

# Cao Guan

## List of Publications by Year in descending order

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107  
papers

15,289  
citations

17440

63  
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26613

107  
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108  
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108  
docs citations

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times ranked

14933  
citing authors

#	ARTICLE	IF	CITATIONS
1	3D Printing of Next-generation Electrochemical Energy Storage Devices: from Multiscale to Multimaterial. <i>Energy and Environmental Materials</i> , 2022, 5, 427-438.	12.8	25
2	Vanadium metal-organic framework-derived multifunctional fibers for asymmetric supercapacitor, piezoresistive sensor, and electrochemical water splitting. <i>SmartMat</i> , 2022, 3, 608-618.	10.7	29
3	Manipulating room-temperature phosphorescence via lone-pair electrons and empty-orbital arrangements and hydrogen bond adjustment. <i>Journal of Materials Chemistry C</i> , 2022, 10, 8854-8859.	5.5	5
4	Additive manufacturing solidification methodologies for ink formulation. <i>Additive Manufacturing</i> , 2022, 56, 102939.	3.0	13
5	Electrospun Nanofibers for New Generation Flexible Energy Storage. <i>Energy and Environmental Materials</i> , 2021, 4, 502-521.	12.8	57
6	Rational design of iron single atom anchored on nitrogen doped carbon as a high-performance electrocatalyst for all-solid-state flexible zinc-air batteries. <i>Chemical Engineering Journal</i> , 2021, 405, 125956.	12.7	33
7	3D printing-assisted gyroidal graphite foam for advanced supercapacitors. <i>Chemical Engineering Journal</i> , 2021, 416, 127885.	12.7	32
8	Amorphous FeOOH Decorated CoSe <sub>2</sub> Nanorod Heterostructured Arrays for Efficient Water Oxidation. <i>Advanced Materials Interfaces</i> , 2021, 8, .	3.7	20
9	3D-Printed highly stretchable conducting polymer electrodes for flexible supercapacitors. <i>Journal of Materials Chemistry A</i> , 2021, 9, 19649-19658.	10.3	84
10	Fabrication of 3D-Printed Ceramic Structures for Portable Solar Desalination Devices. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 23220-23229.	8.0	42
11	Regulating Dendrite-Free Zinc Deposition by 3D Zincophilic Nitrogen-Doped Vertical Graphene for High-Performance Flexible Zn-Ion Batteries. <i>Advanced Functional Materials</i> , 2021, 31, 2103922.	14.9	194
12	Bamboo-derived porous carbons for Zn-ion hybrid supercapacitors. <i>Materials Research Bulletin</i> , 2021, 139, 111281.	5.2	62
13	Strain rate shift for constitutive behaviour of sintered silver nanoparticles under nanoindentation. <i>Mechanics of Materials</i> , 2021, 158, 103881.	3.2	67
14	In-situ formation of isolated iron sites coordinated on nitrogen-doped carbon coated carbon cloth as self-supporting electrode for flexible aluminum-air battery. <i>Chemical Engineering Journal</i> , 2021, 421, 129973.	12.7	21
15	Ultrafast-charging quasi-solid-state fiber-shaped zinc-ion hybrid supercapacitors with superior flexibility. <i>Journal of Materials Chemistry A</i> , 2021, 9, 17292-17299.	10.3	31
16	MOF-Derived Bifunctional Co <sub>0.85</sub> Se Nanoparticles Embedded in N-Doped Carbon Nanosheet Arrays as Efficient Sulfur Hosts for Lithium-Sulfur Batteries. <i>Nano Letters</i> , 2021, 21, 8579-8586.	9.1	143
17	Energy-level engineered hollow N-doped NiS <sub>1.03</sub> for Zn-Air batteries. <i>Energy Storage Materials</i> , 2020, 25, 202-209.	18.0	62
18	Three Dimensionally Free-Formable Graphene Foam with Designed Structures for Energy and Environmental Applications. <i>ACS Nano</i> , 2020, 14, 937-947.	14.6	101

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19	Carbon Nanoarrays Embedded with Metal Compounds for High-Performance Flexible Supercapacitors. Batteries and Supercaps, 2020, 3, 93-100.	4.7	25
20	Recent developments of advanced micro-supercapacitors: design, fabrication and applications. Npj Flexible Electronics, 2020, 4, .	10.7	147
21	Iron Oxide Nanoneedles Anchored on N-Doped Carbon Nanoarrays as an Electrode for High-Performance Hybrid Supercapacitor. ACS Applied Energy Materials, 2020, 3, 12162-12171.	5.1	28
22	Single-Atom Tungsten-Doped CoP Nanoarrays as a High-Efficiency pH-Universal Catalyst for Hydrogen Evolution Reaction. ACS Sustainable Chemistry and Engineering, 2020, 8, 14825-14832.	6.7	73
23	Synthesis of amorphous hydroxyl-rich Co <sub>3</sub> O <sub>4</sub> for flexible high-rate supercapacitor. Chemical Engineering Journal, 2020, 396, 125364.	12.7	124
24	N-doped porous carbon nanoplates embedded with CoS <sub>2</sub> vertically anchored on carbon cloths for flexible and ultrahigh microwave absorption. Carbon, 2020, 163, 348-359.	10.3	173
25	Recent progress on hollow array architectures and their applications in electrochemical energy storage. Nanoscale Horizons, 2020, 5, 1188-1199.	8.0	48
26	Recent advances in architecture design of nanoarrays for flexible solid-state aqueous batteries. Nano Futures, 2020, 4, 032002.	2.2	15
27	Recent Advances on Self-Supported Arrayed Bifunctional Oxygen Electrocatalysts for Flexible Solid-State Zn-Air Batteries. Small, 2020, 16, e2002902.	10.0	95
28	Rational Construction of a WS <sub>2</sub> /CoS <sub>2</sub> Heterostructure Electrocatalyst for Efficient Hydrogen Evolution at All pH Values. ACS Sustainable Chemistry and Engineering, 2020, 8, 4474-4480.	6.7	63
29	Structure-Enhanced Mechanically Robust Graphite Foam with Ultrahigh MnO <sub>2</sub> Loading for Supercapacitors. Research, 2020, 2020, 7304767.	5.7	24
30	(Ni,Co)Se <sub>2</sub> /NiCo-LDH Core/Shell Structural Electrode with the Cactus-Like (Ni,Co)Se <sub>2</sub> Core for Asymmetric Supercapacitors. Small, 2019, 15, e1803895.	10.0	203
31	Decorating Co/CoN <sub>x</sub> nanoparticles in nitrogen-doped carbon nanoarrays for flexible and rechargeable zinc-air batteries. Energy Storage Materials, 2019, 16, 243-250.	18.0	244
32	Mesoporous aluminium manganese cobalt oxide with pentahedron structures for energy storage devices. Journal of Materials Chemistry A, 2019, 7, 18417-18427.	10.3	49
33	Enlarged Interlayer Spacing in Cobalt-Manganese Layered Double Hydroxide Guiding Transformation to Layered Structure for High Supercapacitance. ACS Applied Materials & Interfaces, 2019, 11, 23236-23243.	8.0	85
34	All-solid-state sponge-like squeezable zinc-air battery. Energy Storage Materials, 2019, 23, 375-382.	18.0	47
35	Conformal dispersed cobalt nanoparticles in hollow carbon nanotube arrays for flexible Zn-air and Al-air batteries. Chemical Engineering Journal, 2019, 369, 988-995.	12.7	121
36	Hybrid CoO Nanowires Coated with Uniform Polypyrrole Nanolayers for High-Performance Energy Storage Devices. Nanomaterials, 2019, 9, 586.	4.1	12

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37	Bifunctional oxygen evolution and supercapacitor electrode with integrated architecture of NiFe-layered double hydroxides and hierarchical carbon framework. <i>Nanotechnology</i> , 2019, 30, 325402.	2.6	14
38	Hierarchical Micro-Nano Sheet Arrays of Nickel-Cobalt Double Hydroxides for High-Rate Ni-Zn Batteries. <i>Advanced Science</i> , 2019, 6, 1802002.	11.2	202
39	Phospho-oxynitride Layer Protected Cobalt Phosphonitride Nanowire Arrays for High-Rate and Stable Supercapacitors. <i>ACS Applied Energy Materials</i> , 2019, 2, 616-626.	5.1	16
40	Heterojunction engineering of MoSe <sub>2</sub> /MoS <sub>2</sub> with electronic modulation towards synergetic hydrogen evolution reaction and supercapacitance performance. <i>Chemical Engineering Journal</i> , 2019, 359, 1419-1426.	12.7	160
41	3D-Printed MOF-Derived Hierarchically Porous Frameworks for Practical High-Energy Density Li-O <sub>2</sub> Batteries. <i>Advanced Functional Materials</i> , 2019, 29, 1806658.	14.9	197
42	PtCo bimetallic nanoparticles encapsulated in N-doped carbon nanorod arrays for efficient electrocatalysis. <i>Carbon</i> , 2019, 142, 206-216.	10.3	56
43	Metal-organic framework-derived integrated nanoarrays for overall water splitting. <i>Journal of Materials Chemistry A</i> , 2018, 6, 9009-9018.	10.3	74
44	Rational Construction of Hollow Core-Branch CoSe <sub>2</sub> Nanoarrays for High-Performance Asymmetric Supercapacitor and Efficient Oxygen Evolution. <i>Small</i> , 2018, 14, 1700979.	10.0	172
45	Hollow Mo-doped CoP nanoarrays for efficient overall water splitting. <i>Nano Energy</i> , 2018, 48, 73-80.	16.0	608
46	MOF-derived nanohybrids for electrocatalysis and energy storage: current status and perspectives. <i>Chemical Communications</i> , 2018, 54, 5268-5288.	4.1	237
47	Cactus-Like NiCoP/NiCo(OH) 3D Architecture with Tunable Composition for High-Performance Electrochemical Capacitors. <i>Advanced Functional Materials</i> , 2018, 28, 1800036.	14.9	274
48	Ultrafine Molybdenum Carbide Nanocrystals Confined in Carbon Foams via a Colloid-Confinement Route for Efficient Hydrogen Production. <i>Small Methods</i> , 2018, 2, 1700396.	8.6	83
49	2D Metal-Organic Frameworks Derived Nanocarbon Arrays for Substrate Enhancement in Flexible Supercapacitors. <i>Small</i> , 2018, 14, e1702641.	10.0	80
50	SnS <sub>2</sub> nanosheets arrays sandwiched by N-doped carbon and TiO <sub>2</sub> for high-performance Na-ion storage. <i>Green Energy and Environment</i> , 2018, 3, 42-49.	8.7	22
51	Polypyrrole nanowires coated with a hollow shell for enhanced electrochemical performance. <i>Materials Research Bulletin</i> , 2018, 100, 116-119.	5.2	14
52	Facile Activation of Commercial Carbon Felt as a Low-Cost Free-Standing Electrode for Flexible Supercapacitors. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 42503-42512.	8.0	62
53	Co/Zn bimetallic oxides derived from metal organic frameworks for high performance electrochemical energy storage. <i>Electrochimica Acta</i> , 2018, 291, 177-187.	5.2	60
54	Open hollow Co-Pt clusters embedded in carbon nanoflake arrays for highly efficient alkaline water splitting. <i>Journal of Materials Chemistry A</i> , 2018, 6, 20214-20223.	10.3	42

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55	The Atomic Circus: Small Electron Beams Spotlight Advanced Materials Down to the Atomic Scale. <i>Advanced Materials</i> , 2018, 30, e1802402.	21.0	27
56	Ni-Doped Cobaltâ€“Cobalt Nitride Heterostructure Arrays for High-Power Supercapacitors. <i>ACS Energy Letters</i> , 2018, 3, 2462-2469.	17.4	182
57	Energy-Saving Synthesis of MOF-Derived Hierarchical and Hollow Co(VO <sub>3</sub> ) <sub>2</sub> -Co(OH) <sub>2</sub> Composite Leaf Arrays for Supercapacitor Electrode Materials. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 18440-18444.	8.0	107
58	MOFâ€“Derived Vertically Aligned Mesoporous Co <sub>3</sub> O <sub>4</sub> Nanowires for Ultrahigh Capacity Lithiumâ€“Ion Batteries Anodes. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800222.	3.7	58
59	Single Co Atoms Anchored in Porous N-Doped Carbon for Efficient Zincâ€“Air Battery Cathodes. <i>ACS Catalysis</i> , 2018, 8, 8961-8969.	11.2	364
60	Integrated Hierarchical Carbon Flake Arrays with Hollow Pâ€“Doped CoSe <sub>2</sub> Nanoclusters as an Advanced Bifunctional Catalyst for Znâ€“Air Batteries. <i>Advanced Functional Materials</i> , 2018, 28, 1804846.	14.9	192
61	Cobalt oxide and N-doped carbon nanosheets derived from a single two-dimensional metalâ€“organic framework precursor and their application in flexible asymmetric supercapacitors. <i>Nanoscale Horizons</i> , 2017, 2, 99-105.	8.0	227
62	Rational Design of Metalâ€“Organic Framework Derived Hollow NiCo <sub>2</sub> O <sub>4</sub> Arrays for Flexible Supercapacitor and Electrocatalysis. <i>Advanced Energy Materials</i> , 2017, 7, 1602391.	19.5	874
63	Controllable MnCo <sub>2</sub> S <sub>4</sub> nanostructures for high performance hybrid supercapacitors. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7494-7506.	10.3	198
64	Rational Design of Self-Supported Ni <sub>3</sub> S <sub>2</sub> Nanosheets Array for Advanced Asymmetric Supercapacitor with a Superior Energy Density. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 496-504.	8.0	216
65	Space-confinement and chemisorption co-involved in encapsulation of sulfur for lithiumâ€“sulfur batteries with exceptional cycling stability. <i>Journal of Materials Chemistry A</i> , 2017, 5, 24602-24611.	10.3	24
66	Pt decorated 3D vertical graphene nanosheet arrays for efficient methanol oxidation and hydrogen evolution reactions. <i>Journal of Materials Chemistry A</i> , 2017, 5, 22004-22011.	10.3	49
67	Hollow Co <sub>3</sub> O <sub>4</sub> Nanosphere Embedded in Carbon Arrays for Stable and Flexible Solidâ€“State Zincâ€“Air Batteries. <i>Advanced Materials</i> , 2017, 29, 1704117.	21.0	407
68	Metal Phosphides and Phosphatesâ€“based Electrodes for Electrochemical Supercapacitors. <i>Small</i> , 2017, 13, 1701530.	10.0	318
69	Nanoflakes of Niâ€“Co LDH and Bi <sub>2</sub> O <sub>3</sub> Assembled in 3D Carbon Fiber Network for High-Performance Aqueous Rechargeable Ni/Bi Battery. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 26008-26015.	8.0	71
70	Ultrathin MoS <sub>2</sub> Nanosheets@Metal Organic Frameworkâ€“Derived Nâ€“Doped Carbon Nanowall Arrays as Sodium Ion Battery Anode with Superior Cycling Life and Rate Capability. <i>Advanced Functional Materials</i> , 2017, 27, 1702116.	14.9	447
71	Metalâ€“organic framework derived hollow CoS <sub>2</sub> nanotube arrays: an efficient bifunctional electrocatalyst for overall water splitting. <i>Nanoscale Horizons</i> , 2017, 2, 342-348.	8.0	247
72	Sulfur-doped cobalt phosphide nanotube arrays for highly stable hybrid supercapacitor. <i>Nano Energy</i> , 2017, 39, 162-171.	16.0	273

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73	Surfaceâ€Chargeâ€Mediated Formation of Hâ€TiO <sub>2</sub> @Ni(OH) <sub>2</sub> Heterostructures for Highâ€Performance Supercapacitors. <i>Advanced Materials</i> , 2017, 29, 1604164.	21.0	203
74	Microwave â€ assisted hydrothermal synthesis of nanocrystal $\hat{2}$ -Ni(OH) <sub>2</sub> for supercapacitor applications. <i>CrystEngComm</i> , 2016, 18, 3256-3264.	2.6	42
75	Hybrid Fe <sub>2</sub> O <sub>3</sub> Nanoparticle Clusters/rGO Paper as an Effective Negative Electrode for Flexible Supercapacitors. <i>Chemistry of Materials</i> , 2016, 28, 7296-7303.	6.7	95
76	Recent Development of Advanced Electrode Materials by Atomic Layer Deposition for Electrochemical Energy Storage. <i>Advanced Science</i> , 2016, 3, 1500405.	11.2	93
77	A Flexible Quasiâ€Solidâ€State Nickelâ€Zinc Battery with High Energy and Power Densities Based on 3D Electrode Design. <i>Advanced Materials</i> , 2016, 28, 8732-8739.	21.0	479
78	Highâ€Performance Flexible Solidâ€State Ni/Fe Battery Consisting of Metal Oxides Coated Carbon Cloth/Carbon Nanofiber Electrodes. <i>Advanced Energy Materials</i> , 2016, 6, 1601034.	19.5	262
79	Confined Fe <sub>2</sub> O <sub>3</sub> Nanoparticles on Graphite Foam as Highâ€Rate and Stable Lithiumâ€Ion Battery Anode. <i>Particle and Particle Systems Characterization</i> , 2016, 33, 487-492.	2.3	29
80	3D Graphene-Nickel Hydroxide Hydrogel Electrode for High-Performance Supercapacitor. <i>Electrochimica Acta</i> , 2016, 196, 653-660.	5.2	83
81	3D TiO <sub>2</sub> @Ni(OH) <sub>2</sub> Core-shell Arrays with Tunable Nanostructure for Hybrid Supercapacitor Application. <i>Scientific Reports</i> , 2015, 5, 13940.	3.3	68
82	Flexible Asymmetric Supercapacitor Based on Structureâ€Optimized Mn <sub>3</sub> O <sub>4</sub> /Reduced Graphene Oxide Nanohybrid Paper with High Energy and Power Density. <i>Advanced Functional Materials</i> , 2015, 25, 7291-7299.	14.9	146
83	Atomic-layer-deposition alumina induced carbon on porous Ni <sub>x</sub> Co <sub>1-x</sub> O nanonets for enhanced pseudocapacitive and Li-ion storage performance. <i>Nanotechnology</i> , 2015, 26, 014001.	2.6	21
84	Atomic layer deposition of Co <sub>3</sub> O <sub>4</sub> on carbon nanotubes/carbon cloth for high-capacitance and ultrastable supercapacitor electrode. <i>Nanotechnology</i> , 2015, 26, 094001.	2.6	84
85	Highly stable and flexible Li-ion battery anodes based on TiO <sub>2</sub> coated 3D carbon nanostructures. <i>Journal of Materials Chemistry A</i> , 2015, 3, 15394-15398.	10.3	65
86	Iron Oxide-Decorated Carbon for Supercapacitor Anodes with Ultrahigh Energy Density and Outstanding Cycling Stability. <i>ACS Nano</i> , 2015, 9, 5198-5207.	14.6	441
87	3D hierarchical SnO <sub>2</sub> @Ni(OH) <sub>2</sub> coreâ€shell nanowire arrays on carbon cloth for energy storage application. <i>Journal of Materials Chemistry A</i> , 2015, 3, 9538-9542.	10.3	33
88	Conformally deposited NiO on a hierarchical carbon support for high-power and durable asymmetric supercapacitors. <i>Journal of Materials Chemistry A</i> , 2015, 3, 23283-23288.	10.3	103
89	A High Energy and Power Liâ€Ion Capacitor Based on a TiO <sub>2</sub> Nanobelt Array Anode and a Graphene Hydrogel Cathode. <i>Small</i> , 2015, 11, 1470-1477.	10.0	256
90	A novel hollowed CoO-in-CoSnO <sub>3</sub> nanostructure with enhanced lithium storage capabilities. <i>Nanoscale</i> , 2014, 6, 13824-13830.	5.6	52

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91	Atomic Layer Deposition-Assisted Formation of Carbon Nanoflakes on Metal Oxides and Energy Storage Application. <i>Small</i> , 2014, 10, 300-307.	10.0	60
92	Synthesis of Free-Standing Metal Sulfide Nanoarrays via Anion Exchange Reaction and Their Electrochemical Energy Storage Application. <i>Small</i> , 2014, 10, 766-773.	10.0	413
93	Solution synthesis of metal oxides for electrochemical energy storage applications. <i>Nanoscale</i> , 2014, 6, 5008-5048.	5.6	363
94	Highly Stable and Reversible Lithium Storage in SnO <sub>2</sub> Nanowires Surface Coated with a Uniform Hollow Shell by Atomic Layer Deposition. <i>Nano Letters</i> , 2014, 14, 4852-4858.	9.1	269
95	Hierarchically porous three-dimensional electrodes of CoMoO <sub>4</sub> and ZnCo <sub>2</sub> O <sub>4</sub> and their high anode performance for lithium ion batteries. <i>Nanoscale</i> , 2014, 6, 10556.	5.6	77
96	A New Type of Porous Graphite Foams and Their Integrated Composites with Oxide/Polymer Core/Shell Nanowires for Supercapacitors: Structural Design, Fabrication, and Full Supercapacitor Demonstrations. <i>Nano Letters</i> , 2014, 14, 1651-1658.	9.1	428
97	Uncovering loss mechanisms in silver nanoparticle-blended plasmonic organic solar cells. <i>Nature Communications</i> , 2013, 4, 2004.	12.8	118
98	Rationally Designed Hierarchical TiO <sub>2</sub> @Fe <sub>2</sub> O <sub>3</sub> Hollow Nanostructures for Improved Lithium Ion Storage. <i>Advanced Energy Materials</i> , 2013, 3, 737-743.	19.5	296
99	Hollow core-shell nanostructure supercapacitor electrodes: gap matters. <i>Energy and Environmental Science</i> , 2012, 5, 9085.	30.8	184
100	Integrated photoelectrochemical energy storage: solar hydrogen generation and supercapacitor. <i>Scientific Reports</i> , 2012, 2, 981.	3.3	85
101	Porous Hydroxide Nanosheets on Preformed Nanowires by Electrodeposition: Branched Nanoarrays for Electrochemical Energy Storage. <i>Chemistry of Materials</i> , 2012, 24, 3793-3799.	6.7	201
102	Robust, High-Density Zinc Oxide Nanoarrays by Nanoimprint Lithography-Assisted Area-Selective Atomic Layer Deposition. <i>Journal of Physical Chemistry C</i> , 2012, 116, 23729-23734.	3.1	26
103	Composition-Graded Zn <sub>x</sub> Cd <sub>1-x</sub> Se@ZnO Core-Shell Nanowire Array Electrodes for Photoelectrochemical Hydrogen Generation. <i>Journal of Physical Chemistry C</i> , 2012, 116, 3802-3807.	3.1	81
104	Nanoporous Walls on Macroporous Foam: Rational Design of Electrodes to Push Areal Pseudocapacitance. <i>Advanced Materials</i> , 2012, 24, 4186-4190.	21.0	239
105	Hybrid structure of cobalt monoxide nanowire @ nickel hydroxide/nitrate nanoflake aligned on nickel foam for high-rate supercapacitor. <i>Energy and Environmental Science</i> , 2011, 4, 4496.	30.8	386
106	A general strategy toward graphene@metal oxide core-shell nanostructures for high-performance lithium storage. <i>Energy and Environmental Science</i> , 2011, 4, 4954.	30.8	255
107	Charge Moment Tensor and its Application to a Rotational Charged Rigid Body in a Uniform Magnetic Field. <i>Journal of Electromagnetic Waves and Applications</i> , 2008, 22, 2179-2190.	1.6	2