

## Wednesday, November 13, 2024 – Waygate Technologies Customer Solution Center (CSC), Sharonville

Time	Subject	Presenter
8:00 a.m.	Registration, Breakfast	
8:30 a.m.	Speaker Meeting - Day one speakers, session chairs only	
9:00 a.m.	Opening	Neil Bloomfield, Global Battery and Automotive Segment Leader, IXS, Waygate Technologies, USA
9:05 a.m.	Welcome	Michael Ulbricht, Global Commercial Director, Waygate Technologies, Germany
9:30 a.m.	Keynote Speaker Day 1 - The Capabilities of the High Energy CT for a Battery Inspection.	Dr. Tomas Zikmund, Research Sub-Group Leader, Brno University of Technology, Central European Institute of Technology, Czech Republic

### Battery Inspection Technology Update

10:00 a.m.	Radiography Systems Technology Update	Shana Telesz, Senior Product Manager, Radiography Systems, Waygate Technologies, USA
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### 10:30 a.m. Morning Break

#### Session Chair: Julia Tovar - North America Radiography Sales Director

11:00 a.m.	CT X-ray Basics for Battery Inspection	Grace Pharo, Application Engineer, Waygate Technologies, USA
11:30 a.m.	Application of Electron Microscopy for Battery Application of Electron Microscopy for Battery R&D and Manufacturing	Dr. Hugues Francois-Saint Cyr, Sr. Industrial Application Enabler, Materials Science Division, Battery, Thermo Fisher Scientific, USA

### Battery/Cell Safety and Failure mitigation

12:00 p.m.	X-ray CT for Characterization of Battery Degradation and Failure Mechanisms	Dr. Donal Finegan, Senior Scientist at National Renewable Energy Laboratory, Colorado, USA
12:30 p.m.	Trust but Verify: Beyond Battery Cycling	Mike Pendleton, Technical Director of Battery, Element Materials Technology, Michigan, USA

### 1:00 p.m. Lunch

#### Self Guided Hands-On Training/Tutorials

1:45 p.m.	Introduction to the afternoon activity	Neil Bloomfield, Global Battery and Automotive Segment Leader, Radiography Systems, Waygate Technologies
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Time	Power Scan HE	v tome x M300	v tome x L450	v tome x S240	v tome x C450-1	v tome x C450-2	Thermo Scientific SEM	Ultrasonic Bench Area
2:00 - 2:50 p.m. <b>Session 1</b>	Tesla Module Scan		x approver	Fast Scan vs. Step Scan		Grayscale vs. Image Quality	Axia Scanning Electron Microscope	UT Battery
3:00 - 3:50 p.m. <b>Session 2</b>		Multi Scan Function	x approver		Automation Demo	Grayscale vs. Image Quality	Axia Scanning Electron Microscope	UT General
4:00 - 4:50 p.m. <b>Session 3</b>	Tesla Module Scan	Multi Scan Function		Fast Scan vs. Step Scan	Automation Demo		Axia Scanning Electron Microscope	UT Battery

Code	Description	Presenter
Fast Scan vs. Step Scan	Waygate's Fast Scan Technology vs. a Traditional Step Scan Demonstration	Jacob Wiley
Thermo Scientific SEM	Thermo Scientific Axia ChemiSEM and CleanConnect inert gas transfer system demonstration	John Yorston
Tesla Module Scan	Tesla Module Scan w/ Power Scan HE Demonstration	Josh Schradin
x approver	Waygate's ADR Software Demonstration	Grace Pharo
Multi Scan Function	Waygate's Multi Scan Technology Demonstration to Scan Longer Battery Cells	Mike Randall
Automation Demo	Automation Demonstration for Battery Pack Production Solution	Joe Rinck
Grayscale vs. Image Quality	Demonstration on how different Grayscale ratios affect Image Quality	Jungil Byun
UT Battery	Using UT to inspect Li-Ion Batteries Demonstration	Cole Murphy / Yuichi Kajjura
UT General	General use of UT Demonstration	Kip Herner
5:00 p.m.	Group picture	Joe Mahigel

### Evening Event

6:00 p.m.	TBA
6:30 p.m.	Buffet dinner and cocktails
9:00 p.m.	Event concludes

## Thursday, November 14, 2024 - Waygate Technologies Customer Solution Center (CSC), Sharonville OH

Time	Subject	Presenter
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### Optimizing Cell/Battery Performance

Session Chair: Paul Perera, Strategy & Technology Operations Director, Waygate Technologies | MBA | Beng UK

8:00 a.m.	Breakfast	
8:30 a.m.	Speaker Meeting - Day two speakers, session chairs only	
9:00 a.m.	Day 2 Opening	Neil Bloomfield, Global Battery and Automotive Segment Leader, IXS, Waygate Technologies, USA
9:05 a.m.	Day 2 Welcome	Michael Ulbricht, Global Commercial Director, Waygate Technologies, Germany
9:20 a.m.	Keynote Speaker Day 2 - Solid State Battery Endeavor: Challenges and Pathways for Practicality	Prof. Ilias Belharouak, Corporate Fellow and Head of Electrification Section at Oak Ridge National Laboratory, TN USA
10:00 a.m.	Insights into Morphological Changes in Li-ion Batteries via Ex-situ and In-situ Aging Simulations and Micro-computed X-ray tomography	Zuzana Stravová, Ph.D Candidate, Central European Institute of Technology, CEITEC, Czech Republic

### 10:30 a.m. Morning Break

### Optimization of Battery Production

Session Chair: Alisa De Bruyn Kops, CSC Site Leader, Radiography Systems

11:00 a.m.	Ultrasound Applications in Battery Inspection	Cole Murphy, NDT Design Engineer, Ultrasound, Waygate Technologies, NY USA and Yuichi Kajjura Ph.D Student, University of Oklahoma, OK
11:30 a.m.	X-ray computed tomography as quality control tool in the volume manufacturing of battery cells	Dr. Saad Abbais, Head of Electrochemistry, UK Battery Industrialisation Centre, Coventry, United Kingdom
12:00 p.m.	From Coil to Stack - Utilizing a High Speed Continuous Process	Sebastian Vogel, Head of Global Sales & Business Development, Korber, Germany

### 12:30 p.m. Lunch

### Battery Recycling

Session Chair: Neil Bloomfield, Global Battery and Automotive Segment Leader, IXS, Waygate Technologies, USA

1:30 p.m.	Enabling Circularity of EV Batteries and Their Critical Materials	Jonathan Harter, Senior Technical Professional, Electrical Engineering, Oak Ridge National Laboratory, TN USA
2:30 p.m.	Battery Recycling	Tyler Helps, Co-Founder and Chief Commercial Officer of Currents, OK USA

### Self Guided Hands-On Training/Tutorials

Time	Power Scan HE	v tome x M300	v tome x L450	v tome x S240	v tome x C450-1	v tome x C450-2	Thermo Scientific SEM	Ultrasonic Bench Area
3:10 - 4:00 p.m. <b>Session 1</b>	Tesla Module Scan		x approver		Automation Demo		Axia Scanning Electron Microscope	UT Battery
4:10 - 5:00 p.m. <b>Session 2</b>		Multi Scan Function		Fast Scan vs. Step Scan		Grayscale vs. Image Quality	Axia Scanning Electron Microscope	UT General
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UT Battery	Using UT to inspect Li-Ion Batteries Demonstration							Cole Murphy / Yuichi Kajjura
UT General	General use of UT Demonstration							Kip Herner
5:00 p.m.	Battery Inspection Forum Close - Thank you for coming!							