Karuppasamy Karuppasamy

List of Publications by Year in descending order

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112 papers

4,330 citations

93792 39 h-index 139680 61 g-index

112 all docs

112 docs citations

times ranked

112

4826 citing authors

#	Article	IF	CITATIONS
1	Highly porous, hierarchical peanut-like Ecandrewsite binary metal oxide nanostructures for the high-efficiency detoxification of organic dyes from wastewater. Ceramics International, 2022, 48, 1057-1067.	2.3	3
2	Sheet-like morphology CuCo2O4 bimetallic nanoparticles adorned on graphene oxide composites for symmetrical energy storage applications. Journal of Alloys and Compounds, 2022, 892, 162182.	2.8	35
3	Bifunctional iron molybdate as highly effective heterogeneous electro-Fenton catalyst and Li-ion battery anode. Chemosphere, 2022, 286, 131846.	4.2	5
4	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
5	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
6	Metal organic framework-derived Ni4Mo/MoO2@C composite nanospheres as the sensing materials for hydrogen sulfide detection. Journal of Alloys and Compounds, 2022, 900, 163421.	2.8	14
7	Metal oxides-free anodes for lithium-ion batteries. , 2022, , 149-176.		O
8	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
9	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
10	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
11	Mesoporous SnSe2-grafted N-doped carbon composites with integrated flaky structure for electrochemical sensing of carbendazim. Ceramics International, 2022, 48, 16023-16032.	2.3	43
12	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
13	Water mediated electrochemical conversion of PMMA and other organic residues into graphene and carbon materials. Ceramics International, 2022, 48, 28906-28917.	2.3	3
14	Hierarchical BaTiO3/NiFe2O4 nanocomposite as an efficacious photoanode for photoelectrochemical water splitting. Ceramics International, 2022, 48, 29136-29143.	2.3	10
15	Fabrication of NiCo2S4 accumulated on metal organic framework nanostructured with multiwalled carbon nanotubes composite material for supercapacitor application. Ceramics International, 2022, 48, 29102-29110.	2.3	28
16	Recent progress on synthetic strategies and applications of transition metal phosphides in energy storage and conversion. Ceramics International, 2021, 47, 4404-4425.	2.3	131
17	ZIF-8 templated assembly of La3+-anchored ZnO distorted nano-hexagons as an efficient active photocatalyst for the detoxification of rhodamine B in water. Environmental Pollution, 2021, 272, 116018.	3.7	30
18	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

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19	Structural and Mechanical Characterization of Platinum Thin Films Prepared Electrochemically on ITO/Glass Substrate. Metals and Materials International, 2021, 27, 1554-1564.	1.8	7
20	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
21	Application of advanced materials in sonophotocatalytic processes for the remediation of environmental pollutants. Journal of Hazardous Materials, 2021, 412, 125245.	6.5	215
22	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
23	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
24	Effect of ruthenium oxide on the capacitance and gasâ€sensing performances of cobalt oxide @nitrogenâ€doped graphene oxide composites. International Journal of Energy Research, 2021, 45, 19547-19559.	2.2	17
25	Hexagonal nanostructured cobalt oxide @ nitrogen doped multiwalled carbon nanotubes/polypyyrole composite for supercapacitor and electrochemical glucose sensor. Colloids and Surfaces B: Biointerfaces, 2021, 205, 111840.	2.5	27
26	Hierarchical Co3O4 decorated nitrogen-doped graphene oxide nanosheets for energy storage and gas sensing applications. Journal of Industrial and Engineering Chemistry, 2021, 101, 253-261.	2.9	17
27	Hierarchical structured nano-polyhedrons of CeO2@ZIF-8 composite for high performance supercapacitor applications. Journal of Alloys and Compounds, 2021, 875, 160074.	2.8	42
28	Self-Supportive Bimetallic Selenide Heteronanostructures as High-Efficiency Electro(pre)catalysts for Water Oxidation. ACS Sustainable Chemistry and Engineering, 2021, 9, 13114-13123.	3.2	15
29	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
30	Fabrication strategies and surface tuning of hierarchical gold nanostructures for electrochemical detection and removal of toxic pollutants. Journal of Hazardous Materials, 2021, 420, 126648.	6.5	59
31	Core shell nanostructured of Co3O4@RuO2 assembled on nitrogen-doped graphene sheets electrode for an efficient supercapacitor application. Journal of Alloys and Compounds, 2021, 877, 160297.	2.8	39
32	Potential core-shell anode material for rechargeable lithium-ion batteries: Encapsulation of titanium oxide nanostructure in conductive polymer. Journal of Alloys and Compounds, 2021, 882, 160715.	2.8	3
33	Porous, 3D-hierarchical \hat{l} ±-NiMoO4 rectangular nanosheets for selective conductometric ethanol gas sensors. Sensors and Actuators B: Chemical, 2021, 347, 130615.	4.0	31
34	Switchable p-n gas response for 3D-hierarchical NiFe2O4 porous microspheres for highly selective and sensitive toluene gas sensors. Journal of Alloys and Compounds, 2021, 886, 161281.	2.8	24
35	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
36	Nonaqueous liquid electrolytes based on novel 1-ethyl-3-methylimidazolium bis (nonafluorobutane-1-sulfonyl imidate) ionic liquid for energy storage devices. Journal of Materials Research and Technology, 2020, 9, 1251-1260.	2.6	19

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37	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
38	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
39	Corrosion and Alloy Engineering in Rational Design of High Current Density Electrodes for Efficient Water Splitting. Advanced Energy Materials, 2020, 10, 1904020.	10.2	109
40	Improving fuel cell performance via optimal parameters identification through fuzzy logic based-modeling and optimization. Energy, 2020, 204, 117976.	4.5	49
41	High performance multicomponent bifunctional catalysts for overall water splitting. Journal of Materials Chemistry A, 2020, 8, 13795-13805.	5.2	51
42	High performance, 3D-hierarchical CoS2/CoSe@C nanohybrid as an efficient electrocatalyst for hydrogen evolution reaction. Journal of Alloys and Compounds, 2020, 838, 155537.	2.8	30
43	Nanostructured transition metal sulfide/selenide anodes for high-performance sodium-ion batteries. , 2020, , 437-464.		10
44	Water Splitting: Corrosion and Alloy Engineering in Rational Design of High Current Density Electrodes for Efficient Water Splitting (Adv. Energy Mater. 24/2020). Advanced Energy Materials, 2020, 10, 2070107.	10.2	2
45	Highly porous, hierarchical microglobules of Co3O4 embedded N-doped carbon matrix for high performance asymmetric supercapacitors. Applied Surface Science, 2020, 529, 147147.	3.1	44
46	Bio-inspired proton conducting phytagel derived zwitterionic complex membranes for fuel cells. International Journal of Energy Research, 2020, 45, 17120.	2.2	1
47	Hybrid lithium-ion capacitors based on novel 1-butyl-3-methylimidazolium bis(nonafluorobutanesulfonyl imide) (BMImBNFSI) ionic liquid electrolytes: a detailed investigation of electrochemical and cycling behaviors. Journal of Materials Research and Technology, 2020, 9, 5216-5227.	2.6	7
48	lonic Liquid-Based Electrolytes for Energy Storage Devices: A Brief Review on Their Limits and Applications. Polymers, 2020, 12, 918.	2.0	124
49	Fabrication of manganese oxide@nitrogen doped graphene oxide/polypyrrole (MnO2@NGO/PPy) hybrid composite electrodes for energy storage devices. Journal of Materials Research and Technology, 2019, 8, 4227-4238.	2.6	54
50	Highly interconnected porous TiO2-Ni-MOF composite aerogel photoanodes for high power conversion efficiency in quasi-solid dye-sensitized solar cells. Applied Surface Science, 2019, 496, 143646.	3.1	64
51	Biopolymer phytagel-derived porous nanocarbon as efficient electrode material for high-performance symmetric solid-state supercapacitors. Journal of Industrial and Engineering Chemistry, 2019, 80, 258-264.	2.9	17
52	Synthesis and Antibacterial Properties of Novel ZnMn2O4–Chitosan Nanocomposites. Nanomaterials, 2019, 9, 1589.	1.9	22
53	Electrodeposition of Unary Oxide on a Bimetallic Hydroxide as a Highly Active and Stable Catalyst for Water Oxidation. ACS Sustainable Chemistry and Engineering, 2019, 7, 16392-16400.	3.2	35
54	Al2O3-incorporated proton-conducting solid polymer electrolytes for electrochemical devices: a proficient method to achieve high electrochemical performance. Ionics, 2019, 25, 5117-5129.	1.2	6

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55	Proton transport and dielectric properties of high molecular weight polyvinylpyrrolidone (PVPK90) based solid polymer electrolytes for portable electrochemical devices. Journal of Materials Science: Materials in Electronics, 2019, 30, 11735-11747.	1.1	5
56	Ni(OH)2-decorated nitrogen doped MWCNT nanosheets as an efficient electrode for high performance supercapacitors. Scientific Reports, 2019, 9, 6034.	1.6	48
57	Controlled synthesis of SnO2@NiCo2O4/nitrogen doped multiwalled carbon nanotube hybrids as an active electrode material for supercapacitors. Journal of Alloys and Compounds, 2019, 794, 186-194.	2.8	40
58	Fabrication of MoS2/WSe2 heterostructures as electrocatalyst for enhanced hydrogen evolution reaction. Applied Surface Science, 2019, 480, 611-620.	3.1	82
59	Metal-organic framework derived NiMo polyhedron as an efficient hydrogen evolution reaction electrocatalyst. Applied Surface Science, 2019, 478, 916-923.	3.1	55
60	Shape- and size-tunable synthesis of tin sulfide thin films for energy applications by electrodeposition. Applied Surface Science, 2019, 479, 167-176.	3.1	22
61	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
62	Nanostructured CuO/Co2O4@ nitrogen doped MWCNT hybrid composite electrode for high-performance supercapacitors. Composites Part B: Engineering, 2019, 166, 74-85.	5.9	92
63	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
64	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
65	Schiff base rare earth metal complexes: Studies on functional, optical and thermal properties and assessment of antibacterial activity. International Journal of Biological Macromolecules, 2019, 124, 403-410.	3.6	43
66	Electrochemical and cycling performance of neodymium (Nd3+) doped LiNiPO4 cathode materials for high voltage lithium-ion batteries. Materials Letters, 2019, 237, 224-227.	1.3	19
67	In vitro cytotoxicity activity of novel Schiff base ligand–lanthanide complexes. Scientific Reports, 2018, 8, 3054.	1.6	113
68	Maskless patterned growth of ZnO nanorod arrays using tip based electrolithography. Materials Science in Semiconductor Processing, 2018, 77, 24-30.	1.9	5
69	Biodiesel production process optimization from Pithecellobium dulce seed oil: Performance, combustion, and emission analysis on compression ignition engine fuelled with diesel/biodiesel blends. Energy Conversion and Management, 2018, 161, 141-154.	4.4	109
70	Effect of dimethyl carbonate (DMC) on the electrochemical and cycling properties of solid polymer electrolytes (PVP-MSA) and its application for proton batteries. Solid State Ionics, 2018, 321, 106-114.	1.3	24
71	Electrical, electrochemical, and cycling studies of high-power layered Li(Li0.05Ni0.7 \hat{A} â^' \hat{A} x Mn0.25Co x)O2 (x \hat{A} = \hat{A} 0, 0.1, 0.3, 0.5, and 0.7) cathode materials for rechargeable lithium ion batteries. Ionics, 2018, 24, 1007-1017.	1.2	4
72	Electrochemical performances of LiNi1â^'xMnxPO4 (x = 0.05–0.2) olivine cathode materials for high voltage rechargeable lithium ion batteries. Applied Surface Science, 2018, 449, 435-444.	3.1	27

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73	Hierarchical Flowerlike 3D nanostructure of Co3O4@MnO2/N-doped Graphene oxide (NGO) hybrid composite for a high-performance supercapacitor. Scientific Reports, 2018, 8, 16543.	1.6	71
74	Recent advances in 2-D nanostructured metal nitrides, carbides, and phosphides electrodes for electrochemical supercapacitors – A brief review. Journal of Industrial and Engineering Chemistry, 2018, 67, 12-27.	2.9	111
75	Recent Advances in Metal Chalcogenides (MX; X = S, Se) Nanostructures for Electrochemical Supercapacitor Applications: A Brief Review. Nanomaterials, 2018, 8, 256.	1.9	221
76	Synthesis and Characterization of Li(Li0.05Ni0.6Fe0.1Mn0.25)O2 Cathode Material for Lithim Ion Batteries. Journal of New Materials for Electrochemical Systems, 2018, 21, 051-056.	0.3	0
77	Improved electrochemical, mechanical and transport properties of novel lithium bisnonafluoro-1-butanesulfonimidate (LiBNFSI) based solid polymer electrolytes for rechargeable lithium ion batteries. Journal of Industrial and Engineering Chemistry, 2017, 52, 224-234.	2.9	26
78	Microwave assisted synthesis of high surface area TiO 2 aerogels: A competent photoanode material for quasi-solid dye-sensitized solar cells. Materials Chemistry and Physics, 2017, 196, 37-44.	2.0	50
79	Headway in rhodanide anion based ternary gel polymer electrolytes (TILGPEs) for applications in rechargeable lithium ion batteries: an efficient route to achieve high electrochemical and cycling performances. RSC Advances, 2017, 7, 19211-19222.	1.7	18
80	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
81	An enhanced electrochemical and cycling properties of novel boronic lonic liquid based ternary gel polymer electrolytes for rechargeable Li/LiCoO2 cells. Scientific Reports, 2017, 7, 11103.	1.6	36
82	A nanocrystalline structured NiO/MnO ₂ @nitrogen-doped graphene oxide hybrid nanocomposite for high performance supercapacitors. New Journal of Chemistry, 2017, 41, 15517-15527.	1.4	47
83	An efficient way to achieve high ionic conductivity and electrochemical stability of safer nonaflate anion-based ionic liquid gel polymer electrolytes (ILGPEs) for rechargeable lithium ion batteries. Journal of Solid State Electrochemistry, 2017, 21, 1145-1155.	1.2	35
84	Evaluation of the Corrosion Resistance Properties of Electroplated Chitosan-Zn1â^'xCuxO Composite Thin Films. Nanomaterials, 2017, 7, 432.	1.9	17
85	A Rapid One-Pot Synthesis of Novel High-Purity Methacrylic Phosphonic Acid (PA)-Based Polyhedral Oligomeric Silsesquioxane (POSS) Frameworks via Thiol-Ene Click Reaction. Polymers, 2017, 9, 192.	2.0	10
86	Ionic liquid incorporated nanocomposite polymer electrolytes for rechargeable lithium ion battery: A way to achieve improved electrochemical and interfacial properties. Journal of Industrial and Engineering Chemistry, 2016, 40, 168-176.	2.9	34
87	Electrochemical and cycling performances of novel nonafluorobutanesulfonate (nonaflate) ionic liquid based ternary gel polymer electrolyte membranes for rechargeable lithium ion batteries. Journal of Membrane Science, 2016, 514, 350-357.	4.1	79
88	A Brief Review on Integrated (Layered and Spinel) and Olivine Nanostructured Cathode Materials for Lithium Ion Battery Applications. Materials Focus, 2016, 5, 324-334.	0.4	10
89	High-mobility and low-operating voltage organic thin film transistor with epoxy based siloxane binder as the gate dielectric. Applied Physics Letters, 2015, 107, .	1.5	11
90	Organic–inorganic hybrid catalysts containing new Schiff base for environment friendly cyclohexane oxidation. RSC Advances, 2014, 4, 42816-42824.	1.7	27

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91	Highly dispersed Cu(<scp>ii</scp>), Co(<scp>ii</scp>) and Ni(<scp>ii</scp>) catalysts covalently immobilized on imine-modified silica for cyclohexane oxidation with hydrogen peroxide. RSC Advances, 2014, 4, 24820-24830.	1.7	50
92	Influence of electron beam irradiation on spectral, thermal, morphological and catalytic properties of Co(II) complex immobilized on chitosan's Schiff base. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2014, 124, 178-186.	2.0	12
93	Effect of Nanochitosan on Structural, Thermal and Electrochemical Properties of Poly Ether Based Polymer Electrolytes Complexed with Lithium Bis(Trifluoromethanesulfonyl Imide). Journal of New Materials for Electrochemical Systems, 2014, 17, 197-203.	0.3	1
94	Effect of succinonitrile and nano-hydroxyapatite on ionic conductivity and interfacial stability of polyether-based plasticized nanocomposite polymer electrolytes (PNCSPE). Polymer Bulletin, 2013, 70, 2531-2545.	1.7	10
95	Synthesis, spectroscopic and catalytic studies of Cu(II), Co(II) and Ni(II) complexes immobilized on Schiff base modified chitosan. Journal of Molecular Structure, 2013, 1050, 53-60.	1.8	86
96	Metal based pharmacologically active agents: Synthesis, structural elucidation, DNA interaction, in vitro antimicrobial and in vitro cytotoxic screening of copper(II) and zinc(II) complexes derived from amino acid based pyrazolone derivatives. Arabian Journal of Chemistry, 2013, 6, 235-247.	2.3	32
97	Combined effect of nanochitosan and succinonitrile on structural, mechanical, thermal, and electrochemical properties of plasticized nanocomposite polymer electrolytes (PNCPE) for lithium batteries. lonics, 2013, 19, 747-755.	1.2	19
98	Synthesis, spectrochemical characterisation and catalytic activity of transition metal complexes derived from Schiff base modified chitosan. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2013, 103, 423-430.	2.0	120
99	Effect of nanochitosan and succinonitrile on the AC ionic conductivity of plasticized nanocomposite solid polymer electrolytes (PNCSPE)., 2013,,.		5
100	Characterization of Nanochitosan Incorporated Solid Polymer Composite Electrolytes for Magnesium Batteries. Advanced Materials Research, 2013, 678, 316-320.	0.3	0
101	Electrical and Dielectric Behavior of Nano-bio Ceramic Filler Incorporated Polymer Electrolytes for Rechargeable Lithium Batteries. Journal of New Materials for Electrochemical Systems, 2013, 16, 115-120.	0.3	5
102	Effect of Chitin Nanofibres on the Electrochemical and Interfacial Properties of Composite Solid Polymer Electrolytes. Journal of New Materials for Electrochemical Systems, 2013, 16, 121-126.	0.3	0
103	A Study on Electrochemical, Catalytic and Biological Properties of New Nickel Coordinated Schiff Base Materials. Journal of New Materials for Electrochemical Systems, 2013, 16, 109-114.	0.3	1
104	Biodiesel production and prediction of engine performance using SIMULINK model of trained neural network. Fuel, 2012, 99, 197-203.	3.4	43
105	Effect of nanochitosan on electrochemical, interfacial and thermal properties of composite solid polymer electrolytes. Ionics, 2012, 18, 737-745.	1.2	35
106	A test on DI diesel engine fueled with methyl esters of used palm oil. Renewable Energy, 2012, 47, 160-166.	4.3	126
107	Structural, Surface, Thermal and Catalytic Properties of Chitosan Supported Cu(II) Mixed Ligand Complex Materials. Journal of Surface Engineered Materials and Advanced Technology, 2012, 02, 284-291.	0.2	7
108	Structural and Ionic Conductivity Studies on Nanochitosan Incorporated Polymer Electrolytes for Rechargeable Magnesium Batteries. Chemical Science Transactions, 2012, 1, 311-316.	0.4	11

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109	Effect of Magnesium Doping on the Physicochemical Properties of Strontium Formate Dihydrate Crystals. Chemical Science Transactions, 2012, 2, 141-146.	0.4	4
110	Effect of Electron Beam Irradiation on the Mechanical and Electrochemical Properties of Plasticized Polymer Electrolytes Dispersed with Nanoparticles. Advanced Materials Research, 0, 678, 229-233.	0.3	2
111	A Review on PEO Based Solid Polymer Electrolytes (SPEs) Complexed with LiX (X=Tf, BOB) for Rechargeable Lithium Ion Batteries. Materials Science Forum, 0, 807, 41-63.	0.3	21
112	Numerical Investigation of Heat and Mass Flux Effects on Heat Transfer Characteristics of Supercritical Water in an Upward Flow Vertical Tube. Applied Mechanics and Materials, 0, 592-594, 1667-1671.	0.2	1