Hierarchical nanostructured conducting polymer hydrogel with high electrochemical activity

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#	Paper	IF	Citations
940	MetalOrganic Frameworks/Conducting Polymer Hydrogel Integrated Three-Dimensional Free-Standing Monoliths as Ultrahigh Loading LiS Battery Electrodes.		
939	Stable, Strain-Sensitive Conductive Hydrogel with Antifreezing Capability, Remoldability, and Reusability.		
938	Stretchable, Injectable, and Self-Healing Conductive Hydrogel Enabled by Multiple Hydrogen Bonding toward Wearable Electronics.		
937	CHAPTER 1:Introduction. **2012**, 1-6		1
936	Morphology-Dependent Enhancement of the Pseudocapacitance of Template-Guided Tunable Polyaniline Nanostructures. **2013**, 117, 15009-15019		81
935	Regenerable photovoltaic devices with a hydrogel-embedded microvascular network. **2013**, 3, 2357		26
934	3D nanostructured conductive polymer hydrogels for high-performance electrochemical devices. **2013**, 6, 2856		302
933	Hierarchically structured graphene-based supercapacitor electrodes. **2013**, 3, 21183		51
932	An inorganic-organic double network hydrogel of graphene and polymer. **2013**, 5, 6034-9		66
931	Organic Li4C8H2O6 nanosheets for lithium-ion batteries. **2013**, 13, 4404-9		288
930	Synthesis of redox polymer nanobeads and nanocomposites for glucose biosensors. **2013**, 5, 7852-61		67
929	DNA hydrogel templated carbon nanotube and polyaniline assembly and its applications for electrochemical energy storage devices. **2013**, 1, 14460		35
928	Electrochemically Active Polymers for Electrochemical Energy Storage: Opportunities and Challenges. **2013**, 2, 839-844		74
927	Anionic polysaccharides as templates for the synthesis of conducting polyaniline and as structural matrix for conducting biocomposites. **2013**, 34, 1056-61		20
926	1-Dimensional confinement of porous polyethylenedioxythiophene using carbon nanofibers as a solid template: an efficient charge storage material with improved capacitance retention and cycle stability. **2013**, 3, 11877		24
925	Controlled growth of polypyrrole hydrogels. **2013**, 9, 2832		74
924	Facile synthesis of polyaniline nanotubes using reactive oxide templates for high energy density pseudocapacitors. **2013**, 1, 3315		158

923	Electrochemical synthesis of nanostructured materials for electrochemical energy conversion and storage. **2013**, 5, 4056-69	78
922	Highly sensitive glucose sensor based on pt nanoparticle/polyaniline hydrogel heterostructures. **2013**, 7, 3540-6	597
921	Revisiting the capacitance of polyaniline by using graphene hydrogel films as a substrate: the importance of nano-architecturing. **2013**, 6, 477-481	178
920	Photolatently modulable hydrogels using unilamellar titania nanosheets as photocatalytic crosslinkers. **2013**, 4, 2029	69
919	Synthesis of MnO2-polyaniline nanofiber composites to produce high conductive polymer. **2013**, 172, 49-53	26
918	Stable Li-ion battery anodes by in-situ polymerization of conducting hydrogel to conformally coat silicon nanoparticles. **2013**, 4, 1943	971
917	Synthesis of mesoporous multiwall ZnO nanotubes by replicating silk and application for enzymatic biosensor. **2013**, 49, 318-22	54
916	25th anniversary article: The evolution of electronic skin (e-skin): a brief history, design considerations, and recent progress. **2013**, 25, 5997-6038	1622
915	DNA hydrogel-based supercapacitors operating in physiological fluids. **2013**, 3, 1282	105
914	In-Situ Synthesis of Silicon/Polyaniline Core/Shell and Its Electrochemical Performance for Lithium-Ion Batteries. **2013**, 160, A1916-A1921	16
913	Redox-active charge carriers of conducting polymers as a tuner of conductivity and its potential window. **2013**, 3, 2454	60
912	Fluidic-directed assembly of aligned oligopeptides with Econjugated cores. **2013**, 25, 6398-404	28
911	A high-capacitance solid-state supercapacitor based on polyaniline and ground carbon fibers. **2014**,	1
910	An accessible superhydrophobic coating with nanostructure for continuously oil/water separation. **2014**,	1
909	Patterned electrospun nanofiber matrices via localized dissolution: potential for guided tissue formation. **2014**, 26, 8192-7	44
908	Co-assembled conductive hydrogel of N-fluorenylmethoxycarbonyl phenylalanine with polyaniline. **2014**, 118, 13969-80	31
907	Graphitic Petal Electrodes for All-Solid-State Flexible Supercapacitors. **2014**, 4, 1300515	133
906	Three-dimensional Ni(OH)2 nanoflakes/graphene/nickel foam electrode with high rate capability for supercapacitor applications. **2014**, 39, 7876-7884	122

905	Enzymatic synthesis of polyaniline/multi-walled carbon nanotube composite with core shell structure and its electrochemical characterization for supercapacitor application. **2014**, 123, 151-157	76
904	Nanomaterials for electrochemical energy storage. **2014**, 9, 323-350	77
903	One-step construction of graphene□polypyrrole hydrogels and their superior electrochemical performance. **2014**, 4, 4134-4139	41
902	Urchin-like polypyrrole nanoparticles for highly sensitive and selective chemiresistive sensor application. **2014**, 6, 4188-94	46
901	Two dimensional nanomaterials for flexible supercapacitors. **2014**, 43, 3303-23	827
900	Fabrication of polyaniline/silver nanoparticles/multi-walled carbon nanotubes composites for flexible microelectronic circuits. **2014**, 192, 15-22	33
899	Covalently-grafted polyaniline on graphene oxide sheets for high performance electrochemical supercapacitors. **2014**, 71, 257-267	152
898	Filling the voids of graphene foam with graphene "eggshell" for improved lithium-ion storage. **2014**, 6, 9835-41	57
897	Porous nitrogen-doped hollow carbon spheres derived from polyaniline for high performance supercapacitors. **2014**, 2, 5352-5357	369
896	Enzyme-labeled Pt@BSA nanocomposite as a facile electrochemical biosensing interface for sensitive glucose determination. **2014**, 6, 4170-8	64
895	Supramolecular polyaniline hydrogel as a support for urease. **2014**, 126, 90-97	22
894	An ultra-sensitive resistive pressure sensor based on hollow-sphere microstructure induced elasticity in conducting polymer film. **2014**, 5, 3002	977
893	Enhanced cycling stability of silicon anode by in situ polymerization of poly(aniline-co-pyrrole). **2014**, 4, 54134-54139	9
892	Microwave-assisted chemical-vapor-induced in situ polymerization of polyaniline nanofibers on graphite electrode for high-performance supercapacitor. **2014**, 6, 19978-89	51
891	Electrochemical activity and structure of new composite systems based on cross-linked polyacrylamide and polyaniline. **2014**, 87, 491-495	6
890	Stretchable and semitransparent conductive hybrid hydrogels for flexible supercapacitors. **2014**, 8, 7138-46	154
889	Interface chemistry engineering in electrode systems for electrochemical energy storage. **2014**, 4, 37491-37502	7
888	Flexible solid-state supercapacitors based on a conducting polymer hydrogel with enhanced electrochemical performance. **2014**, 2, 19726-19732	108

887	Non-monotonic swelling of surface grafted hydrogels induced by pH and/or salt concentration. **2014**, 141, 124909	23
886	Stepwise assembled nickel–cobalt-hydroxide hetero-accumulated nanocrystalline walls on reduced graphene oxide/nickel foams: an adjustable interface design for capacitive charge storage. **2014**, 2, 4894-4898	5
885	PEDOT nanostructures synthesized in hexagonal mesophases. **2014**, 38, 1106-1115	62
884	Three-dimensional ultrathin Sn/polypyrrole nanosheet network as high performance lithium-ion battery anode. **2014**, 4, 52074-52082	9
883	Mechanically strong, fluorescent hydrogels from zwitterionic, fully π-conjugated polymers. **2014**, 50, 8930-3	17
882	P/N/O co-doped carbonaceous material based supercapacitor with voltage up to 1.9 V in aqueous electrolyte. **2014**, 4, 55971-55979	17
881	Organic soluble and uniform film forming oligoethylene glycol substituted BODIPY small molecules with improved hole mobility. **2014**, 16, 13376-82	9
880	Nanostructured conducting polymers for electrochemical sensing and biosensing. **2014**, 150-194	1
879	Aptamer-Functionalized Multidimensional Conducting-Polymer Nanoparticles for an Ultrasensitive and Selective Field-Effect-Transistor Endocrine-Disruptor Sensors. **2014**, 24, 6145-6153	30
878	Three-Dimensional Macroporous Graphene Foam Filled with Mesoporous Polyaniline Network for High Areal Capacitance. **2014**, 2, 2291-2296	55
877	Adsorption–template preparation of polyanilines with different morphologies and their capacitance. **2014**, 145, 99-108	33
876	Facile electrochemical co-deposition of a graphene-cobalt nanocomposite for highly efficient water oxidation in alkaline media: direct detection of underlying electron transfer reactions under catalytic turnover conditions. **2014**, 16, 19035-45	35
875	Hierarchical porous polyaniline–silsesquioxane conjugated hybrids with enhanced electrochemical capacitance. **2014**, 4, 39508	28
874	Carbonaceous hydrogels and aerogels for supercapacitors. **2014**, 2, 4852-4864	122
873	Freestanding nanocellulose-composite fibre reinforced 3D polypyrrole electrodes for energy storage applications. **2014**, 6, 13068-75	81
872	Fabrication of 3D Polypyrrole/Graphene Oxide Composite Hydrogels with High Performance Swelling Properties. **2014**, 24, 884-889	17
871	PANI–TiC nanocomposite film for the direct electron transfer of hemoglobin and its application for biosensing. **2014**, 18, 2193-2200	9
870	Polyaniline and polypyrrole pseudocapacitor electrodes with excellent cycling stability. **2014**, 14, 2522-7	589

869	Ultra-wide-range electrochemical sensing using continuous electrospun carbon nanofibers with high densities of states. **2014**, 6, 3394-405	57
868	Solvothermal Synthesis of Ni/Reduced Graphene Oxide Composites as Electrode Material for Supercapacitors. **2014**, 123, 560-568	34
867	Using in-situ polymerization of conductive polymers to enhance the electrical properties of solution-processed carbon nanotube films and fibers. **2014**, 6, 9966-74	36
866	Multifunctional superhydrophobic surfaces templated from innately microstructured hydrogel matrix. **2014**, 14, 4803-9	159
865	Enhanced sensitivity and stability of room-temperature NH□sensors using core-shell CeO□ nanoparticles@cross-linked PANI with p-n heterojunctions. **2014**, 6, 14131-40	154
864	Reinforced conducting hydrogels prepared from the in situ polymerization of aniline in an aqueous solution of sodium alginate. **2014**, 2, 16516-16522	66
863	A co-assembled gel of a pyromellitic dianhydride derivative and polyaniline with optoelectronic and photovoltaic properties. **2014**, 30, 7547-55	23
862	Heterogeneous branched core□shell SnO2□PANI nanorod arrays with mechanical integrity and three dimentional electron transport for lithium batteries. **2014**, 8, 196-204	127
861	Biologically derived soft conducting hydrogels using heparin-doped polymer networks. **2014**, 8, 4348-57	99
860	Strain and Pressure Gauges from Tough, Conducting and Edible Hydrogels. **2015**, 1795, 27-33	2
859	Transfer Printing of Metallic Microstructures on Adhesion-Promoting Hydrogel Substrates. **2015**, 27, 3398-404	38
858	Multistimuli-Responsive, Moldable Supramolecular Hydrogels Cross-Linked by Ultrafast Complexation of Metal Ions and Biopolymers. **2015**, 54, 7944-8	209
857	Multistimuli-Responsive, Moldable Supramolecular Hydrogels Cross-Linked by Ultrafast Complexation of Metal Ions and Biopolymers. **2015**, 127, 8055-8059	28
856	Chemically Crosslinked Hydrogel Film Leads to Integrated Flexible Supercapacitors with Superior Performance. **2015**, 27, 7451-7	277
855	High electric conductivity of liquid crystals formed by ordered self-assembly of nonionic surfactant N,N-bis(2-hydroxyethyl)dodecanamide in water. **2015**, 11, 1762-6	8
854	Fine-tuning the LSPR response of gold nanorod-polyaniline core-shell nanoparticles with high photothermal efficiency for cancer cell ablation. **2015**, 3, 5189-5196	33
853	Self-assembled ultralight three-dimensional polypyrrole aerogel for effective electromagnetic absorption. **2015**, 106, 222902	80
852	Highly conducting composite hydrogels from gellan gum, PEDOT:PSS and carbon nanofibres. **2015**, 206, 61-65	24

851	Electrochemical Hierarchical Composites. **2015**, 239-286	
850	Capacitance performances of supramolecular hydrogels based on conducting polymers. **2015**, 33, 1018-1027	18
849	Hydrogel-coated enzyme electrodes formed by GOx-mediated polymerization for glucose detecting. **2015**, 5, 47244-47247	8
848	Hydrothermal synthesis of Ni(OH)2 nanoflakes on 3D graphene foam for high-performance supercapacitors. **2015**, 173, 399-407	65
847	Phenols from green tea as a dual functional coating to prepare devices for energy storage and molecular separation. **2015**, 51, 11662-4	27
846	Hybrid and Hierarchical Composite Materials. **2015**,	14
845	In situ preparation of ultralight three-dimensional polypyrrole/nano SiO 2 composite aerogels with enhanced electromagnetic absorption. **2015**, 117, 32-38	30
844	Nitrogen and Phosphorus Dual-Doped Graphene/Carbon Nanosheets as Bifunctional Electrocatalysts for Oxygen Reduction and Evolution. **2015**, 5, 4133-4142	539
843	Conductive polypyrrole hydrogels and carbon nanotubes composite as an anode for microbial fuel cells. **2015**, 5, 50968-50974	45
842	Ultrahigh Surface Area Three-Dimensional Porous Graphitic Carbon from Conjugated Polymeric Molecular Framework. **2015**, 1, 68-76	177
841	Aniline polymerization on multiwall carbon nanotubes with immobilized laccase. **2015**, 51, 621-625	3
840	Multifunctional Supramolecular Hybrid Materials Constructed from Hierarchical Self-Ordering of In Situ Generated Metal-Organic Framework (MOF) Nanoparticles. **2015**, 27, 4438-4446	83
839	Cold plasma welding of polyaniline nanofibers with enhanced electrical and mechanical properties. **2015**, 26, 495302	3
838	Porous palladium coated conducting polymer nanoparticles for ultrasensitive hydrogen sensors. **2015**, 7, 20665-73	19
837	Critical roles of binders and formulation at multiscales of silicon-based composite electrodes. **2015**, 280, 533-549	167
836	Dually fixed SnO2 nanoparticles on graphene nanosheets by polyaniline coating for superior lithium storage. **2015**, 7, 2444-51	90
835	Conductive Smart Hybrid Hydrogels with PNIPAM and Nanostructured Conductive Polymers. **2015**, 25, 1219-1225	288
834	A nanostructured conductive hydrogels-based biosensor platform for human metabolite detection. **2015**, 15, 1146-51	286

833	Zero-periodic metal–organic material, organic polymer composites: tuning properties of methacrylate polymers via dispersion of dodecyloxy-decorated Cu-BDC nanoballs. **2015**, 3, 13215-13225	7
832	Rational design and applications of conducting polymer hydrogels as electrochemical biosensors. **2015**, 3, 2920-2930	126
831	Network nanostructured polypyrrole hydrogel/Au composites as enhanced electrochemical biosensing platform. **2015**, 5, 11440	81
830	A novel non-enzymatic amperometric glucose sensor based on a hollow Pt–Ni alloy nanotube array electrode with enhanced sensitivity. **2015**, 5, 70387-70394	32
829	Fabrication of polyaniline hydrogel: Synthesis, characterization and adsorption of methylene blue. **2015**, 356, 39-47	111
828	In-situ fabricated transparent conducting nanofiber-shape polyaniline/coral-like TiO2 thin film: Application in bifacial dye-sensitized solar cells. **2015**, 143, 284-295	22
827	Assembly of Polypyrrole-Graphene Oxide Hydrogel Nanocomposites and Their Swelling Properties. **2015**, 54, 1122-1131	20
826	Combined experimental and theoretical study of poly(aniline-co-pyrrole) oligomer. **2015**, 72, 30-39	40
825	Nanostructured conducting polymer hydrogels for energy storage applications. **2015**, 7, 12796-806	133
824	Conducting hydrogel of a naphthalenetetracarboxylic dianhydride derivative and polyaniline: different electronic properties in gel and xerogel states. **2015**, 17, 8093-8104	14
823	Nanostructured conductive polymers for advanced energy storage. **2015**, 44, 6684-96	542
822	A nanotubular framework with customized conductivity and porosity for efficient oxidation and reduction of water. **2015**, 3, 11040-11047	9
821	Assembly of polypyrrole nanotube@MnO2 composites with an improved electrochemical capacitance. **2015**, 198, 51-56	38
820	Soft materials in neuroengineering for hard problems in neuroscience. **2015**, 86, 175-86	195
819	Graphene based integrated tandem supercapacitors fabricated directly on separators. **2015**, 15, 1-8	26
818	Facile Fabrication of Reduced Graphene Oxide/Polypyrrole Composite Hydrogels with Excellent Electrochemical Performance and Compression Capacity. **2015**, 3, 862-870	41
817	Highly Ordered Mesoporous CuCo2O4 Nanowires, a Promising Solution for High-Performance Supercapacitors. **2015**, 27, 3919-3926	295
816	Small bioactive molecules as dual functional co-dopants for conducting polymers. **2015**, 3, 5058-5069	27

815	Nanostructural analysis of water distribution in hydrated multicomponent gels using thermal analysis and NMR relaxometry. **2015**, 12, 2068-79	3
814	Electro-stimulated release from a reduced graphene oxide composite hydrogel. **2015**, 3, 2530-2537	41
813	A coral-inspired nanoscale design of SnCu/PANi/GO hybrid anode materials for high performance lithium-ion batteries. **2015**, 5, 21525-21531	10
812	Carbon nanotube–polyaniline core–shell nanostructured hydrogel for electrochemical energy storage. **2015**, 5, 37970-37977	23
811	Self-Assembly of Linear Polymers into Phosphorescent Nanoparticles: Optimization toward Non-Cytotoxic Bioimaging and Photonic Devices. **2015**, 119, 12551-12561	8
810	3D polyaniline porous layer anchored pillared graphene sheets: enhanced interface joined with high conductivity for better charge storage applications. **2015**, 7, 7661-9	61
809	A metal-free bifunctional electrocatalyst for oxygen reduction and oxygen evolution reactions. **2015**, 10, 444-52	2290
808	Self-crosslinked polyaniline hydrogel electrodes for electrochemical energy storage. **2015**, 92, 133-141	112
807	Self-assembled graphene monoliths: properties, structures and their pH-dependent self-assembly behavior. **2015**, 30, 30-40	15
806	Dopant-Enabled Supramolecular Approach for Controlled Synthesis of Nanostructured Conductive Polymer Hydrogels. **2015**, 15, 7736-41	178
805	Chemical modification of graphene aerogels for electrochemical capacitor applications. **2015**, 17, 30946-62	67
804	A Conductive Self-Healing Hybrid Gel Enabled by Metal-Ligand Supramolecule and Nanostructured Conductive Polymer. **2015**, 15, 6276-81	294
803	Synergistic effect of simultaneous dual doping in solvent-free mechanochemical synthesis of polyaniline supercapacitor comparable to the composites with multiwalled carbon nanotube. **2015**, 81, 62-69	12
802	Porous nitrogen and phosphorus co-doped carbon nanofiber networks for high performance electrical double layer capacitors. **2015**, 3, 23268-23273	68
801	Carbon-based electrocatalysts for advanced energy conversion and storage. **2015**, 1, e1500564	434
800	Hemin-G-quadruplex-crosslinked poly--isopropylacrylamide hydrogel: a catalytic matrix for the deposition of conductive polyaniline. **2015**, 6, 6659-6664	50
799	Flexible all-solid-state asymmetric supercapacitor assembled using coaxial NiMoO 4 nanowire arrays with chemically integrated conductive coating **2015**, 178, 429-438	54
798	Stimuli-Responsive Matrix-Assisted Colorimetric Water Indicator of Polydiacetylene Nanofibers. **2015**, 7, 20342-8	42

797	A mechanically driven form of Kirigami as a route to 3D mesostructures in micro/nanomembranes. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 11757-64	11.5	344
796	PVDF-Nafion nanomembranes coated microneedles for in vivo transcutaneous implantable glucose sensing. **2015**, 74, 1047-52		70
795	Stably Doped Conducting Polymer Nanoshells by Surface Initiated Polymerization. **2015**, 15, 8217-22		19
794	Porphyrin functionalized porous carbon derived from metal-organic framework as a biomimetic catalyst for electrochemical biosensing. **2015**, 3, 1335-1341		32
793	A durable non-enzymatic electrochemical sensor for monitoring H2O2 in rat brain microdialysates based on one-step fabrication of hydrogels. **2015**, 140, 3788-93		13
792	Electromechanical Properties of Carbon Nanotube Infused Polyacrylamide Hydrogel. **2015**, 34, n/a-n/a		3
791	Hydrous ruthenium oxide nanoparticles anchored to graphene and carbon nanotube hybrid foam for supercapacitors. **2014**, 4, 4452		356
790	Metal-like fluorine-doped ╫FeOOH nanorods grown on carbon cloth for scalable high-performance supercapacitors. **2015**, 11, 119-128		154
789	Electrochemical energy storage by polyaniline nanofibers: high gravity assisted oxidative polymerization vs. rapid mixing chemical oxidative polymerization. **2015**, 17, 1498-502		49
788	Elastic, conductive, polymeric hydrogels and sponges. **2014**, 4, 5792		120
787	Integrated zwitterionic conjugated poly(carboxybetaine thiophene) as a new biomaterial platform. **2015**, 6, 782-788		37
786	A high-capacitance solid-state supercapacitor based on free-standing film of polyaniline and carbon particles. **2015**, 153, 87-93		67
785	Stimuli-responsive hydrogels in drug delivery and tissue engineering. **2016**, 23, 758-80		178
784	Conducting Polymers and Their Applications in Diabetes Management. **2016**, 16,		17
783	Biosynthetic conductive polymer composites for tissue-engineering biomedical devices. **2016**, 277-298		1
782	Nanoscale Engineering of Heterostructured Anode Materials for Boosting Lithium-Ion Storage. **2016**, 28, 7580-602		177
781	Separation-Free Polyaniline/TiO2 3D Hydrogel with High Photocatalytic Activity. **2016**, 3, 1500502		55
780	Strong and Robust Polyaniline-Based Supramolecular Hydrogels for Flexible Supercapacitors. **2016**, 55, 9196-201		242

779	Pseudocapacitive Electrodes Produced by Oxidant-Free Polymerization of Pyrrole between the Layers of 2D Titanium Carbide (MXene). **2016**, 28, 1517-22	614
778	Photolithographic Micropatterning of Conducting Polymers on Flexible Silk Matrices. **2016**, 28, 1406-12	71
777	High-Rate and High-Volumetric Capacitance of Compact Graphene–Polyaniline Hydrogel Electrodes. **2016**, 6, 1600185	79
776	A Phytic Acid Induced Super-Amphiphilic Multifunctional 3D Graphene-Based Foam. **2016**, 55, 3936-41	139
775	Reinforced polyaniline/polyvinyl alcohol conducting hydrogel from a freezing–thawing method as self-supported electrode for supercapacitors. **2016**, 51, 8728-8736	55
774	Conducting polymer hydrogel materials for high-performance flexible solid-state supercapacitors. **2016**, 59, 412-420	53
773	A Phytic Acid Induced Super-Amphiphilic Multifunctional 3D Graphene-Based Foam. **2016**, 128, 4004-4009	11
772	Strong and Robust Polyaniline-Based Supramolecular Hydrogels for Flexible Supercapacitors. **2016**, 128, 9342-9347	83
771	Tunable Polyaniline-Based Porous Carbon with Ultrahigh Surface Area for CO2 Capture at Elevated Pressure. **2016**, 6, 1502491	102
770	Multidimensional hybrid conductive nanoplate-based aptasensor for platelet-derived growth factor detection. **2016**, 4, 4447-4454	16
769	A Strain-Insensitive Stretchable Electronic Conductor: PEDOT:PSS/Acrylamide Organogels. **2016**, 28, 1636-43	176
768	A conducting polymer with enhanced electronic stability applied in cardiac models. **2016**, 2, e1601007	131
767	Highly hemo-compatible, mechanically strong, and conductive dual cross-linked polymer hydrogels. **2016**, 4, 8016-8024	26
766	Mechanically Robust Hybrid Hydrogels for Photovoltaic Applications. **2016**, 369, 119-124	2
765	Immobilization of Anodophilic Biofilms for Use in Aerotolerant Bioanodes of Microbial Fuel Cells. **2016**, 8, 34985-34990	9
764	Preparation of a Hybrid Zirconium Phytate and Its Application for the Removal of Fluorine in Metal-Precoating Effluent. **2016**, 67, 06039	
763	Continuous-flow multi-pulse electroporation at low DC voltages by microfluidic flipping of the voltage space topology. **2016**, 109, 163702	10
762	Hierarchical materials: Background and perspectives. **2016**, 41, 661-664	14

761	Highly Sensitive and Patchable Pressure Sensors Mimicking Ion-Channel-Engaged Sensory Organs. **2016**, 10, 4550-8	38
760	Nanostructured Polypyrrole as a flexible electrode material of supercapacitor. **2016**, 22, 422-438	447
759	Preparation of morphology-controllable polyaniline and polyaniline/graphene hydrogels for high performance binder-free supercapacitor electrodes. **2016**, 319, 73-81	149
758	A simple method to fabricate poly(aniline-co-pyrrole) with highly improved electrical conductivity via pre-polymerization. **2016**, 6, 13780-13785	14
757	Current status and challenges of biohydrogels for applications as supercapacitors and secondary batteries. **2016**, 4, 8952-8968	62
756	Facile fabrication of elastic conducting polypyrrole nanotube aerogels. **2016**, 218, 50-55	26
755	Two-Dimensional Mesoscale-Ordered Conducting Polymers. **2016**, 55, 12516-21	74
754	Covalent Bonding of an Electroconductive Hydrogel to Gold-Coated Titanium Surfaces via Thiol-ene Click Chemistry. **2016**, 301, 1423-1429	7
753	Highly conductive and hydrated PEG-based hydrogels for the potential application of a tissue engineering scaffold. **2016**, 109, 15-22	36
752	Enhancement of Energy Storage and Photoresponse Properties of Folic Acid-Polyaniline Hybrid Hydrogel by in Situ Growth of Ag Nanoparticles. **2016**, 8, 28055-28067	51
751	Polyaniline-based electrodes: recent application in supercapacitors and next generation rechargeable batteries. **2016**, 13, 150-160	31
750	Biopolymer-based hydrogels for encapsulation of photocatalytic TiO 2 nanoparticles prepared by the freezing/thawing method. **2016**, 223, 16-20	17
749	Polyaniline/Carbon Nitride Nanosheets Composite Hydrogel: A Separation-Free and High-Efficient Photocatalyst with 3D Hierarchical Structure. **2016**, 12, 4370-8	170
748	A Tough Nanocomposite Aerogel of Manganese Oxide and Polyaniline as an Electrode for a Supercapacitor. **2016**, 81, 40-43	16
747	The hybrid of SnO2nanoparticle and polypyrrole aerogel: an excellent electromagnetic wave absorbing materials. **2016**, 3, 075023	8
746	A Cytocompatible Robust Hybrid Conducting Polymer Hydrogel for Use in a Magnesium Battery. **2016**, 28, 9349-9355	46
745	Inkjet-printed porous polyaniline gel as an efficient anode for microbial fuel cells. **2016**, 4, 14555-14559	49
744	A Facile Approach for Constructing Conductive Polymer Patterns for Application in Electrochromic Devices and Flexible Microelectrodes. **2016**, 8, 33175-33182	33

743	Asymmetric hybrid capacitors based on novel bearded carbon fiber cloth pinhole polyaniline electrodes with excellent energy density. **2016**, 6, 82995-83002	22
742	Electrodeposition of polyaniline on self-assembled monolayers on graphite for the voltammetric detection of iron(II). **2016**, 184, 261-268	7
741	Two-Dimensional Mesoscale-Ordered Conducting Polymers. **2016**, 128, 12704-12709	13
740	Smart hydrogels as storage elements with dispensing functionality in discontinuous microfluidic systems. **2016**, 16, 3977-3989	16
739	Ultra-Stretchable and Force-Sensitive Hydrogels Reinforced with Chitosan Microspheres Embedded in Polymer Networks. **2016**, 28, 8037-8044	220
738	Nylon 6,6/Polyaniline Based Sheath Nanofibers for High-Performance Supercapacitors. **2016**, 213, 124-131	24
737	Electroconductive Hydrogel Based on Functional Poly(Ethylenedioxy Thiophene). **2016**, 28, 6080-6088	81
736	One-step solid-state in-situ thermal polymerization of silicon-PEDOT nanocomposites for the application in lithium-ion battery anodes. **2016**, 99, 488-495	35
735	Egg-Derived Mesoporous Carbon Microspheres as Bifunctional Oxygen Evolution and Oxygen Reduction Electrocatalysts. **2016**, 6, 1600794	133
734	2D Materials Beyond Graphene for High-Performance Energy Storage Applications. **2016**, 6, 1600671	301
733	Highly Flexible and Resilient Elastin Hybrid Cryogels with Shape Memory, Injectability, Conductivity, and Magnetic Responsive Properties. **2016**, 28, 7758-67	104
732	Scalable and bendable organized mesoporous TiN films templated by using a dual-functional amphiphilic graft copolymer for solid supercapacitors. **2016**, 4, 12497-12503	21
731	A smart polymer with a high sensitivity to temperature and humidity based on polyacrylamide hydrogel doped with polyiodide. **2016**, 4, 11055-11058	11
730	Energy gels: A bio-inspired material platform for advanced energy applications. **2016**, 11, 738-762	112
729	Evaluation of in vitro and in vivo biocompatibility of a myo-inositol hexakisphosphate gelated polyaniline hydrogel in a rat model. **2016**, 6, 23931	34
728	Towards a novel bioelectrocatalytic platform based on "wiring" of pyrroloquinoline quinone-dependent glucose dehydrogenase with an electrospun conductive polymeric fiber architecture. **2016**, 6, 19858	7
727	Supercapacitive studies on electropolymerized natural organic phosphate doped polypyrrole thin films. **2016**, 220, 373-383	46
726	Synthesis of a novel electrode material containing phytic acid-polyaniline nanofibers for simultaneous determination of cadmium and lead ions. **2016**, 947, 32-41	34

725	3D Polyaniline Architecture by Concurrent Inorganic and Organic Acid Doping for Superior and Robust High Rate Supercapacitor Performance. **2016**, 6, 21002	71
724	CuP/RGO Nanocomposite as a New Anode for Lithium-Ion Batteries. **2016**, 6, 35189	39
723	Mechanical assembly of complex, 3D mesostructures from releasable multilayers of advanced materials. **2016**, 2, e1601014	152
722	Stretchable Hydrogel Electronics and Devices. **2016**, 28, 4497-505	418
721	Nanostructured Conjugated Polymers for Energy-Related Applications beyond Solar Cells. **2016**, 11, 1489-511	127
720	Biocatalytic approach as alternative to chemical synthesis of polyaniline/carbon nanotube composite with enhanced electrochemical properties. **2016**, 6, 60372-60375	5
719	Heterogeneous silicon mesostructures for lipid-supported bioelectric interfaces. **2016**, 15, 1023-30	99
718	Porous polymer electrolytes with high ionic conductivity and good mechanical property for rechargeable batteries. **2016**, 307, 320-328	35
717	Amorphous nanostructured FeOOH and Co-Ni double hydroxides for high-performance aqueous asymmetric supercapacitors. **2016**, 21, 145-153	196
716	Rapid formation of highly stretchable and notch-insensitive hydrogels. **2016**, 6, 30570-30576	9
715	Multifunctional biosensor based on self-assembled multi-walled carbon nanotubes sponge. **2016**, 27, 6911-6917	7
714	Femtosecond laser direct writing of metal microstructure in a stretchable poly(ethylene glycol) diacrylate (PEGDA) hydrogel. **2016**, 41, 1392-5	18
713	Dropwise gelation-dehydration kinetics during drop-on-demand printing of hydrogel-based materials. **2016**, 97, 15-25	8
712	Recent advances for cyclodextrin-based materials in electrochemical sensing. **2016**, 80, 232-241	71
711	Designing Hierarchically Nanostructured Conductive Polymer Gels for Electrochemical Energy Storage and Conversion. **2016**, 28, 2466-2477	185
710	Brine solution-driven synthesis of porous polyaniline for supercapacitor electrode application. **2016**, 87, 129-137	30
709	Smart, stretchable and wearable supercapacitors: prospects and challenges. **2016**, 18, 4218-4235	64
708	Rapid synthesis of hierarchical nanostructured Polyaniline hydrogel for high power density energy storage application and three-dimensional multilayers printing. **2016**, 51, 4274-4282	39

707	Biopolymer hybrid electrodes for scalable electricity storage. **2016**, 3, 174-185	41
706	Nanostructured conducting polymers for energy applications: towards a sustainable platform. **2016**, 8, 6921-47	173
705	Self-Assembling Hydrogels. **2016**, 219-250	6
704	Polyaniline All Solid-State Pseudocapacitor: Role of Morphological Variations in Performance Evolution. **2016**, 196, 131-139	38
703	Robust hybrid hydrogels with good rectification properties and their application as active materials for dye-sensitized solar cells: insights from AC impedance spectroscopy. **2016**, 4, 4194-4210	29
702	Towards sustainable solid-state supercapacitors: electroactive conducting polymers combined with biohydrogels. **2016**, 4, 1792-1805	79
701	Electroactive poly(sulfobetaine-3,4-ethylenedioxythiophene) (PSBEDOT) with controllable antifouling and antimicrobial properties. **2016**, 7, 1976-1981	56
700	Extraordinarily high-rate capability of polyaniline nanorod arrays on graphene nanomesh. **2016**, 304, 111-118	61
699	Conductive Polymer Hydrogels. **2016**, 19-44	33
698	Review of the synergies between computational modeling and experimental characterization of materials across length scales. **2016**, 51, 1178-1203	21
697	Self-Crosslink Method for a Straightforward Synthesis of Poly(Vinyl Alcohol)-Based Aerogel Assisted by Carbon Nanotube. **2017**, 27, 1604423	40
696	Formulation of organic and inorganic hydrogel matrices for immobilization of β-glucosidase in microfluidic platform. **2017**, 17, 714-722	6
695	Poly-γ-glutamic Acid Hydrogels as Electrolyte for Poly(3,4-ethylenedioxythiophene)-Based Supercapacitors. **2017**, 121, 3182-3193	22
694	Inorganic Porous Films for Renewable Energy Storage. **2017**, 2, 373-390	58
693	Free-standing oligo(oxyethylene)-functionalized polythiophene with the 3,4-ethylenedioxythiophene building block: electrosynthesis, electrochromic and thermoelectric properties. **2017**, 228, 361-370	19
692	Investigation into Pseudo-Capacitance Behavior of Glycoside-Containing Hydrogels. **2017**, 9, 3554-3561	7
691	Soft-Template Construction of 3D Macroporous Polypyrrole Scaffolds. **2017**, 13, 1604099	28
690	High Power In-Plane Micro-Supercapacitors Based on Mesoporous Polyaniline Patterned Graphene. **2017**, 13, 1603388	47

689	A π-conjugation-containing soft and conductive injectable polymer hydrogel highly efficiently rebuilds cardiac function after myocardial infarction. **2017**, 122, 63-71	103
688	Visual Sensing of Ag+ Ions through Gelation of Cholesterol- Appended Benzimidazole and Associated Ion Conducting Behaviour. **2017**, 2, 959-966	15
687	Elastic Compressible Energy Storage Devices from Ice Templated Polymer Gels treated with Polyphenols. **2017**, 121, 3270-3278	16
686	Wearable/disposable sweat-based glucose monitoring device with multistage transdermal drug delivery module. **2017**, 3, e1601314	596
685	Porous Silicon: From Optical Sensor to Drug Delivery System. **2017**, 217-252	
684	Low-Cost and Novel Si-Based Gel for Li-Ion Batteries. **2017**, 9, 10699-10707	34
683	Nanostructured Conductive Polymer Gels as a General Framework Material To Improve Electrochemical Performance of Cathode Materials in Li-Ion Batteries. **2017**, 17, 1906-1914	107
682	Interpenetrating Conducting Hydrogel Materials for Neural Interfacing Electrodes. **2017**, 6, 1601177	70
681	Silicon Derived from Glass Bottles as Anode Materials for Lithium Ion Full Cell Batteries. **2017**, 7, 917	41
680	Preparation and electrochemical performances of graphene/polypyrrole nanocomposite with anthraquinone-graphene oxide as active oxidant. **2017**, 119, 111-118	48
679	A Quinonoid-Imine-Enriched Nanostructured Polymer Mediator for Lithium-Sulfur Batteries. **2017**, 29, 1606802	107
678	Ultrahigh-Water-Content, Superelastic, and Shape-Memory Nanofiber-Assembled Hydrogels Exhibiting Pressure-Responsive Conductivity. **2017**, 29, 1700339	162
677	Three-dimensional polypyrrole-derived carbon nanotube framework for dye adsorption and electrochemical supercapacitor. **2017**, 414, 218-223	54
676	Conductive catalytic redox hydrogel composed of aniline and vinyl-ferrocene for ultrasensitive detection of prostate specific antigen. **2017**, 248, 545-550	19
675	Graphene directed architecture of fine engineered nanostructures with electrochemical applications. **2017**, 242, 202-218	20
674	Conducting Polymer Hydrogels: Synthesis, Properties, and Applications for Biosensors. **2017**, 175-208	
673	A mini review on hydrogels classification and recent developments in miscellaneous applications. **2017**, 79, 958-971	230
672	Cellulose-based Supercapacitors: Material and Performance Considerations. **2017**, 7, 1700130	118

671	Ultrahigh energy density supercapacitors through a double hybrid strategy. **2017**, 5, 58-65	25
670	One-dimensional polyaniline thorn/BiOCl chip heterostructures: self-sacrificial template-induced synthesis and electrochemical performance. **2017**, 1, 859-866	10
669	An all-solid-state asymmetric device based on a polyaniline hydrogel for a high energy flexible supercapacitor. **2017**, 41, 237-244	38
668	Effect of the polymerization bath on structure and electrochemical properties of polyaniline-poly(styrene sulfonate) hydrogels. **2017**, 784, 115-123	8
667	Carbon-based catalysts for metal-free electrocatalysis. **2017**, 4, 18-25	70
666	Ultrahigh-Conductivity Polymer Hydrogels with Arbitrary Structures. **2017**, 29, 1700974	199
665	Label-free electrochemical immunoassay for □-fetoprotein based on a redox matrix of Prussian blue-reduced graphene oxide/gold nanoparticles-poly(3,4-ethylenedioxythiophene) composite. **2017**, 799, 625-633	18
664	Enhancing the Properties of Conductive Polymer Hydrogels by Freeze-Thaw Cycles for High-Performance Flexible Supercapacitors. **2017**, 9, 20142-20149	82
663	Kirigami pattern design of mechanically driven formation of complex 3D structures through topology optimization. **2017**, 15, 139-144	28
662	Polyaniline nanoflowers grown on vibration-isolator-mimetic polyurethane nanofibers for flexible supercapacitors with prolonged cycle life. **2017**, 5, 7933-7943	32
661	Printing, folding and assembly methods for forming 3D mesostructures in advanced materials. **2017**, 2,	372
660	Properties and toughening mechanisms of PVA/PAM double-network hydrogels prepared by freeze-thawing and anneal-swelling. **2017**, 77, 1017-1026	55
659	Hydrogel Based Biosensors for In Vitro Diagnostics of Biochemicals, Proteins, and Genes. **2017**, 6, 1601475	83
658	Rational design of graphene @ nitrogen and phosphorous dual-doped porous carbon sandwich-type layer for advanced lithium□sulfur batteries. **2017**, 52, 7719-7732	36
657	Novel multi-configuration aniline/phytic acid based aerogel with directed higher performance. **2017**, 198, 206-209	5
656	A Tunable 3D Nanostructured Conductive Gel Framework Electrode for High-Performance Lithium Ion Batteries. **2017**, 29, 1603922	124
655	Rechargeable zinc□air batteries: a promising way to green energy. **2017**, 5, 7651-7666	323
654	Mechanical response and network characterization of conductive polyaniline/polyacrylamide gels. **2017**, 187, 88-95	7

653	Conducting polymer hydrogels. **2017**, 71, 269-291	49
652	Polyacrylamide-phytic acid-polydopamine conducting porous hydrogel for rapid detection and removal of copper (II) ions. **2017**, 91, 306-312	63
651	Sulfur impregnated N, P co-doped hierarchical porous carbon as cathode for high performance Li-S batteries. **2017**, 341, 165-174	125
650	1.82 wt.% Pt/N, P co-doped carbon overwhelms 20 wt.% Pt/C as a high-efficiency electrocatalyst for hydrogen evolution reaction. **2017**, 10, 238-246	73
649	Nature-inspired thermo-responsive multifunctional membrane adaptively hybridized with PNIPAm and PPy. **2017**, 9, e445-e445	25
648	General Method of Manipulating Formation, Composition, and Morphology of Solid-Electrolyte Interphases for Stable Li-Alloy Anodes. **2017**, 139, 17359-17367	81
647	Mechanically robust, photopatternable conductive hydrogel composites. **2017**, 120, 66-73	22
646	Material and Structural Design of Novel Binder Systems for High-Energy, High-Power Lithium-Ion Batteries. **2017**, 50, 2642-2652	186
645	Applications of graphene-based composite hydrogels: a review. **2017**, 7, 51008-51020	42
644	A Triblock Copolymer Design Leads to Robust Hybrid Hydrogels for High-Performance Flexible Supercapacitors. **2017**, 9, 36301-36310	27
643	Asymmetric supercapacitors utilizing highly porous metal-organic framework derived Co3O4 nanosheets grown on Ni foam and polyaniline hydrogel derived N-doped nanocarbon electrode materials. **2017**, 689, 162-168	12
642	Nitrogen-Rich Conjugated Microporous Polymers: Facile Synthesis, Efficient Gas Storage, and Heterogeneous Catalysis. **2017**, 9, 38390-38400	106
641	Conductive hydrogel films produced by freestanding electrophoretic deposition and polymerization at the interface of immiscible liquids. **2017**, 153, 128-135	2
640	A nanocomposite containing Prussian Blue, platinum nanoparticles and polyaniline for multi-amplification of the signal of voltammetric immunosensors: highly sensitive detection of carcinoma antigen 125. **2017**, 184, 4269-4277	27
639	Preparation of high strain porous polyvinyl alcohol/polyaniline composite and its applications in all-solid-state supercapacitor. **2017**, 364, 200-207	36
638	Assembly of Conjugated Nanosystems for Electronic Sensing Devices. **2017**, 3, 1700209	8
637	Mechanochemical assembly of 3D mesoporous conducting-polymer aerogels for high performance hybrid electrochemical energy storage. **2017**, 41, 193-200	14
636	Dynamic Conjugated Polymer Ionic Networks. **2017**, 50, 7577-7583	13

635	Multidimensional performance optimization of conducting polymer-based supercapacitor electrodes. **2017**, 1, 1857-1874	97
634	Electrocatalysis of Rechargeable Non-Lithium Metal–Air Batteries. **2017**, 4, 1700589	17
633	Electrostatic-Interaction-Assisted Construction of 3D Networks of Manganese Dioxide Nanosheets for Flexible High-Performance Solid-State Asymmetric Supercapacitors. **2017**, 11, 7879-7888	100
632	3D Nanostructured Polypyrrole/Sodium Alginate Conducting Hydrogel from self-assembly with High Supercapacitor Performance. **2017**, 56, 532-540	13
631	Kinetics and electrochemical evolution of binary silicon–polymer systems for lithium ion batteries. **2017**, 7, 36541-36549	18
630	Phytic acid-assisted electrochemically synthesized three-dimensional O, P-functionalized graphene monoliths with high capacitive performance. **2017**, 9, 12601-12608	13
629	Anthraquinone-2-sulfonate immobilized to conductive polypyrrole hydrogel as a bioanode to enhance power production in microbial fuel cell. **2017**, 244, 452-455	18
628	Synthesis of an electronically conductive hydrogel from a hydrogelator and a conducting polymer. **2017**, 41, 9602-9606	6
627	Folic Acid-Polyaniline Hybrid Hydrogel for Adsorption/Reduction of Chromium(VI) and Selective Adsorption of Anionic Dye from Water. **2017**, 5, 9325-9337	85
626	Conductive Polymer-Inorganic Hybrid Materials through Synergistic Mutual Doping of the Constituents. **2017**, 9, 27964-27971	19
625	Cellular interfaces with hydrogen-bonded organic semiconductor hierarchical nanocrystals. **2017**, 8, 91	37
624	An interpenetrating, microstructurable and covalently attached conducting polymer hydrogel for neural interfaces. **2017**, 58, 365-375	52
623	Elastic soft hydrogel supercapacitor for energy storage. **2017**, 5, 24942-24950	58
622	A Bioinspired Alginate-Gum Arabic Hydrogel with Micro-/Nanoscale Structures for Controlled Drug Release in Chronic Wound Healing. **2017**, 9, 22160-22175	81
621	A bio-electrochemical membrane system for more sustainable wastewater treatment with MnO/PANI modified stainless steel cathode and photosynthetic provision of dissolved oxygen by algae. **2017**, 76, 1907-1914	8
620	Large anion incorporation to improve the performance of large, paper based conducting polymer supercapacitors. **2017**, 5, 112-117	7
619	Ultrasonic-assisted synthesis of polyvinyl alcohol/phytic acid polymer film and its thermal stability, mechanical properties and surface resistivity. **2017**, 39, 853-862	22
618	Multifunctional Nanostructured Conductive Polymer Gels: Synthesis, Properties, and Applications. **2017**, 50, 1734-1743	257

617	Phytic Acid Doped Polyaniline Nanofibers for Enhanced Aqueous Copper(II) Adsorption Capability. **2017**, 5, 6654-6664	69
616	Enhancement in charge storage upon conversion of conjugated polymer spheres to fibers. **2017**, 246, 1023-1028	2
615	Mellitic Triimide-Doped Carbon Nitride as Sunlight-Driven Photocatalysts for Hydrogen Peroxide Production. **2017**, 5, 6478-6485	58
614	Large scale synthesis of binary composite nanowires in the Mn 2 O 3 -SnO 2 system with improved charge storage capabilities. **2017**, 327, 962-972	41
613	Engineered elastomer substrates for guided assembly of complex 3D mesostructures by spatially nonuniform compressive buckling. **2017**, 27, 1604281	41
612	Conductive Polymer Nanosheets Generated from the Crystal Surface of an Organic Oxidant. **2017**, 82, 177-180	10
611	Biosensing using photolithographically micropatterned electrodes of PEDOT:PSS on ITO substrates. **2017**, 242, 140-147	26
610	A novel glucose sensor using lutetium phthalocyanine as redox mediator in reduced graphene oxide conducting polymer multifunctional hydrogel. **2017**, 92, 638-645	78
609	Conducting Polymer Hydrogels and Their Applications. **2017**, 193-221	2
608	Rational design of sandwiched polyaniline nanotube/layered graphene/polyaniline nanotube papers for high-volumetric supercapacitors. **2017**, 309, 89-97	86
607	Tuning the Conductivity of Polyaniline through Doping by Means of Single Precursor Vapor Phase Infiltration. **2017**, 4, 1600806	20
606	Free standing three-dimensional nitrogen-doped carbon nanowire array for high-performance supercapacitors. **2017**, 308, 222-228	42
605	Smart Nanomaterials. **2017**, 219-276	1
604	3D inkjet printing of star block copolymer hydrogels cross-linked using various metallic ions. **2017**, 7, 55571-55576	4
603	Hydrogels for Biomedical Applications: Their Characteristics and the Mechanisms behind Them. **2017**, 3,	390
602	Visual Prosthesis: Interfacing Stimulating Electrodes with Retinal Neurons to Restore Vision. **2017**, 11, 620	33
601	Highly compressible three-dimensional graphene hydrogel for foldable all-solid-state supercapacitor. **2018**, 384, 214-222	80
600	Hierarchical nanostructured □Fe2O3/polyaniline anodes for high performance supercapacitors. **2018**, 269, 21-29	46

599	A molecular cross-linking approach for hybrid metal oxides. **2018**, 17, 341-348	66
598	Hydrothermal direct synthesis of polyaniline, graphene/polyaniline and N-doped graphene/polyaniline hydrogels for high performance flexible supercapacitors. **2018**, 6, 9245-9256	111
597	Stretchable All-Gel-State Fiber-Shaped Supercapacitors Enabled by Macromolecularly Interconnected 3D Graphene/Nanostructured Conductive Polymer Hydrogels. **2018**, 30, e1800124	304
596	A facile template approach to preparing stable NFC/Ag/polyaniline nanocomposites for imparting multifunctionality to paper. **2018**, 194, 97-102	7
595	Ultrasoft Self-Healing Nanoparticle-Hydrogel Composites with Conductive and Magnetic Properties. **2018**, 6, 6395-6403	71
594	Mechanically robust double-crosslinked network functionalized graphene/polyaniline stiff hydrogels for superior performance supercapacitors. **2018**, 6, 8568-8578	57
593	Electroactive Gellan Gum/Polyaniline Spongy-Like Hydrogels. **2018**, 4, 1779-1787	17
592	Novel interpenetrating 3D network polyaniline/phenolic aerogel with combined thermal and electrical performances. **2018**, 135, 45953	
591	Facile and fast polyaniline-directed synthesis of monolithic carbon cryogels from glucose. **2018**, 265, 26-34	13
590	Synthesis and characterization of phosphorized polyaniline doped with phytic acid and its anticorrosion properties for Mg-Li alloy. **2018**, 55, 24-35	13
589	A high-capacitance flexible solid-state supercapacitor based on polyaniline and Metal-Organic Framework (UiO-66) composites. **2018**, 379, 350-361	99
588	Hydrogels: Promising Energy Storage Materials. **2018**, 3, 1309-1320	9
587	A flexible polyaniline-based bioelectronic patch. **2018**, 6, 493-500	20
586	In situ formation of ultrafine Pt nanoparticles on surfaces of polyaniline nanofibers as efficient heterogeneous catalysts for the hydrogenation reduction of nitrobenzene. **2018**, 296, 567-574	13
585	Three-dimensional design and fabrication of reduced graphene oxide/polyaniline composite hydrogel electrodes for high performance electrochemical supercapacitors. **2018**, 29, 175402	41
584	Multifunctional Stimuli-Responsive Hydrogels with Self-Healing, High Conductivity, and Rapid Recovery through Host□Guest Interactions. **2018**, 30, 1729-1742	345
583	All Inkjet-Printed Amperometric Multiplexed Biosensors Based on Nanostructured Conductive Hydrogel Electrodes. **2018**, 18, 3322-3327	133
582	Highly Dispersed Mo2C Anchored on N,P-Codoped Graphene as Efficient Electrocatalyst for Hydrogen Evolution Reaction. **2018**, 10, 2300-2304	11

581	Highly sensitive and stable zwitterionic poly(sulfobetaine-3,4-ethylenedioxythiophene) (PSBEDOT) glucose biosensor. **2018**, 9, 2540-2546	38
580	Nitrogen and phosphorus co-doped carbon hollow spheres derived from polypyrrole for high-performance supercapacitor electrodes. **2018**, 437, 169-175	56
579	Cross-linkable graphene oxide embedded nanocomposite hydrogel with enhanced mechanics and cytocompatibility for tissue engineering. **2018**, 106, 1247-1257	5
578	A facile strategy to prepare superhydrophilic polyvinylidene fluoride (PVDF) based membranes and the thermodynamic mechanisms underlying the improved performance. **2018**, 197, 271-280	17
577	Conducting □Fe2O3 nanorod/polyaniline/CNT gel framework for high performance anodes towards supercapacitors. **2018**, 156, 231-237	35
576	Analysis of Degradation Mechanisms in Quinone-Based Electrodes for Aqueous Electrolyte System via In Situ XRD Measurements. **2018**, 122, 2461-2466	12
575	Flexible Electrodes for Supercapacitors Based on the Supramolecular Assembly of Biohydrogel and Conducting Polymer. **2018**, 122, 1078-1090	33
574	Rapid thermal responsive conductive hybrid cryogels with shape memory properties, photothermal properties and pressure dependent conductivity. **2018**, 526, 281-294	52
573	Prototyping flexible supercapacitors produced with biohydrogel. **2018**, 16, 60-70	6
572	Tough and Conductive Hybrid Hydrogels Enabling Facile Patterning. **2018**, 10, 13685-13692	63
571	Dually Synergetic Network Hydrogels with Integrated Mechanical Stretchability, Thermal Responsiveness, and Electrical Conductivity for Strain Sensors and Temperature Alertors. **2018**, 10, 14045-14054	108
570	Robust Nanofibrillated Cellulose Hydro/Aerogels from Benign Solution/Solvent Exchange Treatment. **2018**, 6, 6624-6634	22
569	Tetrazole amphiphile inducing growth of conducting polymers hierarchical nanostructures and their electromagnetic absorption properties. **2018**, 29, 215604	8
568	Conducting Polymeric Hydrogel Electrolyte Based on Carboxymethylcellulose and Polyacrylamide/Polyaniline for Supercapacitor Applications. **2018**, 17, 1760003	9
567	Review of recent achievements in self-healing conductive materials and their applications. **2018**, 53, 27-46	120
566	Organic Electrodes and Communications with Excitable Cells. **2018**, 28, 1700587	33
565	Milk powder-derived bifunctional oxygen electrocatalysts for rechargeable Zn-air battery. **2018**, 11, 134-143	33
564	Improved screen-printed carbon electrode for multiplexed label-free amperometric immuniosensor: Addressing its conductivity and reproducibility challenges. **2018**, 101, 304-310	26

563	Phytic acid-assisted synthesis of ultrafine NiCo2S4 nanoparticles immobilized on reduced graphene oxide as high-performance electrode for hybrid supercapacitors. **2018**, 333, 603-612	89
562	Sandwich-format ECL immunosensor based on Au star@BSA-Luminol nanocomposites for determination of human chorionic gonadotropin. **2018**, 101, 219-226	61
561	A Hierarchically Porous Carbon Fabric for Highly Sensitive Electrochemical Sensors. **2018**, 20, 1700608	15
560	Living Bioelectronics: Strategies for Developing an Effective Long-Term Implant with Functional Neural Connections. **2018**, 28, 1702969	42
559	Rapid and efficient uranium(VI) capture by phytic acid/polyaniline/FeOOH composites. **2018**, 511, 1-11	42
558	Acid Red 27-crosslinked polyaniline with nanofiber structure as electrode material for supercapacitors. **2018**, 212, 259-262	9
557	A hydrogel-mediated scalable strategy toward core-shell polyaniline/poly(acrylic acid)-modified carbon nanotube hybrids as efficient electrodes for supercapacitor applications. **2018**, 436, 189-197	17
556	Organic Electronics for Point-of-Care Metabolite Monitoring. **2018**, 36, 45-59	76
555	Soft poly(2-chloroaniline)/pectin hydrogel and its electromechanical properties. **2018**, 32, 788-799	5
554	Conductive Tough Hydrogel for Bioapplications. **2018**, 18, 1700270	32
553	A Self-Healable, Highly Stretchable, and Solution Processable Conductive Polymer Composite for Ultrasensitive Strain and Pressure Sensing. **2018**, 28, 1705551	285
552	Realizing High Capacitance and Rate Capability in Polyaniline by Enhancing the Electrochemical Surface Area through Induction of Superhydrophilicity. **2018**, 10, 676-686	32
551	Facile synthesis of polyaniline-polythionine redox hydrogel: Conductive, antifouling and enzyme-linked material for ultrasensitive label-free amperometric immunosensor toward carcinoma antigen-125. **2018**, 997, 60-66	32
550	A scalable ultrasonic-assisted and foaming combination method preparation polyvinyl alcohol/phytic acid polymer sponge with thermal stability and conductive capability. **2018**, 42, 18-25	15
549	Materials and Structures toward Soft Electronics. **2018**, 30, e1801368	298
548	Copper-based hydrogels with dicarboxylate spacer ligands for selective carbon dioxide separation applications. **2018**, 42, 18242-18251	3
547	Recyclable, stretchable and conductive double network hydrogels towards flexible strain sensors. **2018**, 6, 13316-13324	59
546	Conducting Polymers as Elements of Miniature Biocompatible Sensor. **2018**,	

545	Stable, Strain-Sensitive Conductive Hydrogel with Antifreezing Capability, Remoldability, and Reusability. **2018**, 10, 44000-44010	137
544	Charged solitons in branched conducting polymers. **2018**, 149, 164908	7
543	Confining Redox Electrolytes in Functionalized Porous Carbon with Improved Energy Density for Supercapacitors. **2018**, 10, 42494-42502	51
542	3D Additive Manufacturing and Micro-Assembly for Transfection of 3D-Cultured Cells and Tissues. **2018**,	0
541	Soft-Templated Synthesis of Lightweight, Elastic, and Conductive Nanotube Aerogels. **2018**, 10, 37426-37433	13
540	Electrostatically regulated ternary-doped carbon foams with exposed active sites as metal-free oxygen reduction electrocatalysts. **2018**, 10, 19498-19508	11
539	Ultrastretchable Strain Sensors and Arrays with High Sensitivity and Linearity Based on Super Tough Conductive Hydrogels. **2018**, 30, 8062-8069	207
538	Soft Conducting Polymer Hydrogels Cross-Linked and Doped by Tannic Acid for Spinal Cord Injury Repair. **2018**, 12, 10957-10967	146
537	Morphology-controlled fabrication of polypyrrole hydrogel for solid-state supercapacitor. **2018**, 407, 105-111	73
536	Capacitive Organic Anode Based on Fluorinated-Contorted Hexabenzocoronene: Applicable to Lithium-Ion and Sodium-Ion Storage Cells. **2018**, 5, 1801365	19
535	Ultrahigh Sensitivity Acetaminophen Sensor Based on Network-Structured Nanocarbons. **2018**, 165, H872-H880	9
534	Polypyrrole as Electrically Conductive Biomaterials: Synthesis, Biofunctionalization, Potential Applications and Challenges. **2018**, 1078, 347-370	12
533	Interpenetrating Network Hydrogels based on Nanostructured Conductive Polymers for Flexible Supercapacitor. **2018**, 60, 647-654	3
532	Electrochemically in situ controllable assembly of hierarchically-ordered and integrated inorganic□arbon hybrids for efficient hydrogen evolution. **2018**, 5, 1194-1203	21
531	3D porous Mn3O4/PANi electrodes similar to reinforced concrete structure for high performance supercapacitors. **2018**, 29, 16921-16931	5
530	Conductive Hydrogels as Smart Materials for Flexible Electronic Devices. **2018**, 24, 16930-16943	123
529	Regenerative medicine: Induced pluripotent stem cells and their benefits on accelerated bone tissue reconstruction using scaffolds. **2018**, 33, 1573-1591	6
528	One-step preparation of nanobeads-based polypyrrole hydrogel by a reactive-template method and their applications in adsorption and catalysis. **2018**, 527, 214-221	25

527	A Flexible and Knittable Fiber Supercapacitor for Wearable Energy Storage with High Energy Density and Mechanical Robustness. **2018**, 165, A1515-A1522	19
526	Conjugated polymer-based carbonaceous films as binder-free carbon electrodes in supercapacitors.. **2018**, 8, 19512-19523	3
525	Facile Soaking Strategy Toward Simultaneously Enhanced Conductivity and Toughness of Self-Healing Composite Hydrogels Through Constructing Multiple Noncovalent Interactions. **2018**, 10, 19133-19142	43
524	Chitosan/phytic acid hydrogel as a platform for facile synthesis of heteroatom-doped porous carbon frameworks for electrocatalytic oxygen reduction. **2018**, 137, 68-77	24
523	Tunable ultra low and broad acoustic absorption by controllable pyrolysis of fiber materials. **2018**, 16, 226-231	1
522	Highly Sensitive, Printable Nanostructured Conductive Polymer Wireless Sensor for Food Spoilage Detection. **2018**, 18, 4570-4575	131
521	2.25 Hydrophobic Materials. **2018**, 796-831	
520	Conductive Polymers: Opportunities and Challenges in Biomedical Applications. **2018**, 118, 6766-6843	320
519	A Multifunctional Metallohydrogel with Injectability, Self-Healing, and Multistimulus-Responsiveness for Bioadhesives. **2018**, 303, 1800305	10
518	A One-Step Method of Hydrogel Modification by Single-Walled Carbon Nanotubes for Highly Stretchable and Transparent Electronics. **2018**, 10, 28069-28075	52
517	Transparent, Adhesive, and Conductive Hydrogel for Soft Bioelectronics Based on Light-Transmitting Polydopamine-Doped Polypyrrole Nanofibrils. **2018**, 30, 5561-5572	211
516	Nanocellulose-Mediated Electroconductive Self-Healing Hydrogels with High Strength, Plasticity, Viscoelasticity, Stretchability, and Biocompatibility toward Multifunctional Applications. **2018**, 10, 27987-28002	296
515	Conductive Hydrogel Electrodes for Delivery of Long-Term High Frequency Pulses. **2017**, 11, 748	21
514	Construction of vertically aligned PPy nanosheets networks anchored on MnCo2O4 nanobelts for high-performance asymmetric supercapacitor. **2018**, 393, 169-176	54
513	Biopolymeric Nanostructures: Biosensors and Bioimaging. **2018**, 127-144	1
512	Facile fabrication of thermo/redox responsive hydrogels based on a dual crosslinked matrix for a smart on-off switch. **2018**, 14, 4327-4334	16
511	Self-assembled supermolecular aggregate supported on boron nitride nanoplatelets for flame retardant and friction application. **2018**, 349, 223-234	53
510	A Hydrogel of Ultrathin Pure Polyaniline Nanofibers: Oxidant-Templating Preparation and Supercapacitor Application. **2018**, 12, 5888-5894	137

509	Electrochemical immunoassay for tumor markers based on hydrogels. **2018**, 18, 457-465	8
508	Fast charge separation and photocurrent enhancement on black TiO2 nanotubes co-sensitized with Au nanoparticles and PbS quantum dots. **2018**, 277, 244-254	16
507	Phytic acid assisted fabrication of graphene/polyaniline composite hydrogels for high-capacitance supercapacitors. **2018**, 155, 132-137	38
506	Water-in-Acid Gel Polymer Electrolyte Realized through a Phosphoric Acid-Enriched Polyelectrolyte Matrix toward Solid-State Supercapacitors. **2018**, 6, 12630-12640	14
505	Supramolecular Hydrogels for High-Voltage and Neutral-pH Flexible Supercapacitors. **2018**, 1, 4261-4268	26
504	Extremely stretchable and electrically conductive hydrogels with dually synergistic networks for wearable strain sensors. **2018**, 6, 9200-9207	122
503	Nanostructured Functional Hydrogels as an Emerging Platform for Advanced Energy Technologies. **2018**, 30, e1801796	121
502	Macroporous Conductive Hydrogels with Fatigue Resistance as Strain Sensor for Human Motion Monitoring. **2018**, 303, 1800339	20
501	Hierarchical porous PANI/MIL-101 nanocomposites based solid-state flexible supercapacitor. **2018**, 281, 582-593	47
500	A Wearable Supercapacitor Engaged with Gold Leaf Gilding Cloth Toward Enhanced Practicability. **2018**, 10, 21297-21305	19
499	Designing Boron Nitride Islands in Carbon Materials for Efficient Electrochemical Synthesis of Hydrogen Peroxide. **2018**, 140, 7851-7859	184
498	A DFT study of the structural and electronic properties of periodic forms of aniline and pyrrole polymers and aniline-pyrrole copolymer. **2018**, 24, 148	5
497	Structure-function study of poly(sulfobetaine 3,4-ethylenedioxythiophene) (PSBEDOT) and its derivatives. **2018**, 75, 161-170	5
496	Carbon-Based Polyaniline Nanocomposites for Supercapacitors. **2018**, 489-535	
495	Functional Three-Dimensional Porous Conductive Polymer Hydrogels for Sensitive Electrochemiluminescence in Situ Detection of HO Released from Live Cells. **2018**, 90, 8462-8469	75
494	Engineering conformal nanoporous polyaniline via oxidative chemical vapor deposition and its potential application in supercapacitors. **2019**, 194, 156-164	21
493	Conducting gels: A chronicle of technological advances. **2019**, 88, 189-219	24
492	One-Step Preparation of a Highly Stretchable, Conductive, and Transparent Poly(vinyl alcohol)-Phytic Acid Hydrogel for Casual Writing Circuits. **2019**, 11, 32441-32448	47

491	Engineering of MoS2 Quantum Dots/PANI Aerogel for High Performance Supercapaciator. **2019**, 386, 1800242	4
490	Self-Assembled Nanostructured MoS2 Quantum Dot Polyaniline Hybrid Gels for High Performance Solid State Flexible Supercapacitors. **2019**, 2, 6642-6654	15
489	Self-healing conductive hydrogels based on alginate, gelatin and polypyrrole serve as a repairable circuit and a mechanical sensor. **2019**, 7, 5704-5712	66
488	Wafer-Scale Fabrication of Conducting Polymer Hydrogels for Microelectrodes and Flexible Bioelectronics. **2019**, 3, e1900072	8
487	The high performance of polyaniline-gel network modified electrode in 3-(2,2,6,6-tetramethyl-piperidiynl-1-oxyl)-1-methylylimidazoliumbromide biredox electrolyte used for supercapacitor. **2019**, 434, 226745	6
486	Mixed solvent exfoliated transition metal oxides nanosheets based flexible solid state supercapacitor devices endowed with high energy density. **2019**, 43, 12385-12395	23
485	Conducting polyaniline/poly (acrylic acid)/phytic acid multifunctional binders for Si anodes in lithium ion batteries. **2019**, 25, 5323-5331	14
484	Tuning the morphologies and electrical properties of azobenzene-4,4?-dicarboxylate-doped polypyrrole via ultraviolet light irradiation and medium pH alteration. **2019**, 176, 188-195	8
483	Electrochemical Oxygen Reduction Reaction Performance Boosted by N, P Doped Carbon Layer over Manganese Dioxide Nanorod. **2019**, 11, 4617-4623	14
482	Electronic Skin: Recent Progress and Future Prospects for Skin-Attachable Devices for Health Monitoring, Robotics, and Prosthetics. **2019**, 31, e1904765	498
481	Synthesis and Enhancement of Electroactive Biomass/Polypyrrole Hydrogels for High Performance Flexible All-Solid-State Supercapacitors. **2019**, 6, 1901393	23
480	Functional Hydrogels and Their Application in Drug Delivery, Biosensors, and Tissue Engineering. **2019**, 2019, 1-14	23
479	Short-Term Photovoltaic Generation Forecasting Based on LVQ-PSO-BP Neural Network and Markov Chain Method. **2019**, 1267, 012083	0
478	A Novel Least-Mean Kurtosis Adaptive Filtering Algorithm Based on Geometric Algebra. **2019**, 7, 78298-78310	18
477	. **2019**, 7, 61363-61377	2
476	Flexible solid supercapacitor, based on reduction oxidized graphene polymerization (3, 4-ethylenedioxythiophene). **2019**, 118, 01030	
475	Application of Microfluidics in Wearable Devices. **2019**, 3, 1900688	16
474	Dispersed Association of Single-Component Short-Alkyl Chains toward Thermally Programmable and Malleable Multiple-Shape Hydrogel. **2019**, 11, 43622-43630	9

473	Properties of conductive polymer hydrogels and their application in sensors. **2019**, 57, 1606-1621	32
472	Bioactuators based on stimulus-responsive hydrogels and their emerging biomedical applications. **2019**, 11,	100
471	Tough Polyelectrolyte Hydrogels with Antimicrobial Property via Incorporation of Natural Multivalent Phytic Acid. **2019**, 11,	13
470	Cryogel-Based Electronic–Tissue Interfaces with Soft, Highly Compressible, and Tunable Mechanics. **2019**, 304, 1900367	5
469	Semicrystalline Conductive Hydrogels for High-Energy and Stable Flexible Supercapacitors. **2019**, 2, 8163-8172	16
468	Free-standing PEDOT/polyaniline conductive polymer hydrogel for flexible solid-state supercapacitors. **2019**, 322, 134769	78
467	Promotion of the osteogenic activity of an antibacterial polyaniline coating by electrical stimulation. **2019**, 7, 4730-4737	14
466	Direct Patterning of Highly Conductive PEDOT:PSS/Ionic Liquid Hydrogel via Microreactive Inkjet Printing. **2019**, 11, 37069-37076	29
465	High-tolerance crystalline hydrogels formed from self-assembling cyclic dipeptide. **2019**, 10, 1894-1901	6
464	Electroconductive PEDOT:PSS-based hydrogel prepared by freezing-thawing method. **2019**, 5, e02498	20
463	Hybrid conductive hydrogels for washable human motion energy harvester and self-powered temperature-stress dual sensor. **2019**, 66, 104080	41
462	Engineering crystalline quasi-two-dimensional polyaniline thin film with enhanced electrical and chemiresistive sensing performances. **2019**, 10, 4225	78
461	Tipping the polaron–bipolaron balance: concentration and spin effects in doped oligo(aniline)s observed by UV-vis-NIR and TD-DFT. **2019**, 4, 103-109	5
460	Durable Freestanding Hierarchical Porous Electrode for Rechargeable Zinc–Air Batteries. **2019**, 2, 1505-1516	10
459	Temperature dependent supercapacitive performance of NH3 modified TiO2 decorated PPy nanohybrids in various electrolyte systems. **2019**, 249, 1-13	9
458	From Supramolecular Species to Self-Templated Porous Carbon and Metal-Doped Carbon for Oxygen Reduction Reaction Catalysts. **2019**, 131, 5017-5021	6
457	From Supramolecular Species to Self-Templated Porous Carbon and Metal-Doped Carbon for Oxygen Reduction Reaction Catalysts. **2019**, 58, 4963-4967	47
456	Hierarchical void structured Si/PANi/C hybrid anode material for high-performance lithium-ion batteries. **2019**, 300, 341-348	21

455	Conductive polymers for stretchable supercapacitors. **2019**, 12, 1978-1987	109
454	Electrochemically building three-dimensional supramolecular polymer hydrogel for flexible solid-state micro-supercapacitors. **2019**, 301, 136-144	47
453	Superhydrophilic Phytic-Acid-Doped Conductive Hydrogels as Metal-Free and Binder-Free Electrocatalysts for Efficient Water Oxidation. **2019**, 58, 4318-4322	113
452	Conducting Polymers for Flexible Supercapacitors. **2019**, 220, 1800355	89
451	Hydrogel bioelectronics. **2019**, 48, 1642-1667	742
450	Organic semiconductors for biological sensing. **2019**, 7, 1111-1130	60
449	Conductive Tough Hydrogels with a Staggered Ion-Coordinating Structure for High Self-Recovery Rate. **2019**, 11, 24598-24608	32
448	Phytic acid-encapsulated MIL-101(Cr): Remarkable adsorbent for the removal of both neutral indole and basic quinoline from model liquid fuel. **2019**, 375, 121948	11
447	Carbon-based hydrogels: synthesis and their recent energy applications. **2019**, 7, 15491-15518	72
446	Electroconductive hydrogels for biomedical applications. **2019**, 11, e1568	34
445	A redox poly(ionic liquid) hydrogel: Facile method of synthesis and electrochemical sensing. **2019**, 136, 48051	6
444	Polyaniline hydrogel anchored in carbon cloth network to support Co(OH)2 as flexible electrode for high-energy density supercapacitor. **2019**, 106, 158-164	9
443	Doping engineering of conductive polymer hydrogels and their application in advanced sensor technologies. **2019**, 10, 6232-6244	76
442	Flame-retardant, highly sensitive strain sensors enabled by renewable phytic acid-doped biotemplate synthesis and spirally structure design. **2019**, 374, 730-737	25
441	Three-Dimensional Printing and Injectable Conductive Hydrogels for Tissue Engineering Application. **2019**, 25, 398-411	45
440	Facile synthesis of nanostructured polyaniline in ionic liquids for high solubility and enhanced electrochemical properties. **2019**, 2, 279-288	25
439	Hierarchical double-shelled frameworks of polyaniline@N-doped porous carbon for supercapacitors. **2019**, 486, 490-498	13
438	NADH-Free Electroenzymatic Reduction of CO2 by Conductive Hydrogel-Conjugated Formate Dehydrogenase. **2019**, 9, 5584-5589	32

437	Poly-phenylenediamine-derived atomically dispersed Ni sites for the electroreduction of CO2 to CO. **2019**, 6, 1729-1734	9
436	Honeycomb-like polyaniline for flexible and folding all-solid-state supercapacitors. **2019**, 13, 133-144	9
435	Wetting Characteristics of Surfaces. **2019**, 11-44	1
434	Strong and Stretchable Polypyrrole Hydrogels with Biphase Microstructure as Electrodes for Substrate-Free Stretchable Supercapacitors. **2019**, 6, 1900133	22
433	Electroactive bio-epoxy incorporated chitosan-oligoaniline as an advanced hydrogel coating for neural interfaces. **2019**, 131, 389-396	47
432	Development of electrical conducting nanocomposite based on carboxymethyl cellulose hydrogel/silver nanoparticles@polypyrrole. **2019**, 250, 104-114	21
431	Pure PEDOT:PSS hydrogels. **2019**, 10, 1043	271
430	Nanomolar Level Acetaminophen Sensor Based on Novel Polypyrrole Hydrogel Derived N-doped Porous Carbon. **2019**, 31, 711-717	7
429	A Highly Stretchable and Real-Time Healable Supercapacitor. **2019**, 31, e1900573	132
428	Hierarchical PANI/NiCo-LDH Core-Shell Composite Networks on Carbon Cloth for High Performance Asymmetric Supercapacitor. **2019**, 9,	29
427	Recent advancements of polyaniline-based nanocomposites for supercapacitors. **2019**, 424, 108-130	202
426	All-Sprayable Hierarchically Nanostructured Conducting Polymer Hydrogel for Massively Manufactured Flexible All-Solid-State Supercapacitor. **2019**, 7, 1801109	5
425	Functional Hydrogels for Next-Generation Batteries and Supercapacitors. **2019**, 1, 335-348	103
424	Phytic Acid-Doped Cross-linked Polyaniline Nanofibers for Electrochemical Supercapacitor Electrode Applications. **2019**, 74, 145-153	3
423	Superhydrophilic Phytic-Acid-Doped Conductive Hydrogels as Metal-Free and Binder-Free Electrocatalysts for Efficient Water Oxidation. **2019**, 131, 4362-4366	19
422	The in situ synthesis of conductive polyaniline patterns using micro-reactive inkjet printing. **2019**, 7, 2219-2224	19
421	Conductive Recyclable Organogel Composites. **2019**, 304, 1800583	3
420	Deep eutectic solvents as active media for the preparation of highly conducting 3D free-standing PANI xerogels and their derived N-doped and N-, P-codoped porous carbons. **2019**, 146, 813-826	8

419	Conducting Polymers, Hydrogels and Their Composites: Preparation, Properties and Bioapplications. **2019**, 11,	88
418	A new strategy for anchoring a functionalized graphene hydrogel in a carbon cloth network to support a lignosulfonate/polyaniline hydrogel as an integrated electrode for flexible high areal-capacitance supercapacitors. **2019**, 7, 5819-5830	89
417	Rapid template-free synthesis of nanostructured conducting polymer films by tuning their morphology using hyperbranched polymer additives. **2019**, 11, 20977-20986	10
416	Co-CoO/MnO Heterostructured Nanocrystals Anchored on N/P-Doped 3D Porous Graphene for High-Performance Pseudocapacitive Lithium Storage. **2019**, 166, A3820-A3829	6
415	Hybrid Organic-Inorganic Gel Electrocatalyst for Stable Acidic Water Oxidation. **2019**, 13, 14368-14376	18
414	Micro-to-nanometer patterning of solution-based materials for electronics and optoelectronics.. **2019**, 9, 38085-38104	6
413	Nanoconfinement effects of N-doped hierarchical carbon on thermal behaviors of organic phase change materials. **2019**, 18, 280-288	51
412	Electrically conductive hydrogels for flexible energy storage systems. **2019**, 88, 220-240	154
411	Stretchable conductive nanocomposite based on alginate hydrogel and silver nanowires for wearable electronics. **2019**, 7, 031502	62
410	A Self-Healing, All-Organic, Conducting, Composite Peptide Hydrogel as Pressure Sensor and Electrogenic Cell Soft Substrate. **2019**, 13, 163-175	94
409	High-mass loading electrodes with exceptional areal capacitance and cycling performance through a hierarchical network of MnO2 nanoflakes and conducting polymer gel. **2019**, 412, 655-663	21
408	Beyond conventional supercapacitors: Hierarchically conducting polymer-coated 3D nanostructures for integrated on-chip micro-supercapacitors employing ionic liquid electrolytes. **2019**, 247, 131-143	16
407	Design and Fabrication of Heterogeneous, Deformable Substrates for the Mechanically Guided 3D Assembly. **2019**, 11, 3482-3492	17
406	Polyurethane films modified with polyaniline-zinc oxide nanocomposites for biofouling mitigation. **2019**, 359, 1400-1410	21
405	Nano-/Micro-engineering for Future Li□on Batteries. **2019**, 141-176	
404	Nano-Energetic Materials. **2019**,	6
403	Tunable Three-Dimensional Nanostructured Conductive Polymer Hydrogels for Energy-Storage Applications. **2019**, 11, 4258-4267	53
402	Soft and elastic hydrogel-based microelectronics for localized low-voltage neuromodulation. **2019**, 3, 58-68	284

401	Elastic and conductive hydrogel electrodes. **2019**, 3, 9-10	22
400	Flattened-Top Domical Droplet Formed by a Poly(pyrrole) Membrane. **2019**, 304, 1800707	1
399	Facile Assembly of Polyaniline/Graphene Oxide Composite Hydrogels as Adsorbent for Cr(VI) Removal. **2019**, 40, E1777-E1785	24
398	Application of Polyaniline for Li-Ion Batteries, Lithium-Sulfur Batteries, and Supercapacitors. **2019**, 12, 1591-1611	58
397	Interface engineering: Surface hydrophilic regulation of LaFeO towards enhanced visible light photocatalytic hydrogen evolution. **2019**, 536, 105-111	18
396	High-performance stretchable conductive nanocomposites: materials, processes, and device applications. **2019**, 48, 1566-1595	256
395	Polyaniline-based conducting hydrogels. **2019**, 54, 974-996	41
394	High-voltage aqueous asymmetric pseudocapacitors based on methyl blue-doped polyaniline hydrogels and the derived N/S-codoped carbon aerogels. **2020**, 383, 123153	20
393	Fabrication of the Ni/ZnO/BiOI foam for the improved electrochemical biosensing performance to glucose. **2020**, 1095, 93-98	7
392	Stimuli-enabled reversible switched aclonifen electrochemical sensor based on smart PNIPAM/PANI-Cu hybrid conducting microgel. **2020**, 304, 127232	20
391	Material-Based Approaches for the Fabrication of Stretchable Electronics. **2020**, 32, e1902743	149
390	Three-dimensional porous carbon doped with N, O and P heteroatoms as high-performance anode materials for sodium ion batteries. **2020**, 380, 122457	51
389	Facile fabrication of MnO2-embedded 3-D porous polyaniline composite hydrogel for supercapacitor electrode with high loading. **2020**, 32, 286-295	9
388	3D printing of electrically conductive hydrogels for tissue engineering and biosensors - A review. **2020**, 101, 1-13	126
387	Development of polyoxometalate-anchored 3D hybrid hydrogel for high-performance flexible pseudo-solid-state supercapacitor. **2020**, 329, 135181	18
386	Cryopolymerization enables anisotropic polyaniline hybrid hydrogels with superelasticity and highly deformation-tolerant electrochemical energy storage. **2020**, 11, 62	98
385	Platinum nanoparticles on defect-rich nitrogen-doped hollow carbon as an efficient electrocatalyst for hydrogen evolution reactions.. **2020**, 10, 930-937	4
384	A review on recent advances in polymer and peptide hydrogels. **2020**, 16, 1404-1454	150

383	Improved cell viability for large-scale biofabrication with photo-crosslinkable hydrogel systems through a dual-photoinitiator approach. **2019**, 8, 450-461	19
382	A wearable, self-adhesive, long-lastingly moist and healable epidermal sensor assembled from conductive MXene nanocomposites. **2020**, 8, 1788-1795	53
381	Soft conducting polymer hydrogels in situ doped by sulfonated graphene quantum dots for enhanced electrochemical activity. **2020**, 31, 2153-2161	12
380	Shape-controllable binderless self-supporting hydrogel anode for microbial fuel cells. **2020**, 156, 1325-1335	8
379	Biohydrogel from unsaturated polyesteramide: Synthesis, properties and utilization as electrolytic medium for electrochemical supercapacitors. **2020**, 82, 106300	4
378	Three-dimensional polymer networks for solid-state electrochemical energy storage. **2020**, 391, 123548	26
377	A flexible and highly sensitive nitrite sensor enabled by interconnected 3D porous polyaniline/carbon nanotube conductive hydrogels. **2020**, 12, 604-610	10
376	Novel 3-D hierarchical multiconfiguration graphene/polyaniline-based aerogels with directed higher performances. **2020**, 39, 42-53	1
375	Self-Assembly and Cross-Linking of Conducting Polymers into 3D Hydrogel Electrodes for Supercapacitor Applications. **2020**, 3, 923-932	39
374	Enabling Free-Standing 3D Hydrogel Microstructures with Microreactive Inkjet Printing. **2020**, 12, 1832-1839	16
373	Self-Healing and Highly Stretchable Gelatin Hydrogel for Self-Powered Strain Sensor. **2020**, 12, 1558-1566	91
372	High mass loading polyaniline layer anchored cellulose fibers: Enhanced interface junction for high conductivity and flame retardancy. **2020**, 230, 115660	6
371	Polyaniline nanotube synthesized from natural tubular halloysite template as high performance pseudocapacitive electrode. **2020**, 331, 135259	15
370	Self-Standing Hydrogels Composed of Conducting Polymers for All-Hydrogel-State Supercapacitors. **2020**, 26, 1846-1855	20
369	Self-healing polymers for composite structural applications. **2020**, 33-51	1
368	An Amazingly Simple, Fast and Green Synthesis Route to Polyaniline Nanofibers for Efficient Energy Storage. **2020**, 12,	13
367	Preparation of Phosphorus-containing Porous Carbon by Direct Carbonization for Acetone Adsorption. **2020**, 606, 125431	4
366	Hierarchically Structured Stretchable Conductive Hydrogels for High-Performance Wearable Strain Sensors and Supercapacitors. **2020**, 3, 1196-1210	46

365	A Low-Temperature Boost for Stretchable Conductors. **2020**, 3, 983-984	
364	Amyloid Fibril-Templated High-Performance Conductive Aerogels with Sensing Properties. **2020**, 16, e2004932	9
363	Facile preparation of poly(indole/thiophene) for energy storage and sensor applications. **2020**, 358, 136919	2
362	Electrochemical glucose sensors in diabetes management: an updated review (2010-2020). **2020**, 49, 7671-7709	172
361	Polyaniline-Decorated Supramolecular Hydrogel with Tough, Fatigue-Resistant, and Self-Healable Performances for All-In-One Flexible Supercapacitors. **2020**, 12, 9736-9745	52
360	Self-healing hydrogels. **2020**, 369-423	
359	Nitrogen-doped graphene and conducting polymer PEDOT hybrids for flexible supercapacitor and electrochemical sensor. **2020**, 355, 136772	25
358	Responsive Polymers in the Fabrication of Enzyme-Based Biosensors. **2020**, 1267-1286	2
357	3D Polyaniline Nanofibers Anchored on Carbon Paper for High-Performance and Light-Weight Supercapacitors. **2020**, 12,	9
356	Adomain computation of radiative-convective bi-directional stretching flow of a magnetic non-Newtonian fluid in porous media with homogeneous–heterogeneous reactions. **2020**, 34, 2050165	15
355	Green Synthesis of Free Standing Cellulose/Graphene Oxide/Polyaniline Aerogel Electrode for High-Performance Flexible All-Solid-State Supercapacitors. **2020**, 10,	24
354	Hydrogel soft robotics. **2020**, 15, 100258	69
353	A semi-interpenetrating network ionic composite hydrogel with low modulus, fast self-recoverability and high conductivity as flexible sensor. **2020**, 248, 116797	41
352	Ink-Based Additive Nanomanufacturing of Functional Materials for Human-Integrated Smart Wearables. **2020**, 2, 2000117	9
351	Surface grafted cross-linked poly(ionic liquid) hydrogel for electrocatalytic oxidation of cysteine. **2020**, 136, 109928	1
350	Comparative Study on the Effect of Protonation Control for Resistive Gas Sensor Based on Close-Packed Polypyrrole Nanoparticles. **2020**, 10, 1850	4
349	Stretchable bioelectronics: Mitigating the challenges of the percolation threshold in conductive elastomers. **2020**, 8, 101105	5
348	Device Based on Polymer Schottky Junctions and Their Applications: A Review. **2020**, 8, 189646-189660	3

347	Doping engineering of the flexible polyaniline electrochromic material through H2SO4–HClO4 multiple acids for the radiation regulation in snow environment. **2020**, 8, 13336-13341	5
346	Electroconductive Hydrogels for Tissue Engineering: Current Status and Future Perspectives. **2020**, 2, 279-292	18
345	Conducting polymer hydrogels for electrically responsive drug delivery. **2020**, 328, 192-209	29
344	Functional Conductive Hydrogels for Bioelectronics. **2020**, 2, 1287-1301	68
343	Dual Cross-Linked Ion-Based Temperature-Responsive Conductive Hydrogels with Multiple Sensors and Steady Electrocardiogram Monitoring. **2020**, 32, 7670-7678	19
342	Skin-Contactable and Antifreezing Strain Sensors Based on Bilayer Hydrogels. **2020**, 32, 8938-8946	33
341	Gel Electrocatalysts: An Emerging Material Platform for Electrochemical Energy Conversion. **2020**, 32, e2003191	39
340	Inkjet printing for flexible and wearable electronics. **2020**, 8, 120705	30
339	Synthesis and Characterization of Polyaniline-Chitosan Patches with Enhanced Stability in Physiological Conditions. **2020**, 12,	7
338	Protein Gel Phase Transition: Toward Superiorly Transparent and Hysteresis-Free Wearable Electronics. **2020**, 30, 1910080	19
337	Nanocarbon in Polymeric Nanocomposite Hydrogel Design and Multi-Functional Tendencies. **2020**, 59, 1505-1521	9
336	Functional Supramolecular Polymeric Networks: The Marriage of Covalent Polymers and Macrocycle-Based Host-Guest Interactions. **2020**, 120, 6070-6123	196
335	A new concept of a pseudo-Janus structure: employing a Yin-Yang fish structure film with up/down conversion fluorescence and bi-anisotropic conduction to represent the pseudo-Janus structure as a case study. **2020**, 8, 8676-8688	3
334	Thermosensitive ternary core–shell nanocomposites of polystyrene, poly(N-isopropylacrylamide) and polyaniline. **2020**, 10, 4951-4964	1
333	Highly Sensitive Strain Sensor Based on a Stretchable and Conductive Poly(vinyl alcohol)/Phytic Acid/NH-POSS Hydrogel with a 3D Microporous Structure. **2020**, 12, 26496-26508	46
332	Efficient and stable photocatalytic degradation of tetracycline wastewater by 3D Polyaniline/Perylene diimide organic heterojunction under visible light irradiation. **2020**, 397, 125476	58
331	Nitrogen-doped carbon nanotubes intertwined with porous carbon with enhanced cathode performance in lithium–sulfur batteries. **2020**, 4, 3926-3933	6
330	Conductive polypyrrole-carboxymethyl cellulose-titanium nitride/carbon brush hydrogels as bioanodes for enhanced energy output in microbial fuel cells. **2020**, 204, 117942	20

329	A review on biomacromolecular hydrogel classification and its applications. **2020**, 162, 737-747	61
328	A facile preparation of polyaniline/cellulose hydrogels for all-in-one flexible supercapacitor with remarkable enhanced performance. **2020**, 245, 116611	27
327	Nanostructured Polyaniline/Graphene/Fe2O3 Composites Hydrogel as a High-Performance Flexible Supercapacitor Electrode Material. **2020**, 3, 6434-6446	52
326	Conductive Hydrogels-A Novel Material: Recent Advances and Future Perspectives. **2020**, 68, 7269-7280	20
325	Polyvinyl alcohol: a high-resolution hydrogel resist for humidity-sensitive micro-/nanostructure. **2020**, 31, 425303	8
324	Ion-Induced Nanopatterning of Bacterial Cellulose Hydrogels for Biosensing and Anti-Biofouling Interfaces. **2020**, 3, 6719-6728	8
323	Facile synthesis of multi-functional elastic polyaniline/polyvinyl alcohol composite gels by a solution assembly method.. **2020**, 10, 22019-22026	7
322	Bio-Inspired Stretchable, Adhesive, and Conductive Structural Color Film for Visually Flexible Electronics. **2020**, 30, 2000151	77
321	Genetically targeted chemical assembly of functional materials in living cells, tissues, and animals. **2020**, 367, 1372-1376	70
320	From bulk to porous: Structure transformation of nitrogen and phosphorous co-doped carbon material via sodium chloride assistance and its application in lithium-sulfur batteries. **2020**, 830, 154638	8
319	Facilitated Transdermal Drug Delivery Using Nanocarriers-Embedded Electroconductive Hydrogel Coupled with Reverse Electrodialysis-Driven Iontophoresis. **2020**, 14, 4523-4535	41
318	Adsorption effect of nitrogen, sulfur or phosphorus surface functional group on formaldehyde at ambient temperature: Experiments associated with calculations. **2020**, 393, 124729	17
317	Three-Dimensional Polypyrrole Nano-Network with Sb Nanocrystals as Electrode Material for Sodium-Ion and Lithium-Ion Batteries. **2020**, 167, 020527	3
316	Phytic acid-doped poly(aniline-co-pyrrole) copolymers for supercapacitor electrodes applications. **2020**, 31, 6263-6273	4
315	Polymers in electronics. **2020**, 365-392	7
314	One-step modification of nano-polyaniline/glucose oxidase on double-side printed flexible electrode for continuous glucose monitoring: Characterization, cytotoxicity evaluation and in vivo experiment. **2020**, 165, 112408	21
313	Hydrogels and Hydrogel-Derived Materials for Energy and Water Sustainability. **2020**, 120, 7642-7707	266
312	Advances in Sweat Wearables: Sample Extraction, Real-Time Biosensing, and Flexible Platforms. **2020**, 12, 34337-34361	34

311	. **2020**,	0
310	Bifunctional polyaniline electroconductive hydrogels with applications in supercapacitor and wearable strain sensors. **2020**, 31, 938-953	9
309	Reagentless Redox Capacitive Assaying of C-Reactive Protein at a Polyaniline Interface. **2020**, 92, 3508-3511	25
308	Facile fabrication of polyaniline films with hierarchical porous networks for enhanced electrochemical activity. **2020**, 86, 81-89	4
307	Flexible and Wearable Solar Cells and Supercapacitors. **2020**, 87-129	3
306	Polyaniline/Poly(acrylamide-co-sodium acrylate) Porous Conductive Hydrogels with High Stretchability by Freeze-Thaw-Shrink Treatment for Flexible Electrodes. **2020**, 305, 1900737	7
305	Self-Healable Electro-Conductive Hydrogels Based on Core-Shell Structured Nanocellulose/Carbon Nanotubes Hybrids for Use as Flexible Supercapacitors. **2020**, 10,	49
304	Hydrogel machines. **2020**, 36, 102-124	268
303	Stretchable and tough conductive hydrogels for flexible pressure and strain sensors. **2020**, 8, 3437-3459	163
302	Smart Thermomechanochemical Composite Materials Driven by Different Forms of Electromagnetic Radiation. **2020**, 4, 3	3
301	Water-matrix interaction at the drop-drop interface during drop-on-demand printing of hydrogels. **2020**, 150, 119327	1
300	Soft and Ion-Conducting Materials in Bioelectronics: From Conducting Polymers to Hydrogels. **2020**, 9, e1901372	43
299	Electrically conductive fabric coated with polyaniline: physicochemical characterisation and antibacterial assessment. **2020**, 3, 469-477	10
298	Mechanically Interlocked Hydrogel–Elastomer Hybrids for On-Skin Electronics. **2020**, 30, 1909540	55
297	Asymmetric Modification of Carbon Nanotube Arrays with Thermoresponsive Hydrogel for Controlled Delivery. **2020**, 12, 23378-23387	4
296	Mechanical analysis and design of flexible beads-and-thread lithium-ion battery. **2020**, 37, 100717	2
295	Porphyrin-Based Conducting Polymer Hydrogel for Supercapacitor Application. **2020**, 8, 2000061	7
294	Recent advances in designing conductive hydrogels for flexible electronics. **2020**, 2, 843-865	63

293	Bioactive polymeric materials and electrical stimulation strategies for musculoskeletal tissue repair and regeneration. **2020**, 5, 468-485	44
292	Three-dimensional donor-acceptor-type photoactive material/conducting polyaniline hydrogel complex for sensitive photocathodic enzymatic bioanalysis. **2020**, 158, 112179	12
291	Conductive adhesive self-healing nanocomposite hydrogel wound dressing for photothermal therapy of infected full-thickness skin wounds. **2020**, 394, 124888	200
290	An all-in-one supercapacitor with high stretchability via a facile strategy. **2020**, 8, 8255-8261	20
289	Conducting Polymers for Tissue Regeneration in Vivo **2020**, 32, 4095-4115	22
288	Anisotropic Hydrogels with High Mechanical Strength by Stretching-Induced Oriented Crystallization and Drying. **2020**, 2, 2142-2150	3
287	Assembly of Conductive Polyaniline Microstructures by a Laser-Induced Microbubble. **2020**, 12, 22278-22286	11
286	Engineering Active Sites of Polyaniline for AlCl2+ Storage in an Aluminum-Ion Battery. **2020**, 132, 11898-11905	22
285	Soft-Hard Composites for Bioelectric Interfaces. **2020**, 2, 519-534	8
284	Engineering Active Sites of Polyaniline for AlCl Storage in an Aluminum-Ion Battery. **2020**, 59, 11800-11807	48
283	Influence of buffer solution on structure and electrochemical properties of poly(3,4-ethylenedioxythiophene)/poly(styrenesulfonate) hydrogels. **2020**, 263, 116363	3
282	Water-based phytic acid-crosslinked supramolecular binders for lithium-sulfur batteries. **2020**, 395, 124981	25
281	Direct Current Stimulation for Improved Osteogenesis of MC3T3 Cells Using Mineralized Conductive Polyaniline. **2021**, 7, 852-861	4
280	Carboxymethyl Cellulose-Based Hydrogel: Dielectric Study, Antimicrobial Activity and Biocompatibility. **2021**, 46, 17-30	15
279	A Living Biotic–Abiotic Composite that can Switch Function Between Current Generation and Electrochemical Energy Storage. **2021**, 31, 2007351	8
278	Robust and sensitive pressure/strain sensors from solution processable composite hydrogels enhanced by hollow-structured conducting polymers. **2021**, 403, 126307	55
277	Conductive polyaniline hydrogel enhanced methane production from anaerobic wastewater treatment. **2021**, 581, 314-322	13
276	Endogenous Electric Signaling as a Blueprint for Conductive Materials in Tissue Engineering. **2021**, 3, 27-41	6

275	Multifunctional conductive hydrogel-based flexible wearable sensors. **2021**, 134, 116130	52
274	Recent progress in energy storage and conversion of flexible symmetric transducers. **2021**, 9, 753-781	5
273	An ultrasensitive biosensor based on three-dimensional nanoporous conducting polymer decorated with gold nanoparticles for microRNA detection. **2021**, 161, 105780	6
272	Porous polymeric membranes: fabrication techniques and biomedical applications. **2021**, 9, 2129-2154	14
271	Rational design of multiple hydrogen bonds to improve the mechanical property of rigid PANI. **2021**, 42, 101136	4
270	Metal□rganic framework microdomains in 3D conductive host as polysulfide inhibitor for fast, long-cycle Li□ batteries. **2021**, 535, 147680	6
269	Aqueous solid and gel electrolytes for supercapattery. **2021**, 271-310	0
268	Micelle-enabled self-assembly of porous and monolithic carbon membranes for bioelectronic interfaces. **2021**, 16, 206-213	13
267	Synthetic hydrogels: Synthesis, novel trends, and applications. **2021**, 138, 50376	41
266	Ti3C2Tx/RGO//PANI/RGO all-solid-state asymmetrical fiber supercapacitor with high energy density and superior flexibility. **2021**, 861, 157950	5
265	Insight into specific surface area, microporosity and N, P co-doping of porous carbon materials in the acetone adsorption. **2021**, 258, 123930	9
264	Novel three-dimensional renewable phytic acid based aerogel electronics. **2021**, 260, 01012	
263	3D Particle Free Printing of Biocompatible Conductive Hydrogel Platforms for Neuron Growth and Electrophysiological Recording. **2021**, 31, 2010246	17
262	Modulation of hydrogel stiffness by external stimuli: soft materials for mechanotransduction studies. **2021**, 9, 7578-7596	1
261	Natural Biopolymer-Based Biocompatible Conductors for Stretchable Bioelectronics. **2021**, 121, 2109-2146	64
260	Highly compliant and low strain hysteresis sensory electronic skins based on solution processable hybrid hydrogels. **2021**, 9, 1822-1828	4
259	Cellulose nanocrystalline and sodium benzenesulfonate-doped polypyrrole nano-hydrogel/Au composites for ultrasensitive detection of carcinoembryonic antigen. **2021**, 45, 5551-5560	1
258	Multi length scale porosity as a playground for organic thermoelectric applications. **2021**, 9, 10173-10192	0

257	Stretchable supercapacitor at −30 °C. **2021**, 14, 3075-3085	45
256	Functionalized Elastomers for Intrinsically Soft and Biointegrated Electronics. **2021**, 10, e2002105	13
255	6 thioguanine sensing using poly pyrrole: DFT study. **2021**,	1
254	3D Printing of Supramolecular Polymer Hydrogels with Hierarchical Structure. **2021**, 17, e2005743	24
253	Tissue adhesive hydrogel bioelectronics. **2021**, 9, 4423-4443	39
252	1,3,6,8-Pyrenetetrasulfonic acid anchored doping to prepare solution-processable polyaniline for electrochromic supercapacitors. **2021**, 45, 8786-8794	1
251	Pentafluoropyridine functionalized novel heteroatom-doped with hierarchical porous 3D cross-linked graphene for supercapacitor applications.. **2021**, 11, 26892-26907	1
250	The in situ construction of three-dimensional core–shell-structured TiO2@PPy/rGO nanocomposites for improved supercapacitor electrode performance. **2021**, 45, 1092-1099	10
249	A highly conductive hydrogel driven by phytic acid towards a wearable sensor with freezing and dehydration resistance.	11
248	Review—Novel Carbon Nanomaterials Based Flexible Electrochemical Biosensors. **2021**, 168, 027504	5
247	3D Printable Electrically Conductive Hydrogel Scaffolds for Biomedical Applications: A Review. **2021**, 13,	30
246	Chemical Synthesis of Conducting Polymers Nanostructures. **2021**, 43-83	
245	A micropore-dominant N,P,S-codoped porous carbon originating from hydrogel for high-performance supercapacitors mediated by phytic acid. **2021**, 316, 110951	4
244	PEDOT and PEDOT:PSS conducting polymeric hydrogels: A report on their emerging applications. **2021**, 273, 116709	12
243	Electrically Conductive and 3D-Printable Oxidized Alginate-Gelatin Polypyrrole:PSS Hydrogels for Tissue Engineering. **2021**, 10, e2001876	24
242	An electrically conductive silver–polyacrylamide–alginate hydrogel composite for soft electronics. **2021**, 4, 185-192	80
241	Polyaniline–poly(styrene sulfonate) hydrogel derived hierarchically porous N, S-codoped carbon for high-performance supercapacitors. **2021**, 32, 8916-8931	2
240	Enhancement of conductivity, mechanical and biological properties of polyaniline-poly(N-vinylpyrrolidone) cryogels by phytic acid. **2021**, 217, 123450	4

239	Reinforced polyaniline-dodecyl benzene sulfonate hydrogel with well-aligned fibrous morphology as durable electrode materials for Zn-ion battery. **2021**, 274, 116721	3
238	Somatosensory actuator based on stretchable conductive photothermally responsive hydrogel. **2021**, 6,	46
237	Soft Materials by Design: Unconventional Polymer Networks Give Extreme Properties. **2021**, 121, 4309-4372	145
236	Facile Approach to Conductive Polymer Microelectrodes for Flexible Electronics. **2021**, 13, 21661-21668	5
235	Ion Conductive Phytic Acid-G Quadruplex Hydrogel as Electrolyte for Flexible Electrochromic Device. **2021**, 7, 613-619	1
234	Accelerated electron transfer in nanostructured electrodes improves the sensitivity of electrochemical biosensors.	0
233	Bamboo-like N/S-codoped carbon nanotube aerogels for high-power and high-energy supercapacitors. **2021**, 861, 157946	8
232	Conductive Hydrogel-Based Electrodes and Electrolytes for Stretchable and Self-Healable Supercapacitors. **2021**, 31, 2101303	52
231	Addressing the Selectivity of Enzyme Biosensors: Solutions and Perspectives. **2021**, 21,	4
230	A highly elastic, Room-temperature repairable and recyclable conductive hydrogel for stretchable electronics. **2021**, 588, 295-304	12
229	Oxygen Vacancy-Fe2O3@polyaniline Composites Directly Grown on Carbon Cloth as a High Stable Electrode for Symmetric Supercapacitors. **2021**, 31, 3894-3903	3
228	A Three-Dimensional Electrochemical Biosensor Integrated with Hydrogel Enables Real-Time Monitoring of Cells under Their -like Microenvironment. **2021**, 93, 7917-7924	5
227	Inorganic Electrodes for Flexible Supercapacitor. **2021**, 263-275	1
226	Bacterial Cellulose Reinforced Polyaniline Electroconductive Hydrogel with Multiple Weak H-Bonds as Flexible and Sensitive Strain Sensor. **2021**, 306, 2100159	10
225	Self-healing and toughness cellulose nanocrystals nanocomposite hydrogels for strain-sensitive wearable flexible sensor. **2021**, 179, 324-332	12
224	Soft Wearable Healthcare Materials and Devices. **2021**, 10, e2100577	16
223	Orientation dependent DFT analysis of aniline and pyrrole based copolymer. **2021**, 47, 6934-6934	
222	Translational Applications of Hydrogels. **2021**, 121, 11385-11457	87

221	New-Generation Materials for Flexible Supercapacitors. **2021**, 277-313	0
220	Nanoscale engineering of conducting polymers for emerging applications in soft electronics. **2021**, 14, 3112-3125	5
219	Highly Conductive PPy-PEDOT:PSS Hybrid Hydrogel with Superior Biocompatibility for Bioelectronics Application. **2021**, 13, 25374-25382	18
218	Sacrificial template synthesis of ultrathin polyaniline nanosheets and their application in highly sensitive electrochemical dopamine detection. **2021**, 20, 100479	1
217	Nanoarchitectured Porous Conducting Polymers: From Controlled Synthesis to Advanced Applications. **2021**, 33, e2007318	19
216	Polyvinyl alcohol-phytic acid polymer films as promising gas/vapor sorption materials. **2021**, 28,	1
215	Facilely prepared conductive hydrogels based on polypyrrole nanotubes. **2021**, 75, 5113-5120	3
214	Copolymerization of aniline and 9 vinyl carbazole: A DFT study. **2021**,	0
213	Single-Crystal Inorganic Helical Architectures Induced by Asymmetrical Defects in Sub-Nanometric Wires. **2021**, 143, 9858-9865	4
212	A Hydrothermal Strategy to Fabricate Carbons-Doped Polyaniline Hydrogels with Separation-Free for Flexible All-Solid-State Supercapacitors. **2021**, 306, 2100274	0
211	Additive Manufacturing of Conducting Polymers: Recent Advances, Challenges, and Opportunities. **2021**, 3, 2865-2883	17
210	Exploring the Functional Properties of Sodium Phytate Doped Polyaniline Nanofibers Modified FTO Electrodes for High-Performance Binder Free Symmetric Supercapacitors. **2021**, 13,	7
209	Multifunctional hydrogels for sustainable energy and environment. **2021**, 70, 1425-1432	10
208	A Stretchable and Transparent Electrode Based on PEGylated Silk Fibroin for In Vivo Dual-Modal Neural-Vascular Activity Probing. **2021**, 33, e2100221	8
207	Micro-structural investigations on oppositely charged mixed surfactant gels with potential dermal applications. **2021**, 11, 15527	2
206	Copolymer hydrogel as self-standing electrode for high performance all-hydrogel-state supercapacitor. **2021**, 56, 16028-16043	4
205	Hierarchical Cross-Linked Carbon Aerogels with Transition Metal-Nitrogen Sites for Highly Efficient Industrial-Level CO2 Electroreduction. **2021**, 31, 2104377	20
204	Supramolecular Assembly of Nanostructured Conducting Polymer Hydrogels by Hydrotropic Agents for Outstanding Supercapacitive Energy Storage. **2021**, 4, 9099-9110	4

203	Combining ReaxFF Simulations and Experiments to Evaluate the Structure-Property Characteristics of Polymeric Binders in Si-Based Li-Ion Batteries. **2021**, 13, 41956-41967	0
202	Polypyrrole/sulfonated multi-walled carbon nanotubes conductive hydrogel for electrochemical sensing of living cells. **2021**, 418, 129483	12
201	Band-Like Charge Transport in Phytic Acid-Doped Polyaniline Thin Films. **2021**, 31, 2105184	6
200	Flexible Conducting Composite Film with Reversible In-Plane Folding-Unfolding Property. **2021**, 8, e2102314	2
199	Advanced Metallic and Polymeric Coatings for Neural Interfacing: Structures, Properties and Tissue Responses. **2021**, 13,	4
198	Composites of Ni-MOF and polyaniline hydrogel for carbon monoxide resistant excellent catalysts of ethanol oxidation reaction. **2021**, 46, 27128-27137	4
197	Tuning the oxidation state of Ru to surpass Pt in hydrogen evolution reaction. **2021**, 14, 4321	3
196	Flexible, all-hydrogel supercapacitor with self-healing ability. **2021**, 418, 128616	24
195	Preparation of a self-healing polyaniline-based gel and its application as a healable all-in-one capacitor. **2021**, 420, 129790	5
194	A comprehensive overview of common conducting polymers based nonocomposites; design, and their recent advance applications. **2021**, 160, 110773	4
193	Skin-like hydrogel devices for wearable sensing, soft robotics and beyond. **2021**, 24, 103174	13
192	Highly stretchable and self-healing cellulose nanofiber-mediated conductive hydrogel towards strain sensing application. **2021**, 597, 171-181	38
191	A hierarchically designed nanocomposite hydrogel with multisensory capabilities towards wearable devices for human-body motion and glucose concentration detection. **2021**, 213, 108894	15
190	Polyaniline electropolymerized within template of vertically ordered polyvinyl alcohol as electrodes of flexible supercapacitors with long cycle life. **2021**, 390, 138819	4
189	Recent progress in multifunctional hydrogel-based supercapacitors. **2021**, 6, 338-350	4
188	Structural, Optical and Thermal Properties of PVC/ Polyaniline Composite Thin Films. 1	1
187	Electrical and dielectric properties of self-assembled polyaniline on barium sulphate surface. **2021**,	1
186	Synthesis and characterisation of polyaniline/polyvinyl alcohol composites as supercapacitor electrode materials. 1-10	3

185	3D Printing of Hydrogels for Stretchable Ionotronic Devices. 2107437	10
184	Highly stretchable porous composite hydrogels with stable conductivity for strain sensing. **2021**, 213, 108968	8
183	Temperature-controlled in situ synthesized carbon nanotube-protected vanadium phosphate particle-anchored electrospun carbon nanofibers for high energy density symmetric supercapacitors. **2021**, 600, 740-751	8
182	Tuning morphology, defects and functional group types in hard carbon via phosphorus doped for rapid sodium storage. **2021**, 183, 415-427	4
181	Biomaterials-based bioengineering strategies for bioelectronic medicine. **2021**, 146, 100630	4
180	A novel all-in-one integrated flexible supercapacitor based on self-healing hydrogel electrolyte. **2021**, 888, 161554	4
179	3D-printable conductive materials for tissue engineering and biomedical applications. **2021**, 24, e00166	5
178	Rational design of ultrahigh sensitive sunset yellow sensor based on 3D hierarchical porous graphitic carbon with sub-nanopores. **2021**, 365, 130631	0
177	Conductive polymer hydrogels crosslinked by electrostatic interaction with PEDOT:PSS dopant for bioelectronics application. **2022**, 429, 132430	5
176	Spinning continuous high-strength bacterial cellulose hydrogel fibers for multifunctional bioelectronic interfaces.	5
175	Balancing the mechanical, electronic, and self-healing properties in conductive self-healing hydrogel for wearable sensor applications. **2021**, 8, 1795-1804	50
174	Soft Material-Enabled Packaging for Stretchable and Flexible Hybrid Electronics. **2021**, 377-403	
173	Regulating the species and the counter-ion size of proton acids to prepare novel poly(4-aminodiphenylamine) nanomaterials for supercapacitors. **2021**, 5, 6145-6151	
172	Functional hydrogel-based supercapacitors for wearable bioelectronic devices.	4
171	Conducting Polymer/Hydrogel Systems as Soft Actuators. 211-252	5
170	Fabrication of poly(vinyl alcohol)–graphene oxide–polypyrrole composite hydrogel for elastic supercapacitors. **2020**, 55, 11779-11791	23
169	Phytic acid functionalized antifouling conducting polymer hydrogel for electrochemical detection of microRNA. **2020**, 1124, 104-112	23
168	Zwitterionic Porous Conjugated Polymers as a Versatile Platform for Antibiofouling Implantable Bioelectronics. **2020**, 2, 528-536	13

167	Highly tough supramolecular double network hydrogel electrolytes for an artificial flexible and low-temperature tolerant sensor. **2020**, 8, 6776-6784	89
166	Bacteria repellent protein hydrogel decorated with tunable, isotropic, nano-on-micro hierarchical microbump array. **2021**, 57, 10883-10886	0
165	Designing flexible, smart and self-sustainable supercapacitors for portable/wearable electronics: from conductive polymers. **2021**, 50, 12702-12743	32
164	Extrusion 3D printing of conjugated polymers.	1
163	Prospective on doping engineering of conductive polymers for enhanced interfacial properties. **2021**, 119, 150504	1
162	A Robust and Wearable Triboelectric Tactile Patch as Intelligent Human-Achine Interface. **2021**, 14,	5
161	Double-cross-linked polyaniline hydrogel and its application in supercapacitors. 1	1
160	Accelerated Electron Transfer in Nanostructured Electrodes Improves the Sensitivity of Electrochemical Biosensors. **2021**, 8, e2102495	7
159	2-Methylimidazole assisted synthesis of nanocrystalline shell reinforced PPy hydrogel with high mechanical and electrochemical performance. **2021**, 430, 133033	1
158	Surface modifications of carbon nanotubes towards tailored electrochemical characteristics. **2021**, 32, 27923	1
157	A hydrogel electrochemical electrode for simultaneous measurement of cadmium ions and lead ions. **2021**, 901, 115756	1
156	Cryogels for Neural Tissue Engineering. **2016**, 255-280	
155	Introduction. **2017**, 1-13	
154	Piezoresistive sensor for human motion detection based on polyaniline decorated thermally exfoliated graphene oxide. **2021**,	
153	Technological Challenges in the Development of Optogenetic Closed-Loop Therapy Approaches in Epilepsy and Related Network Disorders of the Brain. **2020**, 12,	3
152	A Density Functional Theory (DFT) Investigation on the Structure and Spectroscopic Behavior of 2-Aminoterephthalic Acid and Its Sodium Salts. **2020**, 10, 39-55	0
151	Nanocellulose and nanohydrogel for energy, environmental, and biomedical applications. **2020**, 33-64	2
150	Chapter 10. Conductive Polymers Building 3D Scaffolds for Tissue Engineering. **2020**, 383-414	

149	Elastic polypyrrole hydrogels reinforced by TEMPO-oxidized cellulose for supercapacitors. **2021**, 282, 116952	2
148	Long-term cell culture and electrically monitoring of living cells based on a polyaniline hydrogel sensor. **2021**, 9, 9514-9523	2
147	Biomimetic integration of tough polymer elastomer with conductive hydrogel for highly stretchable, flexible electronic. **2022**, 92, 106735	5
146	Low-Temperature Tolerance and Conformal Adhesion Zwitterionic Hydrogels as Electronic Skin for Strain and Temperature Responsiveness. **2021**, 133782	6
145	Interfacial synthesis of crystalline quasi-two-dimensional polyaniline thin films for high-performance flexible on-chip micro-supercapacitors. **2021**,	2
144	Biomedical Application, Patent Repository, Clinical Trial and Regulatory Updates on Hydrogel: An Extensive Review. **2021**, 7,	5
143	Urushiol-Induced Hydrogels with Long-Term Durability and Long Service Lifespan in Mechanosensation.	1
142	Advanced biomedical hydrogels: molecular architecture and its impact on medical applications.. **2021**, 8, rbab060	5
141	GNP-CeO- polyaniline hybrid hydrogel for electrochemical detection of peroxynitrite anion and its integration in a microfluidic platform. **2021**, 188, 436	2
140	A review on polymer hydrogel and polymer microneedle based transdermal drug delivery system. **2021**,	2
139	Conducting polymer hydrogel based electrode materials for supercapacitor applications. **2021**, 103510	8
138	A Novel Conductive Antibacterial Nanocomposite Hydrogel Dressing for Healing of Severely Infected Wounds.. **2021**, 9, 787886	1
137	Fabrication of high density and nitrogen-doped porous carbon for high volumetric performance supercapacitors. **2021**, 103657	1
136	Flexible, robust, and high-performance gas sensors based on lignocellulosic nanofibrils.. **2022**, 278, 118920	7
135	Stretchable Zwitterionic Conductive Hydrogels with Semi-Interpenetrating Network Based on Polyaniline for Flexible Strain Sensors. **2021**, 222, 2100165	0
134	N, O-codoped hierarchical porous graphitic carbon for electrochemical immunosensing of Lactobacillus rhamnosus GG. **2021**, 189, 5	1
133	Electroresponsive Hydrogels for Therapeutic Applications in the Brain. **2021**, e2100355	3
132	Role of Water in the Lyotropic Liquid Crystalline Mesophase of Lithium Salts and Non-ionic Surfactants. **2021**,	1

131	A bubble-templated approach to holey N/S-codoped carbon nanosheet aerogels with honeycomb-like structure for supercapacitors. **2022**, 404, 139741	2
130	Organic Electrical Passive Components Based on Polyaniline. **2020**,	1
129	Capacitive electrical stimulation of a conducting polymeric thin film induces human mesenchymal stem cell osteogenesis.. **2022**, 17, 011001	0
128	Wearable Self-Powered Smart Sensors for Portable Nutrition Monitoring.. **2022**,	7
127	Recent advances in conductive polymer hydrogel composites and nanocomposites for flexible electrochemical supercapacitors. **2021**,	16
126	Pseudocapacitive Conjugated Polyelectrolyte/2D Electrolyte Hydrogels with Enhanced Physico-Electrochemical Properties. 2100942	2
125	Strong conductive hybrid hydrogel electrode based on inorganic hybrid crosslinking. **2022**, 300, 111-124	1
124	Conductive materials with elaborate micro/nanostructures for bioelectronics.. **2022**, e2110024	2
123	Preparation and Property of a Three-Dimensional Nitrogen-Doped Graphene-Fe 3+ /P(AA-co-DMA) Hydrogel. **2022**, 7,	
122	Liquid Metal Polymer Composites: from Printed Stretchable Circuits to Soft Actuators.	9
121	CHAPTER 22. Nanoarchitectonics of Stretchable Organic Electronics Materials. **2022**, 518-545	
120	Flexible conductive silk-PPy hydrogel toward wearable electronic strain sensors.. **2022**, 17,	2
119	Advances in Polysaccharide-Based Hydrogels: Self-Healing and Electrical Conductivity. **2022**, 352, 118712	0
118	Ionic conductivity and hydrodynamic permeability of inhomogeneous (cavity doped) polyelectrolyte hydrogels. **2022**, 936,	1
117	Disposable biosensors based on metal nanoparticles.. **2022**, 100169	3
116	Free-standing conductive hydrogel electrode for potentiometric glucose sensing.. **2022**, 12, 5369-5373	1
115	Recent advances in the 3D printing of electrically conductive hydrogels for flexible electronics. **2022**, 10, 5380-5399	0
114	Nanostructured Broadband Solar Absorber for Effective Photothermal Conversion and Electricity Generation. **2022**, 15, 1354	2

113	Advancing flexible electronics and additive manufacturing.	1
112	Double-shelled hybrid MgFe2O4/Fe2O3 hollow microspheres as a high-capacity anode for lithium-ion batteries. **2022**,	0
111	Influence of different dopants and redox forms of PANI in its crystal structure, morphology, electrochemical energy storage to variable extent, unique properties and kinetics. **2022**, 45, 1	0
110	A Structural Gel Composite Enabled Robust Underwater Mechanosensing Strategy with High Sensitivity. 2201396	3
109	Decavanadate Doped Polyaniline for Aqueous Zinc Batteries.. **2022**, e2107689	6
108	A fully textile-based skin pH sensor. 152808372110733	1
107	Application of conductive polymer hydrogels in flexible electronics.	3
106	Recent advances in solid□liquid□gas three-phase interfaces in electrocatalysis for energy conversion and storage.	2
105	Thermosensitive hydrogels functionalized with pH sensitive COOH groups for bone cell harvesting. **2022**, 169, 111131	0
104	Methyl orange-crosslinked polypyrrole hydrogel enabled N, O, S co-doped porous carbon for highly sensitive determination of three redox-active biomolecules. **2022**, 913, 116282	0
103	Flexible bioelectrode via in-situ growth of MOF/enzyme on electrospun nanofibers for stretchable enzymatic biofuel cell. **2022**, 440, 135719	2
102	Formation of Metal□Phytic Acid Surface Coatings via Oxidation-Mediated Coordination Assembly. **2022**, 4, 546-555	1
101	Soft Bioelectronics Based on Nanomaterials.. **2021**,	11
100	Conjugated Polymers as Organic Electrodes for Flexible Supercapacitors. **2022**, 337-356	
99	Biocompatible Conductive Hydrogels: Applications in the Field of Biomedicine.. **2022**, 23,	1
98	Recent advances in 3D printing of tough hydrogels: A review. **2022**, 238, 109895	4
97	Effect of Oxidizer on PANI for Producing BaTiO3@PANI Perovskite Composites and Their Electrical and Electrochemical Properties. 1	1
96	Boosting the energy density of aqueous MXene-based supercapacitor by integrating 3D conducting polymer hydrogel cathode.	2

95	A Review on the Conventional Capacitors, Supercapacitors, and Emerging Hybrid Ion Capacitors: Past, Present, and Future. 2100191	5
94	Facile synthesis of ultra-tensile hydrogels for flexible all-solid-state supercapacitor energy storage devices. 1	
93	Metal-Functionalized Hydrogels as Efficient Oxygen Evolution Electrocatalysts.. **2022**,	0
92	Conductive Gels: Properties and Applications of Nanoelectronics.. **2022**, 17, 50	2
91	Recent Development of Conductive Hydrogels for Tissue Engineering: Review and Perspective.. **2022**, e2200051	1
90	Poly(N-Isopropylacrylamide) Based Electrically Conductive Hydrogels and Their Applications. **2022**, 8, 280	2
89	Copolymerization of Aniline, Melamine and p -Phenylenediamine for Enhanced Pseudocapacitance Hydrogel Supercapacitor Electrodes. 2200180	0
88	Electrogenetics: Bridging synthetic biology and electronics to remotely control the behavior of mammalian designer cells.. **2022**, 68, 102151	0
87	Hydrogel Nanoarchitectonics: An Evolving Paradigm for Ultrasensitive Biosensing. 2107571	2
86	Titanium dioxide nanobelts modified with manganese dioxide nanoflakes for high-performance supercapacitor applications. **2022**, 24,	
85	Cross-Linked, Transient Ionic Conductive Elastomer with Extreme Stretchability, Healability, and Degradability for Detecting Human Motions.	2
84	Conducting Polymer Hydrogel Driven By Sodium Chloride as High Performance Flexible Supercapacitor Electrode.	
83	Nanomembranes Technology for Microrobots: from Origami to 4 D Construction. **2022**, 287-316	
82	Injectable conductive nanocomposite hydrogels for cardiac tissue engineering: Focusing on carbon and metal-based nanostructures. **2022**, 174, 111336	1
81	Reliable and flexible supercapacitors toward wide-temperature operation based on self-supporting SiC/CNT composite films.	
80	Supercapacitors: a review on electrode materials and models based on conjugated polymers. **2022**, 335-365	
79	Recent advances in optically induced di-electrophoresis and its biomedical applications. **2022**, 24,	
78	A Comparative Study of Silver Microflakes in Digitally Printable Liquid Metal Embedded Elastomer Inks for Stretchable Electronics. 2200534	2

77	Fiber-shaped dynamic thermal radiation-regulated device based on carbon fiber and polyaniline. **2022**, 245, 111855	0
76	Graphitic carbon nitride colloid as one photoinitiator for two-step polymerization. **2022**, 650, 129615	2
75	Solvent-assisted self-assembly to fabricate a ternary flexible free-standing polyaniline@MXene-CNTs electrode for high-performance supercapacitors. **2022**, 921, 166062	2
74	Artificial jelly channel inspired by the shark for sensing specific ions and environmental perturbation. **2022**, 26, 101047	
73	Interfacial polymerization synthesis of polypyrrole and sodium metavanadate (PPy/NaVO3) composite as an excellent performance electrode for supercapacitors. **2022**, 4, 100446	
72	Evaluating the Effects of Carbon Physicochemistry on the Rate Capability of Polyaniline and Phytic Acid-Derived Sodium-Ion Battery Anodes. **2022**, 36, 8449-8459	
71	Progress on nanostructured gel catalysts for oxygen electrocatalysis.	0
70	Polymeric Hydrogelator-Based Molecular Gels Containing Polyaniline/Phosphoric Acid Systems. **2022**, 8, 469	
69	Electrochemical Methods for Water Purification, Ion Separations, and Energy Conversion. **2022**, 122, 13547-13635	8
68	Additive manufacturing of smart polymeric composites: Literature review and future perspectives.	2
67	Emerging Iontronic Sensing: Materials, Mechanisms, and Applications. **2022**, 2022, 1-35	0
66	Patternable Gelatin Methacrylate/PEDOT/Polystyrene Sulfonate Microelectrode Coatings for Neuronal Recording.	
65	Strong Tough Poly Acrylic-Co-Acrylamide Hydrogels via a Synergistic Effect of Fiber and Metal-Ligand Bonds as Flexible Strain Sensors. 2200389	0
64	Polyacrylamide-Conductive Hydrogel Modified with Regenerated Silk Fibroin Resulting in Low-Temperature Resistance and Self-Healing Properties for Flexible Electronic Skin. **2022**, 7,	4
63	Electrode Material of PVA/PANI/GO-PANI Hybrid Hydrogels through Secondary Induced Assembly In Situ Polymerization Method for Flexible Supercapacitors. 2200366	1
62	Metal-based Aerogels catalysts for Electrocatalytic CO2 Reduction.	0
61	Facile synthesis of 3D porous polyaniline composite with MnO2-decorated fiber morphology and enhanced electrochemical performance. **2022**, 256, 125235	0
60	Solid-state survey of boronate-substituted polyaniline: on the mechanism of conductivity, electroactivity, and interactions with polyols. **2022**, 26, 101070	

59	Controllable synthesis of hierarchically porous polyaniline/MnO2 composite with wide potential window towards symmetric supercapacitor. **2022**, 654, 130199	0
58	Host-guest interaction enabled chiroptical property, morphology transition, and phase switch in azobenzene-glutamide amphiphile based hydrogel. **2022**, 655, 130212	0
57	Conducting polymer host–guest hydrogels with bicontinuous electron/ion transport for boosted thickness-independent supercapacitance. **2023**, 452, 139223	0
56	A review of inkjet printing technology for personalized-healthcare wearable devices. **2022**, 10, 14091-14115	1
55	Polyaniline-Based Nanostructure Interface for Signal-to-Noise Ratio Enhancement in Potentiometric Enzyme-Free Biosensors. **2022**, 9, 2201029	0
54	Application of the Ugi reaction for preparation of submicron capsules based on sugar beet pectin.	0
53	Poly(vinyl Alcohol) (PVA)-Based Hydrogel Scaffold with Isotropic Ultratoughness Enabled by Dynamic Amine–Catechol Interactions.	1
52	Antioxidant and Physical Properties of Dual-Networked Contact Lenses Containing Quercetin Using Chitosan and Alginate.	0
51	Three-Dimensional Mesoporous Polyindole Architectures for Supercapacitor Applications.	0
50	Direct Chemical Oxidative Polymerization of Polymelamine and its Copolymerization with Aniline for Hydrogel Supercapacitor Electrodes. **2022**, 169, 100543	0
49	Hydrogel interfaces for merging humans and machines.	11
48	A Strand Entangled Supramolecular PANI/PAA Hydrogel Enabled Ultra-Stretchable Strain Sensor. 2203258	1
47	Advanced Functional Composite Materials toward E-Skin for Health Monitoring and Artificial Intelligence. 2201088	1
46	Flexible Composites with Variable Conductivity and Memory of Deformation Obtained by Polymerization of Polyaniline in PVA Hydrogel. **2022**, 14, 4638	0
45	One-Step Preparation of Carboxymethyl Cellulose–Phytic Acid Hydrogels with Potential for Biomedical Applications. **2022**, 8, 647	0
44	Highly sensitive pH sensor based on flexible polyaniline matrix for synchronal sweat monitoring. **2022**, 108092	0
43	Selective and efficient extraction of iron from water systems with a recyclable phytate-polyaniline hydrogel. **2022**, 135006	0
42	Natural Glycyrrhizic Acid-Tailored Homogeneous Conductive Polyaniline Hydrogel as a Flexible Strain Sensor.	0

41	Advances in the Translation of Electrochemical Hydrogel-Based Sensors. 2201501	0
40	Promoting Industrial-level CO2 Electroreduction Kinetics via Accelerating Proton Feeding on a Metal-free Aerogel Electrocatalyst. **2022**, 107980	0
39	Grinding to produce polydopamine-modified polypyrrole nanotubes with enhanced performance for sodium-ion capacitor. **2022**, 434, 141338	0
38	Unveiling the surface dominated capacitive properties in flexible ternary polyaniline/NiFe2O4/reduced graphene oxide nanocomposites hydrogel electrode for supercapacitor applications. **2022**, 434, 141324	0
37	An Easy-to-Prepare Conductive Hydrogel for Smart Wearable Materials Based on Acrylic Derivatives and Acrylamide. **2022**, 12, 11404	0
36	3D conductive material strategies for modulating and monitoring cells. **2022**, 101041	0
35	In-situ formation of cobalt phosphide nanoparticles confined in three-dimensional porous carbon for high-performing zinc-air battery and water splitting. **2022**, 43, 3107-3115	0
34	Incorporating polyimide cathode materials into porous polyaniline xerogel to optimize the zinc-storage behavior. **2022**, 33, 103878	0
33	Recent Advances of Polyaniline-based Micro-Supercapacitors.	0
32	Solid-state synthesis of conductive polymer PEDOT whiskers. **2023**, 292, 117239	1
31	Selective separation of monovalent anions by PPy/pTS membrane electrodes in redox transistor electrodialysis. **2023**, 218, 114987	0
30	Polyaniline □electron mediated electron-hole separation of TiO2/diatomite composite for enhancing visible light-induced indoor formaldehyde degradation. **2023**, 612, 155855	0
29	Electrochemical Failure Results Inevitable Capacity Degradation in Li-Ion Batteries□A Review. **2022**, 15, 9165	2
28	Tunable Self-Assembled Peptide Hydrogel Sensor for Pharma Cold Supply Chain. **2022**, 14, 55392-55401	0
27	Hydrogel and Machine Learning for Soft Robots□Sensing and Signal Processing: A Review.	0
26	Achieving Enhanced Interfacial Interaction and High Dielectric Properties in PVDF Composite Film Containing Polyaniline-Derived N-Doped Carbon. **2022**, 4, 5825-5837	0
25	Ultralow-Temperature Aqueous Conductive Polymer□Hydrogen Gas Battery.	0
24	High Electrical Conductivity and Low Temperature Resistant Double Network Hydrogel Ionic Conductor as a Flexible Sensor and Quasi-Solid Electrolyte. **2022**, 7,	0

23	Developing a p-Toluenesulfonic Acid Monohydrate-Assisted Electrodeposition Method To Synthesize an Additive-Free Polypyrrole Cathode for High-Rate Stability and High Gravimetric/Volumetric Capacity Li-Ion Batteries.	0
22	"Layer-by-layer" building strategy for the fabrication of metal-hydrogel-metallic nanoarray plasmonic cavity with dynamic color display performance.	0
21	Highly conductive and tough double-network hydrogels for smart electronics.	0
20	Hydrogel as an advanced energy material for flexible batteries. **2023**, 62, 359-383	0
19	Wearable supercapacitors. **2023**, 585-596	0
18	Structure-property-function relationships of sustainable hydrogels. **2023**, 79-111	0
17	Silicon-based lithium-ion battery anodes and their application in solid-state batteries. **2023**, 129-169	0
16	From surface loading to precise confinement of polyoxometalates for electrochemical energy storage. **2023**, 108194	0
15	Stretch-Induced Robust Intrinsic Antibacterial Thermoplastic Gelatin Organohydrogel for a Thermoenhanced Supercapacitor and Mono-gauge-factor Sensor.	0
14	A 10‐years-developmental study on conducting polymers composites for supercapacitors electrodes: A review for extensive data interpretation. **2023**, 122, 27-45	0
13	Label-free electrochemiluminescence immunosensor based on conductive PANI to synergistically amplify electrodeposited AuNPs luminophore signal for ultrasensitive detection of 3-nitrotyrosine. **2023**, 190, 108619	0
12	Polyanionic electrically conductive superabsorbent hydrogel based on sodium alginate-g-poly (AM-co-ECA-co-AMPS): Broadband dielectric spectroscopy investigations. **2023**, 232, 123443	1
11	Preparation of conductive polyaniline hydrogels co-doped with hydrochloric acid/phytic acid and their application in Ag NPs @ PA / GCE biosensor for H 2 O 2 detection. **2023**, 140,	0
10	Hybrid assembly of polymeric nanofiber network for robust and electronically conductive hydrogels. **2023**, 14,	1
9	Hybrid polymer gels for energy applications.	0
8	A Low Noise Microelectrode Array for Specific Cell Activity Modulation from Cell to Tissue. **2023**,	0
7	Fabrication and desired properties of conductive hydrogel dressings for wound healing. **2023**, 13, 8502-8522	0
6	Dynamic and Wearable Electro-responsive Hydrogel with Robust Mechanical Properties for Drug Release. **2023**, 15, 17113-17122	0

5	Hydrogels: A Promising Materials for 3D Printing Technology. **2023**, 9, 260	0
4	Integration of hydrogels in microfabrication processes for bioelectronic medicine: Progress and outlook. 11,	0
3	3D printed thermo-responsive electroconductive hydrogel and its application for motion sensor. 10,	0
2	Naturally sourced hydrogels: emerging fundamental materials for next-generation healthcare sensing.	0
1	A Flexible Sensor with Excellent Environmental Stability Using Well-Designed Encapsulation Structure. **2023**, 15, 2308	0