

Charl J Jafta

List of Publications by Year in descending order

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| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Synthesis, characterisation and electrochemical intercalation kinetics of nanostructured aluminium-doped $\text{Li}[\text{Li}_{0.2}\text{Mn}_{0.54}\text{Ni}_{0.13}\text{Co}_{0.13}]\text{O}_2$ cathode material for lithium ion battery. <i>Electrochimica Acta</i> , 2012, 85, 411-422. | 5.2 | 145 |
| 2 | Mechanochemical Synthesis of High Entropy Oxide Materials under Ambient Conditions: Dispersion of Catalysts via Entropy Maximization. , 2019, 1, 83-88. | | 143 |
| 3 | Porous Ti_4O_7 Particles with Interconnected Pore Structure as a High Efficiency Polysulfide Mediator for Lithium-Sulfur Batteries. <i>Advanced Functional Materials</i> , 2017, 27, 1701176. | 14.9 | 127 |
| 4 | Microwave-Assisted Synthesis of High-Voltage Nanostructured $\text{LiMn}_{1.5}\text{Ni}_{0.5}\text{O}_4$ Spinel: Tuning the Mn^{3+} Content and Electrochemical Performance. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 7592-7598. | 8.0 | 120 |
| 5 | Fast microwave-assisted solvothermal synthesis of metal nanoparticles (Pd, Ni, Sn) supported on sulfonated MWCNTs: Pd-based bimetallic catalysts for ethanol oxidation in alkaline medium. <i>Electrochimica Acta</i> , 2012, 59, 310-320. | 5.2 | 118 |
| 6 | A high-rate aqueous symmetric pseudocapacitor based on highly graphitized onion-like carbon/birnessite-type manganese oxide nanohybrids. <i>Journal of Materials Chemistry A</i> , 2015, 3, 3480-3490. | 10.3 | 93 |
| 7 | Manganese oxide/graphene oxide composites for high-energy aqueous asymmetric electrochemical capacitors. <i>Electrochimica Acta</i> , 2013, 110, 228-233. | 5.2 | 82 |
| 8 | Lithium Iron Aluminum Nickelate, $\text{LiNi}_x\text{Fe}_y\text{Al}_z\text{O}_2$ "New Sustainable Cathodes for Next-Generation Cobalt-Free Li-Ion Batteries. <i>Advanced Materials</i> , 2020, 32, e2002960. | 21.0 | 77 |
| 9 | Electrocatalytic oxidation of ethylene glycol at palladium-bimetallic nanocatalysts (PdSn and PdNi) supported on sulfonate-functionalised multi-walled carbon nanotubes. <i>Journal of Electroanalytical Chemistry</i> , 2013, 692, 26-30. | 3.8 | 74 |
| 10 | Electrochromic and electrochemical capacitive properties of tungsten oxide and its polyaniline nanocomposite films obtained by chemical bath deposition method. <i>Electrochimica Acta</i> , 2014, 128, 218-225. | 5.2 | 72 |
| 11 | An ultrastable heterostructured oxide catalyst based on high-entropy materials: A new strategy toward catalyst stabilization via synergistic interfacial interaction. <i>Applied Catalysis B: Environmental</i> , 2020, 276, 119155. | 20.2 | 72 |
| 12 | Studies on Bare and Mg-doped LiCoO_2 as a cathode material for Lithium ion Batteries. <i>Electrochimica Acta</i> , 2014, 128, 192-197. | 5.2 | 64 |
| 13 | Correlating Morphological Evolution of Li Electrodes with Degrading Electrochemical Performance of Li/LiCoO_2 and Li/S Battery Systems: Investigated by Synchrotron X-ray Phase Contrast Tomography. <i>ACS Energy Letters</i> , 2018, 3, 356-365. | 17.4 | 64 |
| 14 | Recovery of Cathode Materials and Aluminum Foil Using a Green Solvent. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 6048-6055. | 6.7 | 59 |
| 15 | Solution-combustion synthesized nickel-substituted spinel cathode materials ($\text{Li}_{1-x}\text{Ni}_x\text{Mn}_2\text{O}_4$; $0 \leq x \leq 0.2$) for lithium ion battery: enhancing energy storage, capacity retention, and lithium ion transport. <i>Electrochimica Acta</i> , 2014, 128, 172-177. | 5.2 | 57 |
| 16 | Insights into the Enhanced Cycle and Rate Performances of the F-Substituted $\text{P}_2\text{-Type}$ Oxide Cathodes for Sodium-Ion Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 2000135. | 19.5 | 57 |
| 17 | Carbon Coated Porous Titanium Niobium Oxides as Anode Materials of Lithium-Ion Batteries for Extreme Fast Charge Applications. <i>ACS Applied Energy Materials</i> , 2020, 3, 5657-5665. | 5.1 | 53 |
| 18 | Correlating pore size and shape to local disorder in microporous carbon: A combined small angle neutron and X-ray scattering study. <i>Carbon</i> , 2017, 123, 440-447. | 10.3 | 50 |

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|----|---|------|-----------|
| 19 | Bis(trimethylsilyl) 2-fluoromalonate derivatives as electrolyte additives for high voltage lithium ion batteries. <i>Journal of Power Sources</i> , 2019, 412, 527-535. | 7.8 | 47 |
| 20 | High-performance aqueous asymmetric electrochemical capacitors based on graphene oxide/cobalt(ii)-tetrapyrazinoporphyrazine hybrids. <i>Journal of Materials Chemistry A</i> , 2013, 1, 2821. | 10.3 | 42 |
| 21 | In situ engineering of urchin-like reduced graphene oxide@Mn ₂ O ₃ @Mn ₃ O ₄ nanostructures for supercapacitors. <i>RSC Advances</i> , 2014, 4, 886-892. | 3.6 | 40 |
| 22 | Improving Contact Impedance via Electrochemical Pulses Applied to Lithium-Solid Electrolyte Interface in Solid-State Batteries. <i>ACS Energy Letters</i> , 2021, 6, 3669-3675. | 17.4 | 40 |
| 23 | Synthesis of Dispersible Mesoporous Nitrogen-Doped Hollow Carbon Nanoplates with Uniform Hexagonal Morphologies for Supercapacitors. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 29628-29636. | 8.0 | 37 |
| 24 | Multidimensional operando analysis of macroscopic structure evolution in lithium sulfur cells by X-ray radiography. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 10630-10636. | 2.8 | 37 |
| 25 | Probing microstructure and electrolyte concentration dependent cell chemistry <i>via operando</i> small angle neutron scattering. <i>Energy and Environmental Science</i> , 2019, 12, 1866-1877. | 30.8 | 36 |
| 26 | A dicyanobenzoquinone based cathode material for rechargeable lithium and sodium ion batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 17888-17895. | 10.3 | 35 |
| 27 | Direct experimental observation of mesoscopic fluorine domains in fluorinated room temperature ionic liquids. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 13101-13110. | 2.8 | 32 |
| 28 | Microwave-assisted optimization of the manganese redox states for enhanced capacity and capacity retention of LiAl _x Mn _{2-2x} O ₄ (x = 0 and 0.3) spinel materials. <i>RSC Advances</i> , 2015, 5, 32256-32262. | 3.6 | 31 |
| 29 | Small-angle neutron scattering and molecular dynamics structural study of gelling DNA nanostars. <i>Journal of Chemical Physics</i> , 2016, 145, 084910. | 3.0 | 30 |
| 30 | Insight into the Solid Electrolyte Interphase Formation in Bis(fluorosulfonyl)Imide Based Ionic Liquid Electrolytes. <i>Advanced Functional Materials</i> , 2021, 31, 2008708. | 14.9 | 30 |
| 31 | Al ₂ O ₃ /TiO ₂ coated separators: Roll-to-roll processing and implications for improved battery safety and performance. <i>Journal of Power Sources</i> , 2021, 507, 230259. | 7.8 | 30 |
| 32 | Mesoscopic organization in ionic liquids. <i>Topics in Current Chemistry</i> , 2017, 375, 58. | 5.8 | 29 |
| 33 | Fluorination of MXene by Elemental F ₂ as Electrode Material for Lithium-Ion Batteries. <i>ChemSusChem</i> , 2019, 12, 1316-1324. | 6.8 | 28 |
| 34 | Sustainable recycling of cathode scraps via Cyrene-based separation. <i>Sustainable Materials and Technologies</i> , 2020, 25, e00202. | 3.3 | 28 |
| 35 | Probing Thermal Stability of Li-Ion Battery Ni-Rich Layered Oxide Cathodes by means of Operando Gas Analysis and Neutron Diffraction. <i>ACS Applied Energy Materials</i> , 2020, 3, 7058-7065. | 5.1 | 28 |
| 36 | Non-destructive characterization of lithium deposition at the Li/separator and Li/carbon matrix interregion by synchrotron X-ray tomography. <i>Nano Energy</i> , 2019, 62, 11-19. | 16.0 | 26 |

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|----|--|------|-----------|
| 37 | Microwave Irradiation Controls the Manganese Oxidation States of Nanostructured (Li _{0.2} Mn _{0.52} Ni _{0.13} Co _{0.13} Al _{0.02})O ₂ Layered Cathode Materials for High-Performance Lithium Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2015, 162, A768-A773. | 2.9 | 24 |
| 38 | Investigating Multiscale Spatial Distribution of Sulfur in a CNT Scaffold and Its Impact on Li-S Cell Performance. <i>Journal of Physical Chemistry C</i> , 2021, 125, 13146-13157. | 3.1 | 24 |
| 39 | Binder-free carbon monolith cathode material for operando investigation of high performance lithium-sulfur batteries with X-ray radiography. <i>Energy Storage Materials</i> , 2017, 9, 96-104. | 18.0 | 23 |
| 40 | Ion Dynamics in Ionic-Liquid-Based Li-Ion Electrolytes Investigated by Neutron Scattering and Dielectric Spectroscopy. <i>ChemSusChem</i> , 2018, 11, 3512-3523. | 6.8 | 22 |
| 41 | Simultaneously Boosting the Ionic Conductivity and Mechanical Strength of Polymer Gel Electrolyte Membranes by Confining Ionic Liquids into Hollow Silica Nanocavities. <i>Batteries and Supercaps</i> , 2019, 2, 985-991. | 4.7 | 21 |
| 42 | Eutectic Synthesis of the P2-Type Na _{1-x} Fe _{1/2} Mn _{1/2} O ₂ Cathode with Improved Cell Design for Sodium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 23951-23958. | 8.0 | 21 |
| 43 | High accuracy in-situ direct gas analysis of Li-ion batteries. <i>Journal of Power Sources</i> , 2020, 466, 228211. | 7.8 | 20 |
| 44 | Nanoscale organization in the fluorinated room temperature ionic liquid: Tetraethyl ammonium (trifluoromethanesulfonyl)(nonafluorobutylsulfonyl)imide. <i>Journal of Chemical Physics</i> , 2018, 148, 193816. | 3.0 | 19 |
| 45 | Cationic and chain-packing effects on surfactant self-assembly in the ionic liquid ethylammonium nitrate. <i>Journal of Colloid and Interface Science</i> , 2019, 540, 515-523. | 9.4 | 16 |
| 46 | Magnetism variations and susceptibility hysteresis at the metal-insulator phase transition temperature of VO ₂ in a composite film containing vanadium and tungsten oxides. <i>Journal of Magnetism and Magnetic Materials</i> , 2015, 375, 1-9. | 2.3 | 15 |
| 47 | Operando Analysis of Gas Evolution in TiNb ₂ O ₇ (TNO)-Based Anodes for Advanced High-Energy Lithium-Ion Batteries under Fast Charging. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 55145-55155. | 8.0 | 15 |
| 48 | Facile Surface Coatings for Performance Improvement of NMC811 Battery Cathode Material. <i>Journal of the Electrochemical Society</i> , 2022, 169, 020565. | 2.9 | 15 |
| 49 | Epitaxial deposition of silver ultra-fine nano-clusters on defect-free surfaces of HOPG-derived few-layer graphene in a UHV multi-chamber by in situ STM, ex situ XPS, and ab initio calculations. <i>Nanoscale Research Letters</i> , 2012, 7, 173. | 5.7 | 14 |
| 50 | Micellization in binary biosurfactant/synthetic surfactant systems: Effects of temperature and hydrophobic group structure of alkyl benzenesulfonate. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2018, 551, 174-184. | 4.7 | 13 |
| 51 | Encapsulated Sb and Sb ₂ O ₃ particles in waste-tire derived carbon as stable composite anodes for sodium-ion batteries. <i>Sustainable Energy and Fuels</i> , 2020, 4, 3613-3622. | 4.9 | 13 |
| 52 | Mesoscopic structural organization in fluorinated room temperature ionic liquids. <i>Comptes Rendus Chimie</i> , 2018, 21, 757-770. | 0.5 | 12 |
| 53 | Synthesizing High-Capacity Oxyfluoride Conversion Anodes by Direct Fluorination of Molybdenum Dioxide (MoO ₂). <i>ChemSusChem</i> , 2020, 13, 3825-3834. | 6.8 | 12 |
| 54 | A Multidimensional Operando Study Showing the Importance of the Electrode Macrostructure in Lithium Sulfur Batteries. <i>ACS Applied Energy Materials</i> , 2020, 3, 6965-6976. | 5.1 | 11 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 55 | Analysis of Dimer Impurity in Polyamidoamine Dendrimer Solutions by Small-angle Neutron Scattering. Chinese Journal of Polymer Science (English Edition), 2019, 37, 827-833. | 3.8 | 10 |
| 56 | Enhancing Cycling Stability and Capacity Retention of NMC811 Cathodes by Reengineering Interfaces via Electrochemical Fluorination. Advanced Materials Interfaces, 2022, 9, . | 3.7 | 10 |
| 57 | Tuning the solution organization of cationic polymers through interactions with bovine serum albumin. Physical Chemistry Chemical Physics, 2017, 19, 18471-18480. | 2.8 | 9 |
| 58 | Probing the Li ₄ Ti ₅ O ₁₂ Interface Upon Lithium Uptake by Operando Small Angle Neutron Scattering. ChemSusChem, 2020, 13, 3654-3661. | 6.8 | 9 |
| 59 | Nanostructured ligament and fiber Al ³⁺ -doped Li ₇ La ₃ Zr ₂ O ₁₂ scaffolds to mediate cathode-electrolyte interface chemistry. Journal of Power Sources, 2021, 513, 230551. | 7.8 | 9 |
| 60 | Dynamics of Emim ⁺ in [Emim][TFSI]/LiTFSI Solutions as Bulk and under Confinement in a Quasi-liquid Solid Electrolyte. Journal of Physical Chemistry B, 2021, 125, 5443-5450. | 2.6 | 8 |
| 61 | MXene Reinforced Thermosetting Composite for Lightning Strike Protection of Carbon Fiber Reinforced Polymer. Advanced Materials Interfaces, 2021, 8, 2100803. | 3.7 | 7 |
| 62 | Quantifying the chemical, electrochemical heterogeneity and spatial distribution of (poly) sulfide species using Operando SANS. Energy Storage Materials, 2021, 40, 219-228. | 18.0 | 7 |
| 63 | Review ^o Electrospun Inorganic Solid-State Electrolyte Fibers for Battery Applications. Journal of the Electrochemical Society, 2022, 169, 050527. | 2.9 | 7 |
| 64 | V4: The Small Angle Scattering Instrument (SANS) at BER II. Journal of Large-scale Research Facilities JLSRF, 0, 2, A97. | 0.0 | 6 |
| 65 | The Nanoporous RP-20 Carbon Electrode as a Model for Energy Storage and Conversion Systems ^o Studied with μ CT, SAXS and SANS Techniques. ECS Transactions, 2017, 77, 1133-1144. | 0.5 | 5 |
| 66 | Methyl quantum tunneling in ionic liquid [DMIm][TFSI] facilitated by Bis(trifluoromethane)sulfonimide lithium salt. Scientific Reports, 2018, 8, 10354. | 3.3 | 5 |
| 67 | Reduced Graphene Oxide Aerogels with Functionalization-Mediated Disordered Stacking for Sodium-Ion Batteries. Batteries, 2022, 8, 12. | 4.5 | 5 |
| 68 | A lightweight thermally insulating and moisture-stable composite made of hollow silica particles. RSC Advances, 2022, 12, 15373-15377. | 3.6 | 5 |
| 69 | Carbon nanotube-enhanced photoelectrochemical properties of metallo-octacarboxyphthalocyanines. Journal of Materials Science, 2014, 49, 340-346. | 3.7 | 4 |
| 70 | Viscosity Transitions Driven by Thermoresponsive Self-Assembly in PHOS-g-P(PO-r-EO) Brush Copolymer. Macromolecules, 2018, 51, 1644-1653. | 4.8 | 4 |
| 71 | Progress of nanotechnology for lithium-sulfur batteries. Frontiers of Nanoscience, 2021, 19, 137-164. | 0.6 | 3 |
| 72 | Correlation of Oxygen Anion Redox Activity to In-plane Honeycomb Cation Ordering in Na _x Ni _y Mn _{1-y} O ₂ Cathodes. Advanced Energy and Sustainability Research, 0, , 2200027. | 5.8 | 3 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 73 | Tuning Electrolytic Manganese Dioxide for a High-Voltage Aqueous Asymmetric Electrochemical Capacitor. ECS Transactions, 2013, 50, 93-101. | 0.5 | 2 |
| 74 | Stability of human serum albumin structure upon toxin uptake explored by small angle neutron scattering. Polymer, 2018, 141, 175-183. | 3.8 | 2 |
| 75 | Recent In Situ/Operando Characterization of Lithium-Sulfur Batteries. Environmental Chemistry for A Sustainable World, 2019, , 21-40. | 0.5 | 2 |
| 76 | Sodium Oxide Cathodes: Insights into the Enhanced Cycle and Rate Performances of the F ²⁺ -Substituted P2-Type Oxide Cathodes for Sodium-Ion Batteries (Adv. Energy Mater. 19/2020). Advanced Energy Materials, 2020, 10, 2070087. | 19.5 | 2 |
| 77 | Directed Assembly of Multi-Walled Nanotubes and Nanoribbons of Amino Acid Amphiphiles Using a Layer-by-Layer Approach. Chemistry - A European Journal, 2021, 27, 6904-6910. | 3.3 | 2 |
| 78 | A PRESSURIZED Ar-FILLED ANNEALING SYSTEM. Instrumentation Science and Technology, 2010, 38, 261-267. | 1.8 | 1 |
| 79 | Modification to an Auger Electron Spectroscopy system for measuring segregation in a bi-crystal. Journal of Instrumentation, 2013, 8, P03020-P03020. | 1.2 | 1 |
| 80 | Magnetic Properties of Zn _{0.5} Ni _{0.5} Fe ₂ O ₄ : the Effect of Synthesis Route. Journal of Superconductivity and Novel Magnetism, 2017, 30, 3321-3325. | 1.8 | 0 |
| 81 | Fluorination of MXene by Elemental F ₂ as Electrode Material for Lithium-Ion Batteries. ChemSusChem, 0, , . | 6.8 | 0 |
| 82 | Fluorination of MXene by Elemental F ₂ as Electrode Material for Lithium-Ion Batteries. ChemSusChem, 2019, 12, 1271-1271. | 6.8 | 0 |
| 83 | Solid Electrolyte Interphases: Insight into the Solid Electrolyte Interphase Formation in Bis(fluorosulfonyl)Imide Based Ionic Liquid Electrolytes (Adv. Funct. Mater. 23/2021). Advanced Functional Materials, 2021, 31, 2170163. | 14.9 | 0 |
| 84 | Probing the electrode-electrolyte interface with in operando neutron scattering. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, a395-a395. | 0.1 | 0 |
| 85 | Fluorination of Mxene by Elemental F ₂ as Electrode for Lithium-Ion Batteries. ECS Meeting Abstracts, 2019, , . | 0.0 | 0 |
| 86 | New Electrolyte Additives for High Voltage Lithium Ion Batteries. ECS Meeting Abstracts, 2019, , . | 0.0 | 0 |
| 87 | Operando SANS and Synchrotron Radiography Characterization of the Carbon Cathode from Lithium Sulfur Batteries. ECS Meeting Abstracts, 2019, , . | 0.0 | 0 |
| 88 | (Invited) In-Operando Neutron Scattering Studies of Interfacial Electrolyte Chemistry. ECS Meeting Abstracts, 2019, , . | 0.0 | 0 |
| 89 | Dicyanobenzoquinone Functionalized Carbon Nanotubes As Cathode Materials for Rechargeable Lithium and Sodium Ion Batteries. ECS Meeting Abstracts, 2019, , . | 0.0 | 0 |
| 90 | Probing the electrode-electrolyte interface with in operando neutron scattering. Acta Crystallographica Section A: Foundations and Advances, 2019, 75, a368-a368. | 0.1 | 0 |

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|----|--|-----|-----------|
| 91 | Investigation of an <i>in situ</i> chemically formed SEI from bis(fluorosulfonyl)imide based electrolyte on ordered mesoporous carbons. Acta Crystallographica Section A: Foundations and Advances, 2019, 75, a336-a336. | 0.1 | 0 |
| 92 | (Invited) Understanding the Dynamics of Confined Species in Electrochemical Energy Storage Materials. ECS Meeting Abstracts, 2020, MA2020-01, 52-52. | 0.0 | 0 |