Sajjad Z Hussain

List of Publications by Year in descending order

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117453 174990 3,764 120 34 52 citations g-index h-index papers 122 122 122 3580 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	Engineering the novel MoSe2-Mo2C hybrid nanoarray electrodes for energy storage and water splitting applications. Applied Catalysis B: Environmental, 2020, 264, 118531.	10.8	136
2	lonic Liquid-Based Electrolytes for Energy Storage Devices: A Brief Review on Their Limits and Applications. Polymers, 2020, 12, 918.	2.0	124
3	Improved Hydrogen Evolution Reaction Performance using MoS ₂ â€"WS ₂ Heterostructures by Physicochemical Process. ACS Sustainable Chemistry and Engineering, 2018, 6, 8400-8409.	3.2	111
4	Large-area, continuous and high electrical performances of bilayer to few layers MoS2 fabricated by RF sputtering via post-deposition annealing method. Scientific Reports, 2016, 6, 30791.	1.6	104
5	Direct synthesis of thickness-tunable MoS2 quantum dot thin layers: Optical, structural and electrical properties and their application to hydrogen evolution. Nano Energy, 2017, 35, 101-114.	8.2	99
6	Highly dispersive Co ₃ O ₄ nanoparticles incorporated into a cellulose nanofiber for a high-performance flexible supercapacitor. Nanoscale, 2021, 13, 355-370.	2.8	98
7	One-pot facile methodology to synthesize MoS2-graphene hybrid nanocomposites for supercapacitors with improved electrochemical capacitance. Composites Part B: Engineering, 2019, 161, 555-563.	5.9	85
8	Fabrication of MoS2/WSe2 heterostructures as electrocatalyst for enhanced hydrogen evolution reaction. Applied Surface Science, 2019, 480, 611-620.	3.1	82
9	Influence of an Al2O3 interlayer in a directly grown graphene-silicon Schottky junction solar cell. Carbon, 2018, 132, 157-164.	5.4	78
10	n-MoS ₂ /p-Si Solar Cells with Al ₂ O ₃ Passivation for Enhanced Photogeneration. ACS Applied Materials & Samp; Interfaces, 2016, 8, 29383-29390.	4.0	77
11	Synthesis and characterization of large-area and continuous MoS ₂ atomic layers by RF magnetron sputtering. Nanoscale, 2016, 8, 4340-4347.	2.8	74
12	Hybrid Design Using Carbon Nanotubes Decorated with Mo ₂ C and W ₂ C Nanoparticles for Supercapacitors and Hydrogen Evolution Reactions. ACS Sustainable Chemistry and Engineering, 2020, 8, 12248-12259.	3.2	73
13	Engineering MoSe ₂ /WS ₂ Hybrids to Replace the Scarce Platinum Electrode for Hydrogen Evolution Reactions and Dye-Sensitized Solar Cells. ACS Applied Materials & Samp; Interfaces, 2021, 13, 5061-5072.	4.0	69
14	Large area growth of MoTe2 films as high performance counter electrodes for dye-sensitized solar cells. Scientific Reports, 2018, 8, 29.	1.6	68
15	Unveiling a binary metal selenide composite of CuSe polyhedrons/CoSe2 nanorods decorated graphene oxide as an active electrode material for high-performance hybrid supercapacitors. Chemical Engineering Journal, 2022, 427, 131535.	6.6	63
16	Facile preparation of molybdenum carbide (Mo2C) nanoparticles and its effective utilization in electrochemical sensing of folic acid via imprinting. Biosensors and Bioelectronics, 2019, 140, 111330.	5.3	59
17	Design of Basal Plane Edges in Metal-Doped Nanostripes-Structured MoSe ₂ Atomic Layers To Enhance Hydrogen Evolution Reaction Activity. ACS Sustainable Chemistry and Engineering, 2019, 7, 458-469.	3.2	58
18	The role of uniformly distributed ZnO nanoparticles on cellulose nanofibers in flexible solid state symmetric supercapacitors. Journal of Materials Chemistry A, 2021, 9, 11580-11594.	5.2	58

#	Article	IF	Citations
19	Design of WSe ₂ /MoS ₂ Heterostructures as the Counter Electrode to Replace Pt for Dye-Sensitized Solar Cell. ACS Sustainable Chemistry and Engineering, 2019, 7, 13195-13205.	3.2	57
20	Engineering the active sites tuned MoS2 nanoarray structures by transition metal doping for hydrogen evolution and supercapacitor applications. Journal of Alloys and Compounds, 2022, 893, 162271.	2.8	57
21	CuS/WS2 and CuS/MoS2 heterostructures for high performance counter electrodes in dye-sensitized solar cells. Solar Energy, 2018, 171, 122-129.	2.9	50
22	Engineering MoTe2 and Janus SeMoTe nanosheet structures: First-principles roadmap and practical uses in hydrogen evolution reactions and symmetric supercapacitors. Nano Energy, 2021, 87, 106161.	8.2	50
23	MoS2@X2C (XÂ=ÂMo or W) hybrids for enhanced supercapacitor and hydrogen evolution performances. Chemical Engineering Journal, 2021, 421, 127843.	6.6	49
24	Catalytic decontamination of organic/inorganic pollutants in water and green H2 generation using nanoporous SnS2 micro-flower structured film. Journal of Hazardous Materials, 2021, 417, 126105.	6.5	48
25	Facile and cost-effective methodology to fabricate MoS 2 counter electrode for efficient dye-sensitized solar cells. Dyes and Pigments, 2018, 151, 7-14.	2.0	47
26	Unveiling the Redox Electrochemistry of MOFâ€Derived fccâ€NiCo@GC Polyhedron as an Advanced Electrode Material for Boosting Specific Energy of the Supercapattery. Small, 2022, 18, e2107284.	5.2	43
27	1D-CoSe ₂ nanoarray: a designed structure for efficient hydrogen evolution and symmetric supercapacitor characteristics. Dalton Transactions, 2020, 49, 14191-14200.	1.6	42
28	Physical and electrical properties of graphene grown under different hydrogen flow in low pressure chemical vapor deposition. Nanoscale Research Letters, 2014, 9, 546.	3.1	39
29	Facile method to synthesis hybrid phase 1T@2H MoSe2 nanostructures for rechargeable lithium ion batteries. Journal of Electroanalytical Chemistry, 2019, 833, 333-339.	1.9	39
30	One-Pot Synthesis of W2C/WS2 Hybrid Nanostructures for Improved Hydrogen Evolution Reactions and Supercapacitors. Nanomaterials, 2020, 10, 1597.	1.9	39
31	Asymmetric electrode incorporated 2D GeSe for self-biased and efficient photodetection. Scientific Reports, 2020, 10, 9374.	1.6	38
32	Role of perovskites as a biâ€functional catalyst for electrochemical water splitting: A review. International Journal of Energy Research, 2020, 44, 9714-9747.	2.2	38
33	Ultrasonically derived WSe2 nanostructure embedded MXene hybrid composites for supercapacitors and hydrogen evolution reactions. Renewable Energy, 2022, 185, 585-597.	4.3	38
34	Photocatalytic Degradation Properties of Li r Ions Substituted CoFe ₂ O ₄ Nanoparticles for Wastewater Treatment Application. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	0.8	38
35	Synthesis of Mo2C and W2C Nanoparticle Electrocatalysts for the Efficient Hydrogen Evolution Reaction in Alkali and Acid Electrolytes. Frontiers in Chemistry, 2019, 7, 716.	1.8	37
36	WS2/CoSe2 heterostructure: A designed structure as catalysts for enhanced hydrogen evolution performance. Journal of Industrial and Engineering Chemistry, 2018, 65, 167-174.	2.9	34

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37	NIR self-powered photodetection and gate tunable rectification behavior in 2D GeSe/MoSe2 heterojunction diode. Scientific Reports, 2021, 11, 3688.	1.6	34
38	Hierarchical <scp>NiCo</scp> / <scp>NiO</scp> / <scp> NiCo ₂ O ₄ </scp> composite formation by solvothermal reaction as a potential electrode material for hydrogen evolutions and asymmetric supercapacitors. International Journal of Energy Research, 2021, 45, 19947-19961.	2.2	33
39	Bimetallic Cu/Fe MOF-Based Nanosheet Film via Binder-Free Drop-Casting Route: A Highly Efficient Urea-Electrolysis Catalyst. Nanomaterials, 2022, 12, 1916.	1.9	33
40	Sputtering and sulfurization-combined synthesis of a transparent WS ₂ counter electrode and its application to dye-sensitized solar cells. RSC Advances, 2015, 5, 103567-103572.	1.7	32
41	Growth of a WSe 2 /W counter electrode by sputtering and selenization annealing for high-efficiency dye-sensitized solar cells. Applied Surface Science, 2017, 406, 84-90.	3.1	32
42	Fabrication of MoSe2 decorated three-dimensional graphene composites structure as a highly stable electrocatalyst for improved hydrogen evolution reaction. Renewable Energy, 2019, 143, 1659-1669.	4.3	32
43	Enhanced electrocatalytic properties in MoS2/MoTe2 hybrid heterostructures for dye-sensitized solar cells. Applied Surface Science, 2020, 504, 144401.	3.1	32
44	Dependence of InGaZnO and SnO2 thin film stacking sequence for the resistive switching characteristics of conductive bridge memory devices. Applied Surface Science, 2020, 525, 146390.	3.1	31
45	Supercapacitor performance based on nitrogen and sulfur coâ€doped hierarchically porous carbons: Superior rate capability and cycle stability. International Journal of Energy Research, 2022, 46, 15602-15616.	2.2	31
46	Mixedâ€phase <scp> MoS ₂ </scp> decorated reduced graphene oxide hybrid composites for efficient symmetric supercapacitors. International Journal of Energy Research, 2021, 45, 9193-9209.	2.2	28
47	Highâ€Performance Platinumâ€Free Dyeâ€Sensitized Solar Cells with Molybdenum Disulfide Films as Counter Electrodes. ChemPhysChem, 2015, 16, 3959-3965.	1.0	27
48	Synthesis of MoS _{2(1â^'x)} Se _{2x} and WS _{2(1â^'x)} Se _{2x} alloys for enhanced hydrogen evolution reaction performance. Inorganic Chemistry Frontiers, 2017, 4, 2068-2074.	3.0	27
49	Development of a WS ₂ /MoTe ₂ heterostructure as a counter electrode for the improved performance in dye-sensitized solar cells. Inorganic Chemistry Frontiers, 2018, 5, 3178-3183.	3.0	27
50	Facile and cost-effective growth of MoS2 on 3D porous graphene-coated Ni foam for robust and stable hydrogen evolution reaction. Journal of Alloys and Compounds, 2019, 788, 267-276.	2.8	27
51	Influence of selenium precursors on the formation of iron selenide nanostructures (FeSe2): Efficient Electro-Fenton catalysts for detoxification of harmful organic dyestuffs. Chemosphere, 2021, 272, 129639.	4.2	27
52	Self-standing SnS nanosheet array: a bifunctional binder-free thin film catalyst for electrochemical hydrogen generation and wastewater treatment. Dalton Transactions, 2021, 50, 12723-12729.	1.6	27
53	Honeycomb \hat{l}^2 -Ni(OH)2 films grown on 3D nickel foam substrates at low temperature. Materials Letters, 2012, 69, 37-40.	1.3	26
54	Layer-modulated, wafer scale and continuous ultra-thin WS ₂ films grown by RF sputtering via post-deposition annealing. Journal of Materials Chemistry C, 2016, 4, 7846-7852.	2.7	26

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55	Thicknessâ€Dependent, Gateâ€Tunable Rectification and Highly Sensitive Photovoltaic Behavior of Heterostructured GeSe/WS ₂ p–n Diode. Advanced Materials Interfaces, 2020, 7, 2000893.	1.9	25
56	Study of Grains and Boundaries of Molybdenum Diselenide and Tungsten Diselenide Using Liquid Crystal. Nano Letters, 2017, 17, 1474-1481.	4.5	24
57	WS(1â^'x)Sex Nanoparticles Decorated Three-Dimensional Graphene on Nickel Foam: A Robust and Highly Efficient Electrocatalyst for the Hydrogen Evolution Reaction. Nanomaterials, 2018, 8, 929.	1.9	24
58	A vertical WSe ₂ –MoSe ₂ p–n heterostructure with tunable gate rectification. RSC Advances, 2018, 8, 25514-25518.	1.7	23
59	Designing the MXene/molybdenum diselenide hybrid nanostructures for highâ€performance symmetric supercapacitor and hydrogen evolution applications. International Journal of Energy Research, 2021, 45, 18770-18785.	2.2	23
60	Anions effect on the low temperature growth of ZnO nanostructures. Vacuum, 2012, 86, 1998-2001.	1.6	22
61	Effect of oxygen content on the structural and optical properties of ZnO films grown by atmospheric pressure MOCVD. Progress in Natural Science: Materials International, 2013, 23, 44-50.	1.8	22
62	Theoretical evaluation and experimental investigation of layered 2H/1T-phase MoS2 and its reduced graphene-oxide hybrids for hydrogen evolution reactions. Journal of Alloys and Compounds, 2021, 868, 159272.	2.8	22
63	Impact of Molybdenum Dichalcogenides on the Active and Holeâ€Transport Layers for Perovskite Solar Cells, Xâ€Ray Detectors, and Photodetectors. Small, 2022, 18, e2104216.	5.2	22
64	A highly sensitive enzymeless glucose sensor based on 3D graphene–Cu hybrid electrodes. New Journal of Chemistry, 2015, 39, 7481-7487.	1.4	21
65	Inorganic molecule (O ₂ , NO) adsorption on nitrogen- and phosphorus-doped MoS ₂ monolayer using first principle calculations. RSC Advances, 2018, 8, 38656-38666.	1.7	21
66	Engineering-safer-by design ZnO nanoparticles incorporated cellulose nanofiber hybrid for high UV protection and low photocatalytic activity with mechanism. Journal of Environmental Chemical Engineering, 2021, 9, 105845.	3.3	21
67	A Facile Design of Solution-Phase Based VS2 Multifunctional Electrode for Green Energy Harvesting and Storage. Nanomaterials, 2022, 12, 339.	1.9	21
68	Controlled synthesis and optical properties of polycrystalline molybdenum disulfide atomic layers grown by chemical vapor deposition. Journal of Alloys and Compounds, 2015, 653, 369-378.	2.8	20
69	High Performance MoSe ₂ /Mo Counter Electrodes Based- Dye-Sensitized Solar Cells. Journal of the Electrochemical Society, 2017, 164, E11-E16.	1.3	20
70	Facile Synthesis of Molybdenum Diselenide Layers for High-Performance Hydrogen Evolution Electrocatalysts. ACS Omega, 2018, 3, 5799-5807.	1.6	20
71	MoS2@Mo2C hybrid nanostructures formation as an efficient anode material for lithium-ion batteries. Journal of Materials Research and Technology, 2021, 14, 2382-2393.	2.6	20
72	A highly efficient A-site deficient perovskite interlaced within two dimensional MXene nanosheets as an active electrocatalyst for hydrogen production. International Journal of Hydrogen Energy, 2022, 47, 37476-37489.	3.8	20

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73	Templateâ€free synthesis of oneâ€dimensional cobalt sulfide nanorod array as an attractive architecture for overall water splitting. International Journal of Energy Research, 2021, 45, 2785-2796.	2.2	19
74	Morphologically engineered metal oxides for the enhanced removal of multiple pollutants from water with degradation mechanism. Journal of Environmental Chemical Engineering, 2021, 9, 104852.	3.3	19
75	Thickness-dependent monochalcogenide GeSe-based CBRAM for memory and artificial electronic synapses. Nano Research, 2022, 15, 2263-2277.	5.8	19
76	Characteristics of Mo2C-CNTs hybrid blended hole transport layer in the perovskite solar cells and X-ray detectors. Journal of Alloys and Compounds, 2021, 885, 161039.	2.8	19
77	Flexible Memory Device Composed of Metal-Oxide and Two-Dimensional Material (SnO2/WTe2) Exhibiting Stable Resistive Switching. Materials, 2021, 14, 7535.	1.3	19
78	Construction of dye-sensitized solar cells using wet chemical route synthesized MoSe2 counter electrode. Journal of Industrial and Engineering Chemistry, 2019, 69, 379-386.	2.9	18
79	High energy storage capabilities of CaCu3Ti4O12 for paper-based zinc–air battery. Scientific Reports, 2022, 12, 3999.	1.6	18
80	Retention studies of chromium (VI) from aqueous solution on the surface of a novel carbonaceous material. Arabian Journal of Geosciences, 2013, 6, 4547-4556.	0.6	17
81	Facile preparation of tungsten carbide nanoparticles for an efficient oxalic acid sensor via imprinting. Microchemical Journal, 2020, 159, 105404.	2.3	17
82	Influence of morphological tuned nanostructure hybrid layers on efficient bulk heterojunction organic solar cell and X-ray detector performances. Applied Surface Science, 2021, 543, 148863.	3.1	17
83	Reutilizing Methane Reforming Spent Catalysts as Efficient Overall Water-Splitting Electrocatalysts. ACS Omega, 2021, 6, 21316-21326.	1.6	16
84	Ternary Zn1-xNixSe nanostructures as efficient photocatalysts for detoxification of hazardous Congo red, methyl orange, and chrome yellow dyes in wastewater sources. Environmental Research, 2021, 201, 111587.	3.7	16
85	Fabrication of InGaZnO-SnO2/PCBM hybrid electron transfer layer for high-performance Perovskite solar cell and X-ray detector. Journal of Alloys and Compounds, 2022, 906, 164399.	2.8	15
86	Enhanced structural, electromagnetic and absorption features of CoSm ferrite-metamaterial absorbers through synergistic effects. Ceramics International, 2022, 48, 29561-29571.	2.3	15
87	A progressive route for tailoring electrical transport in MoS2. Nano Research, 2016, 9, 380-391.	5.8	14
88	Selective AuCl3 doping of graphene for reducing contact resistance of graphene devices. Applied Surface Science, 2018, 427, 48-54.	3.1	14
89	Recent Advances in Nanostructured Transition Metal Carbide- and Nitride-Based Cathode Electrocatalysts for Li–O2 Batteries (LOBs): A Brief Review. Nanomaterials, 2020, 10, 2106.	1.9	14
90	Influence of helium-ion bombardment on the optical properties of ZnO nanorods/p-GaN light-emitting diodes. Nanoscale Research Letters, 2011, 6, 628.	3.1	13

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91	Suppressed photocatalytic activity of ZnO based Core@Shell and RCore@Shell nanostructure incorporated in the cellulose nanofiber. Chemosphere, 2021, 269, 129311.	4.2	13
92	Development of <scp>MXene</scp> / <scp> WO ₃ </scp> embedded <scp>PEDOT</scp> : <scp>PSS</scp> hole transport layers for highly efficient perovskite solar cells and Xâ€ray detectors. International Journal of Energy Research, 2022, 46, 12485-12497.	2.2	13
93	Fabrication of Robust Hydrogen Evolution Reaction Electrocatalyst Using Ag2Se by Vacuum Evaporation. Nanomaterials, 2019, 9, 1460.	1.9	12
94	Eutectoid WxC embedded WS2 nanosheets as a hybrid composite anode for lithium-ion batteries. Ceramics International, 2021, 47, 18646-18655.	2.3	12
95	Microwave-assisted synthesis of NiTe2 photocatalyst as a facile and scalable approach for energy-efficient photocatalysis and detoxification of harmful organic dyes. Separation and Purification Technology, 2022, 282, 120025.	3.9	12
96	Cu/MoS ₂ /ITO based hybrid structure for catalysis of hydrazine oxidation. RSC Advances, 2015, 5, 15374-15378.	1.7	11
97	Experimental and theoretical insights to demonstrate the hydrogen evolution activity of layered platinum dichalcogenides electrocatalysts. Journal of Materials Research and Technology, 2021, 12, 385-398.	2.6	11
98	Study of the Distribution of Radiative Defects and Reabsorption of the UV in ZnO Nanorods-Organic Hybrid White Light Emitting Diodes (LEDs). Materials, 2011, 4, 1260-1270.	1.3	10
99	Selective growth of graphene in layer-by-layer via chemical vapor deposition. Nanoscale, 2016, 8, 14633-14642.	2.8	10
100	Visualizing Degradation of Black Phosphorus Using Liquid Crystals. Scientific Reports, 2018, 8, 12966.	1.6	10
101	MoO3@MoS2 Core-Shell Structured Hybrid Anode Materials for Lithium-Ion Batteries. Nanomaterials, 2022, 12, 2008.	1.9	10
102	Versatile GeS-based CBRAM with compliance-current-controlled threshold and bipolar resistive switching for electronic synapses. Applied Materials Today, 2022, 29, 101554.	2.3	10
103	Ceramic based multi walled carbon nanotubes composites for highly efficient electromagnetic interference shielding. Journal of Materials Science: Materials in Electronics, 2019, 30, 13381-13388.	1.1	9
104	Ultrasonically Processed WSe2 Nanosheets Blended Bulk Heterojunction Active Layer for High-Performance Polymer Solar Cells and X-ray Detectors. Materials, 2021, 14, 3206.	1.3	9
105	Binder free heteroatomâ€doped graphene oxide as high energy density electrodes for supercapacitor applications. International Journal of Energy Research, 2022, 46, 9643-9666.	2.2	9
106	Nearâ€Direct Band Alignment of MoTe ₂ /ReSe ₂ Typeâ€II pâ€n Heterojunction for Efficient VNIR Photodetection. Advanced Materials Technologies, 2022, 7, .	3.0	9
107	Improving Lithiumâ€ion Halfâ€/Fullâ€Cell Performance of WO ₃ â€Protected SnO ₂ Coreâ€Shell Nanoarchitectures. ChemSusChem, 2021, 14, 917-928.	3.6	7
108	Schottky barrier height modulation and photoconductivity in a vertical graphene/ReSe2 vdW p-n heterojunction barristor. Journal of Materials Research and Technology, 2022, 17, 2796-2806.	2.6	7

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109	Novel core-shell structured electrocatalyst with 1D-NiTe2 over 3D metal structure for efficient hydrogen evolution reactions. Journal of Alloys and Compounds, 2022, 918, 165797.	2.8	7
110	Fabrication of High-Performance Solar Cells and X-ray Detectors Using MoX ₂ @CNT Nanocomposite-Tuned Perovskite Layers. ACS Applied Materials & Samp; Interfaces, 2022, 14, 33626-33640.	4.0	7
111	Graphene film growth on sputtered thin Cu–Ni alloy film by inductively coupled plasma chemical vapor deposition. RSC Advances, 2014, 4, 63349-63353.	1.7	6
112	Hierarchical Mo2C@CNT Hybrid Structure Formation for the Improved Lithium-Ion Battery Storage Performance. Nanomaterials, 2021, 11, 2195.	1.9	6
113	Dynamics of liquid crystal on hexagonal lattice. 2D Materials, 2018, 5, 045021.	2.0	5
114	Bifunctional iron molybdate as highly effective heterogeneous electro-Fenton catalyst and Li-ion battery anode. Chemosphere, 2022, 286, 131846.	4.2	5
115	Fullerene-free, MoTe2 atomic layer blended bulk heterojunctions for improved organic solar cell and photodetector performance. Journal of Materials Research and Technology, 2022, 17, 2875-2887.	2.6	5
116	The effect of boron-doped carbon nanotubes blended with active layers in achieving high-efficiency polymer solar cells and X-ray detectors. Journal of Alloys and Compounds, 2022, 922, 166137.	2.8	5
117	Decoration of X2C nanoparticles on CdS nanostructures for highly efficient photocatalytic wastewater treatment under visible light. Applied Surface Science, 2022, 583, 152533.	3.1	4
118	Highly Fast Response of Pd/Ta2O5/SiC and Pd/Ta2O5/Si Schottky Diode-Based Hydrogen Sensors. Sensors, 2021, 21, 1042.	2.1	3
119	Highly Active Mo2C@WS2 Hybrid Electrode for Enhanced Hydrogen Evolution Reaction. Catalysts, 2021, 11, 1060.	1.6	2
120	Deep-Ultraviolet (DUV)-Induced Doping in Single Channel Graphene for Pn-Junction. Nanomaterials, 2021, 11, 3003.	1.9	1