Kwang Chul Roh

List of Publications by Year
in descending order

115 papers	4,872 citations	109264 35 h-index	102432 66 g-index
118 all docs	118 docs citations	118 times ranked	7134 citing authors

#	Article	IF	Citations
1	A durable high-energy implantable energy storage system with binder-free electrodes useable in body fluids. Journal of Materials Chemistry A, 2022, 10, 4611-4620.	5.2	5
2	Black Phosphorusâ€Based Lithiumâ€Ion Capacitor. Batteries and Supercaps, 2022, 5, .	2.4	1
3	On-demand solid-state artistic ultrahigh areal energy density microsupercapacitors. Energy Storage Materials, 2022, 47, 569-578.	9.5	3
4	Efficient utilization of lignin residue for activated carbon in supercapacitor applications. Materials Chemistry and Physics, 2022, 284, 126073.	2.0	11
5	Correlation between lithium-ion accessibility to the electrolyteâ€“active material interface and low-temperature electrochemical performance. Journal of Alloys and Compounds, 2021, 856, 158233.	2.8	8
6	Suppression of metal-to-insulator transition using strong interfacial coupling at cubic and orthorhombic perovskite oxide heterointerfaces. Nanoscale, 2021, 13, 708-715.	2.8	0
7	Electrochemical Effect of Cokesâ€Derived Activated Carbon with Partially Graphitic Structure for Hybrid Supercapacitors. ChemElectroChem, 2021, 8, 3621-3628.	1.7	2
8	Structural control of highly oxidized carbon nanotube networks for high electrochemical performance. Journal of Industrial and Engineering Chemistry, 2021, 104, 172-178.	2.9	10
9	sp2â€“sp3 Hybrid Porous Carbon Materials Applied for Supercapacitors. Energies, 2021, 14, 5990.	1.6	5
10	Nitrogen-Doped and Carbon-Coated Activated Carbon as a Conductivity Additive-Free Electrode for Supercapacitors. Energies, 2021, 14, 7629.	1.6	0
11	Electrode materials for biomedical patchable and implantable energy storage devices. Energy Storage Materials, 2020, 24, 113-128.	9.5	44
12	Preparation of activated carbon decorated with carbon dots and its electrochemical performance. Journal of Industrial and Engineering Chemistry, 2020, 82, 383-389.	2.9	16
13	Phase transformation of spinel Li4Ti5O12 to anatase TiO2 by catalytic delithiation. Energy Storage Materials, 2020, 25, 510-519.	9.5	5
14	Giant-miscanthus-derived activated carbon and its application to lithium sulfur batteries. Carbon Letters, 2020, 30, 477-484.	3.3	10
15	Silver grass-derived activated carbon with coexisting micro-, meso- and macropores as excellent bioanodes for microbial colonization and power generation in sustainable microbial fuel cells. Bioresource Technology, 2020, 300, 122646.	4.8	44
16	Polyol-mediated carbon-coated Li4Ti5O12 nanoparticle/graphene composites with long-term cycling stability for lithium and sodium ion storages. Chemical Engineering Journal, 2020, 385, 123984.	6.6	32
17	Comparison of the electrochemical properties of activated carbon prepared from woody biomass with different lignin content. Wood Science and Technology, 2020, 54, 1165-1180.	1.4	4
18	Facile preparation of composite electrodes for supercapacitors by CNT entrapment into carbon matrix derived from pitch at a softening point. Carbon, 2020, 163, 402-407.	5.4	17

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19	Nitrogenâ€Immobilized, Ionic Liquidâ€Derived, Nitrogenâ€Doped, Activated Carbon for Supercapacitors. ChemElectroChem, 2020, 7, 2410-2417.	1.7	10
20	Exceptionally Reversible Li-/Na-Ion Storage and Ultrastable Solid-Electrolyte Interphase in Layered GeP₅ Anode. ACS Applied Materials & Interfaces, 2019, 11, 32815-32825.	4.0	28
21	A holey graphene-based hybrid supercapacitor. Chemical Engineering Journal, 2019, 378, 122126.	6.6	79
22	Porous graphitic activated carbon sheets upcycled from starch-based packing peanuts for applications in ultracapacitors. Journal of Alloys and Compounds, 2019, 805, 1282-1287.	2.8	10
23	Chlorella-derived activated carbon with hierarchical pore structure for energy storage materials and adsorbents. Carbon Letters, 2019, 29, 167-175.	3.3	28
24	Effect of thermally decomposable spacers on graphene microsphere structure and restacking of graphene sheets during electrode fabrication. Carbon, 2019, 150, 128-135.	5.4	17
25	Structural Recovery of Highly Oxidized Single-Walled Carbon Nanotubes Fabricated by Kneading and Electrochemical Applications. Chemistry of Materials, 2019, 31, 3468-3475.	3.2	28
26	MagnÃ©li Phase Titanium Oxide as a Novel Anode Material for Potassium-Ion Batteries. ACS Omega, 2019, 4, 5304-5309.	1.6	35
27	Revisiting NaTi2(PO4)3/nanocarbon composites prepared using nanocarbons with different dimensions for high-rate sodium-ion batteries: The surface properties of nanocarbons. Journal of Alloys and Compounds, 2019, 787, 728-737.	2.8	7
28	Improved pseudocapacitive charge storage in highly ordered mesoporous TiO₂/carbon nanocomposites as high-performance Li-ion hybrid supercapacitor anodes. RSC Advances, 2019, 9, 37882-37888.	1.7	9
29	An ionic liquid incorporated in a quasi-solid-state electrolyte for high-temperature supercapacitor applications. Chemical Communications, 2019, 55, 15081-15084.	2.2	36
30	Structural and Electrochemical Characteristics of Activated Carbon Derived from Lignin-Rich Residue. ACS Sustainable Chemistry and Engineering, 2019, 7, 2471-2482.	3.2	33
31	Fabrication of bimodal micro-mesoporous amorphous carbon-graphitic carbon-reduced graphene oxide composite microspheres prepared by pilot-scale spray drying and their application in supercapacitors. Carbon, 2019, 144, 591-600.	5.4	24
32	Studying the reduction of graphene oxide with magnetic measurements. Carbon, 2019, 142, 373-378.	5.4	32
33	High-performance sodium hybrid capacitor enabled by presodiated Li4Ti5O12. Journal of Power Sources, 2019, 409, 48-57.	4.0	14
34	Rational design of oxide/carbon composites to achieve superior rate-capability via enhanced lithium-ion transport across carbon to oxide. Journal of Materials Chemistry A, 2018, 6, 6033-6044.	5.2	19
35	Superior electrochemical properties of micron-sized aggregates of (Co0.5Fe0.5)3O4 hollow nanospheres and graphitic carbon. Chemical Engineering Journal, 2018, 346, 351-360.	6.6	5
36	Bulk metal-derived metal oxide nanoparticles on oxidized carbon surface. Journal of Alloys and Compounds, 2018, 752, 198-205.	2.8	1

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37	Mesoporous graphitic carbon microspheres with a controlled amount of amorphous carbon as an efficient Se host material for Liâ€“Se batteries. Journal of Materials Chemistry A, 2018, 6, 4152-4160.	5.2	34
38	Lithiumâ€“Sulfur Capacitors. ACS Applied Materials & Interfaces, 2018, 10, 6199-6206.	4.0	7
39	Strong, persistent superficial oxidation-assisted chemical bonding of black phosphorus with multiwall carbon nanotubes for high-capacity ultradurable storage of lithium and sodium. Journal of Materials Chemistry A, 2018, 6, 10121-10134.	5.2	71
40	Non-aqueous quasi-solid electrolyte for use in supercapacitors. Journal of Industrial and Engineering Chemistry, 2018, 59, 192-195.	2.9	7
41	Superior lithium-ion storage performances of carbonaceous microspheres with high electrical conductivity and uniform distribution of Fe and TiO ultrafine nanocrystals for Li-S batteries. Carbon, 2018, 126, 394-403.	5.4	13
42	Enhancement of Oxygen Reduction Reaction Catalytic Activity via the Modified Surface of La0.6Sr0.4Co0.2Fe0.8O3â^Î´ with Palladium Nanoparticles as Cathode for Lithiumâ€“Air Battery. ACS Applied Energy Materials, 2018, , .	2.5	11
43	Highly conductive carbon nanotube micro-spherical network for high-rate silicon anode. Journal of Power Sources, 2018, 394, 94-101.	4.0	60
44	Comparative Study of Li₄Ti₅O₁₂ Composites Prepared withPristine, Oxidized, and Surfactantâ€Treated Multiwalled Carbon Nanotubes for Highâ€Power Hybrid Supercapacitors. ChemElectroChem, 2018, 5, 2357-2366.	1.7	15
45	A biocompatible implant electrode capable of operating in body fluids for energy storage devices. Nano Energy, 2017, 34, 86-92.	8.2	44
46	Synthesis of LiFePO4/graphene microspheres while avoiding restacking of graphene sheetâ€™s for high-rate lithium-ion batteries. Journal of Industrial and Engineering Chemistry, 2017, 52, 251-259.	2.9	28
47	A study of the effects of synthesis conditions on Li5FeO4/carbon nanotube composites. Scientific Reports, 2017, 7, 46530.	1.6	12
48	Exploring Highâ€Energy Liâ€(r)on Batteries and Capacitors with Conversionâ€Type Fe₃O₄â€rGO as the Negative Electrode. ChemElectroChem, 2017, 4, 2626-2633.	1.7	10
49	Li3PO4 surface coating on Ni-rich LiNi0.6Co0.2Mn0.2O2 by a citric acid assisted sol-gel method: Improved thermal stability and high-voltage performance. Journal of Power Sources, 2017, 360, 206-214.	4.0	210
50	An effective approach to preparing partially graphitic activated carbon derived from structurally separated pitch pine biomass. Carbon, 2017, 118, 431-437.	5.4	80
51	Self-assembled Li3V2(PO4)3/reduced graphene oxide multilayer composite prepared by sequential adsorption. Journal of Power Sources, 2017, 367, 167-176.	4.0	5
52	Surfactant-free synthesis of a nanoperforated graphene/nitrogen-doped carbon nanotube composite for supercapacitors. Journal of Materials Chemistry A, 2017, 5, 22607-22617.	5.2	13
53	Multimodal porous carbon derived from ionic liquids: correlation between pore sizes and ionic clusters. Nanoscale, 2017, 9, 14672-14681.	2.8	30
54	Rational design of Li₃VO₄@carbon coreâ€“shell nanoparticles as Li-ion hybrid supercapacitor anode materials. Journal of Materials Chemistry A, 2017, 5, 20969-20977.	5.2	34

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55	A new general approach to synthesizing filled and yolkâ€“shell structured metal oxide microspheres by applying a carbonaceous template. Nanoscale, 2017, 9, 17991-17999.	2.8	20
56	Multi-functionalized herringbone carbon nanofiber for anodes of lithium ion batteries. Physical Chemistry Chemical Physics, 2017, 19, 18612-18618.	1.3	4
57	A chemically bonded NaTi₂(PO₄)₃/rGO microsphere composite as a high-rate insertion anode for sodium-ion capacitors. Journal of Materials Chemistry A, 2017, 5, 17506-17516.	5.2	80
58	Nitrogen and Fluorine Co-doped Activated Carbon for Supercapacitors. Journal of Electrochemical Science and Technology, 2017, 8, 338-343.	0.9	13
59	Sandwich-type ordered mesoporous carbon/graphene nanocomposites derived from ionic liquid. Nano Research, 2016, 9, 2696-2706.	5.8	17
60	Dual coexisting interconnected graphene nanostructures for high performance supercapacitor applications. Energy and Environmental Science, 2016, 9, 2249-2256.	15.6	87
61	In situ synthesis of chemically bonded NaTi2(PO4)3/rGO 2D nanocomposite for high-rate sodium-ion batteries. Nano Research, 2016, 9, 1844-1855.	5.8	69
62	Dodecylamine-derived thin carbon-coated single Fe₃O₄ nanocrystals for advanced lithium ion batteries. RSC Advances, 2016, 6, 37923-37928.	1.7	6
63	TiO2-reduced graphene oxide nanocomposites by microwave-assisted forced hydrolysis as excellent insertion anode for Li-ion battery and capacitor. Journal of Power Sources, 2016, 327, 171-177.	4.0	93
64	Grapheneâ€“Selenium Hybrid Microballs as Cathode Materials for High-performance Lithiumâ€“Selenium Secondary Battery Applications. Scientific Reports, 2016, 6, 30865.	1.6	30
65	High-rate Li4Ti5O12/N-doped reduced graphene oxide composite using cyanamide both as nanospacer and a nitrogen doping source. Journal of Power Sources, 2016, 336, 376-384.	4.0	48
66	Hierarchically structured activated carbon for ultracapacitors. Scientific Reports, 2016, 6, 21182.	1.6	70
67	Synthesis of Reduced Graphene Oxide-Modified LiMn0.75Fe0.25PO4 Microspheres by Salt-Assisted Spray Drying for High-Performance Lithium-Ion Batteries. Scientific Reports, 2016, 6, 26686.	1.6	15
68	Highâ€Performance Sodiumâ€Ion Hybrid Supercapacitor Based on Nb₂O₅@Carbon Coreâ€“Shell Nanoparticles and Reduced Graphene Oxide Nanocomposites. Advanced Functional Materials, 2016, 26, 3711-3719.	7.8	363
69	Scalable fabrication of micron-scale graphene nanomeshes for high-performance supercapacitor applications. Energy and Environmental Science, 2016, 9, 1270-1281.	15.6	122
70	Longitudinal unzipped carbon nanotubes with high specific surface area and trimodal pore structure. RSC Advances, 2016, 6, 8661-8668.	1.7	16
71	Improved electrochemical performance of LiNi0.6Co0.2Mn0.2O2 cathode material synthesized by citric acid assisted sol-gel method for lithium ion batteries. Journal of Power Sources, 2016, 315, 261-268.	4.0	135
72	Superior electrochemical properties of manganese dioxide/reduced graphene oxide nanocomposites as anode materials for high-performance lithium ion batteries. Journal of Power Sources, 2016, 312, 207-215.	4.0	57

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73	Silica-assisted bottom-up synthesis of graphene-like high surface area carbon for highly efficient ultracapacitor and Li-ion hybrid capacitor applications. Journal of Materials Chemistry A, 2016, 4, 5578-5591.	5.2	60
74	Rusted iron wire waste into high performance anode (Î±-Fe₂O₃) for Li-ion batteries: an efficient waste management approach. Green Chemistry, 2016, 18, 1395-1404.	4.6	39
75	Highâ€Surfaceâ€Area Nitrogenâ€Doped Reduced Graphene Oxide for Electric Doubleâ€Layer Capacitors. ChemSusChem, 2015, 8, 1875-1884.	3.6	83
76	Retransformed graphitic activated carbon from ionic liquid-derived carbon containing nitrogen. Journal of Materials Chemistry A, 2015, 3, 2564-2567.	5.2	14
77	Electrochemical Kinetics Investigation of Li₄Ti₅O₁₂/Reduced Graphene Oxide Nanocomposite Using Voltammetric Charge Analysis. Journal of the Electrochemical Society, 2015, 162, A667-A673.	1.3	19
78	Highly dispersible surface-unzipped multi-walled carbon nanotubes as binder-free electrodes for supercapacitor applications. Current Applied Physics, 2015, 15, S21-S26.	1.1	15
79	High-coulombic-efficiency Si-based hybrid microspheres synthesized by the combination of graphene and IL-derived carbon. Journal of Materials Chemistry A, 2015, 3, 20935-20943.	5.2	26
80	Size-tunable tavorite LiFe(PO4)(OH) microspheres with a coreâ€“shell structure. CrystEngComm, 2015, 17, 6149-6154.	1.3	7
81	Reversible Capacity Enhancement of Zinc-Manganese Mixed Oxide through Nanoscale Electrochemical Wiring with Carbon Nanotubes. Journal of the Electrochemical Society, 2015, 162, A1990-A1996.	1.3	3
82	Facile Synthesis of Nb₂O₅@Carbon Coreâ€“Shell Nanocrystals with Controlled Crystalline Structure for High-Power Anodes in Hybrid Supercapacitors. ACS Nano, 2015, 9, 7497-7505.	7.3	411
83	Co3O4-reduced graphene oxide nanocomposite synthesized by microwave-assisted hydrothermal process for Li-ion batteries. Electronic Materials Letters, 2015, 11, 282-287.	1.0	20
84	In Situ Electrochemical Dilatometric Study of Fe₃O₄/Reduced Graphene Oxide Nanocomposites as Anode Material for Lithium Ion Batteries. Journal of the Electrochemical Society, 2015, 162, A2308-A2312.	1.3	14
85	Spray-Assisted Deep-Frying Process for the In Situ Spherical Assembly of Graphene for Energy-Storage Devices. Chemistry of Materials, 2015, 27, 457-465.	3.2	92
86	A two-dimensional highly ordered mesoporous carbon/graphene nanocomposite for electrochemical double layer capacitors: effects of electrical and ionic conduction pathways. Journal of Materials Chemistry A, 2015, 3, 2314-2322.	5.2	49
87	Kinetic favorability of Ru-doped LiNi 0.5 Mn 1.5 O 4 for high-power lithium-ion batteries. Journal of Industrial and Engineering Chemistry, 2015, 21, 731-735.	2.9	30
88	One-step preparation of reduced graphene oxide/carbon nanotube hybrid thin film by electrostatic spray deposition for supercapacitor applications. Metals and Materials International, 2014, 20, 975-981.	1.8	16
89	Effect of Electronic Wiring on the Electrochemical Reaction Sites in Manganese Oxide with Pseudocapacitive Behavior. Journal of the Electrochemical Society, 2014, 161, H365-H369.	1.3	2
90	Electrochemical Impedance Spectroscopic Investigation of Sodium Ion Diffusion in MnO₂Using a Constant Phase Element Active in Desired Frequency Ranges. Journal of the Electrochemical Society, 2014, 161, H207-H213.	1.3	58

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91	Enhanced high-temperature cycling of Li2Oâ€“2B2O3-coated spinel-structured LiNi0.5Mn1.5O4 cathode material for application to lithium-ion batteries. Journal of Alloys and Compounds, 2014, 601, 217-222.	2.8	45
92	Improved high-voltage performance of FePO4-coated LiCoO2 by microwave-assisted hydrothermal method. Electrochemistry Communications, 2014, 43, 113-116.	2.3	34
93	Fluorinated activated carbon with superb kinetics for the supercapacitor application in nonaqueous electrolyte. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2014, 443, 535-539.	2.3	48
94	Lithiumâ€Ion Transport through a Tailored Disordered Phase on the LiNi_{0.5}Mn_{1.5}O₄ Surface for Highâ€Power Cathode Materials. ChemSusChem, 2014, 7, 2248-2254.	3.6	25
95	LiTi₂(PO₄)₃/reduced graphene oxide nanocomposite with enhanced electrochemical performance for lithium-ion batteries. RSC Advances, 2014, 4, 31672-31677.	1.7	26
96	Synthesis of LiMn_{0.75}Fe_{0.25}PO₄/C microspheres using a microwave-assisted process with a complexing agent for high-rate lithium ion batteries. Journal of Materials Chemistry A, 2014, 2, 10607-10613.	5.2	38
97	Size-selective synthesis of mesoporous LiFePO₄/C microspheres based on nucleation and growth rate control of primary particles. Journal of Materials Chemistry A, 2014, 2, 5922-5927.	5.2	35
98	Study on the Electrochemical Kinetics of Manganese Dioxide/Multiwall Carbon Nanotube Composite by Voltammetric Charge Analysis. Journal of the Electrochemical Society, 2014, 161, A137-A141.	1.3	16
99	Phase Transition Method To Form Group 6A Nanoparticles on Carbonaceous Templates. ACS Nano, 2014, 8, 2279-2289.	7.3	12
100	Electrochemical performance of hybrid supercapacitor fabricated using multi-structured activated carbon. Electrochemistry Communications, 2014, 47, 5-8.	2.3	36
101	In Situ Synthesis of Three-Dimensional Self-Assembled Metal Oxideâ€“Reduced Graphene Oxide Architecture. Chemistry of Materials, 2014, 26, 4838-4843.	3.2	47
102	Highâ€Performance Hybrid Supercapacitor Based on Grapheneâ€Wrapped Li₄Ti₅O₁₂ and Activated Carbon. ChemElectroChem, 2014, 1, 125-130.	1.7	137
103	Spine-like Nanostructured Carbon Interconnected by Graphene for High-performance Supercapacitors. Scientific Reports, 2014, 4, 6118.	1.6	28
104	Two-dimensional cobalt-based composites grown on Ti plates for application as pseudocapacitor materials. Electronic Materials Letters, 2013, 9, 531-534.	1.0	4
105	Synthesis of nano-Li4Ti5O12 decorated on non-oxidized carbon nanotubes with enhanced rate capability for lithium-ion batteries. RSC Advances, 2013, 3, 14267.	1.7	25
106	A Novel Highâ€Energy Hybrid Supercapacitor with an Anatase TiO₂â€“Reduced Graphene Oxide Anode and an Activated Carbon Cathode. Advanced Energy Materials, 2013, 3, 1500-1506.	10.2	510
107	Dispersant-free conducting pastes for flexible and printed nanocarbon electrodes. Nature Communications, 2013, 4, 2491.	5.8	65
108	A highly ordered cubic mesoporous silica/graphene nanocomposite. Nanoscale, 2013, 5, 9604.	2.8	32

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109	Self-assembly of Si entrapped graphene architecture for high-performance Li-ion batteries. Electrochemistry Communications, 2013, 34, 117-120.	2.3	48
110	In situ fabrication of lithium titanium oxide by microwave-assisted alkalization for high-rate lithium-ion batteries. Journal of Materials Chemistry A, 2013, 1, 14849.	5.2	25
111	Structurally stabilized LiNi0.5Mn1.5O4 with enhanced electrochemical properties through nitric acid treatment. Journal of Power Sources, 2013, 230, 138-142.	4.0	59
112	Defect-free solvothermally assisted synthesis of microspherical mesoporous LiFePO4/C. RSC Advances, 2013, 3, 3421.	1.7	40
113	Nanocomposite of LiFePO4 and mesoporous carbon prepared by microwave heating for rechargeable lithium batteries. Electronic Materials Letters, 2013, 9, 855-858.	1.0	5
114	Ribbon-like activated carbon with a multi-structure for supercapacitors. Journal of Materials Chemistry A, 2013, 1, 14008.	5.2	12
115	Nanocomposite of LiFePO4 and Mesoporous Carbon for High Power Cathode of Lithium Rechargeable Batteries. Journal of Nanoscience and Nanotechnology, 2012, 12, 8475-8480.	0.9	1