# Topical Feature: ELECTRIC VEHICLES (EVs)

## Discovery

We SHARE to inspire and ignite ideas.

The titles featured here are to give you a peek into the wealth of resources we have. We hope, through this, will encourage you to explore and read further. Share with us trending topics and we can introduce relevant titles from some 400,000 eBooks we carry & other publications from the wealth of resources.

### 2017 HAPPENINGS

<table>
<thead>
<tr>
<th>CHARGING INFRASTRUCTURE</th>
<th>CHARGING MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2017 Will Be Remembered as the Year Electric Cars Came of Age</strong></td>
<td><strong>An Optimal Solution for Charging Management of Electric Vehicles Fleets</strong></td>
</tr>
</tbody>
</table>

This year, we will be expecting a grand arrival of a wide variety of economical, eye-catching EVs in the market. In addition you can expect prices to be around the $30,000 USD mark.

Source: [Observer](https://observer.com/) (4 April 2017)

A study on the deployment of charging stations, charging lanes, and finding the optimal deployment of charging infrastructure. Findings indicate that charging lanes are more advantageous considering usage and profit-making.


### ELECTRIC ROADS

<table>
<thead>
<tr>
<th>ENERGY POLICY</th>
<th>ENERGY STORAGE SYSTEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wired-Up Roads Will Soon Charge Your Electric Car – While You’reDriving</strong></td>
<td><strong>Here’s How to Speed Up the Electric-Car Revolution</strong></td>
</tr>
</tbody>
</table>

Convenient and time-saving charging-on-the-move is no longer a dream thanks to wireless charging technologies. However, safety and information security could be an issue.

Source: [The Conversation](https://theconversation.com/) (9 February 2017)

With the rise of EVs, policies made by governments towards a regulatory-driven adoption of EVs are needed to speed up the arrival of an EV future. Gain additional insights from the [Bloomberg-McKinsey Report](https://www.bloomberg.com/Themes/mcm辩论) on the future of mobility.

Source: [MIT Technology Review](https://mittechnologyreview.com/) (12 October 2016)

### ENVIRONMENTAL CONCERNS

<table>
<thead>
<tr>
<th>EV BATTERIES</th>
<th>Battery Sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Why Electric Cars Are Only as Clean as Their Power Supply</strong></td>
<td><strong>New Sensor Technology for e-Vehicle Batteries</strong></td>
</tr>
</tbody>
</table>

Batteries for Tesla and other Electric Car Makers Are Getting Cheaper


It is argued that the manufacturing process and batteries of EVs are two crucial factors to evaluate how environmentally-friendly the vehicles are.

Continuous innovations in battery technologies have made EV batteries more and more affordable. A recent McKinsey Report further predicts that EVs will reach the same price range of other vehicles within 10 years.

A new system for EV batteries was proposed that only a single voltage sensor is needed in the system, making the batteries lighter and cheaper.

<table>
<thead>
<tr>
<th>EV DESIGN</th>
<th>HYBRID EVS</th>
<th>INSIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>What will the future EVs look like? The VW’s new design gives some hints: taller vehicles with shorter overhangs and an expanded passenger compartment.</td>
<td>From this paper, you are able to view a full picture on the architecture of different types of HEVs, with a focus on the energy flow between engine and motor during various driving conditions.</td>
<td>According to the latest automotive executives survey by KPMG, most of the respondents deem battery-powered EVs will slip up against fuel cell hydrogen cars due to infrastructure. Read the full KPMG report.</td>
</tr>
</tbody>
</table>

**MARKET GROWTH**

Electric Vehicles: Ready to Go Mainstream

This report explores the attractiveness of various domestic EV markets, taking political, economic, and technological factors into account, as well as investment opportunities around the global market. Find out more from the Accenture Report.

Source: Accenture (1 December 2016)

**MARKET IMPACTS**

The World Could Reach Peak Coal and Oil in Three Years, Thanks to Cheap Renewables

The impacts of affordable solar power and EVs on the demand for fossil fuels were studied. It is predicted that year 2020 will meet the peak demands for coal and oil. Learn more from the Imperial College London Report.

Source: Fast Co. Exist (7 February 2017)

**SINGAPOREAN EV**

Singapore’s First Home-Grown Electric Supercar to Debut at Geneva Motor Show

Introducing the very first fully electric car Dendrobium, developed by the electric transportation solution provider Vanda Electrics. It has a total output of 1,500 horsepower and a top speed of 400 kmh.

Source: Today Online (19 January 2017)

**SOLAR-CHARGING**

The Use of Parking Lots to Solar-Charge Electric Vehicles

<table>
<thead>
<tr>
<th>TESLA</th>
<th>TRIP COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tesla Has Big Plans for 2017</td>
<td>Analysis of Electric Vehicle’s Trip Cost Without Late Arrival</td>
</tr>
</tbody>
</table>
An up-to-date review of existing EV charging technologies and solutions integrating solar panels and parking lots, with focus on the framework architecture of smart charging systems.

Source: Renewable and Sustainable Energy Reviews (December 2016)

This year, Tesla is going to hasten its innovation and production for a more sustainable future. From Model 3 to Tesla Semi, from Supercharger expansion to a new Gigafactory, and more.

Source: Futurism (11 February 2017)

A car-following model was employed to study each EV’s trip cost and the traffic system's total cost without late arrival, with an emphasis on the electricity cost.


For more articles or in-depth research, contact us at library@sutd.edu.sg!