

**ASX Release**

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**12 September 2018****ULTRACHARGE LIMITED**  
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**Corporate and Investors**

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**Directors**

Mr Kobi Ben-Shabat  
Mr David Wheeler  
Mr Doron Nevo  
Mr Yuri Nehushtan  
Mr John Paitaridis

**ASX Code:**

UTR

**Shares:**

695,629,070

**Escrow Shares:**

114,059,808 quoted  
103,108,409 unquoted

**Options (various):**

124,000,000

**Performance Rights:**

13,687,500

Dear Fellow Shareholders,

The last nine months have been extremely significant for UltraCharge.

We started 2018 as a battery technology company with intellectual property rights for Titanium Dioxide TiO<sub>2</sub> Anode material. We have rapidly advanced with the addition of several innovative advanced battery technologies, a world leading research and development team, partnerships with leading suppliers of battery materials, customers for our batteries and an in-house capability to build batteries that can be delivered to end-user customers for testing and deployment.

However, before I update you on our technical and commercial achievements over the past 12 months, I wanted to share with you a few personal observations about our exciting ecosystem.

**The world is rapidly moving towards electric transportation.** Zero emission electric transportation is necessary to limit global warming to below 20°C. There is no way around it. We, as a society, must stop using carbon-based fuels to hold global warming before universal disasters change our way of living in scenes reminiscent of Hollywood's 'end-of-the-world' movies!

Society is ready to move from using fossil fuels to power transport. The key to electric transportation and successfully mass-produced electric vehicles is having a similar user experience to that of today's internal combustion engine, at the same price points.

Lithium-ion batteries are the most mature technology for zero emission, electric battery transportation. However, they have two major limiting factors – (i) the price of Electric Vehicles (EV) is significantly higher compared to internal combustion engine vehicles in the same class, mainly due to the cost of battery packs and (ii) the current state-of-the-art batteries take several hours to charge and “fast-charging” is limited due to fast degradation of the battery.

**The key to achieving widespread adoption of Electric Vehicles is “fast-charging”.** “Fast-charging” provides Electric Vehicles with the same level of freedom that internal combustion engine vehicles have – the freedom to drive from point A to point B with minimal planning and wait times. “Fast-charging” is critical but without significant cost reduction, market penetration will be limited. UltraCharge's mission is “low-cost”, “fast-charging” lithium-ion batteries.

During the past 12 months, we have been heavily focused on identifying advanced lithium-ion battery technologies that would be “low-cost” and ultra “fast charging” which could provide the foundations for an innovative and profitable company.

## **TiO<sub>2</sub>: Titanium dioxide or titania**

TiO<sub>2</sub> is a low cost abundant raw material used in the food and paint industry, with a theoretical capacity of 330mA hg<sup>-1</sup> and low volume change (<4%) during lithium insertion/desertion **enabling ultra-fast charge/discharge and high cycle-stability**.

Over the last 12 months we have:

1. Initiated a joint development agreement (JDA) with the world's second largest TiO<sub>2</sub> manufacturer, Chemours, to scale-up production and develop new ways of improving the TiO<sub>2</sub> Anode material, as well as reducing the cost of production to sustain commercial aspects of future supplies of Anode material. Chemours will support the project this year providing USD\$150,000 to assist with the JDA while investing funds internally as part of the JDA;
2. Increased our TiO<sub>2</sub> production capability from what was a laboratory research quantity to several kilograms using our newly installed 50L reactor; and –
3. Demonstrated 250mA hg<sup>-1</sup> at TiO<sub>2</sub> Anode.

## **LNMO (LiNi<sub>0.5</sub>Mn<sub>1.5</sub>O<sub>4</sub>) Cathode - High Voltage Nickel-Manganese-Oxide (Spinel)**

**LNMO high voltage cathode presents an enormous opportunity for a low cost, high power, high energy battery. It can save around 30 to 40 per cent of the cost of a battery pack compared to the state-of-the-art NMC (Lithium Nickel Manganese Cobalt Oxide) batteries used in Nissan Leaf EV's or NCA (Lithium Nickel Cobalt Aluminium Oxide) batteries used in Tesla EV's, and also demonstrates similar performance levels.**

In late 2017, UltraCharge acquired the LNMO cathode intellectual property from ETV Energy, a technology start-up located in Bar-Ilan University and we recruited ETV's leading scientific team. Post the acquisition, we moved quickly to exercise a great opportunity around the LNMO solution that is attracting strong, worldwide attention for our cobalt-free solution and 4.7V performance. We have attracted the attention of many potential customers and strategic partners that are excited about the opportunity we provide using this technology.

## **Combining our ultra-fast charging Anode (TiO<sub>2</sub>) and High Voltage Cathode (LNMO) into a disruptive Li-ion battery**

UltraCharge has developed a unique opportunity by combining its state-of-the-art, high voltage LNMO cathode with its TiO<sub>2</sub> Anode. Combining the two electrodes will result in a high power, high-energy, ultra-fast charging battery, with the potential to change the automotive Battery Electric Vehicle market. We are in regular discussions with potential automotive partners about our unique ultra-fast charging battery, as well as generating sales opportunities from our relatively mature LMNO technology.

**LiFSI:** The intellectual property in this field also provides a great future opportunity as LiFSI is set to be the future salt inside an Electrolyte that can extend the life of lithium-ion batteries by 25 per cent. This is super critical for the overall Electric Vehicle market. UltraCharge signed a Memorandum of Understanding with Sinochem Lantian Co, the second largest chemical company in China for the mass production of LiFSI.

On top of achieving some great technical results during the last year, we have also taken major steps towards commercialisation of our lithium-ion battery technologies:

1. Signed a Letter of Intent with Aeronautics Ltd, a leading UAV manufacturer, to test our LMNO solution in their UAV's. Initial testing of the LMNO batteries will occur in their UAV's during the next three months with an aim of securing a commercial agreement once successful.
2. Signed a supply agreement with Blitz Motors, an established electric scooter manufacturer, to use our LNMO solution for their electric scooters. Our LNMO battery pack will extend the scooter's range by 50 per cent. The potential revenue for UltraCharge could exceed USD\$20M in sales over the next three years. Pilot testing in the two models of scooters will occur towards the end of 2018.

3. Signed a joint venture agreement with PT Garda, a leading battery supplier to the Indonesian Army, to establish a local production facility and for PT Garda to secure orders of batteries in Indonesia and throughout the ASEAN region. PT Garda must secure firm orders of at least USD\$5 million worth of lithium-ion batteries from its military clientele in order to proceed with the JV. UltraCharge will then be required to contribute up to USD\$3 million to establish a new production facility near Jakarta.

Furthermore, we are in constant discussions with other potential partners in the two-wheel and electric vehicle markets, with the key objective of securing new joint venture opportunities that we hope to be able to announce shortly.

At present, we expect first revenues from our two-wheels project will be received in the first half of 2019. We are 100 per cent focused on our research and development and our efforts to commercialise our lithium-ion battery technologies. We also hope to be able to strengthen our cash position with non-diluted sources that will assist us to achieve our business goals.

UltraCharge has made major progress during the past 12 months and with strong technical assets, leading partners, a top research team and strong potential sales, we are heavily focused on continuing our efforts to scale-up our production capabilities to deliver a significant supply of lithium-ion batteries into the global market. This provides us with both short and long-term revenue opportunities as we look forward to strengthening our position as leaders in the lithium-ion battery market.

I thank you for your continued support of UltraCharge and look forward to keeping you regularly apprised about the company's activities.

Yours sincerely

**Kobi Ben-Shabat**  
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#### **About UltraCharge Limited ([www.ultra-charge.net](http://www.ultra-charge.net))**

UltraCharge is an Israel-based company that is a global leader in identifying, acquiring and developing battery technologies that offer superior qualities and new solutions for the lithium ion and flow battery markets.

UltraCharge has established a battery facility to develop its platform technologies and customising solutions to meet end user requirements, and subsequently meet global market demand.

The Company offers a full lithium ion battery solution with the following suite of intellectual property:

- **Anode for Lithium Ion Batteries:** The technology will replace graphite in anodes (negative pole) with nanotube fibers made from titanium dioxide. This has the potential to revolutionise the market for lithium batteries by producing a battery that is safe, has a longer lifetime and is fast charging.
- **Cathode for Lithium Ion Batteries:** The technology contains a high voltage LiMnNio cathode that is half the cost of commercial cathodes and can offer a battery solution that has advantages in terms of the voltage, energy capacity and power capacity.
- **Electrolyte for Lithium Ion Batteries:** Low cost, high performing electrolyte solution. The intellectual property is around producing a more superior electrolyte salt – LiFSI - which can increase battery lifespan and performance at high and low temperatures.