

## Annual Meeting 24-25 April 2019

*Son Quality Spa & Resort*



## Program at a Glance

Wednesday 24 April		
10h00	Arrival and Registration	
11h00	Welcome	
11h10	<b>Session 1: Policy</b>	
11h55	Lunch	
13h00	<b>Session 1: Policy (cont.)</b>	
13h40	<b>Session 2: Batteries</b>	
14h55	<b>Session 3: Systems &amp; Safety</b>	
16h25	<b>Session 4: Hydrogen and Fuel Cells</b>	
19h30	Dinner	
Thursday 25 April		
08h30	<b>1. Market &amp; Innovation</b>	<b>RTN Seminar</b>
10h15	<b>2. General Assembly</b>	
11h30	Lunch	
12h30	<b>3. Research Highlights &amp; Results</b>	
14h40	<b>Closing Remarks</b>	
15h10	Bus departure to Oslo & Gardermoen	

## Program Wednesday 24 April

### Arrival & Registration

08h30 Bus pick-up at Oslo Airport (08h30) – Olavsgaard (08h50) – Ryen (09h10)  
10h00 Registration & Morning Coffee

11h00 **Welcome and information by the Norwegian Research Council** Andreas Bratland, *RCN*

### Session 1: Policy (Chair: Erik Figenbaum, *TØI*)

11h10 Scenarios for ZEV Market Penetration into the Truck Sector Marshall Miller, *UC Davis*  
11h35 The early adoption of battery electric trucks - Results from the MoZEEES case study on electrification and hydrogen solutions for trucks in Norway Inger Beate Hovi, *TØI*

### Lunch 11h55-13h00

13h00 Life cycle environmental impacts of alternative powertrain configurations heavy vehicles, at real scale deployment in Norway - *Abstract* Gaylord Booto, *IFE*  
13h20 Governance in transitioning maritime passenger transport towards sustainability Solveig Meland, *SINTEF*

### Session 2: Batteries (Chair: Hanne F. Andersen, *IFE*)

13h40 Lithium inventory loss in NCA||Si cells: The importance of full-cell analysis of anode materials for Li-ion batteries Nils Wagner, *SINTEF*  
14h00 High Energy Density Cathode for Lithium-ion Batteries and Operando Studies - *Abstract* Halvor H. Hval & Alok Tripathi, *UiO*  
14h20 Silicon anodes for Li-ion batteries Samson Lai, *IFE*

### Coffee Break 14h40-14h55

### Session 3: Systems & Safety (Chair: Sissel Forseth, *FFI*)

14h55 Hydrogen Safety in the era of fake news and alternative facts - *Abstract* Olav Hansen, *Lloyd's Register*  
15h15 Potential hazards of indoor use of hydrogen - *Abstract* André Vagner Gaathaug, *USN*  
15h35 Aging and lifetime prediction of lithium-ion batteries - *Abstract* Moritz Teuber, *RWTH Aachen*

### Coffee & Light Meal 15h55-16h25

### Session 4: Hydrogen and Fuel cells (Chair: Magnus Thomassen, *SINTEF*)

16h25 Development of electrocatalysts for low cost and high efficiency electrolyzers Magnus Thomassen, *SINTEF*  
16h45 Protonic Conductivity of Undoped High-Temperature Polymer Electrolyte Membranes - *Abstract* Xinwei Sun, *UiO*  
17h05 Long Term Properties of Hydrogen Pressure Vessels - *Abstract* Eivind Hugaas, *NTNU*

### Relaxation – Spa – Networking

19h30 **Dinner**

## Program Thursday 25 April

08h15	<b>Morning coffee</b>	
<b>Session 1: Market and Innovation</b> (Chair: Jorulf Nergard, <i>ABB</i> )		
08h30	Orientation of Energy Storage: Li-ion and Beyond	Cécile Tessier, <i>Saft</i>
08h50	Technology revolution in fast ferries: what is the market upside – worldwide? How can Norway take a lead in this business?	Erik Ianssen, <i>Selfa</i>
09h10	Continuous development is opening new market opportunities	Vegard Fredheim, <i>Hexagon Raufoss</i>
09h30	Johnson Matthey Fuel Cells and the Future of Automotive MEAs	Jonathan Sharman, <i>Johnson Matthey</i>
<b>Coffee</b> 09h50-10h15		
<b>Session 2: General Assembly</b> (Chair: Ole Kristian Sollie, <i>SVU</i> )		
10h15-11h30	Agenda distributed separately	
<b>PhD and post.doc seminar</b> (In parallel with the morning sessions) - Lead by Elina Melteig, <i>UiO</i>		
08h30-11h30	Agenda distributed separately	
<b>Lunch</b> 11h30-12h30		
<b>Session 3: Research Highlights and Results</b> (Chair: Øystein Ulleberg, <i>IFE</i> )		
12h30	Gaseous and electrochemical properties of C15-Laves type Ti-Zr alloy with enhanced hydrogen storage capacity <i>Abstract</i>	Ika Wijayanti, <i>IFE</i>
12h45	Increasing Li-ion battery energy density by implementing high-voltage cathodes - <i>Abstract</i>	Elise Ramleth Østli, <i>NTNU</i>
13h00	Stainless steel as OER electrode in alkaline water electrolysis - <i>Abstract</i>	Hamid Zamanizadeh, <i>NTNU</i>
13h15	Comparing the Danish, Norwegian and Swedish automobile taxation systems and their CO <sub>2</sub> emission effects - <i>Abstract</i>	Vegard Østli, <i>TØI</i>
<b>Coffee and fruit</b> 13h30-13h50		
13h50	User experiences and competitiveness of battery electric city buses	Rebecca Thorne, <i>TØI</i>
14h05	Silicon anodes and ionic liquid electrolytes for Li-ion batteries - <i>Abstract</i>	Daniel T. Rogstad, <i>NTNU</i>
14h20	The electrochemical performance of the high-energy Ni-rich NCM cathodes with Ni-content over 60% (LiNi <sub>x</sub> Co <sub>y</sub> Mn <sub>z</sub> O <sub>2</sub> ; denoted as NCM622) - <i>Abstract</i>	Artur Tron, <i>SINTEF</i>
14h40	<b>Closing Remarks</b>	
15h10	<b>Departure</b>	

## List of Participants

<b>Name</b>	<b>Affiliation</b>
Matko Barisic	ABB
Jorulf Nergard	ABB
Ola Nilsen	Baldur Coatings AS
Christina Ianssen	Bellona
Martin Kirkengen	Cenate AS
Øystein Alnes	DNV GL
Hendrik Brinks	DNV GL
Jorunn Voje	Elkem AS Technology
Per Ivar Helgesen	Enova
Andreas Bratland	Forskningsrådet
Sissel Forseth	Forsvarets forskningsinstitutt
Ahmet Oguz Tezel	Graphene Batteries AS
Vegard Fredheim	Hexagon Raufoss AS
Per Sigurd Heggem	Hexagon Raufoss AS
Kari Espegren	IFE
Arve Holt	IFE
Arne Lind	IFE
Carl Erik Lie Foss	IFE
Jan Petter Mæhlen	IFE
Morten Tjelta	IFE
Øystein Ulleberg	IFE
Volodymyr Yartys	IFE
Ragnhild Hancke	IFE
Hanne Flåten Andersen	IFE
Ika Dewi Wijayanti	IFE
Preben J. S. Vie	IFE
Fredrik Aarskog	IFE
Gaylord Booto	IFE
Samson Lai	IFE
Janis Danebergs	KTH/IFE
Bjørn Bryne	Jernbanedirektoratet
Christoffer Serck-Hanssen	Jernbanedirektoratet
Jonathan Sharman	Johnson Matthey
Jon Eriksen	Kunnskapsbyen Lillestrøm
Daniel Ras-Vidal	Kunnskapsbyen Lillestrøm
Olav Roald Hansen	Lloyd's Register
Trond Strømgren	Maritim Forening Sogn og Fjordane

Bjørn Gregert Halvorsen	Nel Hydrogen
Frode Seland	NTNU
Eivind Hugaas	NTNU
Ann Mari Svensson	NTNU
Hamid reza Zamanizadeh	NTNU
Daniel Tevik Rogstad	NTNU
Elise Ramleth Østli	NTNU
Sverre Magnus Selbach	NTNU
Andreas Echtermeyer	NTNU
Carl Johan Hatteland	Oslo Havn KF
Frode Haugen	Robot Aviation AS
Moritz Tauber	RWTH Aachen
Cecile Tessier	Saft
Erik Ianssen	Selfa AS
Rune Bredesen	SINTEF
Sigrid Damman	SINTEF
Solveig Meland	SINTEF
Artur Tron	SINTEF
Nils Wagner	SINTEF
Anders Ødegård	SINTEF
Vegar Øygarden	SINTEF
Edel Sheridan	SINTEF
Magnus Thomassen	SINTEF
Christine Maass	Statens vegvesen
Ole Kristian Sollie	Statens vegvesen
Sigrid Andresen	Statkraft
Vegard Østli	TØI
Erik Figenbaum	TØI
Inger Beate Hovi	TØI
Rebecca Thorne	TØI
Glenn-Ivar Gaalaas	Unibuss AS
Marshall Miller	University of California, Davis
Halvor Høen Hval	University of Oslo/Department of Chemistry
Klaus Magnus Johansen	University of Oslo/Department of Chemistry
Helmer Fjellvåg	University of Oslo/Department of Chemistry
Alok Mani Tripathi	University of Oslo/Department of Chemistry
Xinwei Sun	University of Oslo/Department of Chemistry
Truls Norby	University of Oslo/Department of Chemistry
Vebjørn Bakken	University of Oslo/UiO:Energy
Katinka Grønli	University of Oslo/UiO:Energy
Elina Melteig	University of Oslo/Department of Chemistry

Øystein Moen  
Dag Bjerketvedt  
Agnieszka Lach  
Andre Vagner Gaathaug  
Egil Mollestad

University of Oslo/UiO:Energy  
University of South-Eastern Norway  
University of South-Eastern Norway  
University of South-Eastern Norway  
ZEM

---

## Practical Information

During your stay you will have free access to the spa area on the 1st floor. For more information regarding the facilities at Son Quality Spa, please contact the hotel (<https://sonspa.no/>). The hotel rooms will be ready for check in from 15h00 the arrival date. Departure day check out before 10h00.

### PARKING

The indoor parking charge at the hotel is 12 NOK/h, limited upwards to 100 NOK/24 h.

### FOOD AND DRINK

Lunch will be served between 11h55-13h00 Tuesday and 11h30-12h30 Wednesday. Breakfast Wednesday morning is served between 07h00 and 08h30. In the afternoon break 17h25 – 19h30, there will be possibilities to enjoy the spa at the hotel. Dinner is served at 19h30 Wednesday night. With dinner, two units of drink are included.

### SCHEDULE AND TRANSPORTATION

Wednesday 24 April, the meeting registration takes place from 10h00 – 10h45 in the hotel reception. The first session starts precisely at 11h00. The conference ends at 15h00 on Thursday 25 April.

Since a lot of participants will travel from Oslo or through Gardermoen Airport, a shuttle bus with a departure time set to Thursday 25 April at 15h10 has been commissioned. The shuttle bus will go from Quality Spa and Resort hotel to Gardermoen Airport with only two stops along the way: the Ryen subway station in Oslo and Olavsgard. The bus leaves on time!

### PRACTICAL INFORMATION FOR PRESENTERS

If you are giving a presentation, please make sure to upload your presentation in SharePoint or to bring an USB stick and install your presentation at the latest at the beginning of the last break prior to your presentation. The organizing committee will be on site and glad to give you any assistance you might need.

