

## KEEPING UP WITH BATTERIES

We have sifted through 1000s of articles on lithium-ion batteries for you! We have captured pretty much everything new and important that came out in *May 2018*. We have selected and categorized commercially-relevant articles, added some interesting news, and squeezed all this content into our comprehensive review.

Hope it makes your work easier and keeps you in touch with battery literature!

*The Research Interfaces Team*

### APPLICATIONS, POLICY & RECYCLING



Fuel cells vs batteries for drone applications	<a href="#">Elsevier</a>				
BMS for small-size rotary-wing electric UAVs	<a href="#">Elsevier</a>				
Online fuzzy energy management of hybrid fuel cell/battery system	<a href="#">Elsevier</a>				
Thermal safety issues of Li-ion batteries for EVs	<a href="#">IEEE</a>				
Thermal and electrical performance of EV battery under drive cycles	<a href="#">Elsevier</a>				
Energy management of off-road EVs with hybrid battery-SC system	<a href="#">IEEE</a>				
Battery size and lifetime for wireless charging of EVs	<a href="#">IEEE</a>				
<b>Assessing prototype solid-state Li-metal battery for EV application</b>	<a href="#">Elsevier</a>				
<b>Hybrid NCA/LTO EV battery system to reduce battery aging</b>	<a href="#">Elsevier</a>				
Development of 48V P0 demonstration vehicle	<a href="#">Springer</a>				
World Electric Vehicle Journal: New open access journal for e-mobility	<a href="#">MDPI</a>				
Stochastic prediction of power demand at high-rate EV chargers	<a href="#">IEEE</a>				
Peak-load reduction algorithm using coordination of PV, BESS, EV	<a href="#">IEEE</a>				
Dynamic program to value energy storage in grid applications	<a href="#">Elsevier</a>				
Energy storage for preserving power system adequacy and security	<a href="#">Elsevier</a>				
Improving dispatchability of distribution networks through grid batteries	<a href="#">Elsevier</a>				
<b>Impact of BESS representative usage profile on cell degradation</b>	<a href="#">Elsevier</a>				
ESS technologies in microgrid applications	<a href="#">IEEE</a>				
Energy storage technologies for PV systems	<a href="#">Elsevier</a>				
Study of battery-SC hybrid ESS for standalone PV power system	<a href="#">Elsevier</a>				
MPC based peak shaving for household battery-PV system	<a href="#">Elsevier</a>				
ESS coupling in high-efficiency household scenario	<a href="#">Elsevier</a>				
Battery sizing and energy management for green small cells	<a href="#">IEEE</a>				
Short-distance commercial electric aviation	<a href="#">IEEE</a>				
Electricity management for EVs considering urban mobility	<a href="#">Nature</a>				
Best practices and incentives for EVs: International expert survey	<a href="#">IEEE</a>				
<b>Effectiveness of EV incentives in US</b>	<a href="#">Elsevier</a>				
Ownership costs for conventional, hybrid, and EVs in US cities	<a href="#">Elsevier</a>				

Probabilistic cost of ownership model for EV uptake in Italy	<a href="#">Elsevier</a>				
<b>Car dealerships as barriers to EV adoption</b>	<a href="#">Nature</a>				★
Future of US energy storage and policies driving its growth	<a href="#">ABA</a>				
Technical and financial comparison of BESS for residential grid	<a href="#">AIP</a>				
Hazard identification for Li-ion batteries using FMEA	<a href="#">Elsevier</a>				
New vision 2050: Technology and low-carbon society 🔍	<a href="#">Springer</a>				book

<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li> – link to the article or website</li> <li>  – industry/government co-author</li> <li> – application / Li-ion chemistry</li> <li>  – electric vehicles/EVs</li> </ul>	<ul style="list-style-type: none"> <li> grid storage  aviation</li> <li> policy relevance</li> <li> mining  recycling</li> <li> – open access</li> <li> ★ – review article / highlight</li> </ul>	<p>*Other abbreviations are chemistry or engineering specific and commonly used throughout the field (e.g. NMC = Ni-Mn-Co cathode). If you are unclear, please click on the link and check.</p> <p>**Mistakes are unavoidable, so please forgive us if you find any.</p>
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Comparative LCA of batteries with Li metal, Si, and graphite anodes	<a href="#">Springer</a>				
<b>Sustainability of Li recovery from brines</b> 🔍	<a href="#">Elsevier</a>				★
Separation of Li from leach liquors by solvent extraction 🔍	<a href="#">MDPI</a>				
Purification of industrial grade LiCl into battery grade Li <sub>2</sub> CO <sub>3</sub>	<a href="#">Elsevier</a>				
<b>Recycling of metals from spent Li-ion batteries</b> 🔍	<a href="#">Elsevier</a>				★
Metallurgical and mechanical methods for recycling EV battery packs 🔍	<a href="#">Elsevier</a>				
Recycling of LiCoO <sub>2</sub> cathode powders using mild organic acids	<a href="#">Elsevier</a>				
Ultrasound-assisted leaching of Co and Li from spent batteries	<a href="#">Elsevier</a>				
Extracellular polymeric substances in bioleaching of spent batteries	<a href="#">Elsevier</a>				
Battery waste and capitalist phantasy	<a href="#">Sage</a>				

NEWS BOX



- IEA: Global EV Outlook 2018 ([IEA](#))

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- Bloomberg New Energy Finance: Electric Vehicle Outlook 2018 ([Bloomberg](#))

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- Electric-car Batteries That Charge in Five Minutes Have Lured an Unlikely Investor: Big Oil ([Quartz](#))

*"StoreDot says its flash batteries for mobile should be commercially available next year, according to the BP statement. It's unclear when the rapid-charging batteries for EVs will arrive."*

Whatever Happened to That \$35,000 Tesla Model 3 You Still Can't Buy? ([The Guardian](#))

Storage Will Be Energy's Next Big Thing ([Bloomberg](#))

*'One result is that where renewables penetration is greatest, wholesale electricity prices have occasionally gone to zero or even into negative territory... negative prices give storage operators the opportunity to get paid to charge their cells, and then paid to discharge them as well.'*



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Just How Much Business Can Batteries Take from Gas Peakers?  
([Greentech Media](#))

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Sonnen Raises \$71M and Kicks Off a Strategic Partnership With Shell ([Greentech Media](#))



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JetSuite Strikes a Deal for Hybrid Electric Planes With Start-up Zunum Aero  
([Los Angeles Times](#))

*"It is the first substantial commercial order of an aircraft technology that could cut fuel costs and emissions, and make flights quieter."*

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China's Chilean Entry Raises Doubts About Lithium Price Outlook ([Mining.com](#))