial overview: Diamond electrochemistry current advances, challenges and opportunities in diamond electrochemistry. Current Opinion in Electrochemistry, 2022, 36, 101135.	2.5	0
237	Pressure Sensor Devices Featuring a Chemical Passivation Made of a Locally Synthesized Diamond Layer. Physica Status Solidi (A) Applications and Materials Science, 0, , 2200309.	0.8	1
238	Activation of Boron-Doped Diamond Electrodes for Electrochemical CO₂ Reduction in a Halogen-free Electrolyte. ACS Sustainable Chemistry and Engineering, 2022, 10, 14445-14450.	3.2	4
239	Heavily boron-doped diamond grown on scalable heteroepitaxial quasi-substrates: A promising single crystal material for electrochemical sensing applications. Carbon, 2023, 201, 1229-1240.	5.4	16
240	Chem-mechanical polishing influenced morphology, spectral and electrochemical characteristics of boron doped diamond. Carbon, 2023, 203, 363-376.	5.4	9
241	First-principles study of the microstructure evolution of the diamond (110) surface with the adsorption of Fe atoms. Applied Surface Science, 2023, 613, 156053.	3.1	3
242	Analysis on Electrochemical CO2 Reduction by Diamond Doping Technology. Journal of Electrochemical Energy Conversion and Storage, 2023, 20, .	1.1	2
243	Boron-Doped Diamond Electrodes: Fundamentals for Electrochemical Applications. Accounts of Chemical Research, 2022, 55, 3605-3615.	7.6	26

#	Article	IF	Citations
244	Partly-O-Diamond Solution-Gate Field-Effect Transistor as an Efficient Biosensor of Glucose. Journal of the Electrochemical Society, 2023, 170, 037507.	1.3	1
245	Surface treatment technology of downhole water cut sensor. Petroleum Exploration and Development, 2022, 49, 1440-1451.	3.0	0
246	Diamond/c-BN van der Waals heterostructure with modulated electronic structures. Chinese Physics B, 0, , .	0.7	0
247	Determination of Terbinafine at a Boron-Doped Diamond (BDD) Electrode Modified with Polypyrrole and Î³-Cyclodextrin by Square Wave Voltammetry (SWV). Analytical Letters, 2023, 56, 2275-2290.	1.0	0
248	Electrochemical behavior of fungicide tebuconazole and its voltammetric determination on an oxygen-terminated boron-doped diamond electrode. Journal of Electroanalytical Chemistry, 2023, 930, 117155.	1.9	4
249	Rational Design of Diamond Electrodes. Accounts of Chemical Research, 2023, 56, 117-127.	7.6	6
250	Electrochemical Advanced Oxidation Processes Using Diamond Technology: A Critical Review. Environments - MDPI, 2023, 10, 15.	1.5	7
251	In-house vs. commercial boron-doped diamond electrodes for electrochemical degradation of water pollutants: A critical review. Frontiers in Materials, 0, 10, .	1.2	3
252	Modification-free boron-doped diamond as a sensing material for direct and reliable detection of the antiretroviral drug nevirapine. Electrochimica Acta, 2023, 450, 142238.	2.6	7
253	Outstanding degradation of sulfamethazine using ZnO-Boron with superior oxygen adsorption as a novel electro-Fenton catalyst. Journal of Hazardous Materials Advances, 2023, 9, 100245.	1.2	0
254	Improved procedure for square-wave voltammetric sensing of fenhexamid residues on blueberries peel surface at the anodically pretreated boron-doped diamond electrode. Analytica Chimica Acta, 2023, 1249, 340936.	2.6	1
255	A critical review on latest innovations and future challenges of electrochemical technology for the abatement of organics in water. Applied Catalysis B: Environmental, 2023, 328, 122430.	10.8	98
256	Non-hazardous Electrochemical Sensing Approach for Health and Environmental Monitoring: Use of the Boron-Doped Diamond Electrode. ACS Symposium Series, 0, , 223-268.	0.5	0
257	Environmental and Biosensing Using Nanocarbon Electrodes. Denki Kagaku, 2023, 91, 4-9.	0.0	0
258	The boron-phosphorous co-doping scheme for possible n-type diamond from first principles. Computational Materials Science, 2023, 222, 112113.	1.4	2
259	The Oxidation of Organoâ€Boron Compounds Using Electrochemically Generated Peroxodicarbonate. European Journal of Organic Chemistry, 2023, 26, .	1.2	4
260	Carbon nanopores for DNA sequencing: a review on nanopore materials. Chemical Communications, 2023, 59, 4838-4851.	2.2	5
261	Onâ€chip Diamond MEMS Magnetic Sensing through Multifunctionalized Magnetostrictive Thin Film. Advanced Functional Materials, 2023, 33, .	7.8	3

#	Article	IF	Citations
262	Review of New Data Center Network Structure. , 2023, , .		1
263	Green Diamond: A Superhard Boron Carbonitride with Bandgap in Green-Light Region and Anisotropic High Carrier Mobilities. Journal of Physical Chemistry Letters, 2023, 14, 3403-3412.	2.1	1
264	Cost-Effective Synthesis of Diamond Nano-/Microstructures from Amorphous and Graphitic Carbon Materials: Implications for Nanoelectronics. ACS Applied Nano Materials, 2023, 6, 6488-6495.	2.4	4
265	Recent advances in modified boron-doped diamond electrodes: A review. Electrochimica Acta, 2023, 456, 142435.	2.6	6
316	Inserting auxeticity into graphene oxide via bottom-up strategy. Nanoscale, 2024, 16, 3977-3984.	2.8	0