

Sung-Soo Kim

List of Publications by Year in descending order

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75
papers

2,704
citations

236925

25
h-index

182427

51
g-index

77
all docs

77
docs citations

77
times ranked

3449
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 1 | Effect of fluoroethylene carbonate additive on interfacial properties of silicon thin-film electrode. Journal of Power Sources, 2006, 161, 1254-1259. | 7.8 | 554 |
| 2 | Interfacial Origin of Performance Improvement and Fade for 4.6 V LiNi _{0.5} Co _{0.2} Mn _{0.3} O ₂ Battery Cathodes. Journal of Physical Chemistry C, 2014, 118, 10631-10639. | 3.1 | 160 |
| 3 | Enhanced thermal properties of the solid electrolyte interphase formed on graphite in an electrolyte with fluoroethylene carbonate. Electrochimica Acta, 2009, 54, 4445-4450. | 5.2 | 144 |
| 4 | Enhanced electrochemical properties of a Si-based anode using an electrochemically active polyamide imide binder. Journal of Power Sources, 2008, 177, 590-594. | 7.8 | 143 |
| 5 | Surface layer formed on silicon thin-film electrode in lithium bis(oxalato) borate-based electrolyte. Journal of Power Sources, 2007, 172, 404-409. | 7.8 | 109 |
| 6 | Synthesis and characterization of MnV ₂ O ₆ as a high capacity anode material for a lithium secondary battery. Solid State Ionics, 2001, 139, 57-65. | 2.7 | 106 |
| 7 | A mini-review on the development of Si-based thin film anodes for Li-ion batteries. Materials Today Energy, 2018, 9, 49-66. | 4.7 | 92 |
| 8 | Effect of SEI on Capacity Losses of Spinel Lithium Manganese Oxide/Graphite Batteries Stored at 60 Å°C. Electrochemical and Solid-State Letters, 2010, 13, A168. | 2.2 | 88 |
| 9 | Electrochemical Performance of Natural Graphite by Surface Modification Using Aluminum. Electrochemical and Solid-State Letters, 2001, 4, A109. | 2.2 | 87 |
| 10 | Novel Cathode Materials for Na-ion Batteries Composed of Spoke-Like Nanorods of Na[Ni _{0.61} Co _{0.12} Mn _{0.27}]O ₂ Assembled in Spherical Secondary Particles. Advanced Functional Materials, 2016, 26, 8083-8093. | 14.9 | 78 |
| 11 | Phase transitions explanatory of the electrochemical degradation mechanism of Si based materials. Electrochemistry Communications, 2007, 9, 959-964. | 4.7 | 72 |
| 12 | Thermal reactions of lithiated graphite anode in LiPF ₆ -based electrolyte. Thermochemica Acta, 2008, 480, 10-14. | 2.7 | 63 |
| 13 | Effect of titanium addition as nickel oxide formation inhibitor in nickel-rich cathode material for lithium-ion batteries. Journal of Power Sources, 2015, 299, 425-433. | 7.8 | 54 |
| 14 | Improvement of rate capability by graphite foam anode for Li secondary batteries. Journal of Power Sources, 2017, 355, 164-170. | 7.8 | 51 |
| 15 | Interfacial Architectures Derived by Lithium Difluoro(bisoxalato) Phosphate for Lithium-Rich Cathodes with Superior Cycling Stability and Rate Capability. ChemElectroChem, 2017, 4, 56-65. | 3.4 | 45 |
| 16 | Electrochemical properties of lithium vanadium oxide as an anode material for lithium-ion battery. Materials Chemistry and Physics, 2009, 116, 603-606. | 4.0 | 43 |
| 17 | Improving the electrochemical properties of graphite/LiCoO ₂ cells in ionic liquid-containing electrolytes. Journal of Power Sources, 2010, 195, 2368-2371. | 7.8 | 40 |
| 18 | Degradation of spinel lithium manganese oxides by low oxidation durability of LiPF ₆ -based electrolyte at 60 Å°C. Solid State Ionics, 2012, 219, 41-48. | 2.7 | 39 |

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|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 19 | Silicon thin film on graphene coated nickel foam as an anode for Li-ion batteries. <i>Electrochimica Acta</i> , 2017, 258, 800-806. | 5.2 | 36 |
| 20 | Synthesis and Electrochemical Reaction of Tin Oxalate-Reduced Graphene Oxide Composite Anode for Rechargeable Lithium Batteries. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 25941-25951. | 8.0 | 35 |
| 21 | n-Type Doped Silicon Thin Film on a Porous Cu Current Collector as the Negative Electrode for Li-ion Batteries. <i>ChemistryOpen</i> , 2018, 7, 92-96. | 1.9 | 35 |
| 22 | Epicyanohydrin as an Interface Stabilizer Agent for Cathodes of Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2016, 163, A171-A177. | 2.9 | 29 |
| 23 | Quantitative relationships between microstructures and electrochemical properties in Si core-SiO ₂ shell nanoparticles for Li-ion battery anodes. <i>Journal of Power Sources</i> , 2016, 329, 79-87. | 7.8 | 28 |
| 24 | Synthesis of MnMoO ₄ as High Capacity Anode Material for Li Secondary Battery. <i>Chemistry Letters</i> , 2001, 30, 760-761. | 1.3 | 27 |
| 25 | Microstructure and electrochemical properties of rapidly solidified Si-Ni alloys as anode for lithium-ion batteries. <i>Journal of Industrial and Engineering Chemistry</i> , 2019, 71, 351-360. | 5.8 | 27 |
| 26 | Microalgae-derived hollow carbon-MoS ₂ composite as anode for lithium-ion batteries. <i>Journal of Industrial and Engineering Chemistry</i> , 2019, 79, 106-114. | 5.8 | 25 |
| 27 | Electrochemical Characterization of Phosphorous-doped Soft Carbon using Single Particle for Lithium Battery Anode. <i>Electrochimica Acta</i> , 2014, 130, 60-65. | 5.2 | 23 |
| 28 | Observation of Electrochemically Driven Elemental Segregation in a Si Alloy Thin Film Anode and its Effects on Cyclic Stability for Li-ion Batteries. <i>Advanced Energy Materials</i> , 2015, 5, 1501136. | 19.5 | 21 |
| 29 | Synergistic effect of 3D current collector structure and Ni inactive matrix on the electrochemical performances of Sn-based anodes for lithium-ion batteries. <i>Materials Today Energy</i> , 2020, 16, 100397. | 4.7 | 20 |
| 30 | The effect of Co-Co ₃ O ₄ coating on the electrochemical properties of Si as an anode material for Li ion battery. <i>Electrochimica Acta</i> , 2006, 52, 450-454. | 5.2 | 19 |
| 31 | Analysis of intrinsic properties of Li ₄ Ti ₅ O ₁₂ using single-particle technique. <i>Journal of Electroanalytical Chemistry</i> , 2019, 855, 113514. | 3.8 | 19 |
| 32 | Local atomic characterization of LiCo _{1/3} Ni _{1/3} Mn _{1/3} O ₂ cathode material. <i>Electrochimica Acta</i> , 2006, 52, 1467-1471. | 5.2 | 17 |
| 33 | Self-organized Artificial SEI for Improving the Cycling Ability of Silicon-based Battery Anode Materials. <i>Bulletin of the Korean Chemical Society</i> , 2013, 34, 1296-1299. | 1.9 | 17 |
| 34 | 3D electrochemical model for a Single Secondary Particle and its application for operando analysis. <i>Nano Energy</i> , 2019, 62, 810-817. | 16.0 | 16 |
| 35 | The Electrochemical Performances of n-Type Extended Lattice Spaced Si Negative Electrodes for Lithium-Ion Batteries. <i>Frontiers in Chemistry</i> , 2019, 7, 389. | 3.6 | 15 |
| 36 | Mass Production of Electrospun Carbon Nanofiber Containing SiO _x for Lithium-Ion Batteries with Enhanced Capacity. <i>Macromolecular Materials and Engineering</i> , 2019, 304, 1800564. | 3.6 | 15 |

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|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 37 | Understanding the effect of p-, n-type dopants and vinyl carbonate electrolyte additive on electrochemical performance of Si thin film anodes for lithium-ion battery. <i>Electrochimica Acta</i> , 2020, 330, 135179. | 5.2 | 15 |
| 38 | Structural Analysis and First-Principles Calculation of Lithium Vanadium Oxide for Advanced Li-Ion Batteries. <i>Advances in Quantum Chemistry</i> , 2008, , 23-33. | 0.8 | 13 |
| 39 | One-dimensional nanofiber architecture of an anatase TiO ₂ carbon composite with improved sodium storage performance. <i>RSC Advances</i> , 2015, 5, 106252-106257. | 3.6 | 13 |
| 40 | Strong stress-composition coupling in lithium alloy nanoparticles. <i>Nature Communications</i> , 2019, 10, 3428. | 12.8 | 13 |
| 41 | Effects of Phosphorous-doping on Electrochemical Performance and Surface Chemistry of Soft Carbon Electrodes. <i>Bulletin of the Korean Chemical Society</i> , 2013, 34, 2029-2035. | 1.9 | 13 |
| 42 | Novel silane-treated polyacrylonitrile as a promising negative electrode binder for LIBs. <i>Journal of Alloys and Compounds</i> , 2020, 815, 152481. | 5.5 | 12 |
| 43 | Structural and Electrochemical Properties of Li ₂ Mn _{0.5} Fe _{0.5} SiO ₄ /C Cathode Nanocomposite. <i>Bulletin of the Korean Chemical Society</i> , 2011, 32, 4205-4209. | 1.9 | 11 |
| 44 | Thermal Reactions of Lithiated and Delithiated Sulfur Electrodes in Lithium-Sulfur Batteries. <i>ECS Electrochemistry Letters</i> , 2014, 3, A26-A29. | 1.9 | 10 |
| 45 | Pragmatic Approach to Design Silicon Alloy Anode by the Equilibrium Method. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 17406-17414. | 8.0 | 10 |
| 46 | Li-incorporated porous carbon monoliths derived from carboxymethyl cellulose as anode material for high power lithium-ion batteries. <i>Journal of Power Sources</i> , 2021, 506, 230050. | 7.8 | 10 |
| 47 | Enhanced Dilation Properties of Silicon-Silicide, Si-TiFeSi ₂ , Nanocomposite as a Lithium Battery Anode. <i>ECS Electrochemistry Letters</i> , 2012, 2, A10-A13. | 1.9 | 9 |
| 48 | Effects of phosphorous incorporation on the microstructure of Si nanoparticles as an anode material for lithium-ion battery. <i>Thin Solid Films</i> , 2015, 587, 142-149. | 1.8 | 9 |
| 49 | Thermal and Structural Stabilities of Li _x CoO ₂ cathode for Li Secondary Battery Studied by a Temperature Programmed Reduction. <i>Eurasian Chemico-Technological Journal</i> , 2019, , 3. | 0.6 | 9 |
| 50 | Fundamental Approach to Capacity Prediction of Si-Alloys as Anode Material for Li-ion Batteries. <i>Journal of Electrochemical Science and Technology</i> , 2018, 9, 51-59. | 2.2 | 9 |
| 51 | Enhancement of Electrochemical Reaction Rate by Deposition of Alumina on Natural Graphite Surface. <i>Electrochemistry</i> , 2001, 69, 830-833. | 1.4 | 7 |
| 52 | RGO/sAC composites as electrode materials for supercapacitors to enhance electrochemical performance. <i>Journal of Physics and Chemistry of Solids</i> , 2019, 131, 69-78. | 4.0 | 7 |
| 53 | Understanding the relationship of electrochemical properties and structure of microstructure-controlled core shell gradient type Ni-rich cathode material by single particle measurement. <i>Electrochimica Acta</i> , 2021, 390, 138813. | 5.2 | 7 |
| 54 | Three-dimensional Ni ₃ Sn ₄ Negative Electrodes for Lithium-Ion Batteries. <i>International Journal of Electrochemical Science</i> , 2018, 13, 7111-7120. | 1.3 | 6 |

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|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Facile fabrication of polyacrylonitrile-derived porous carbon beads via electron beam irradiation as anode materials for Li-ion batteries. International Journal of Energy Research, 2021, 45, 9530-9540. | 4.5 | 6 |
| 56 | The Effect of Oxygen Content in Binderless Cokes for High-Density Carbon Blocks from Coal Tar Pitch. Materials, 2021, 14, 1832. | 2.9 | 6 |
| 57 | Effect of Conductive Additives on the Structural and Electrochemical Properties of $\text{Li}_4\text{Ti}_5\text{O}_{12}$ Spinel. Bulletin of the Korean Chemical Society, 2012, 33, 4059-4062. | 1.9 | 6 |
| 58 | Grain size effect of nanocrystalline-Si embedded in buffering alloy-matrix as anode for Li-ion batteries. Journal of Alloys and Compounds, 2021, 882, 160558. | 5.5 | 5 |
| 59 | Microstructural Analysis of Si-Ti-Fe Alloy Anode Materials for Li-ion Secondary Batteries. Journal of Korean Institute of Metals and Materials, 2013, 51, 429-436. | 1.0 | 5 |
| 60 | Influence of Precursor on the Electrochemical Properties of $\text{Li}(\text{Ni}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3})\text{O}_2$ Cathode for the Lithium Secondary Battery. Journal of the Korean Electrochemical Society, 2013, 16, 191-197. | 0.1 | 5 |
| 61 | Interfacial Architectures Derived by Lithium Difluoro(bisoxalato) Phosphate for Lithium-Rich Cathodes with Superior Cycling Stability and Rate Capability. ChemElectroChem, 2017, 4, 3-3. | 3.4 | 4 |
| 62 | Electrochemical Study of Graphene Coated Nickel Foam as an Anode for Lithium-Ion Battery. Eurasian Chemico-Technological Journal, 2018, 20, 91. | 0.6 | 4 |
| 63 | N-type doped amorphous Si thin film on a surface of rough current collector as anode for Li-ion batteries. Materials Today: Proceedings, 2018, 5, 22759-22763. | 1.8 | 3 |
| 64 | Synthesis of TiO_2 nanoparticles induced by electron beam irradiation and their electrochemical performance as anode materials for Li-ion batteries. Journal of Electrochemical Science and Technology, 2015, 6, 75-80. | 2.2 | 3 |
| 65 | Relationship between Mechanical and Electrochemical Property in Silicon Alloy Designed by Grain Size as Anode for Lithium-Ion Batteries. Journal of the Electrochemical Society, 0, , . | 2.9 | 3 |
| 66 | Thermally Crosslinked Polyimide Binders for Si-alloy Anodes in Li-ion Batteries. Journal of Electrochemical Science and Technology, 0, , . | 2.2 | 3 |
| 67 | Physical mixtures of Si nanoparticles and carbon nanofibers as anode materials for lithium-ion batteries. Japanese Journal of Applied Physics, 2015, 54, 085001. | 1.5 | 2 |
| 68 | Microstructures and Electrochemical Properties of Si-M (M : Cr, Ni) as Alloy Anode for Li Secondary Batteries. Journal of the Korean Electrochemical Society, 2015, 18, 68-74. | 0.1 | 2 |
| 69 | Onion-Structured Si Anode Constructed with Coating by $\text{Li}_4\text{Ti}_5\text{O}_{12}$ and Cyclized-Polyacrylonitrile for Lithium-Ion Batteries. Nanomaterials, 2020, 10, 1995. | 4.1 | 1 |
| 70 | Design of Non-Flammable Electrolytes for Highly Safe Lithium-Ion Battery. Journal of the Korean Electrochemical Society, 2009, 12, 203-218. | 0.1 | 1 |
| 71 | Thermal stability and reduction mechanism of $\text{LiNi}_0.8\text{Co}_0.1\text{Mn}_0.1\text{O}_2$ and $\text{LiNi}_0.5\text{Co}_0.2\text{Mn}_0.3\text{O}_2$ cathode materials studied by a Temperature Programmed Reduction. Thermochimica Acta, 2021, 706, 179069. | 2.7 | 1 |
| 72 | Electrochemical Characteristics of an Electric Double Layer Supercapacitor Electrode using Cooked-Rice based Activated Carbon. Journal of the Korean Electrochemical Society, 2013, 16, 129-137. | 0.1 | 1 |

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|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 73 | Effect of Lithium Bis(Oxalato)Borate Additive on Thermal Stability of Si Nanoparticle-based Anode. Journal of the Korean Electrochemical Society, 2014, 17, 79-85. | 0.1 | 1 |
| 74 | Power Enhancement of Lithium-Ion Batteries by a Graphene Interfacial Layer. Journal of Nanoscience and Nanotechnology, 2015, 15, 9034-9038. | 0.9 | 0 |
| 75 | Nitrided LATP Solid Electrolyte for Enhanced Chemical Stability in Alkaline Media. Journal of the Korean Electrochemical Society, 2015, 18, 45-50. | 0.1 | 0 |